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Dear Readers,

"Have a heart that never hardens,
a temper that never tires,
a touch that never hurts."

The nursing profession is indispensable to the healthcare system. The roots of modern nursing in Türkiye date back to Florence Nightingale, who provided care to wounded British and Turkish soldiers during the Crimean War of 1853. Although much progress has been made towards becoming a scientific profession since then, there are still steps to be taken in professionalizing the profession and providing evidence-based nursing care. We are honored to present you our journal, "Journal of Nursing Care Research," which we think is one of these steps and will provide scientific information that will optimize nursing care.

Our journal started publishing in 2024 and published its first issue. We would like to thank our authors, referees, and the editorial team, who contributed greatly to the publication of this issue. This is an important step in sharing current scientific information in the field of nursing and contributes to evidence-based nursing care. The research and review articles and case reports we present to our readers in this issue serve as a guide for nurses' clinical practice. Our research articles focused on the psychiatric symptom levels of mothers with autistic children, in addition to studies involving nurses examining end-of-life care and psychological well-being levels of intensive care nurses. Another research article concerned the use of traditional and complementary medicine practices by adults. While our review article provides information focusing on harm reduction programs, which is a new approach for our country in combating substance use disorders, the nursing care process for nurses caring for children with autism according to Peplau's interpersonal relations theory is detailed in our case report. We hope that these articles will contribute to the field of nursing and guide patient care.

The Journal of Nursing Care Research started its journey as a platform on which all national and international academicians and clinician nurses can share their insights, experiences, and innovations. Every step taken in nursing will improve and strengthen our profession and patient care. I invite all our researchers and readers to support our journal and I wish for a beautiful publishing life in which we learn from each other.

Sincerely,

Assoc. Prof. Hilal SEKİ ÖZ, PhD
Editor in Chief

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Determination of attitudes and behaviours towards end-of-life care and psychological well-being levels of intensive care nurses

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ABSTRACT

Aims: This study was conducted to determine the attitudes and behaviors of intensive care nurses towards end-of-life care and their psychological well-being levels.

Methods: This descriptive study was conducted using a face-to-face interview technique with 101 nurses working at Aksaray University Training and Research Hospital between March and July 2023. Data were collected using the Nurse Introductory Information Form, Intensive Care Nurses' Attitudes and Behaviors Towards End-of-Life Care Scale, and Psychological Well-Being Scale. The relationship between the variables was investigated with the Spearman correlation test.

Results: It was determined that 74.3% of the nurses were women, 60.4% were single, and 61.4% had worked in the profession for 1-5 years. It was determined that nurses' attitudes and behaviors towards end-of-life care scale scores showed a significant difference depending on whether they received information about end-of-life care and that there was a significant difference between the psychological well-being scale score and satisfaction with the department they worked in ($p<0.05$). There is a moderate and positive relationship between the behavioral scale and the psychological well-being scale mean scores ($r=0.368$, $p<0.001$).

Conclusion: The study found that as nurses' attitudes and behavior levels towards end-of-life care increased their psychological well-being levels also increased. It is recommended that nurses evaluate their psychological well-being and quality of life within the scope of holistic care and that studies be carried out to provide training and consulting services to nurses in this direction.

Keywords: Psychological well-being, end of life, intensive care nursing

INTRODUCTION

Intensive care units are specialized units with technological equipment where the highest level of support and treatment is provided to individuals whose health status is seriously impaired, who require close follow-up and treatment of life-threatening organ failures, who need to be under constant observation, and who cannot meet all their needs (Hermann et al., 2021). They are divided into units as internal, adult, pediatric, surgical, neonatal, and general according to the services provided and their characteristics (T.C. Resmi Gazete, 2015). An intensive care nurse is a nurse responsible for diagnosing patients with complex and life-threatening problems, implementing quality and high-level intensive care and treatment interventions, monitoring patients frequently, developing therapeutic relationships with patients and their relatives, and implementing curative, protective, and rehabilitative interventions (T.C. Resmi Gazete, 2010).

The concept of psychological well-being refers to optimal psychological functioning and experience, as well as cognitive and emotional evaluations in terms of life satisfaction, the presence of positive emotions, and the absence of negative emotions (Ryan & Deci, 2001). High-stress environments can affect the level of psychological well-being and cause burnout, low job satisfaction, absenteeism, and frequent staff turnover (Shoorideh et al., 2015). Since nurses working in intensive care units are exposed to continuous and unmanaged stress, their emotional resilience and performance are negatively affected, and their psychological well-being levels decrease (Makowiecki et al., 2020). It is reported that burnout among intensive care nurses is 33%, and post-traumatic stress disorder rates are approximately 15% higher in intensive care nurses compared to other nurses (Moss et al., 2016). Psychological well-being has an important place for nurses to overcome events in end-of-life care and to protect their mental health because it provides a balance between life satisfaction and positive and negative life experiences (Breitbart et al., 2015).

Witnessing the death and suffering of a patient affects the emotional state of nurses. Nurses who witness this situation feel fear, anxiety, distress, grief, failure, and frustration, and they suffer emotionally and have a stressful and distressing experience while

caring for patients (Ciechaniewicz et al., 2010). Boerner et al. (2017) reported that emotions associated with the death of the patient play an important role in occupational burnout in long-term care workers (Boerner et al., 2017). Emotional exhaustion and burnout are more common in nurses working in intensive care units due to the fact that working conditions are heavier than in other units and more care is given to end-stage patients (Khamisa et al., 2015). In general, the death of a patient is recognized as one of the most professional situations in the nursing profession. However, despite the ability of self-control and a cool-headed approach to the issue, there is no doubt that nurses are still unable to cope with some emotions. The most common feelings are helplessness, a sense of abandonment, anger, and sadness. The death of patients affects not only the professional aspect of the nurse's functioning but also her/his personal life, leading to a loss of self-confidence and guilt (Głowacka et al., 2014).

This study, it was aimed at determining the attitudes and behaviors of nurses working in intensive care units towards end-of-life care and their psychological well-being levels. Answers to the following questions were sought:

1. What is the level of nurses' attitudes and behaviors towards end-of-life care?
2. What is the level of psychological well-being of nurses?
3. Are nurses' attitudes and behaviors towards end-of-life care affected by sociodemographic variables?
4. Are the psychological well-being levels of nurses affected by sociodemographic variables?
5. Is there a relationship between nurses' attitudes and behaviors towards end-of-life care and their psychological well-being levels?

METHODS

Ethics

The study was carried out with the permission of Aksaray University Clinical Researches Ethics Committee (Date: 02.02.2023, Decision No: 2023/03-08). All participants signed and free and informed consent form. All procedures were carried out in accordance with the ethical rules and the principles of the Declaration of Helsinki.

Population and Sample of the Study

The population of the study consisted of 111 nurses working in the Intensive Care Unit at Aksaray University Training and Research Hospital. No sample selection was made; 101 intensive care nurses who agreed to participate in the study constituted the sample. Data were collected through face-to-face interviews between March 2023 and July 2023. It took approximately 10-20 minutes to answer the questionnaires.

Data Collection Instruments

The Nurse Information Form, End-of-Life Care Attitudes and Behaviors Scale (EACAS) of Intensive Care Nurses, and Psychological Well-Being Scale (PWBS) were used to collect the data. The Nurse Information Form was created by the researchers in line with the literature to obtain sociodemographic information about nurses (Can et al., 2020; Erzincanlı & Kasar, 2022; Keskin-Kızıltepe & Kurtgöz, 2022; Özel-Yalçınkaya, 2016; Selvi, 2019). This form includes questions about the participants' age, gender, marital status, education level, unit of employment, years of employment, and their thoughts on death and end-of-life care.

End-of-Life Care Attitudes and Behaviors Scale (EACAS) of Intensive Care Nurses was developed by Zomorodi (2008) in the USA to measure the attitudes and behaviors of intensive care nurses towards end-of-life care. The 2008 version was later revised by Zomorodi and Lynn (2011) (Zomorodi, 2008; Zomorodi & Lynn, 2011). The adaptation of the scale to Turkish culture, validity, and reliability study was conducted by Özel-Yalçınkaya (2016) (Özel-Yalçınkaya, 2016). The scale has two sub-dimensions as attitude (10 items) and behavior (6 items) and 16 items. The scale is a five-point Likert-type scale, and the attitude sub-dimension is evaluated as "1-totally disagree, 5-totally agree" and the behavior sub-dimension is evaluated as "1-never, 5-always". The 8th item on the scale is reverse-coded. The highest score to be obtained from the scale in total is 80, while the lowest score is 16. As the scale score increases, it is interpreted that attitudes and behaviors will be positive. In the study conducted by Özel-Yalçınkaya (2016), the Cronbach's alpha coefficient of the attitude sub-dimension of the scale was 0.71, the Cronbach's alpha coefficient of the behavior sub-dimension was 0.65, and the total Cronbach's alpha coefficient of the scale was 0.70 (Özel-Yalçınkaya 2016). In this study, the behavior sub-dimension Cronbach's alpha value was 0.64, the attitude sub-dimension Cronbach's alpha value was 0.71, and the total Cronbach's alpha value was 0.75.

The Psychological Well-Being Scale (PWBS), developed by Ryff (1989), was adapted into Turkish by Telef (2013). Consisting of 8 items, the PWBS defines important elements of human functioning, from positive relationships to feelings of competence and having a meaningful and purposeful life. The items of the PWBS are answered on a 1-7 scale ranging from strongly disagree (1) to strongly agree (7). All items are positively worded. Scores range from 8 (if strongly disagreeing with all items) to 56 (if strongly agreeing with all items). A high score indicates that the person has many psychological resources and strengths. As a result of the validity study conducted with university students, it was found that the scale consisted of a single factor, and the total variance explained was 53%. The factor loadings of the scale items ranged between 0.61 and 0.77. Cronbach's alpha internal consistency coefficient was found to be 0.87 (Diener et al., 2010). In this study, the Cronbach's alpha value of the scale was found to be 0.79.

Data Collection Process

Research data were collected using the face-to-face interview technique. Nurses were informed about the purpose of the study, confidentiality, and voluntary participation in the first part of the questionnaires. Nurses who volunteered to participate in the study were informed about the questionnaire form, which lasted approximately 10-20 minutes, and the questionnaire was administered after verbal consent was obtained.

Data Evaluation

The evaluation of the obtained data was performed in the SPSS 24.0 program. Descriptive statistics were presented as mean (±), standard deviation, median (min-max), frequency distribution, and percentage. In the evaluation made with the Kolmogorov-Smirnov test, the EACAS showed a normal distribution, whereas the PWBS did not show a normal distribution. The data that fit the normal distribution were evaluated with an independent two-sample t test, one-way analysis of variance, Mann-Whitney U test, and Kruskal-Wallis H test for the data that did not fit the normal distribution. Spearman correlation test was used to determine the relationship between variables. The statistical significance level was accepted as $p<0.05$.

RESULTS

Table 1 shows the socio-demographic characteristics, working standards, and psychiatric drug use information of the nurses.

Table 1. Sociodemographic characteristics of nurses (n=101)

Characteristics	n	Percentage
Age (mean:31.10, SD:8.44, min:23, max:53)		
23-25 years old	34	33.7
26-29 years old	32	31.6
30 years and older	35	34.7
Gender		
Female	75	74.3
Male	26	25.7
Marital status		
Married	40	39.6
Single	60	60.4
Unit worked in		
General intensive care unit	7	6.9
Surgical intensive care unit	21	20.8
Internal medicine intensive care unit	16	15.8
Neurology intensive care unit	23	22.9
Cardiovascular surgery intensive care unit	12	11.9
Adult intensive care	6	5.9
Palliative service	16	15.8
Education status		
Health vocational high school	5	5.0
Associate degree in nursing	17	16.8
Undergraduate and graduate studies in nursing	79	78.2
Length of service in the profession		
1-5 years	62	61.4
6-15 years	16	15.8
16 and more years	23	22.8
Duration of employment in the current institution		
Less than 1 year	16	15.8
1-5 years	57	56.5
6 and more years	28	27.7
Duration of work in intensive care/palliative care		
Less than 1 year	19	18.8
1-5 years	50	49.5
6 and more years	32	31.7
Mode of operation		
Continuous daytime	11	10.9
Constantly at night	4	4.0
Day and night (shifts)	86	85.1
Position		
Ward nurse	91	90.1
Nurse in charge	10	9.9
Average weekly working hours		
40 hours	28	27.7
41-45 hours	20	19.8
46-50 hours	33	32.7
51 hours and more	20	19.8
The willingness to choose the department		
Yes	73	72.3
No	28	27.7
The willingness to choose the department		
Yes	87	86.1
No	14	13.9
Participation in a course related to intensive care		
Yes	37	36.6
No	64	63.4
Having an intensive care nursing certificate		
Yes	31	30.7
No	70	69.3
Receiving psychiatric support during the working period		
Yes	5	5.0
No	96	95
Use of psychiatric medication during the working period		
Yes	3	3.0
No	98	97.0
Receiving information about end-of-life care		
Yes	60	59.4
No	41	40.6
Total	101	100

The total number of nurses who participated in the study was 101. The nurses who participated in the study were 30 years of age or older (34.7%), female (74.3%), single (60.4%), and had undergraduate or graduate education in nursing (78.2%). 49.5% of the nurses reported that they had been working in intensive care/palliative care for 1-5 years; 69.3% did not have an intensive care certificate; 95% did not receive psychiatric support during their working period; and 97% did not use psychiatric drugs. Among the nurses participating in the study, 59.4% stated that they did not receive information about end-of-life care (Table 1).

