DOI 10.18471/rbe.v36.44858 Original Article

NURSING DIAGNOSES AND INTERVENTIONS IN CHILDREN WITH AUTISM SPECTRUM DISORDER: PERSPECTIVE FOR SELF-CARE

DIAGNÓSTICOS E INTERVENÇÕES DE ENFERMAGEM EM CRIANÇAS COM TRANSTORNO DO ESPECTRO AUTISTA: PERSPECTIVA PARA O AUTOCUIDADO

DIAGNÓSTICOS E INTERVENCIONES DE ENFERMERÍA EN NIÑOS CON TRASTORNO DEL ESPECTRO AUTISTA: PERSPECTIVA PARA EL AUTOCUIDADO

Juliana Macêdo Magalhães[1]
Geovana Raíra Pereira de Sousa[2]
Denise Silva dos Santos[3]
Tamires Kelly dos Santos Lima Costa[4]
Thays Magda Dias Gomes[5]
Marly Marques Rêgo Neta[6]
Delmo de Carvalho Alencar[7]

How to cite this article: Magalhães JM, Sousa GRP, Santos DS, Costa TKSL, Gomes TMD, Rêgo Neta MM, et al. Nursing diagnoses and interventions in children with autism spectrum disorder: perspective for self-care. Rev baiana enferm. 2022;36:e44858.

Objective: to describe nursing diagnoses and interventions in children with autism spectrum disorder based on nursing taxonomies and self-care theory. Method: exploratory and descriptive study, with a qualitative approach with 11 children and based on the application of the nursing process. International Nursing Diagnoses: definitions and classification taxonomy was used to define nursing diagnoses, self-care theory and nursing interventions classification recommendations for intervention planning. Results: social isolation, lack of motivation and dependence to perform activities were the main problems raised. The diagnostic statements that allowed the structuring of 27 nursing interventions comprised the deficit in self-care for food, bathing and intimate hygiene; social isolation; and the willingness to improve self-care. Final considerations: the capacity for self-care was compromised, requiring effective nursing strategies aimed at the child and family members.

Descriptors: Autism Spectrum Disorder. Child. Self Care. Nursing Diagnosis. Nursing Care.

Objetivo: descrever os diagnósticos e as intervenções de enfermagem em crianças com transtorno do espectro autista fundamentados em taxonomias de enfermagem e na teoria do autocuidado. Método: estudo exploratório e descritivo,

[1] Nurse. PhD in Biomedical Engineering. Professor at the University Center UNINOVAFAPI. Teresina, Piauí, Brazil. http://orcid.org/0000-0001-9547-9752.
[2] Nurse. Independent Researcher. Teresina, Piauí, Brazil. http://orcid.org/0000-0002-9298-7062.
[3] Nurse. Independent Researcher. Teresina, Piauí, Brazil. http://orcid.org/0000-0002-4264-5275.
[4] Nurse. Independent Researcher. Teresina, Piauí, Brazil. http://orcid.org/0000-0001-9735-5972.
[5] Nurse. Independent Researcher. Teresina, Piauí, Brazil. http://orcid.org/0000-0002-5028-5628.
[6] Nurse. MSc in Nursing. Nurse at the Mixed Heath Unit of Matias Olímpio. Matias Olímpio, Piauí, Brazil. http://orcid.org/0000-0003-4049-7894.
[7] Nurse. PhD in Public Health. Professor at the Universidade Federal do Piauí. Picos, Piauí, Brazil. delmo-carvalho@hotmail.com http://orcid.org/0000-0002-6555-7921.

com abordagem qualitativa com 11 crianças e embasado na aplicação do processo de enfermagem. Utilizou-se taxonomia International Nursing Diagnoses: definitions and classification, para definição dos diagnósticos de enfermagem, a teoria do autocuidado e as recomendações da Nursing Interventions Classification para planejamento das intervenções. Resultados: isolamento social, falta de motivação e dependência para execução de atividades constituíram os principais problemas levantados. As afirmativas diagnósticas que possibilitaram a estruturação de 27 intervenções de enfermagem, compreenderam o déficit no autocuidado para alimentação, banho e higiene íntima; o isolamento social; e a disposição para melhora do autocuidado. Considerações finais: a capacidade para o autocuidado esteve comprometida, requerendo estratégias de enfermagem efetivas voltadas para a criança e para os familiares.

Descritores: Transtorno do Espectro Autista. Criança. Autocuidado. Diagnósticos de Enfermagem. Cuidados de Enfermagem.

