

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

 Selin Söyünmez,  Nagihan Merve Söylemez

Department of Nursing, Faculty of Health Sciences, Kırşehir Ahi Evran University, Kırşehir, Türkiye

Received: 03/03/2024

Accepted: 21/03/2024

Published: 24/03/2024

Cite this article: Söyünmez, S., Söylemez, N. M. (2024). Nursing care of a child with autism spectrum disorder and family according to Peplau's theory of interpersonal relations: case report. *J Nurs Care Res.* 1(1),24-28.

Corresponding Author: Selin Söyünmez, selin.soyunmez@ahievran.edu.tr

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 (Allgood, 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. (Allgood, 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), pCO₂ (45.1 mmHg), pO₂ (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

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.

REFERENCES

- Alligood, M.R. (2017). *Nursing Theorists and Their Work-E-Book: Nursing Theorists and Their Work-E-Book*. Elsevier Health Sciences.
- Centers for Disease Control and Prevention. (Date of access: 2 March 2024). Data & Statistics on Autism Spectrum Disorder. <https://www.cdc.gov/ncbddd/autism/data.html>
- Dertli, S., & Başdağ, Ö. (2022). In the adaptation process of parents with a child diagnosed with autism using the human-to-human relationship model. *Archives Med Rev J*, 31(3),237–242.
- Fawcett, J., & DeSanto-Madeya, S. (2012). *Contemporary nursing knowledge: Analysis and evaluation of nursing models and theories*. Fa Davis.
- Karadağ, A., Çalışkan, N., & Göçmen Baykara, Z. (2017). *Nursing theory and models*. Academy Press and Publishing.
- McKenna, H. (2006). *Nursing theories and models*. Routledge.
- Meleis, A. I. (2011). *Theoretical nursing: Development and progress*. Lippincott Williams & Wilkins
- National Institute of Mental Health. (NIMH). *Autism spectrum disorder*. <https://www.nimh.nih.gov/health/topics/autism-spectrum-disorders-asd>. Access Date: 2 March 2024

Republic of Türkiye Ministry of Health. (2022). Autism spectrum disorder family guide. <https://shgm.saglik.gov.tr/Eklenti/43594/0/osb-aile-rehberi-2022pdf.pdf?tag1=CDD47D57EF8D46016D789D4FADD5F3CF917BFE2C> Access Date: 03.03.2024

Yağcıoğlu, Ö., & Atman, B. Y. (2023). Investigation of parents' views on the services from autism day care and family counseling centers. *J Soc Policy Studies*, 23(61),833-857.