As seen in Table 2, the mean score of the nurses was found to be 56.10±7.64 on the EACAS and 44.08±5.64 on the PWBS.

Table 2. Mean scores of attitudes and behaviors towards end-of-life care scale and psychological well-being scale of intensive care nurses (n=101)

Scale score means	Mean±SD	Min-Max taken from the scale	Min-Max that can be taken from the scale
Scale of attitudes and behaviors towards end-of-life care	56.10±7.64	38-75	16-80
Psychological well-being scale	44.08±5.64	26-56	8-56

Table 3 shows the factors affecting the scores of the nurses on the EACAS and PIOS. The nurses' status of receiving information about end-of-life care and being satisfied with the department in which they work positively affected the EACAS ($p<0.05$).

In Table 4, the relationship between nurses' EACAS and PWBS scores is examined. There is a moderate and positive correlation between EACAS and PWBS ($r=0.368$, $p<0.001$). In other words, the higher the nurses' EACAS scores, the higher the PWBS scores.

Table 4. Correlation between intensive care nurses' attitudes and behaviors towards the end-of-life care scale and psychological well-being scale scores

		EACAS	PWBS
EACAS	**r**	1	
	p	-	
PWBS	**r**	0.368**	1
	p	0.000	-

**Correlation is significant at the 0.01 level (2-tailed).

DISCUSSION

The study was conducted to determine the attitudes and behaviors of intensive care nurses towards end-of-life care and their psychological well-being levels.

Intensive care is one of the nursing fields that requires special education, practice, research, and the utilization of research results (Hatipoğlu, 2002). These units are the ones where the vital signs of critically ill patients are monitored for 24 hours by using high-level technological equipment and, at the same time, aim to treat and improve the patients (Ministry of Health, General Directorate of Treatment Services, 2007).

It was found that the majority (65.4%) of the intensive care nurses who participated in the study were younger than 30 years of age, and their working period in intensive care was mostly between 1-5 years. When we look at other studies conducted in our country, it was found that 33.4% of the nurses were under the age of 25 years in the study of Çelen

Table 3. Variables affecting the mean scores of intensive care nurses' attitudes and behaviors towards the end-of-life care scale and psychological well-being scale

	EACAS (X±SD)	PWBS (X±SD)
Age of the nurse		
23-25 years old	57.0±7.51	44.47±5.72
26-29 years old	57.43±7.55	43.68±5.88
30 years and older	54.02±7.60	44.08±5.47
F / x^2	2.055	0.598
p	0.134	0.742
Gender		
Female	56.78±7.39	44.24±5.91
Male	54.15±8.15	43.65±4.88
t/z	1.524	-0.599
p	0.131	0.549
Marital status		
Married	54.65±7.22	44.65±4.48
Single	57.06±7.80	43.72±6.30
t/z	-1.565	-0.560
p	0.121	0.575
Unit worked in		
General intensive care unit	55.42±7.43	55.42±7.43
Surgical intensive care unit	55.28±7.66	55.28±7.66
Internal medicine intensive care unit	53.87±7.06	53.87±7.06
Neurology intensive care unit	56.86±6.71	6.71±1.40
Cardiovascular surgery intensive care unit	53.16±9.48	53.16±9.48
Adult intensive care	59.16±4.44	59.16±4.44
Palliative service	59.68±8.26	59.68±8.26
F/x^2	1.389	6.381
p	0.227	0.382
Education status		
Health vocational high school	55.0±7.28	43.40±8.67
Associate degree in nursing	55.11±7.47	43.17±3.74
Undergraduate and graduate studies in nursing	56.39±7.76	44.32±5.81
F/x2	0.246	1.359
p	0.782	0.507
Length of service in the profession		
1-5 years	57.17±7.46	44.04±5.86
6-15 years	55.93±8.52	42.75±6.21
16 and more years	53.34±7.07	45.13±4.55
F/x^2	2.161	1.034
p	0.121	0.596
Duration of employment in the current institution		
Less than 1 year	56.37±7.56	46.50±4.17
1-5 years	57.38±7.85	43.38±6.42
6 and more years	53.35±6.72	44.14±4.27
F/x^2	2.712	3.689
p	0.071	0.158
Duration of work in intensive care/palliative care		
Less than 1 year	57.10±7.29	45.89±3.94
1-5 years	57.18±7.80	43.26±6.62
6 and more years	53.84±7.30	44.31±4.61
F/x^2	2.105	2.137
p	0.127	0.344
Mode of Operation		
Continuous daytime	54.0±8.16	44.81±4.70
Constantly at night	57.75±3.59	42.50±4.93
Day and night (shifts)	58.3±7.72	44.06±5.81
F/x^2	0.534	0.606
p	0.588	0.738
Mission		
Ward nurse	56.57±7.61	44.15±5.76
Nurse in charge	51.90±6.82	43.50±4.57
t/z	1.858	-0.558
p	0.066	0.577
Average weekly working hours		
40 hours	55.14±7.94	43.42±6.64
41-45 hours	54.15±6.02	42.90±5.40
46-50 hours	58.03±7.10	45.60±4.95
51 hours and more	56.25±9.13	43.70±5.37
F/x^2	1.297	3.437
p	0.280	0.329
The willingness to choose the department		
Yes	56.16±7.56	44.46±5.53
No	55.96±7.96	43.10±5.91
t/z	0.117	-1.361
p	0.907	0.174
Satisfaction with the department		
Yes	56.33±7.45	44.49±5.56
No	54.71±8.88	41.57±5.72
t/z	0.734	-2.113
p	0.465	**0.035**
Participation in a course related to intensive care		
Yes	55.08±7.85	44.18±4.90
No	56.70±7.51	44.03±6.07
t/z	-1.028	-0.035
p	0.306	0.972
Having an intensive care nursing certificate		
Yes	55.45±7.77	44.96±4.04
No	56.40±7.62	43.70±6.21
t/z	-0.573	-0.893
p	0.568	0.372
Receiving psychiatric support during the working period		
Yes	56.20±8.13	42.40±7.60
No	56.10±7.65	44.17±5.56
t/z	0.027	-0.565
p	0.978	0.572
Use of psychiatric medication during the working period		
Yes	55.33±7.02	38.00±5.00
No	56.133±7.69	44.27±5.58
t/z	-0.178	-1.854
p	0.859	0.064
Receiving information about end-of-life care		
Yes	57.61±7.44	44.76±5.36
No	53.90±7.46	43.09±5.96
t/z	2.459	-1.237
p	**0.016**	0.216

Used for EACAS: t = t Test and F = One-Way Analysis of Variance, Used for PWBS: z = Mann-Whitney U test and x2 = Kruskal-Wallis H test

et al. (2007) (Çelen et al., 2007), and 53% of the nurses were between the ages of 25-29 years in the study of Aytaç et al. (Aytaç et al., 2008). When we look at these findings, it is evident that they are in parallel with our study. Studies have reported that the reason why the age of nurses working in intensive care units is lower than 30 years is that nurses over the age of 30 years are not preferred by nurses because the workload and work stress in intensive care units are higher (Başak et al., 2010). In our study, more than half of the nurses (59.4%) stated that they received information about end-of-life care. In the literature, it is stated that end-of-life care education can be beneficial in increasing the awareness of the nurse against the end-of-life concept, reducing death anxiety, and having the knowledge, psychosocial skills, and cultural sensitivity necessary to change negative behaviors towards the care of the patient at the end of life (İnci and Öz 2012). In a study conducted by Menekli and Fadıloğlu (2014), it was reported that most of the nurses did not receive training on end-of-life care (85.7%) and that the nurses who received training did not consider these trainings to be sufficient (Menekli & Fadıloğlu, 2014).

The average score of the intensive care nurses' attitudes and behaviors towards end-of-life care scale was 56.10±7.64. The maximum score that can be obtained from the scale for end-of-life care is 80, and the minimum score is 16. The maximum value of the nurses who participated in our study on the scale of attitudes and behaviors towards end-of-life care was 75, and the minimum value was 38. As can be seen from here, it is seen that the attitudes and behaviors of the nurses participating in our study towards end-of-life care are higher than medium level. When we look at the mean score of the psychological well-being scale of the nurses, it was found to be 44.08±5.64. While the minimum score that could be obtained from the psychological well-being scale was 8, the minimum score obtained by the participants was 26, and while the maximum score that could be obtained from the scale was 56, the maximum score obtained by the participants was 56. When we looked at these data, it was determined that the psychological well-being levels of the nurses participating in our study were at a high level. When the mean scores of the attitudes and behaviors of nurses towards the end-of-life care scale and the mean scores of the psychological well-being scale are compared with the studies in the literature, it can be said to be at a high level and compatible with the literature (Karacaoğlu & Köktaş, 2016; Priesack & Alcock, 2015; Ratanasiripong & Wang, 2011). To summarize briefly, nurses' high attitudes and behaviors toward caring for individuals at the end of life make them feel psychologically stronger. In other words, as nurses' attitudes and behaviors towards end-of-life care increase, their psychological strength and resilience increase.

In our study, it was found that nurses' age, gender, marital status, working hours, working styles, the unit they work in, having an intensive care certificate, receiving psychiatric support, and whether they use psychiatric medication or not did not affect the mean total EACAS score of intensive care nurses. Similar to our finding, in the study conducted by Özel-Yalçınkaya (2016), there was no statistically significant difference between the total scores of the scale according to whether the years of working in intensive care units increased or not, while it was reported that as the nurses' years of working in intensive care units increased, there was a significant increase in the total scores of the sub-dimension of behavior towards end-of-life care (Özel-Yalçınkaya, 2016). In our study, the mean total score of the intensive care nurses obtained from the EACAS was found to be 56.10±7.64. However, in our study, it was found that as the intensive care nurses' knowledge about end-of-life care increased, the mean score of the EACAS increased and was statistically significant. Unlike our study, in the study conducted by Özel-Yalçınkaya (2016), it was found that the scale total and attitude sub-dimension scores of nurses with undergraduate and graduate education levels were significantly higher than the scores of nurses with high school and associate degree education levels, and the behavioral sub-dimension scores of nurses working in intensive care clinics for more than five years were significantly higher than the scores of nurses working less than five years (Özel-Yalçınkaya, 2016).

In the study, it was found that there was a relationship between attitudes and behaviors towards end-of-life care and psychological well-being. As the psychological well-being levels of nurses increase, their attitudes and behaviors towards end-of-life care also increase. Çevik stated that most of the nurses were in sorrow and pain while caring for the patient at the end of life, and more than half of them did not want to provide end-of-life care (Çevik, 2010). Research results have shown that the behavior of the dying patient can change the care and behaviors of patients and their relatives (Çevik, 2010; Terzi, 2018; Yılmaz & Vermişli, 2015). Dunn and colleagues found that nurses who are faced with death are in grief and sadness, and as the situation of facing this situation increases, the behaviors developed against death are positive (Dunn et al., 2005). Psychological well-being is a concept that activates the individual to initiate a more positive adaptation process in the face of events that can be considered traumatic (Luthar et al., 2014). It is known that psychological well-being training increases psychological health in individuals and also plays a role in high self-awareness. In this context, when the study results are examined, it is known that nurses who have knowledge about the concept of psychological well-being have higher levels of tolerance for negative events (Thomas & Revell, 2016).

CONCLUSION

As a result of our study, it was determined that more than half of the nurses participated in end-of-life care and received information about end-of-life care. It is recommended that nurses who provide end-of-life care should be provided with effective training on end-of-life care by increasing the frequency and keeping it up-to-date, that nurses should be aware of their own emotions and develop appropriate coping methods, be supported psychologically, and at the same time provide environments where they can transfer and talk about their feelings, and that this study should be conducted with a larger sample.

What Did the Study Contribute to the Literature?

It was found that as the working time of the nurses in intensive care units increased, their attitudes towards end-of-life care also increased. It is predicted that the level of psychological well-being will increase as the level of attitudes and behaviors in end-of-life care shown by nurses to dying patients increases.

ETHICAL DECLARATIONS

Ethics Committee Approval

The study was carried out with the permission of Aksaray University Clinical Researches Ethics Committee (Date: 02.02.2023, Decision No: 2023/03-08).

Informed Consent

All participants signed and free and informed consent form.

Referee Evaluation Process

Externally peer-reviewed.