Objetivo: describir diagnósticos e intervenciones de enfermería en niños con trastorno del espectro autista basados en taxonomías de enfermería y teoría del autocuidado. Método: estudio exploratorio y descriptivo, con abordaje cualitativo con 11 niños y basado en la aplicación del proceso de enfermería. International Nursing Diagnoses: se utilizó la taxonomía de definitions and classification para definir los diagnósticos de enfermería, la teoría del autocuidado y las recomendaciones de Nursing Interventions Classification para la planificación de la intervención. Resultados: el aislamiento social, la falta de motivación y la dependencia para realizar actividades fueron los principales problemas planteados. Las declaraciones diagnósticas que permitieron la estructuración de 27 intervenciones de enfermería comprendieron el déficit en el autocuidado de la alimentación, el baño y la higiene íntima; aislamiento social; y la voluntad de mejorar el autocuidado. Consideraciones finales: la capacidad de autocuidado se vio comprometida, requiriendo estrategias de enfermería efectivas dirigidas al niño y a los miembros de la familia.

Descriptores: Trastorno del Espectro Autista. Niño. Autocuidado. Diagnóstico de Enfermería. Atención de Enfermería.

Introduction

Autism Spectrum Disorder (ASD) comprises a chronic neurodevelopmental deficiency characterized by impairments in social interaction, language and communication, as well as repetitive, restricted and stereotyped patterns of behavior, interests and activities[1].

According to the report by the Centers for Disease Control and Prevention (CDC), the number of people with ASD has increased significantly in recent decades. In 2018, the estimate of 8-year-olds with ASD was 1 in 54. In 2021, the prevalence increased by 22% compared to the last study, resulting in a number of 1 for 44 children[2].

A study observed that if these numbers were allocated to Brazil, the country would have approximately 4.84 million autistic people. However, even with estimates in some Brazilian states, the country still lacks studies that allow reaching a number that totals all cases[3]. In the state of Bahia, for example, it is estimated that 220,000 individuals have ASD[4].

Due to scientific advances and improvements in diagnostic resources, there has been a considerable increase in epidemiological projections in recent years, indicating the prevalence of the disease in males and in the child-juvenile context[5]. From this perspective, it is estimated that 1 in 59 children have ASD and that the manifestation may result from the interaction between different biological, genetic, environmental and immunological factors[6].

The literature highlights that the illness due to ASD, as well as its coping, is associated with changes in the child's standard of living and family dynamics. Thus, it requires the structuring of care services as a fundamental strategy for accepting the diagnosis and adapting to new demands and care routine[7-8].

In this context, specialized follow-up, including nursing, is a viable alternative to predict basic needs and minimize the impacts of the disease. This follow-up expresses the need to form a support network and social support, as well as interventions favorable to the promotion of self-care, stress reduction and maintenance of well-being[9].

Thus, nurses play a relevant role in the care process and in the execution of systematized, integral and individualized actions supported by the understanding of nursing diagnoses and interventions, for structuring care in elements of quality, safety and effectiveness. In addition, these conditions allow optimizing the work process and generating optimized health results[10].

Thus, the use of theories, such as Dorothea Orem's, can support nursing care. This theory is divided into three categories: self-care, self-care deficit and nursing systems. Self-care is the execution or performance of practical activities, on the part of individuals, for their own benefit, aiming at the maintenance of life, health and well-being. The self-care deficit occurs when there is disability or limitation on the part of individuals to promote continuous and effective self-care, requiring self-care agents, such as nurses. Nursing systems understand nursing as a human action, because these are systems of action conceived and produced by nurses through the exercise of their practice with people who have self-care limitations[11].

Thus, the application of this theory can mainly promote the identification of deficits, besides supporting the development of interventions with methods that help the individual to manage his/her care, favoring the maintenance and improvement of his/her quality of life[12].

However, there is a lack of studies on nursing diagnoses and interventions related to the care of children with ASD. Considering this assumption, this investigation was guided by the following question: What are the nursing diagnoses and interventions in children with autism spectrum disorder based on nursing taxonomies and the theory of self-care?

Therefore, the study aimed to describe nursing diagnoses and interventions in children with autism spectrum disorder based on nursing taxonomies and self-care theory.

Method

This is an exploratory and descriptive study, with a qualitative approach, conducted in an *Associação de Amigos dos Autistas* (AMA) located in the state of Piauí, Brazil.