Conflict of Interest Statement

The authors have no conflicts of interest to declare.

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Author Contributions

All of the authors declare that they have all participated in the design, execution, and analysis of the paper, and that they have approved the final version.

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A descriptive study on the depression, anxiety, and stress levels of mothers with autistic children

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ABSTRACT

Aims: Autism spectrum disorder is a condition that profoundly impacts a child's life and has significant effects on the mothers, particularly the primary caregivers.

Methods: This descriptive study aims to examine the levels of depression, anxiety, and stress among mothers of children registered at an autism center in Iraq. The research was conducted between September 2022 and May 2023 at the Thi Qar Autism Center in Iraq, with the participation of 218 mothers. Data for the study were collected using a Personal Information Form and the Depression Anxiety Stress Scale.

Results: The findings revealed that the majority of participants were 40 years old and above, had two children, possessed literacy skills, and struggled to meet their financial needs. Mothers were found to experience high levels of depression, very high levels of anxiety, and moderate levels of stress. Furthermore, a strong positive correlation was identified between depression and anxiety ($r=0.647$, $p<0.001$), while a weak positive correlation was observed between depression and stress ($r=0.219$, $p=0.001$).

Conclusion: Based on these results, it is recommended that healthcare professionals provide mothers with therapeutic, preventive, and mental health-enhancing support. The study underscores the importance of addressing the mental health challenges faced by mothers of children with autism.

Keywords: Anxiety, mother, depression, autism, stress

INTRODUCTION

The presence of Autism spectrum disorder (ASD) in children necessitates comprehensive care and a regular treatment strategy (Gowda et al., 2019). ASD signifies a group of neurodevelopmental disorders that begin in early childhood and persist throughout life. Behaviors such as inattention, social isolation, and the need to repeat the same actions are observed in children diagnosed with ASD (Picardi et al., 2018). These tendencies can lead to difficulties in forming peer and family relationships, as well as interpersonal and emotional interactions. Due to the focus on the child during the treatment process, the mental health issues experienced by mothers of children with ASD are sometimes overlooked. Increased levels of stress and psychiatric symptoms in mothers can negatively impact the care and treatment processes for children. In studies examining the burden of parenting in families with a child with ASD, it has been reported that mothers, compared to fathers, experience a higher subjective burden (Kaya & Yöndem, 2020; Fırat, 2016). Research conducted in the Netherlands indicated that parents, especially mothers, raising a child with neurodevelopmental disorders have higher levels of stress compared to the general population (Fırat, 2016). Care challenges for children with autism have been associated with higher levels of stress among parents, influenced by unmet caregiver needs and perceived family burden (An, Chan & Kaukenova, 2020).

When stress and challenges in families with children affected by ASD are not well managed, psychiatric problems such as anxiety, depression, and burnout become common (Demšar & Bakracevic, 2023). In addition to psychiatric issues associated with ASD, problems such as helplessness, shame, and stigmatization related to the child's illness can lead to delays in seeking social support and medical assistance, causing disruptions in the continuity of services received. Therefore, compared to other developmental anomalies, ASD has been shown to lead to higher levels of mood and anxiety disorders among parents (Oruche et al., 2012). As parenting stress increases in mothers of children with autism, a decrease in parenting competence is reported, affecting both the care of the sick child and the struggle to fulfill other parenting

roles. Moreover, mothers expressing more guilt about their child's illness have been found to have lower levels of self-efficacy (Bramhe, 2019). Considering that parenting self-efficacy may mediate the relationship between the behavioral problems of an autistic child and the mother's anxiety/depression, addressing the dynamics influencing maternal self-efficacy becomes crucial in a situation directly affecting the child (Servi & Baştuğ, 2018).

During the treatment process for autistic children, mothers, by cultural roles, tend to take on more responsibility, and the mental state of mothers has been found to affect the adaptation to clinic-based early intervention programs (Fırat, 2016). Furthermore, evidence suggests that maternal depression is associated with cases of ill-treatment and neglect/abuse in children (Beck et al., 2004). In this context, both the overall health of the mother and the child can be improved through early diagnosis and effective treatment of maternal depression (Uğuz et al., 2004). Given that ASD in children is a chronic condition requiring prolonged care and a comprehensive treatment process, the levels of stress, anxiety, and depression in mothers can directly impact the care and treatment of their children (Beck et al., 2004; Uğuz et al., 2004). The fact that autism affects caregivers as much as the sick child, especially the negative impact on mothers in this process, necessitates the evaluation of mothers caring for children with autism and the conduct of research on this issue. The literature review reveals the scarcity of studies focusing on parents of autistic children in Iraq. This descriptive study aims to assess the stress, anxiety, and depression levels of mothers of children with ASD and the variables influencing them.

METHODS

Ethical Aspects of the Study

Ethical approval was obtained from the Kırşehir Ahi Evran University Clinical Researches Ethics Committee for the conduct of the study (Date: 27.09.2022, Decision No: 2022-17/155) (Annex 3). All procedures were carried out in accordance with the ethical rules and the principles of the Declaration of Helsinki. Before conducting the research, written permission was obtained from the Iraq Ministry of Health /Nasriyah Health Department. Prior to completing the survey forms, individuals constituting the research sample were provided with comprehensive information about the research, given time to decide, and left alone. After freely deciding to participate, verbal and written consent was obtained from those willing to participate, and data collection tools were provided.

Aim of the Study

The aim of this study is to examine the levels of depression, anxiety, and stress among mothers of children with autism registered at an autism center in Iraq. To achieve this goal, the following questions were addressed:

1.What are the levels of stress, anxiety, and depression in mothers within the scope of the study?

2.What is the relationship between the levels of stress, anxiety, and depression in mothers within the scope of the study?

Study Type

The research is a descriptive study conducted to assess the levels of depression, anxiety, and stress in mothers of children with autism.

Population and Sample of the Study

The population of the study consists of mothers of children registered at the Dhi Qar Autism Autism Center in Iraq. The universe of the study is formed by the mothers of 500 autistic children whose records are available in the institution. The sample size for the study was determined using the known population sampling method, considering a 95% confidence interval and a 5% margin of error, with a minimum of 218 mothers accepted as the sample size. Participants were selected based on inclusion and exclusion criteria evaluated by the researchers. Inclusion criteria included being above 18 years old, not having a psychiatric illness, willingness to participate in the study, literacy in Arabic, and registration at the Dhi-Qar Autism Center.

Implementation of the Study

The study was conducted with mothers of children diagnosed with Autism Spectrum Disorder (ASD) registered at the Dhi Qar Autism Spectrum Disorder Rehabilitation Center in Iraq. Ethical approval and institutional permission were obtained before the implementation of the study. The primary researcher is employed at the institution where the research was conducted. The data collection process took place face-to-face from September 2022 to May 2023, with the survey application lasting approximately 5-10 minutes. Before the implementation of the study, comprehensive information about the research was provided to mothers of children seeking services at the institution, allowing them time to decide. After ensuring free decision-making, those willing to participate in the research provided verbal and written consent, and data collection tools were provided.

Data Collection Tools

The research data were collected using a Descriptive Information Form prepared by the researchers and the Depression Anxiety Stress Scale-21.

Descriptive Information Form: This form, prepared by the researchers (Roy et al., 2023; Christi et al., 2023; Alibekova et al., 2022; Sajib et al., 2022), includes a total of 18 questions containing information about the mother and the child. It includes information such as the mother's age, marital status, education level, place of residence, the family's average monthly income, and occupation, as well as questions about the child's age and year of diagnosis.

Depression, Anxiety, and Stress Scale (DASS-21): The Depression Anxiety Stress Scale (DASS), developed by Lovibond and Lovibond (1995), consists of 42 items. The scale utilizes a 4-point Likert-type rating, with responses ranging from 0 "not applicable to me at all," 1 "somewhat applicable to me," 2 "applicable to me most of the time," to 3 "completely applicable to me." The 21-item version of the DASS used in this study was developed by Henry and Crawford (2005) and validated for Arabic-speaking adults by Ali et al. (2017). In this short scale (DASS-21) employed in

the study, there are 7 questions each for measuring depression, anxiety, and stress dimensions. For each subscale, a score is obtained by adding up the answers given to the subscale. Scores obtained from the subscales are evaluated as normal, mild, moderate, severe and very severe. The Cronbach's alpha coefficients for the short scale were calculated as 0.81 for depression, 0.76 for anxiety, and 0.77 for stress.

Data Analysis

The defining statistics of the variables in the survey are presented as frequency, percentage, average and standard deviation. Parametric method assumptions were evaluated in order to determine the appropriate statistical analysis for the scales obtained from the scale used in the study. A Kolmogrow Smirnow test was carried out to evaluate normal distribution, and the scale scores were determined not to be compatible. For this reason, non-parametric methods have been used in statistical analysis. Spearman's correlation analysis, a method of non-parametric correlations analysis, was performed to establish the relationship between scale sub-dimensions. In statistical analyses, the significance level (α) is assumed to be 0.05.

RESULTS

When the sociodemographic characteristics of the mothers involved in the study were examined, the majority of mothers were women aged 40 and over. When looked at by marital status and profession, most mothers (73.9%) were married and housewives (60.1%). 26.1% of mothers had 2 children, 23.9% had 3 children and 20.6% had 4 children. The majority of the participants were mothers who were literate, lived in the city, did not have enough income to cover their expenses, were responsible for the care of 1-3 people at home, did not receive help in caring for their autistic child, and did not have a chronic disease (Table 1).

A study was conducted on Table 2 to examine the characteristics of children diagnosed with OSB. It was observed that 52.3% of the children diagnosed with ASD were girls and 42.2% were between the ages of 5-8. When the child's length of stay in an autism care center was examined, it was found that 71.6% of them stayed between 1-30 days, and the majority (90.4%) did not have any other diseases. It was observed that more than half of the children were diagnosed with autism between the ages of 3-4, and 34.9% had mild mental retardation.

The average depression score of the mothers participating in the study was determined to be 12.25±2.50, the anxiety score was 12.31±2.51, and the stress score was 12.22±2.70 (Table 3).

When Table 4 was examined, 74.31% of mothers found that they had severe and very severe depression, 87.61% had very severe anxiety, while 45.87% had severe and very high levels of stress.

When the relationship level of depression, anxiety, and stress scores among mothers participating in the study was examined; a strong positive correlation was found between depression and anxiety ($r=0.647$, $p<0.001$), indicating a robust association. Additionally, there was a weak positive correlation between depression and stress ($r=0.219$, $p=0.001$). However, the relationship between anxiety and stress was not found to be statistically significant ($p=0.061$) (Table 5).

Table 1. The sociodemographic characteristics of the mothers

		Frequency	Percentage
Age	≤24	11	5.1
	25-29	29	13.3
	30-34	56	25.7
	35-39	48	22.0
	≥40	74	33.9
Marital status	Married	161	73.9
	Single	57	26.1
Number of children owned	1	32	14.7
	2	57	26.1
	3	52	23.9
	4	45	20.6
	5	21	9.6
	6	11	5.1
Education level	Not able to read or write	6	2.8
	Read-to-write	84	38.5
	Primary school	56	25.7
	Secondary school	43	19.7
	High school and above	29	13.3
Place of residence	City	148	67.9
	Village	70	32.1
Status of revenue expenditure	Yes	92	42.2
	No	126	57.8
Profession	Looking for a job	16	7.3
	Housewife	131	60.1
	Employee	26	11.9
	Government employee	39	17.9
	Self-employed	6	2.8
The number of people who are responsible for care at home	1-3	107	49.1
	4-6	66	30.3
	7 +	45	20.6
Status of participation of family members in the care of the child	Yes	95	43.6
	No	123	56.4
Presence of chronic disease	Yes	74	33.9
	No	144	66.1

Table 2. Characteristics of the children

		Frequency	Percentage
Child gender	Male	104	47.7
	Female	114	52.3
Child age	0-4	88	40.4
	5-8	92	42.2
	9+	38	17.4
Duration of a child's stay at an autism care center	1-30 day-days	156	71.6
	31-90 days	19	8.7
	91+ days	43	19.7
Presence of another disease in the child	Yes	21	9.6
	No	197	90.4
Age at which the child was diagnosed	1-2 age	8	3.7
	3-4 age	128	58.7
	5-6 age	78	35.8
	7 + age	4	1.8
Intelligence level of the child	≤69 "Middle intelligence volatility"	76	34.9
	70-79 "Border intelligence"	59	27.1
	80-89 "Lower intelligence"	62	28.4
	90-109 "Normal (average) intelligence"	21	9.6

Table 3. Descriptive statistics of the subscales of the scale

	n	Minimum	Maximum	Median	Mean	Standard deviation
Depression score	218	7	18	12	12.25	2.50
Anxiety score	218	8	18	12	12.31	2.51
Stress score	218	6	20	12	12.22	2.70