AMA was founded on January 29, 2000 and currently 103 children with ASD are registered. This institution aims to help parents and friends of autistic children find support and technical support for education and treatment of their children. Currently, the AMA has the support of a multidisciplinary team, including: social workers, teachers, physical educators, psychologists, neuropediatricians, psychopedagogists, physiotherapists and speech therapists, promoting bonds, trust and arousing social co-participation on ASD.

Data were collected from June 1 to 29, 2019. The study population consisted of children with ASD. For inclusion, the following criteria were considered: children registered with the AMA for at least 6 months, having a companion with basic reading comprehension, being in the age group between 6 and 10 years, of both sexes. Exclusion was conditioned to the presence of cognitive or psychomotor impairments that made it impossible to understand the approach or participate in the research. Under these conditions, the sample consisted of 11 participants.

The methodological trajectory was delimited in four stages: application of the data collection instrument; identification of problems; preparation of nursing diagnoses; and development of nursing intervention proposals, from the perspective of Dorothea Orem's theory of self-care[13].

In the first stage, the data collection instrument developed based on the nursing process was applied. This considered two thematic axes: one aimed at the responsible family member, in which sociodemographic variables were prioritized; and the other, to the child, with children's illustrations about the activities of daily living related to self-care.

Thus, the children were asked to identify, in the instrument, the images that involved activities that they could not perform alone, thus enabling anamnesis. Following the stages of the nursing process, the problems related to

self-care listed by the child and family members were identified and the nursing diagnoses were elaborated, which were based on the Taxonomy International Nursing Diagnoses: definitions and classification (NANDA)[14].

To define nursing diagnoses, the defining characteristics, as well as related conditions or risk factors, were considered, leading to the planning of interventions that were based on the theory of self-care and the recommendations proposed by the Nursing Interventions Classification (NIC)[15].

It should be emphasized that, for the theory of self-care, nursing actions are associated with the intention to make the person, complete or partially, capable of knowing how to regulate care for themselves or their dependents, besides being able to commit themselves to the continuation of the performance of these measures[12].

The ethical recommendations were preserved, and the study was approved by the Research Ethics Committee , under Opinion n. 3,415,172.

Results

The descriptive analysis of the results showed the prevalence of male children, who lived with parents, with basic level of education (elementary school), maximum family income of two minimum wages and specialized follow-up time from 2 to 6 years, as shown in Table 1.

Table 1 – Sociodemographic characterization of autistic children from the *Associação de Amigos dos Autistas*. Teresina, Piauí, Brazil – 2021. (N=11)

Variables	n	%
Sex		
Female	1	9.1
Male	10	90.9
Lives with		
Parents	7	63.62
Mother and grandfather	2	18.18
Mother and stepfather	1	9.1
Grandparents	1	9.1
Elementary Education		
Elementary Education I	6	54.54
Elementary Education II	2	18.18
Does not study	3	27.28
Monthly income		
Below 1 minimum wage	5	45.45
1 minimum wage	4	36.36
2 minimum wages	2	18.18
Time of specialized follow-up		
2 - 4 years	8	72.72
4 - 6 years	3	27.28

Source: Created by the authors.

The approximation with the studied group resulted in the establishment of bonds and allowed the identification of individual and singular demands that emerged in the daily life of the participants. Among the main challenges elucidated in this study are: social isolation and lack of motivation for food, bathing and oral hygiene. Other aspects of self-care were also compromised, including the activities of combing hair, dressing and dressing autonomously and independently.

In view of the identification of the problems, the nursing diagnoses were established, according to the taxonomy of NANDA, also presenting the related factors and the defining characteristics (Chart 1).

Chart 1 – Nursing diagnoses established for children with Autism Spectrum Disorder

Title	Related factors	Defining characteristics
Deficit in self-care for food.	Decreased motivation	Impaired ability to pick up food with utensils.
Deficit in self-care for bathing, characterized by impaired ability to wash the body.	Decreased motivation	Impaired ability to wash the body.
Deficit in self-care for dressing.	Decreased motivation	Impaired ability to dress each item of clothing (dressing and putting on shoes).
Deficit in self-care for intimate hygiene.	Decreased motivation	Impaired ability to use assistive devices (shoes).
Deficit in self-care for oral hygiene.	Decreased motivation	Impaired ability to close clothes.
Social isolation.	I wish to be alone	Impaired ability to perform intimate hygiene.
Willingness to improve self-care.	–	Impaired ability to brush teeth.

Source: Created by the authors.

In view of these diagnoses, Chart 2 shows the planned nursing intervention proposals, according to each identified diagnosis. It is noteworthy that the interventions elaborated were based on scientific evidence, self-care theory and NIC recommendations.