Table 4. Descriptive statistics for levels of depression, anxiety and stress

		Frequency	Percentage
Depression level	Moderate	56	25.69
	Severe	85	38.99
	Very severe	77	35.32
Anxiety level	Severe	27	12.39
	Very severe	191	87.61
Stress level	Normal	7	3.21
	Mild	20	9.17
	Moderate	91	41.74
	Severe	83	38.07
	Very severe	17	7.80

Table 5. Correlations between sub-dimensions of the scales

		Anxiety Score	Stress Score
Depression score	Spearman's rho	0.647*	0.219*
	p-value	<0.000	0.001
Anxiety score	Spearman's rho		0.217
	p-value		0.061

DISCUSSION

The aim of this study is to investigate the levels of depression, anxiety, and stress in mothers of children registered in an autism center in Iraq. A study conducted by Roy et al. (2023) in Bangladesh with parents of 391 children with ASD found that 65.7% of parents had moderate depression. Similarly, in a study by Christi et al. (2023) focusing on parents of children with autism, they found that 52.9% of mothers had a history of depression in the five years following the diagnosis. Alibekova et al. (2022) reported a prevalence of mild to very severe depression in parents of 53.7% in a study conducted in Kazakhstan. In a cross-sectional study by Sajib et al. (2022) involving parents of 227 children with autism, 11% of parents had moderate, 8.4% had severe, and 6.2% had very severe depression. Al-Farsi et al. (2016) examined the levels of stress, anxiety, and depression in parents of children with and without ASD in Oman. They found that 43% of participating parents had depressive symptoms. Another study by Alshahrani & Algashmari (2021) found a prevalence of 30% for mild depression and 68% for moderate to severe depression in parents of children with ASD. In comparison, a study found that mothers of children with ASD had higher levels of parental stress and depressive symptoms compared to mothers of typically developing children, and mothers of autistic children reported higher levels of stress than fathers (Barańczuk & Pisula, 2022). Gong et al. (2015) found that mothers of children with autism had higher levels of depression and anxiety compared to mothers of typically developing children, and autistic children's mothers were more vulnerable to depression than fathers. Kousha et al. (2016) conducted a descriptive-cross-sectional study on the demographic and mental health characteristics of 127 mothers of children with ASD. They found that 49.6% of mothers of children with ASD had a high level of depression. Studies by Falk et al. (2014), Almansour et al. (2013), and Hayes and Watson (2013) also confirmed a high level of depression among mothers of children with autism. However, some studies have not found a significant relationship between the prevalence of depression and parents of children with autism. This variation is believed to be related to factors that either facilitate or reduce the emergence of depression. It is noteworthy that this study was conducted in an autism center, and the high prevalence of depression among mothers is surprising considering that children with autism receive professional support from the government. This may indicate a lack of sufficient support for mothers, with a focus solely on children even in an autism center. Additionally, the weak social support system for women in Iraq, the lack of government assistance for mothers, and the stigma and blame mothers face could explain this situation. Furthermore, the burden of care, increasing responsibilities, the health status of their children, the level of dependence, and financial difficulties experienced by mothers can contribute to the onset of depression (Barańczuk & Pisula, 2022).

In the study, it was observed that the average anxiety score

of mothers was 12.31±2.51, and the majority of participants had a very high level of anxiety. When reviewing the literature, Sajib et al. (2022) found that 28.6% of parents of autistic children had anxiety disorders, Alibekova and colleagues (2022) reported a prevalence of anxiety ranging from mild to very high, and Barańczuk & Pisula (2020) indicated high levels of anxiety in mothers of children with Autism Spectrum Disorder (ASD). Gong et al. (2015) examined parents of autistic children and typically developing children, discovering that mothers of autistic children had higher anxiety compared to the control group. Kousha et al. (2016) also found that mothers of children with ASD had high levels of anxiety. In a study conducted by Almansour et al. (2013), mothers of autistic children were found to have significantly higher anxiety scores compared to healthy controls. The finding of high anxiety in the study could be attributed to the unequal status and power of Iraqi mothers socially compared to men, women experiencing more poverty, inadequate access to social resources and healthcare services, and uncertainties about the future. The complete responsibility of childcare being placed on mothers restricts their participation in social and recreational activities. Stigmatization of autistic children may lead to social isolation for both the mother and the entire family, contributing to increased anxiety. The caregiving responsibility of mothers may lead them to experience anxiety more intensely, especially in connection with behavioral problems in children.

Another variable examined in the study is the stress levels of mothers of autistic children. The average stress score of participant mothers was found to be 12.22±2.70, with 45.87% of mothers having high or very high levels of stress. When the literature is reviewed, Alibekova and colleagues (2022) conducted a cross-sectional study to examine the stress, anxiety, and depression of 146 parents caring for autistic children registered at the Astana National Children's Rehabilitation Center. They reported a prevalence of mild to severe stress of 52.9%. Barańczuk & Pisula (2020) reports that mothers of children diagnosed with OSB have very high levels of parental stress. A study by Christi and colleagues (2022) found that 76% of women had a stress score of 14 to 26, indicating moderate levels of stress. Padden and James (2017) that parents of children diagnosed with OSB had higher levels of stress and worse physical health than those of children with normal development. A 2002 study by Newschaffer and colleagues found that parents of children with autism suffer more stress than parents of normal-developed children. Children diagnosed with autism tend to have more serious difficulties in social interaction, communication, repetitive and restrictive behavior, which is suggested to lead to increased parental stress. The violence of these behaviors can increase parental burden and stress by increasing dependence and pressure on the parent. One of the causes of stress is the burden of caring (Barańczuk & Pisula, 2022). The effects of care on mental health have been linked to a burden resulting from the greater priority given to the needs of the recipient (Bulley, Henry & Suddendorf, 2017). This burden can be divided into two categories: the objective burden, which includes the tangible adverse effects on the life of the caregiver due to care, and the subjective burdens that relate to personal assessments of the care provider's role and its consequences. (Myers, 2003). Objective burden levels can also be said to increase stress levels when the mothers who participated in the study were also considered not to receive childcare assistance.

The relationship between mothers' levels of depression, anxiety, and stress was examined in the context of the study. The correlation analysis revealed a strong positive relationship between depression and anxiety ($r=0.647$, $p<0.001$), a weak positive relationship between depression and stress ($r=0.219$, $p= 0.001$), but no statistically significant relationship between anxiety and stress ($p=0.061$). The findings of the study are consistent with the literature. In a study by Rezendes & Scarpa (2011) involving mothers of 3-16-year-old children diagnosed with ASD, it was reported that parenting stress was positively correlated with depression and anxiety. Falk et al.'s (2014) study examined 250 mothers and 229 fathers of children with ASD, reporting a positive correlation between depression and stress and anxiety. Padden & James (2017) conducted research comparing reported levels of stress, anxiety, and depression among parents of children with and without ASD ($n=38$ in each group) and found a strong positive correlation between depression and stress. Another study suggested that a history of anxiety or depression in parents is associated with an increase in perceived stress (Christi et al., 2023). Another study indicates that the caregiving process for autistic children may contribute to increased levels of stress, anxiety, and depression, while mothers of typically developing children did not show a significant relationship between stress and depression levels (Barańczuk, & Pisula, 2022). Stress has the potential to trigger symptoms of anxiety and depression. Although the study did not find a relationship between stress and anxiety, it is a known fact that stress has the potential to trigger symptoms of anxiety and depression (Christi et al., 2023; Rezendes & Scarpa, 2011). Daily stressors can make individuals overly aroused and evoke negative emotions. These negative emotions can affect perceptions, disrupt attention, and impair problem-solving skills. Additionally, negative emotions associated with perceived threats can lead to rumination, undermining analytical thinking and problem-solving skills. Understanding this cognitive-emotional downward spiral is key to understanding how depression, anxiety, and stress interact in this context (Bulley, Henry & Suddendorf, 2017).

Limitations

This research has some limitations. One of the limitations of this study is that data was collected based on self-report. Studies evaluating psychiatric symptoms are recommended by psychiatrists. Another limitation is that only mothers of children registered to an autism center were included in the study. It is recommended to conduct studies that include mothers of children with autism who are not registered to a center.

CONCLUSION

According to the results obtained from current research on the stress, anxiety, and depression levels of mothers with autistic children, the majority of mothers experience high levels of depression and anxiety, along with moderate to high levels of stress. There is a strong positive relationship

between depression and anxiety, while a weak positive relationship exists between depression and stress. In light of these findings, it is recommended that the healthcare team supports mothers with autistic children through mental health-preserving, therapeutic, and developmental services. Further research is suggested to investigate the effectiveness of coping strategies for stress, anxiety, and depression among mothers with autistic children.

ETHICAL DECLARATIONS

Ethics Committee Approval

The study was carried out with the permission of Kırşehir Ahi Evran University Clinical Researches Ethics Committee for the conduct of the study (Date: 27.09.2022, Decision No: 2022-17/155).

Informed Consent

All patients signed and free and informed consent form.

Referee Evaluation Process

Externally peer-reviewed.

Conflict of Interest Statement

The authors have no conflicts of interest to declare.

Financial Disclosure

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Author Contributions

All of the authors declare that they have all participated in the design, execution, and analysis of the paper, and that they have approved the final version.

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Determining the use of traditional and complementary health practices by adults during the COVID-19 pandemic

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ABSTRACT

Aims: The research was conducted in a descriptive manner to determine the use of traditional and complementary health practices among adult individuals during the COVID-19 pandemic.

Methods: The sample group of the study consisted of 385 adult individuals aged between 20-65 registered at Mucur Primary Health Care Centers. Data were collected using a "Data Collection Form" prepared by the researchers based on relevant literature review. Number, percentage, and mean were used in the analysis of the data.

Results: The mean age of the participants was 42.03±13.51, with 54.3% being female and 45.7% male. 66.0% of the individuals believe in the effectiveness of traditional and complementary health practices in COVID-19 disease, and 40.3% stated that they use traditional and complementary health practices every day during the COVID-19 pandemic. The most commonly used phytotherapy method (herbal treatment) during the COVID-19 pandemic by individuals is vitamin, citrus fruits, and garlic. It was found that individuals mostly practice breathing exercises, movement therapies, and music therapy among body and mind practices. Other complementary health approaches practiced by individuals during the COVID-19 pandemic include reading prayers, performing prayers, and seeking amulet-based therapies.

Conclusion: It is recommended that healthcare professionals collect data on traditional and complementary health practices during the COVID-19 pandemic, and provide education and counseling services to the community on this issue.

Keywords: Traditional medicine, middle age, COVID-19 virus

INTRODUCTION

Since the first cluster of cases detected in Wuhan city of Hubei province, China, in December 2019, as of June 2022, more than 6 million people worldwide have died due to the pandemic (Yang et al., 2020). Pandemics have historically posed a serious threat to public health, resulting in numerous deaths and physical as well as mental health issues (Yang, et al., 2020; Lake, 2020; Marcel et al., 2020).

According to the World Health Organization (WHO), "Traditional Medicine" encompasses the sum total of knowledge, skills, and practices based on the theories, beliefs, and experiences indigenous to different cultures, which can be explained or not explained, used to prevent, diagnose, improve, or treat physical and mental illnesses, and maintain health. "Complementary Medicine," on the other hand, refers to the additional meaning gained by the use of health practices believed to provide additional benefits when used in conjunction with conventional medicine. "Herbal medicine" includes medicinal herbs, herbal materials, herbal preparations, and finished herbal products containing parts of plants or other plant materials, or combinations thereof, as active ingredients (WHO, 2019). In recent years, the awareness of Traditional and Complementary Medicine Practices has been increasing both in our country and worldwide. The Regulation on Traditional and Complementary Medicine Practices, which has become increasingly recognized, was published in the Official Gazette with number 29158 on October 27, 2014, and entered into force, completing the process from the perspective of the Ministry of Health. The regulation clearly sets out the purpose, scope, and legal basis. Other traditional and complementary medicine practices besides acupuncture were defined for the first time in this regulation. These include Apitherapy, Phytotherapy, Hypnosis, Leech Therapy, Homeopathy, Chiropractic, Cupping Therapy, Larva Therapy, Mesotherapy, Prolotherapy, Osteopathy, Ozone Therapy, Reflexology, and Music Therapy (Doğru & Şahbaz, 2020).

Despite significant progress in vaccination against COVID-19, the lack of a specific antiviral treatment for COVID-19 increases concerns about health among people worldwide (Yılmaz, et al., 2021). Therefore, individuals exposed to risks and uncertainties seek self-care measures and focus more on preventive measures to boost immunity, prevent the spread of the disease, or alleviate the progression of infection, turning to more traditional and complementary health practices (Yılmaz et al., 2021; Marcel et al., 2020). Traditionally, traditional and complementary health practices have been more commonly used by those with chronic illnesses (Harris et al., 2012; Metcalfe et al., 2010). However, in the last decade, the use of traditional and complementary health practices has also increased in response to the threat of new emerging infectious diseases such as HIV/AIDS, SARS, H1N1, and COVID-19 (Ganjhu et al., 2015; Zhou et al., 2020). For example, during the SARS crisis in China, 40-60% of infected patients used traditional Chinese medicine (TCM) in addition to standard modern medical treatment at various stages of their treatment (Liu et al., 2012). A study showed that over 85% of COVID-19 patients in China used traditional Chinese medicine (TCM) as a type of traditional and complementary medicine (TCM) and that TCM enhanced the immune system and alleviated the course of the disease (Syed, et al., 2016). In Turkey, 39.3% of individuals have used traditional and complementary health practices during the pandemic (Karataş et al., 2021). It is important to increase immunity before COVID-19 infection, to reduce the expected side effects of modern medical treatments when encountered with the virus, and to increase the patient's compliance with treatment. At the same time, it is thought that it would be beneficial to use phytotherapy, traditional and complementary medicine in addition to conventional treatment in the treatment of COVID-19. Furthermore, in countries where traditional medicine practices are popular and widely used, investigating the characteristics of the use of traditional and complementary health practices, especially during pandemics, is considered particularly important. Therefore, this study aimed to determine the use of traditional and complementary health practices by adult individuals during the COVID-19 pandemic.

METHODS

Ethics

The study was carried out with the permission of Ethical Committe of Faculty of Medicine, Kırşehir Ahi Evran University (Date:06.04.2021, Decision No: 2021-07/76). All procedures were carried out in accordance with the ethical rules and the principles of the Declaration of Helsinki. Informed consent forms were read to/ad read to adult individuals before filling out the questionnaire forms, and their verbal consents were obtained.

Type and Location of the Study

The study was conducted at the Family Health Center (FHC) located in the district of Mucur, affiliated with the Kırşehir province in the Central Anatolia Region, using a descriptive study design.

Population and Sample of the Study

The population of the study consists of 11,984 adult individuals aged between 20 and 65 registered at the FHC. The sample size of the study was determined based on data from a similar study conducted previously in our country, where the rate of traditional/alternative medicine usage among individuals was found to be 65.8% (Oral et al., 2016). Considering this rate and with a 90% confidence level and a 0.04 margin of error, the required sample size was determined to be 385 according to the absolute percentage recommended by the WHO (Lemeshow et al., 1990). The sample of the study comprised 385 adult individuals selected through random sampling method. Among the individuals who applied to the FHC during the dates when the researcher collected data, the first 385 adult individuals were selected as the sample. The data for the study were collected between 07/04/2021 and 1/07/2021. Individuals who were between the ages of 20-64, did not have any communication barriers, could speak and understand Turkish, lived in the Mucur district of Kırşehir, and agreed to participate in the study were included in the study.

Data Collection Instruments

In the scope of the research, a questionnaire form developed based on the literature (1-85) was used to collect the necessary data. The questionnaire form used in the research consists of four sections: Socio-demographic characteristics (9 questions), characteristics related to the disease (6 questions), and evaluation of traditional and complementary health practices and usage characteristics (10 questions), totaling 25 questions. Before the research began, the questionnaire form was applied to 20 adult individuals in an FHC randomly selected in the provincial center by the researcher. It was determined in the pilot application that the questions were understandable and provided sufficient coverage for the data to be obtained in the study, and no changes were made to the questionnaire. The data was collected by the researcher at the designated Mucur ASM, following the mask and physical distance (1.5 meters) rules that must be followed during the COVID-19 pandemic process. Research data were collected with adult individuals in a separate room at the FHC with the windows open or by face-to-face interview technique outside the FHC.

Statistic Analysis

The SPSS 22.0 package program was utilized for the analysis of the data obtained in the research. Number, percentage, mean, and standard deviation values were used in the analysis. Additionally, traditional and complementary medicine practices and preventive measures were categorized.

DISCUSSION

The ages of the individuals participating in the study range from 20 to 64, with a mean age of 42.03±13.51. 54.3% of the individuals are female, and 45.7% are male. 75.1% of the individuals participating in the study are married, 59.7% have completed high school education or above, 57.7% are unemployed, 47.3% perceive their income level as medium, 89.4% have social security coverage, and 71.4% have a nuclear family structure (Table 1).

Before the COVID-19 pandemic, individuals' highest usage was determined as garlic (24.4%), citrus fruits (22.6%), pickles (13.8%), vitamin (9.6%), turmeric (4.4%), ginger (4.4%), green tea (4.2%), probiotics (4.2%), linden (3.9%), turnip juice (3.4%), and minerals (2.1%) among traditional and complementary health practices. When the distribution of the

Table 1. Distribution of individuals according to socio-demographic characteristics

Variables	Number (n)	Percentage (%)
Age	(Min-Max) (20-64)	Mean±SD 42.03±13.51
20-39 (Young adulthood)	173	44.9
40-64 (Middle adulthood)	212	55.1
Gender		
Male	176	45.7
Female	209	54.3
Marital status		
Married	289	75.1
Single	96	24.9
Education level		
Illiterate	21	5.5
Primary school	101	26.2
Secondary school	33	8.6
High school	123	31.9
University and above	107	27.8
Employment status		
Employed	163	42.3
Unemployed	222	57.7
Income level		
Low	61	15.8
Medium	182	47.3
High	142	36.9
Social security status		
Yes	344	89.4
No	41	10.6
Family structure		
Elementary family	288	74.8
Extended family	97	25.2
Total	385	100.00

frequency of use of phytotherapy method (herbal treatment) from traditional and complementary health practices is examined during the COVID-19 pandemic, it is observed that the frequency of use of all phytotherapy methods (herbal treatments) has increased. The top ten in order are vitamin (49.9%), citrus fruits (35.3%), garlic (32.5%), pickles (26.5%), vinegar (22.3%), turmeric (20.3%), ginger (19.0%), minerals (17.9%), sumac (15.8%), and turnip juice (14.5%) (Table 2).

It has been observed that individuals mostly practiced breathing exercises (0.5%), movement therapies (0.5%), and music therapy (0.5%) before the COVID-19 pandemic. During the COVID-19 pandemic. the practice of movement therapies (0.5%) remained the same, while the usage of breathing exercises (4.7%) and music therapy (1.6%) increased. Before the COVID-19 pandemic, individuals were found to engage in other complementary health approaches such as reading prayers (4.7%), praying (1.6%), getting lead casting (0.3%), carrying amulets (0.3%), acupuncture (0.3%), and apitherapy (0.3%). However, during the COVID-19 pandemic, the usage of other complementary health approaches increased, with percentages for reading prayers (17.7%), praying (3.4%), getting lead casting (0.3%), carrying amulets (1.6%), acupuncture (0.8%), and apitherapy (0.3%).

66.0% of individuals believe in the effectiveness of traditional and complementary health practices during COVID-19 disease. The majority of individuals (61.8%) have stated that they used traditional and complementary health practices within the last ≤1 month during the COVID-19 pandemic, 40.3% of individuals use traditional and complementary health practices every day during the COVID-19 pandemic, and 61.3% are aware of traditional and complementary health practices through sources such as the internet, radio, television, magazines, newspapers, etc. Additionally, 35.6% of individuals reported an increase in the budget allocated for traditional and complementary health practices during the pandemic, and 52.5% stated that they would recommend traditional and complementary health practices to others.

COVID-19, a highly pathogenic viral infection, encompasses a wide clinical spectrum ranging from asymptomatic infection and mild upper respiratory tract illness to severe viral pneumonia-induced respiratory failure and even death. According to the World Health Organization's COVID-19 report from China, the case fatality rate was reported to be 3.8% (Çelik. & Köse. 2020). Traditional and complementary medicine practices can be used by individuals for reasons such as disease prevention. reducing the side effects of medications, strengthening the immune system, and managing the disease (Solmaz & Altay, 2019; Aktaş, 2017). Given the physiological and psychological effects of the globally spreading COVID-19 on individuals, and considering the lack of adequate and effective pharmacotherapeutic approaches in the initial stages of the disease, traditional and complementary treatments have attracted significant attention among the public during this global pandemic. In the study, it was determined that before the COVID-19 pandemic, the top ten phytotherapy methods (herbal treatment) most commonly used by individuals were garlic, citrus fruits, pickles, vitamins, turmeric, ginger, green tea, probiotics, linden tea, and turnip juice. However, during the COVID-19 pandemic. when looking at the distribution, it can be seen that the frequency of use of all phytotherapy methods has increased, with vitamins, citrus fruits garlic, pickles, vinegar, turmeric, ginger, minerals, sumac, and turnip juice ranking in the top ten. While individuals mostly practiced breathing exercises, movement therapies, and music therapy before the COVID-19 pandemic, during the pandemic, the practice of movement therapies remained the same while the usage of breathing exercises and music therapy increased. Before and during the COVID-19 pandemic, the top three complementary health approaches used by individuals were reading prayers, praying, and getting lead casting (Table 2).

In a study conducted by Işık and Can (2021) with nursing students, the traditional and complementary medicine practices applied against COVID-19 were reported as biological practices, massage with oils, and listening to relaxing music, respectively. In the same study, it was found that students particularly increased their consumption of artichokes, garlic, onions, hot peppers, lemon juice, and vinegar, as well as red cabbage and pomegranate consumption, and increased their consumption of dairy products, especially kefir and yogurt (Işık. & Rana. 2021). Previous studies in Turkey have reported a prevalence of traditional and complementary health practice usage ranging from 7.1% to 38.8% (104-106). In a study conducted by Karataş et al. (2021) in Adana province, they found that a significant

Table 2. Distribution of the frequency of traditional and complementary health practices usage among individuals before and during the COVID-19 pandemic period

Traditional and complementary health practices	Before the COVID-19 pandemic period		During the COVID-19 pandemic period	
	I used number (%)	I didn't used number (%)	I used number (%)	I didn't used number (%)
Phytotherapy method (Herbal treatment)				
Vitamin	37 (9.6)	348 (90.4)	192 (49.9)	193 (50.1)
Mineral	8 (2.1)	377 (97.9)	69 (17.9)	316 (82.1)
Probiotic	16 (4.2)	369 (95.8)	37 (9.6)	348 (90.4)
Garlic	94 (24.4)	291 (75.6)	125 (32.5)	260 (67.5)
Turmeric	17 (4.4)	368 (95.6)	78 (20.3)	307 (79.7)
Ginger	17 (4.4)	368 (95.6)	73 (19.0)	312 (81.0)
Sumac	7 (1.8)	378 (98.2)	61 (15.8)	324 (84.2)
Citrus fruits	87 (22.6)	298 (77.4)	136 (35.3)	249 (64.7)
Vinegar	28 (7.3)	357 (92.7)	86 (22.3)	299 (77.7)
Pickles	53 (13.8)	332 (86.2)	102 (26.5)	283 (73.5)
Turnip juice	13 (3.4)	372 (96.6)	56 (14.5)	329 (85.5)
Coriander	1 (0.3)	384 (99.7)	13 (3.4)	372 (96.6)
Cinnamon	5 (1.3)	380 (98.7)	19 (4.9)	366 (95.1)
Linden	15 (3.9)	370 (96.1)	38 (9.9)	347 (90.1)
Green tea	16 (4.2)	369 (95.8)	27 (7.0)	358 (93.0)
Echinacea	2 (0.5)	383 (99.5)	13 (3.4)	372 (96.6)
Sage	6 (1.6)	379 (98.4)	32 (8.3)	353 (91.7)
Hibiscus	1 (0.3)	384 (99.7)	10 (2.6)	375 (97.4)
Licorice	1 (0.3)	384 (99.7)	6 (1.6)	379 (98.4)
Clove	1 (0.3)	384 (99.7)	13 (3.4)	372 (96.6)
Pomegranate peel	-	385 (100.0)	9 (2.3)	376 (97.7)
Black seed	2 (0.5)	383 (99.5)	2 (0.5)	383 (99.5)
Rosehip	-	385 (100.0)	5 (1.3)	380 (98.7)
Olive oil	3 (0.8)	382 (99.2)	3 (0.8)	382 (99.2)
Mind and body practices				
Chinese medicine	-	385 (100.0)	1 (0.3)	384 (99.7)
Tai chi	-	385 (100.0)	-	385 (100.0)
Breathing exercises	2 (0.5)	383 (99.5)	18 (4.7)	367 (95.3)
Hypnotherapy	-	385 (100.0)	-	385 (100.0)
Meditation	1 (0.3)	384 (99.7)	7 (1.8)	378 (98.2)
Yoga	-	385 (100.0)	6 (1.6)	379 (98.4)
Movement therapies	2 (0.5)	383 (99.5)	2 (0.5)	383 (99.5)
Reflexology	-	385 (100.0)	-	385 (100.0)
Music therapy	2 (0.5)	383 (99.5)	6 (1.6)	379 (98.4)
Therapeutic touch	1 (0.3)	384 (99.7)	1 (0.3)	384 (99.7)
Other complementary health approaches				
Reading prayers	18 (4.7)	367 (95.3)	68 (17.7)	317 (82.3)
Getting lead casting	1 (0.3)	384 (99.7)	1 (0.3)	384 (99.7)
Visiting a healer	-	385 (100.0)	-	385 (100.0)
Visiting entombed saint	-	385 (100.0)	2 (0.5)	383 (99.5)
Praying	6 (1.6)	379 (98.4)	13 (3.4)	372 (96.6)
Carrying amulets	1 (0.3)	384 (99.7)	6 (1.6)	379 (98.4)
Acupuncture	1 (0.3)	384 (99.7)	3 (0.8)	382 (99.2)
Apitherapy	1 (0.3)	384 (99.7)	1 (0.3)	384 (99.7)
Leech therapy	-	385 (100.0)	1 (0.3)	384 (99.7)
Prolotherapy	-	385 (100.0)	-	385 (100.0)
Cupping therapy	-	385 (100.0)	2 (0.5)	383 (99.5)

portion of the population (39.3%) used traditional and complementary medicine practices for COVID-19 during the April 2020 quarantine period (Karataş et al., 2021). In the study by Erişen and Yılmaz (2020), it was found that approximately half of the participants (42.8%) consumed herbal products such as garlic and sumac (Erişen. & Yılmaz. 2020).