Chart 2 – Proposals for nursing interventions according to identified diagnoses

(continued)

Nursing Diagnosis	Nursing Interventions
Deficit in self-care for food, related to decreased motivation, characterized by impaired ability to pick up food with utensils.	- Encourage the child to handle the cutlery and eat. - Encourage the child to keep the balance of utensils when eating. - Establish eating routines. - Perform positive encouragement during meals. - Establish simple rules for feeding. - Encourage the child's participation in the choice of food. - Eliminate external distractions at mealtime. - Investigate selective feeding.
Deficit in self-care for bathing, related to decreased motivation.	- Use playful strategies to guide the bath gradually. - Motivate the child's autonomy in the step by step of bathing. - Assist in activities that present greater difficulty.
Deficit in self-care for dressing, related to decreased motivation, characterized by impaired ability to close clothes and use assistive devices.	- Encourage the child to exercise the ability to dress himself. - Motivate the child's independence in performing self-care activities (dressing). - Directing family members to perform simultaneous execution, collaborating and having fun with the child, in some activities, such as dressing and brushing teeth. - Encourage the child to acquire the ability to tie the shoelace by himself (put on shoes).
Deficit in self-care for intimate hygiene, related to decreased motivation, characterized by impaired ability to perform it.	- Encourage the child to perform intimate hygiene (after physiological excretions). - Motivate the child's independence in performing self-care activities. - Explain to family members the importance of empowering the child to perform independent self-care actions.

Chart 2 – Proposals for nursing interventions according to identified diagnoses (conclusion)

Nursing Diagnosis	Nursing Interventions
Deficit in self-care for oral hygiene.	- Encourage the child to exercise autonomy in self-care with the teeth. - Directing family members to perform some activities simultaneously with the child, such as brushing.
Willingness to improve self-care, characterized by expressing a desire to improve self-care (combing hair).	- Perform techniques to improve hair care. - Listen to the child/family's concerns and desires, set goals and promote actions to mediate the best functional level. - Positively reinforce the child's autonomy actions.
Social isolation due to difficulty establishing relationships, characterized by a desire to be alone.	- Encourage attendance at psychotherapy sessions and other integrative and complementary practices available in the assistance network. - Guide family members and/or significant others about tools for approximation and interaction, such as games, social stories and games. - Help family members and/or significant others to recognize positive changes in interpersonal interactions. - Conduct periodic reassessments.

Source: Created by the authors.

Discussion

This study found that autism spectrum disorder often interferes with self-care skills, as well as learning, social bonds and autonomy of affected children. Therefore, it requires that specialized services, from the perspective of intersectoriality, provide the development of basic skills for the management of their own life needs.

In this perspective, the impairment of self-care and activities of daily living manifested by the disinterest in feeding, bathing and oral hygiene were evidenced. This indicates the need for care and family efforts aimed at the development of personal care (sanitizing, dressing, eating) as a fundamental instrument for the development of skills favorable to independence, autonomy and improvement of quality of life[16].

The literature considers that, in ASD, self-care impairment may result from different factors. These involve both the limitations imposed by the disease and family relationships, in which lack of knowledge and understanding, as well as late stimulation and feelings of overprotection lead to greater developmental delays[17].

Thus, identifying individual and collective demands represents an instrument that supports clinical nursing practice and enables intervention strategies and the execution of care plans in different contexts and levels of care[18]. In this sense, nurses, together with the child/family member, must identify deficits in self-care capacity and develop existing potentials, capable of leading to improved health practices[8].

The structuring of nursing diagnoses considered, for the most part, domain 4, which comprises activity/rest, which contains class 5, focused on self-care. Thus, the first diagnosis proposed was "Deficit in self-care for food", defined as the "Inability to eat independently"[14:457]. The feeding difficulties experienced by people with ASD are constantly observed in other studies, which indicate a higher prevalence when compared to children without developmental impairments[19].

In the midst of this difficulty, we highlight the need to evaluate the presence of other clinical problems that compromise the ability to eat, since, in children with ASD, gastrointestinal discomfort is common, which makes them selective in relation to some food groups. Thus, establishing eating routines, performing positive incentives during meals, establishing simple rules for eating, participating in the choice of foods, are among the guidelines that can improve the eating pattern[19].

The diagnoses "Deficit in self-care for bathing" were also highlighted, characterized by the "Inability to complete body cleansing activities independently"[14:460]; "Deficit in self-care for intimate hygiene" comprising the "Inability to perform tasks associated with bladder and intestinal elimination independently"[14:462]; and the "Deficit in self-care to dress", conceptualized as "Inability to wear and remove clothes independently"[14:464].