In the study by Özenoğlu et al. (2021), they found that the most commonly used dietary supplements during the pandemic were vitamin C, vitamin D, and multivitamin complex (Özenoğlu et al. 2021). In another study. approximately one-third of individuals (36.1%) reported starting to use dietary supplements, especially vitamin D (56.9%), Vitamin C (50.4%), and zinc (27.6%). during the pandemic (Macit, 2020). In a cross-sectional study conducted by Kamarlı Altun et al. (2022), it was determined that 57.0% of individuals used herbal supplements and 46.1% used dietary supplements during the pandemic. In the same study, it was found that the most preferred dietary supplements were vitamin C, multivitamins, Vitamin D, and zinc, and individuals consumed fresh herbs such as garlic, ginger, turmeric, green tea, and other herbal teas (linden, chamomile, sage) during the pandemic, although they had not previously used them (Kamarlı Altun et al., 2022). In a study conducted in South Korea, it was found that 76.1% of participants used one or more traditional and complementary medicine practices during the MERS epidemic. with easily accessible methods such as multivitamins and food products being the most popular (Hwang et al., 2020). In a study conducted in Saudi Arabia, approximately 22.1% of participants reported using herbal products or dietary supplements during the pandemic, with vitamin C being the most commonly used food supplement reported to boost immunity and reduce the risk of COVID-19 (Alyami et al., 2020). Due to the antioxidant and anti-inflammatory effects of vitamins such as A, C, D, and minerals such as zinc and selenium. They are known to be protective against viral infections. Additionally, these vitamins and nutrients may play a protective role against the increased intrapulmonary oxidative stress in viral infections (Özenoğlu & Gülbahar, 2020). Although there are not many high-quality studies, the role of dietary supplements in combating COVID-19. the positive effects of supplements such as vitamins A. C. D. Zinc, and selenium on immune response, and their protective effects against viral infections are known (Rao et al., 2020; Shah, Saxena & Mavalankar, 2021).

In the study, it was determined that 61.3% of individuals were aware of traditional and complementary health practices through sources such as the internet, radio, television, magazines, newspapers, etc. (Table 3). Kocabaş et al. found in their study that family and friend recommendations were effective in the use of traditional and complementary medicine (TAT) (Kocabaş, Erdal & Demir. 2019). Hwang et al. (2020) found in their study that the majority of TAT users relied on mass media (52.4%) and the internet (27.4%) to acquire information about TAT. Nural and Çakmak (2018) found in their study that the primary sources of information about TAT methods for patients were television first, followed by relatives, family, and friends. Ak and Baran Aksakal (2020) reported in their study that 58.5% of those who preferred traditional and complementary medicine for the treatment of a health problem did so because they were recommended by friends/neighbors/relatives. In another study, participants were found to acquire information about dietary supplements mostly from mass media (Demir, Kılıçkalkan & Takak. 2021).

Table 3. Characteristics of traditional and complementary health practices usage by ındividuals

Characteristics	Number (n)	Percentage (%)
Belief in the effectiveness of traditional and complementary health practices in COVID-19 disease		
Yes	254	66.0
No	131	34.0
Last time of using traditional and complementary health practices during the COVID-19 pandemic (n=281)*		
≤1 month	238	61.8
2 months	15	3.9
3 months	12	3.1
4 months	12	3.1
5 months	2	.5
6 months	1	.3
7 months	1	.3
Frequency of using traditional and complementary health practices during the COVID-19 pandemic (n=281) *		
Throughout the illness	47	12.2
Every day	155	40.3
Three to four times a week	54	14.0
Rarely	25	6.5
Awareness of traditional and complementary health practices (n=281)*		
Internet. radio. television. magazine. newspaper. etc.	236	61.3
Friends. family. neighbors	36	9.4
Herbalist/Traditional healer	9	2.3
Increase in budget allocated for traditional and complementary health practices during the pandemic (n=281)*		
Yes	137	35.6
No	144	37.4
Recommendation of traditional and complementary health practices to others (n=281)*		
Yes	202	52.5
No	79	20.5

The literature and the study results indicate that individuals' awareness of traditional and complementary health practices comes from sources such as the internet, radio, television, magazines, newspapers, etc. as well as from family, Friends, and neighbors. In line with these results, it is evident that technology has become an important source of information in people's lives, particularly in the field of health. Due to its ability to provide access to information and development most quickly, technology emerges as the most important tool for preserving, enhancing. and strengthening health. However, it is also important for this technology to be used consciously and correctly in all areas, especially in healthcare. The effectiveness of family and friend recommendations in the use of traditional and complementary medicine can be attributed to the importance given to recommendations from close circles, as is the case with many other aspects of our culture, even in the field of health.

In the study it was found that 35.6% of individuals reported an increase in the budget allocated for traditional and complementary health practices during the pandemic. In a study conducted by Erişen and Yılmaz (2020) it was found that during the COVID-19 pandemic, households spent an average of 436.1 TL for health purposes. 1011.9 TL for other purposes, and a total of 1163.3 TL on average. Regarding

health-related expenses in the same study, 207 individuals spent an average of 219.2 TL for foods that were claimed to boost immunity, 99 individuals spent an average of 239.1 TL for dietary supplements (vitamin pills. fish oil. etc.), and 72 individuals spent an average of 314.5 TL for various other health-related expenses (Erişen. & Yılmaz. 2020). These findings suggest that individuals are affected both health-wise and economically during pandemics.

In the study, 52.5% of individuals stated that they would recommend traditional and complementary health practices to others (Table 3). As an interesting finding, in a study by Yılmaz et al. (2018) involving 129 independent pharmacists and 113 primary care physicians. 68% of pharmacists and 42.5% of doctors reported recommending herbal products to patients. But 70.2% of participants stated that they could not provide adequate counseling services (Yılmaz et al., 2018).

CONCLUSION

It is believed that individuals recommend these methods to others because they perceive them as auxiliary to medical treatment and as natural products. It is recommended that healthcare professionals collect data on traditional and complementary health practices during the COVID-19 pandemic and provide education and counseling services to the community on this matter.

ETHICAL DECLARATIONS

Ethics Committee Approval

The study was carried out with the permission of Ethical Committe of Faculty of Medicine, Kırşehir Ahi Evran University (Date:06.04.2021, Decision No: 2021-07/76).

Informed Consent

All patients signed and free and informed consent form.

Refree Evaluation Process

Externally peer-reviewed.

Conflict of Interest Statement

The authors have no conflicts of interest to declare.

Financial Disclosure

The authors declared that this study has received no financial support.

Author Contributions

All of the authors declare that they have all participated in the design, execution, and analysis of the paper, and that they have approved the final version.

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A preventive mental health service for substance use disorder: harm reduction

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ABSTRACT

Harm reduction is a pragmatic approach to reducing the harmful consequences of alcohol and drug use or other high-risk activities, including a variety of strategies, ranging from safer use to controlled use and abstinence. The primary goal of most harm reduction approaches is not to deny or condemn harmful behaviors by individuals, but to work with the individual or community to minimize the harmful effects of a particular behavior. The present review addresses some of the most recent developments related to harm reduction policy, prevention, and treatment programs. This review aims to increase public awareness by presenting some of the current information and developments on harm reduction as a tertiary preventive mental health service for substance use disorders that concern all health professionals, especially psychiatrists, general practitioners, family medicine specialists, psychologists, social workers, and nurses working in the field of dependence.

Keywords: Substance use disorder, harm reduction, preventive mental health

INTRODUCTION

Substance use disorder, which has relapse and remission phases and severely impairs functionality, is a disorder characterized by an unstoppable craving for any substance and the continuation of this craving and the individual's continued use despite negative, self- destructive consequences. The American Psychological Association (APA) considers addiction as a risk factor that negatively affects the health of society. Substance use and dependence, whose importance is increasing and becoming more evident in our country and in the world every day, significantly increases the incidence of infectious diseases such as HIV, Hepatitis C, and mortality rates due to substance use (Yoldaş & Demircioğlu, 2020). An estimated 15.5 million individuals worldwide have a substance use disorder. This leads to very high rates of infectious diseases and mortality. In the United States, untreated substance use disorder has led to death by overdose, resulting in reduced life expectancy over the past three years (Wakeman, 2019). However, the vast majority of individuals with active alcohol or substance problems do not voluntarily seek treatment. Those who do seek treatment are often forced to do so by the courts or other legal requirements or suffer from serious biological problems associated with excessive use that led to detrimental health outcomes (Marlatt & Witkiewitz, 2010). At this point, the focus is on creating programs and policies that address substance use, mostly designed to reduce the availability of illicit substances, reducing the supply, or expanding the existing treatment system. Reducing the supply or expanding the existing treatment system may not target the needs of people who are actively using substances and are at the highest risk of harm or death. However, 'Harm Reduction' offers a practical approach that focuses on reducing negative outcomes and improving the lives and health of people who use substances (Wakeman, 2019).

PREVENTIVE MENTAL HEALTH AND HARM REDUCTION

Preventive mental health has a very important place in protecting the mental health of the society and preventing diseases. Preventive mental health services are services implemented within the scope of primary, secondary, and tertiary levels of protection in order to prevent, delay, shorten the duration of the disease or reduce disability. At the primary level, services such as preventing mental illnesses before they occur, early diagnosis or facilitating access to health services by identifying risky groups; at the secondary level, raining and counseling for mental health diseases, follow-up of individuals with psychiatric illnesses, and at the tertiary level, services such as reducing disability due to psychiatric diseases and reintegrating individuals into society are provided (Attepe Özden, 2015). In this context, 'Harm Reduction' in patients with substance use disorder is a tertiary level preventive health service and aims to minimize

the damage caused by the disease. Harm reduction is a substance use treatment approach that involves reducing risks and improving the quality of life of individuals, regardless of their willingness or ability to quit substance use. Harm reduction approaches include motivational interviewing, medication-assisted treatment, needle exchange programs, distribution of naloxone to counteract the effects of overdose, provision of fentanyl testing kits to opioid users, and safe consumption areas (Collins & Clifasefi, 2023; Moro & Burson, 2018, Carroll, Greene, Noonan, 2018). Many components of these specific interventions could be incorporated into clinical practice. In addition, general principles of harm reduction can inform a patient-centered model of care within both addiction treatment programs and general medical settings to improve patients' health and clinical outcomes. This approach embraces the idea that individuals who continue substance use deserve fair and dignified care delivered with respect and without judgment (Wakeman, 2019). Harm reduction is a pragmatic approach to helping substance users that focuses on improving quality of life rather than maintaining abstinence as the primary goal. It does not require abstinence to be an outcome goal for substance users and aims to provide services that protect the health and well-being of individuals regardless of substance use (Collins & Clifasefi, 2023). Harm Reduction is also a social justice movement built on a belief in and respect for the rights of people who use substances (National Harm Reduction Coalition, 2024). Harm reduction recognizes that people who use substances, like all individuals, are inherently valuable and deserve appropriate care, even if they are "unable or unwilling to stop using substances" (Moro & Burson, 2018). Substance use, whether legal or illicit, is part of our world and efforts should be made to minimize its harmful effects rather than ignoring or condemning them (National Harm Reduction Coalition. 2024). At this point, the attitude of health professionals is very important. A positive attitude of health professionals towards harm reduction strategies can increase patients' compliance with treatment and improve treatment outcomes (Korkmazer, Aslan, Ekingen, 2020). In addition, health professionals' knowledge about harm reduction strategies can help them provide better support to patients during the treatment process (Altındiş, Altındiş, Saylı, 2011). At this point, psychiatric nurses, who are closest to individuals in every field and are in the role of direct caregivers, have an important position in the implementation of harm reduction strategies (Ünsal et al. 2014).

Harm Reduction Strategies

Harm reduction strategies include a wide range of interventions, from prevention programs to treatment programs. Over the past 100 years, policies to address the demand and supply of substances have been implemented alongside policies to reduce the harms of substance use. The ultimate goal of both supply reduction and demand reduction policies is to reduce or remove the use and abuse of illicit substances (Marlatt & Witkiewitz, 2010). In the 2018-2023 National Action Plan and Strategy Document on Combating Drugs, 16 indicators and targets have been set to keep the society away from the use of all kinds of stimulants and drugs. All priorities and activities in the supply. demand, communication and coordination dimension have been prepared to achieve the determined goal. With the 2018-2023 National Action Plan and Strategy Document on Combating Drugs, a road map for combating drugs for a period of 6 years has been determined and the headings are as follows.

- Reducing substance supply
- Reducing demand for substances
- Protective and preventive services
- Counseling. decontamination, treatment and rehabilitation services
- Social cohesion services
- Communication in the fight against drugs

Coordination, monitoring and evaluation of the process of combating drugs

The activities carried out within the scope of the fight against drugs are diverse (Republic of Turkey Ministry of Development, 2018).

Supply reduction: The goal of supply-side reduction is to reduce the availability of illicit drugs, which includes measures such as enforcing foreign policy aimed at eliminating the international cultivation of plants used to make drugs and stopping drug trafficking. To maximize the effectiveness of supply reduction programs, most supply-side efforts have focused on drug sources, including illicit crops, drug laboratories, drug trafficking organizations and street dealers (Marlatt & Witkiewitz, 2010).

Demand reduction: Demand reduction measures include prohibition and treatment. Awareness campaigns, preventive interventions, community social services and support for families, preventing individuals from starting to use substances, preventing experimental use from turning into regular use, providing early intervention in risky consumption patterns and providing treatment and rehabilitation programs are among the demand reduction strategies (Marlatt & Witkiewitz, 2010).

Harm Reduction Programs

Harm reduction policy aims to meet individuals where they are and help individuals and communities reduce the harms associated with drug use and other risky behaviors (Marlatt & Witkiewitz, 2010).

Needle syringe programs: The needle syringe exchange program primarily involves providing new needles/syringes to intravenous drug users and collecting old, used needles/syringes. Other clean injection equipment and condoms are also provided, as well as information on safer injection and safer sex practices. Needle syringe exchange programs are therefore primarily implemented to help reduce the transmission of HIV and other blood-borne viruses among intravenous drug users, and therefore from intravenous drug users to their partners (UNODC, 2012).

Supervised injection facilities: Supervised injection facilities are harm reduction interventions that allow intravenous drug users to use pre-obtained substances under the supervision of health professionals. Studies to determine the effectiveness of supervised injection facilities in terms of harm reduction and social outcomes have found that supervised injection facilities for intravenous drug users can reduce the risk of overdose morbidity and mortality, improve access to care, and do not increase crime or public nuisance in the surrounding community (Levengood et al., 2021).

Opioid substitution: Opioid substitution therapy involves replacing shorter-acting injected heroin with a longer- acting opioid, usually administered orally. Methadone blocks the effects of heroin when taken in high daily doses, allowing individuals to benefit from rehabilitation services. Its effectiveness is supported by randomized controlled trials and observational studies showing that it reduces heroin use, criminal activity and HIV transmission while users remain in treatment (Hall & Lucke, 2013).

Overdose prevention programs: In the past two decades, more than 750,000 lives have been lost due to drug overdoses. Access to life-saving tools could have prevented many of these tragic deaths. Overdose prevention programs focus on policies that put people in greater harm, including substance use controls, housing affordability crises, and limited access to effective drug treatment (National Harm Reduction Coalition, 2024).

School based substance use prevention programs: School-based prevention programs are considered one of the most effective strategies to reduce substance use among youth (Gingiss, Roberts-Gray & Boerm, 2006). Findings from numerous studies examining the effectiveness of youth substance use disorder prevention programs suggest that substance use prevention programs that include skills training aimed at changing attitudes, promoting social and emotional abilities, critical thinking, and problem-solving produce more beneficial outcomes than traditional intervention approaches that focus solely on changing perceptions and attitudes towards drugs (Alarcó-Rosales et al., 2021). School-based substance use prevention programs. and intervention programs that include behavioral and skills training to change attitudes and improve social and emotional abilities in early adolescence have shown promising results in reducing substance consumption and promoting attitudes that lead to rejection of drugs (Zins & Elias, 2007). As schools provide more opportunities to conduct intervention programs, it is important that intervention programs can be incorporated into school curricula.

Brief alcohol screening and intervention for university students: Alcohol prevention and treatment interventions for college students, including motivational interviewing cognitive behavioral skills (e.g., alcohol-related skills training) and individualized normative feedback, have received substantial empirical support for effectiveness among college students (Marlatt & Witkiewitz, 2010). The Brief Alcohol Screening and Intervention for College Students is a brief intervention that includes education about the effects of alcohol on the brain and behavior, skills training, risk awareness, expectancy information, and personalized feedback about drinking behavior with components of cognitive behavioral treatment, including suggestions for less risky drinking habits as well as brainstorming alternatives to heavy alcohol consumption (Marlatt et al., 1998).

Web-based or computer-implemented interventions: Recent research has evaluated extensions of harm reduction approaches to be delivered through Web-based or computer-mediated interventions. Importantly, Web or computer- based methods allow for complete anonymity and also allow individuals to and use the program when it is most needed. Web or computer-based interventions are developed to address issues such as alcohol, substance and tobacco use, weight loss, nutrition, activity, violence, stress and coping (Marlatt & Witkiewitz, 2010).

SITUATION IN TURKEY

Turkey is a country where a "Prevention Policy" is implemented in relation to substance use and dependence. Although it is seen as an advantage that it is not at the point of "harm reduction" unlike many European countries in terms of this feature, situations such as not taking preventive and protective measures and not implementing intervention programs with proven effectiveness and sustainability may cause the risk of substance use and dependence to increase. For this reason, the development of protective and supportive psycho-education programs with universal validity, taking into account the cultural characteristics of the target group, is considered as a very functional solution proposal in terms of protecting individuals from risks (Yoldaş & Demircioğlu, 2020). Although it is not possible to provide these interventions with campaigns on certain days, well- organized and planned studies are required in which inter-institutional cooperation is ensured in every field. Treatment and rehabilitation opportunities for individuals with substance use disorders are not sufficient and of the same quality in all parts of our country, and the number of individuals specialized in this field is not sufficient to carry out this service. As for harm reduction, no policy has been developed in Turkey so far (Psychiatry Association of Turkey, 2024).

CONCLUSION

Harm reduction is a practical and compassionate approach that aims to alleviate the negative consequences associated with alcohol and substance use, as well as other high-risk behaviors. It covers a wide range of strategies, ranging from safer consumption practices to controlled use and even abstinence. It is of great importance to set specific goals for the implementation of these strategies in the fight against substance use disorder and to support scientific studies to achieve these goals. For this purpose, state policies should be established, and inter-institutional cooperation should be maintained. Preventive activities are also of great importance in order to raise awareness throughout the society and to prevent the formation of negative attitudes towards individuals who use substances. Identifying risk groups and developing special approaches for these groups can help prevent the spread of substance use and reduce the harms suffered by individuals.

ETHICAL DECLARATIONS

Referee Evaluation Process

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Conflict of Interest Statement

The authors have no conflicts of interest to declare.

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Author Contributions

All of the authors declare that they have all participated in the design, execution, and analysis of the paper, and that they have approved the final version.

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Nursing care of a child with autism spectrum disorder and family according to Peplau's theory of interpersonal relations: case report

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ABSTRACT

Nursing theories and models serve as a guide by creating a standard for nursing care. Thanks to theories and models, the quality of patient care and the professional development of nurses increases. Hildegard E. Peplau, who created the 'Interpersonal Relations Theory' between the patient and the nurse in nursing, emphasized the communication between the patient and the nurse and stated that nurses should help the healing process by providing emotional support as well as physical care. Autism spectrum disorder, which requires multidisciplinary and biopsychosocial care, is an increasingly increasing neurodevelopmental disorder that affects the health of children and families. Autism spectrum disorder affects the child and family's physical and mental health, economic situation, routines, social life and interaction with other people. In this case report, nursing care was given and reported to a child with autism spectrum disorder who was hospitalized with pneumonia and child's family within the framework of Peplau's interpersonal relations theory.

Keywords: Autism, nursing care, nursing theory

INTRODUCTION

Autism spectrum disorder (ASD) is a lifelong developmental and neurological disorder in which stereotypic behaviors, social interaction, and communication problems occur in early childhood (National Institute of Mental Health, 2024). The incidence of ASD is increasing day by day, and according to the data of the Center for Disease Prevention and Control, ASD is seen in 1 in every 36 children (CDC, 2023). Although there is no clear data on the frequency of ASD in Turkey, it is stated that 1 in 222 children has ASD, according to the Ministry of Health (Republic of Türkiye Ministry of Health, 2022). Children with ASD frequently exhibit behaviors such as indifference to their surroundings, lack of eye contact, aimless repetitive behaviors, difficulties with language development, an excessive interest in spinning objects, food selectivity, excessive or inappropriate reactions, and hitting and biting themselves or others (NIHM, 2024). These basic problems affect family members, especially children. It has been stated that the stress level of families with children with ASD increases, they are exposed to stigma and are excluded (Yağcıoğlu & Atman, 2023). Nurses have an important role in providing biopsychosocial care to the child and family, starting from the diagnosis phase of ASD, which needs to be addressed in a multidisciplinary manner (Dertli & Başdaş, 2022). Nurses utilize nursing theories and models as guides to provide these care services. Hildegard E. Peplau, who developed the 'Interpersonal Relations Theory' of the patient and the nurse in nursing, highlighted the necessity of communication between the patient and the nurse, as well as the fact that emotional support and physical care aid in the healing process (Karadağ et al., 2017). In this case report, the nursing care given to a child with ASD and his parents, who were hospitalized with a diagnosis of pneumonia, was discussed using the theory of interpersonal relations.

Hildegard E. Peplau and Interpersonal Relations Theory

Peplau's Interpersonal Relations Theory, which she developed using behavioral and biological sciences, examined the psychological implications of conduct, emotions, and events within the context of nursing efforts and assigned a significant role to nurses in patient rehabilitation (Meleis, 2011). According to Peplau, human beings are organisms that live by establishing a balance within psychological, physiological and social variations (Alligood, 2017).

Peplau believes that biological and social processes are required for good health. According to Peplau, the most significant interventions that nurses may provide for patient care include recognizing and reducing anxiety (McKenna,

2006). Peplau defined nursing as 'an important, therapeutic and interpersonal process' and emphasized that nurses should accept the patient as she is and use it to improve interpersonal relationships, protect health or provide education (Fawcett & DeSanto-Madeya, 2012). According to Peplau's theory, the nursing process consists of four stages: orientation, identification, exploitation and resolution.

Orientation: This is the stage where the patient or his family consults healthcare professionals regarding their needs. At this stage, nurses collect data and determine the patient's problems and needs. After the identified problem is identified, an environment should be provided where the patient and family can express their concerns (Alligood, 2017).

Identification: It is a stage where there is mutual solidarity and the patient shares problems and concerns with the nurse. In this phase, expectations, goals and perceptions are determined between the patient and the nurse. Patient reactions may vary and nurses should manage this in a professional and therapeutic manner (Fawcett & DeSanto-Madeya, 2012).

Exploitation: This is the stage where the patient can benefit from all services available according to patient's needs and interests. At this stage, nurses should support the patient in identifying problem and developing a coping method with a therapeutic attitude that includes acceptance, interest and trust. (Alligood, 2017).

Resolution: At this stage, all stages were carried out successfully and the care required by the patient was completed with nurse-patient cooperation. The patient who feels independent from the nurse may tend to new goals (McKenna, 2006).

CASE

The parent of the case was interviewed and an informed consent form was obtained for the case presentation.

Introductory Information

A nine-year-old male case with autism spectrum disorder (ASD) was attending the 2nd grade at an application school affiliated to the Ministry of National Education and receiving support from a private rehabilitation center.

Reason for Coming to the Hospital

The case was admitted to the hospital on 22.02.2024 with complaints of fever up to 40 degrees Celsius, diarrhea, cough for two months and decreased feeding. As a result of physical examination, chest radiography and laboratory findings, the case was diagnosed with pneumonia and hospitalized in the pediatric clinic.

Health History

The case was born in 2015 at 2750 g with normal vaginal delivery. The case had a history of jaundice after birth, and atrial septal defect was detected and followed up during examination. The atrial septal defect did not close and the case was operated and treated at the age of one year. During this period, undescended testicle was detected in the case, but the mother did not want surgical treatment because they had just undergone surgery. The case received treatment to support motor development in a rehabilitation center due to his motor development lagging behind. The case started to walk after the age of two with the treatment. The mother of the case applied to child psychiatry when the case was two and a half years old, noticing that the case did not react when called by name, did not speak, constantly opened and closed cabinet doors and did not react to anything else while watching television. As a result of the evaluations, the case was diagnosed with ASD. It is known that the case was frequently hospitalized due to respiratory system diseases since infancy. All childhood vaccinations were complete according to his age.

Physical Examination Findings

Weight and height of the case are in the 3rd percentile. Head, neck, eye and ear examinations were normal. Nasal examination revealed occasional discharge and occasional congestion. It was observed that the inside of the mouth was pink, there were sores on the gums, 2 teeth had caries, and 3 of the main teeth had come out. There is dryness and cracks on the lips. Skin turgor is normal, hygiene is not good. Edema, cyanosis, petechiae, purpura were not observed and there is a scar on the sternum due to atrial septal defect surgery. Respiratory sounds are coarse and mild rales are heard in the right lung. He had a habit of underfeeding and consuming certain foods. The case consumes soup, yogurt, bread, baby biscuits and chips most frequently. While the case can consume bread and water by herself, she consumes other foods with the help of her mother. The case uses a bottle especially when consuming baby biscuits. Fluid consumption does not exceed 1 liter per day. There is no use of additional vitamins and iron preparations. The mother reported occasional nausea and vomiting at home. The case has no toilet habits and uses diapers. It is known that the case frequently suffered from constipation, assumed the fetal position while stooling and her face was flushed. There was no abdominal tension, mass, hardness or tenderness, but bowel sounds were decreased. It was observed that the mother of the case cleaned from back to front during diaper changes. Stool and urine output was normal during hospitalization. The case has no daytime sleeping habits, sleeps for 7-8 hours at night and sleeps with his mother. The activation level of the case was high, fatigue, weakness and weakness were not observed during activity. His mother takes care of his self-care (Table 1).

Table 1. Sample life findings of the case

Date	Time	Temperature (°C)	Pulse (beats/min)	Respiration (breaths/min)	Saturation (%)
28.02.2024	09:00	37	120	28	96
	12:00	36.8	86	26	97
	15:00	36.5	117	28	97
27.02.2024	09:00	36.6	91	28	96
	12:00	36	90	26	96
	15:00	36.5	110	26	96
26.02.2024	09:00	36.7	154	30	91
	12:00	37	135	28	91
	15:00	37.5	128	26	95

Laboratory studies: Abnormally low/high laboratory results of the case dated 24.02.2024: MCV (79.4 fL), glucose (177 mg/dL), CRP (25 mg/L). Blood gas results: pH (7.402), pCO_2 (45.1 mmHg), pO_2 (21.0 mmHg).

Ordered drugs: Ceftriaxone 1x2 gr. (IM), Ventolin 8x2 (INH), Klin 3x200 mg. (PO), Iprasal 4x1 (INH), Cortair 2x0.5 (INH), Sedadomid 100 µg 24 hours intravenous infusion with 24 cc saline, 200 cc saline 2 hours intravenous infusion.

Family characteristics: The case lived as a nuclear family in an apartment in the center of a city in the Central Anatolia region of Turkey. The mother was 37 years old and unemployed. The mother's pregnancy history was gravida:1, para:1 and abortion:0. The mother stated that menstruation continued during pregnancy and that she used analgesics, antibiotics, antispasmodics and cigarettes. The mother's medical history included cardiac rheumatism and asthma. After the diagnosis of ASD, the mother applied to the psychiatry outpatient clinic because she had psychological difficulties, her thoughts became complex and she started to hear voices and antipsychotic treatment was started. The father of the case was 40 years old and worked as a market vendor. It was learned that the father had a history of heart disease. The mother stated that her relationship with her husband was neither good nor bad and that the case could recognize her but she could not recognize her father and did not see him frequently. The nursing process of the case according to Peplau's Interpersonal Relations Theory is explained in Table 2.

DISCUSSION

In this case report, the orientation, identification, utilization and resolution stages in Peplau's theory were used to ensure that the nursing care of the patient and his family was maintained. The positive relationship between the patient's mother and the nurses contributed to meeting the psychosocial needs of the patient and her mother and maintaining appropriate nursing care.

Table 2. Nursing process according to peplau interpersonal relations theory

Orientation		Identification	Exploitation	Resolution
1. Data: Ineffective cough due to pneumonia, pathologic lung sounds (rales), nasal congestion.	Problem (NANDA I Nursing Diagnosis): Ineffective Airway Clearance	Airway patency will be ensured, effective cough and normal lung sounds will be heard.	-Respiratory sounds, respiratory rate and pattern, oxygen saturation, airway patency, color and odor of sputum were monitored. -Oxygen and bronchodilator drugs were administered with the ordered 10 lt/min reservoir mask. -Since the case did not like to be touched by strangers, the mother was taught postural drainage and the case was allowed to apply it. -The mother was interviewed about smoking in the presence of the case and her exposure to passive smoke was examined. The mother stated that she did not smoke around the case and was careful.	Airway patency and clearance were achieved and respiratory parameters improved.
2. Data: The case had difficulty during defecation, assumed the fetal position and grimaced. Stool is hard, dark in color and bowel sounds are decreased.	Problem (NANDA I Nursing Diagnosis): Constipation	The passage of soft stool will be regular, unforced and painless.	-Information was obtained from the mother about the case's emptying pattern at home and in the hospital. It was learned that the case had frequent constipation at home. -Information was obtained about the case's nutritional characteristics, food content and water consumption. The mother was informed about fiber foods, probiotics and water consumption in the diet of the case. -The bowel sounds of the case were listened and the abdomen was palpated. -The mother of the case was informed about abdominal massage. -The information that the case had constipation was shared with the nurses and physicians in the team.	The mother of the case stated that she understood the importance of fiber, probiotics and water consumption in preventing constipation. She was able to apply abdominal massage in the direction of colon activity. Pharmacologic treatment was added to the case's order.
3. Data: Lack of regular mealtimes, food refusal, frequent consumption of junk food such as chips, poor appetite, under-nutrition.	Problem (NANDA I Nursing Diagnosis): Ineffective Child Nutrition Dynamics	The case will consume foods with high nutritional value to meet body needs.	-The mother of the case was interviewed about the diet of the case and the content and amount of food consumed. -It was learned that the case had no appetite and consumed certain foods such as soup, bread, baby biscuits and yogurt. The mother was informed about improving the nutritional content of these foods. For example, giving bread with egg instead of dry bread, preferring soups with high protein and vitamin value such as vegetable soup, chicken soup, making yogurt at home. -The mother of the subject was encouraged to try adding new foods to the diet. -Suggestions were made to the mother of the victim to establish a diet at home, to have set meal times and to have the whole family eat together. -The mother of the case was informed about the harms of junk foods such as chips. In addition, it was observed that the case consumed some foods with a bottle and the use of a bottle was discussed with the mother.	The mother of the case stated that she understood the information on child nutrition and would implement it.
4. Data: Low and ineffective social interaction with the environment due to the fact that the case has autism spectrum disorder.	Problem (NANDA I Nursing Diagnosis): Impaired Social Interaction	The social interaction of the case will be increased.	-The social interaction of the case was evaluated. It was learned that the case could only say a few words and could show some requests by pointing. -Communication with the case was maintained and games were played every time the case went to his room. -The mother of the case was told about the importance of maintaining communication with the caes within the family, playing games together and ensuring the continuity of education in the rehabilitation center. The mother of the subject was informed about the benefits of music therapy, animal-assisted activities and peer-mediated interaction for children with autism and about access to these services.	-The case's interaction with hospital nurses and nursing students increased. It was observed that the case played games and enjoyed it.
5. Data: The case had self-injurious behavioral problems due to autism spectrum disorder. The subject hit his head on the bed borders in the hospital, hit toys such as cars/buses on his head, and hit the surrounding objects while flapping his hands and arms.	Problem (NANDA I Nursing Diagnosis): Risk for Injury	A safe environment will be created in the hospital and at home to ensure the safety of the case.	-Bed borders were wrapped with soft sheets and blankets. -The case was allowed to play with toys made of soft materials instead of toys made of hard materials. -The wheels of the plastic bus, which was the adolescent's favorite toy, were completely removed because the adolescent took the wheels off and put them in his mouth. -The mother of the case was given training on the prevention of home accidents (such as assembling the furniture, preferring toys with soft materials and not preferring toys with small parts such as beads and wheels that may cause foreign body aspiration, storing medicines and sharps).	-The case was not injured during hospitalization in the clinic. The mother of the case stated that she understood the information provided to reduce the risk of injury.

Table 2. Nursing process according to peplau interpersonal relations theory (Continued)

Orientation		Identification	Exploitation	Resolution
6. Data: The mother of the case had an anxious facial expression and expressed that she was anxious.	Problem (NANDA I Nursing Diagnosis): Anxiety	The mother of the case will be helped to manage her anxiety and reduce anxiety.	-When the mother of the case was met, it was observed that she was angry and anxious. The mother was met and therapeutic communication was established. -In the first interview, the mother of the case described the communication conflict she had recently experienced with other nurses in the clinic in an anxious manner. The mother was listened to without judgment and an atmosphere of trust was restored. The mother was able to express her feelings, thoughts and concerns comfortably. -In subsequent interviews with the mother, it was learned that she was concerned not only about her communication with the nurses but also about her child's safety, health and future. The mother stated that she was worried while sending her child to the rehabilitation center and that she thought that the child could be harmed by the environment, so she went to the rehabilitation center with her child. Suggestions were made to the mother to ensure the safety of her child while at the same time being able to maintain her own life. -In another interview with the mother, the mother stated that her child would enter adolescence in the future and that she had concerns about continuing to care for her child in this situation. The mother was informed about the care of children with ASD in adolescence, problems that may be encountered and solutions.	-After sharing her concerns, the mother expressed that it was good for her to talk to someone, that her worries had decreased after getting information, and continued the communication with a relaxed expression.
7. Data: The fact that the mother undertook all the care of the case, the mother had no social support, and the mother had anxiety about caring for her child.	Problem (NANDA I Nursing Diagnosis): Caregiver Role Strain	It will be ensured that the mother of the case receives support in the care process and her difficulties and anxieties regarding care will be reduced.	-The mother was encouraged to share her feelings, concerns, uncertainties and fears as a caregiver. -Support systems where the mother could share the burden of care were examined. The mother was informed about public and non-governmental organizations where she could receive support. -The mother was taught stress coping methods (breathing exercises, relaxation exercises, etc.) to alleviate the psychological distress caused by the strain of caregiving.	-The mother was able to share her feelings easily and correctly apply the breathing and relaxation techniques taught.
8. Data: The mother of the case had false beliefs about the disease and insufficient knowledge about care.	Problem (NANDA I Nursing Diagnosis): Deficient Knowledge	The case's mother's lack of information will be addressed.	-During the interviews with the mother of the case, it was learned that the mother thought that the cause of autism was due to the medications used during pregnancy. The mother was informed about autism and her questions were answered. -It was observed that the mother did not clean the perineum correctly during diaper changes, increasing the risk of urinary system infection and contamination. The mother was given practical training on perineal care. (The mother's lack of knowledge related to other nursing diagnoses was addressed in the related diagnoses).	The mother's false beliefs about ASD were corrected. The mother correctly cared for the perineum at the next diaper change.
9. Data: The case and his/her family's withdrawal from social life due to exposure to negative attitudes, behaviors and stigmatization of the environment.	Problem (NANDA I Nursing Diagnosis): Social Isolation	The case and his/her family will be supported to participate in social life.	-Therapeutic communication was established with the mother. The mother explained that due to ASD, the behaviors of the case were negatively perceived by the people around them and that they were exposed to negative looks and pushing in areas such as parks, streets and public transportation. The mother stated that they did not have a social life because of these negative reactions they received from their environment. The mother stated that the case was like a "shadow" of herself and that they were always together and that she did not have a social life independent of the case. -Social support systems of the case and her family were investigated. The mother stated that they did not receive emotional or social support from anyone. -The coping status of the mother of the case with social isolation was evaluated. It was learned that the mother felt lonely, had no one to share her feelings with and kept her feelings bottled up. The mother was encouraged to seek emotional and psychological support. -The mother of the case was encouraged to contact the families of children with similar conditions in the rehabilitation center. It was discussed that peer support groups could be established with the support of the nurse.	-The mother of the case expressed that she would be able to have easier contact with the mothers of children with similar conditions in the peer support group and expressed her willingness to meet with them after discharge.

CONCLUSION

Peplau's theory provides an important framework to increase the satisfaction of the patient and his family in the recovery process by emphasizing the importance of interpersonal relationships that form the basis of nursing care.

ETHICAL DECLARATIONS

Informed Consent

All patients signed and free and informed consent form.

Refree Evaluation Process

Externally peer-reviewed.

Conflict of Interest Statement

The authors have no conflicts of interest to declare.

Financial Disclosure

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Author Contributions

All of the authors declare that they have all participated in the design, execution, and analysis of the paper, and that they have approved the final version.

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