The identification of these problems indicates that children with ASD may develop bathing readiness late. Thus, developing strategies that point out the sanitary "steps" with clear and simple instructions helps to establish the routine for the child, especially if the steps are outlined in a visual schedule and audio resources[17,19].

Oral hygiene represents another aspect of child growth and development that may be impaired in children with ASD. This condition was confirmed in a cross-sectional study that showed numerous challenges that interfere in learning, behavior and execution of the level of care, including communication/contact, sensory perception, cooperation, motor function and sociocultural aspects[20].

The result of this study reinforces the conception that playful strategies should be adopted and that the use of audiovisual resources, technological support, training programs and the choice of preferred materials of the child constitute ways to improve autonomy in oral hygiene in children who have neurodevelopmental disorders and skills deficits[21-22].

In the same perspective, a near-experimental study, carried out to evaluate a strategy for stimulating global development, concluded that a systematized plan, with training of skills for activities of daily living, followed by playful and symbolic resources, is an appropriate tool to be used to improve self-care actions in personal hygiene and feeding[23].

Another established nursing diagnosis comprised the "Disposition for self-care improvement", characterized by the "Pattern of performing activities for oneself to achieve health goals that can be improved"[14:467]. This result resulted from the interest expressed by the participants in performing certain basic activities, as well as from the parents, in developing and improving this ability. These basic aspects require incentive to be performed on a day-to-day high, regardless of the environment, since they reinforce the child's autonomy and reduce the burden of parents. Therefore, it is of paramount importance to learn this development in childhood, to expand self-care skills.

Thus, stimulating the learning process, instructing and supervising self-care measures enable independence and greater comfort in everyday life. Considering these assumptions, Orem's theory allows the management of care provided to children with ASD, leading to the identification of deficits in self-care, as well as to the valorization of activities that the child and the family member still do not understand. It leads, above all, to the prioritization of teaching, guidance and the development of individual capacities. Thus, it is understood that the care intention is to empower, develop autonomy and guarantee independence to assume self-care[12].

The "Social Isolation" also comprised a structured nursing diagnosis for the participants of this investigation, presenting a definition associated with "Loneliness felt by the individual and perceived as imposed by others and as a negative or threatening state"[14:913]. The difficulties of social interaction in individuals with ASD can be challenging and often lead to social isolation. Using established strategies, such as timelines, modeling and story-based interventions, can improve communication skills, learning readiness and social interaction[24-25].

Therefore, the need for effective interventions in personal care skills remains a concern for the scientific and professional community[15]. Nursing has a primary role to play, introducing therapeutic and stimulating ways to be developed with these children, also assuming a primary role in guiding parents on the various ways to stimulate their children.

Thus, developing care plans for children with ASD is an instrument that supports clinical nursing practice, allowing planning care based

on the verbalizations of the service user and ensuring shared active care, which allows the care of basic needs and the reassessment of the results of the proposed interventions[18].

The limitation of the study is related to the lack of studies on nursing diagnoses and interventions related to the care of children with ASD, which hinders a comparative analysis, and also because it is the reality of children from a single service.

It is believed that, because it is one of the pioneering studies in the identification of nursing diagnoses and interventions, the results can contribute to minimize the impacts of the disease, reduce vulnerability indicators and improve health practices aimed at this population.

Final Considerations

This study showed that children with autism spectrum disorder experienced self-care impairments capable of interfering in autonomy and degree of independence, leading to lack of interest and lack of motivation to perform basic life activities.

The diagnostic statements were structured according to the problems evidenced, resulting in the foundation of 6 diagnoses and 27 nursing interventions, which comprised the deficit in self-care for food, bathing, intimate and oral hygiene, social isolation and the willingness to improve self-care.

Moreover, it was perceived the need for a specialized support network from the perspective of intersectoriality and interdisciplinarity, to promote and provide the evolution of children with ASD. It is believed that further studies are necessary to understand care from the perspective of integrality, as well as to identify other aspects inherent to the growth and development of children with ASD, capable of interfering in activities, perceptions and social interactions. It is also recommended that Orem's self-care theory be used as an alternative for planning, implementing and evaluating intervention in academic research and in the clinical practice of nurses.

Collaborations:

1 – conception and planning of the project: Juliana Macêdo Magalhães, Geovana Raíra Pereira de Sousa, Denise Silva dos Santos and Tamires Kelly dos Santos Lima Costa;

2 – analysis and interpretation of data: Juliana Macêdo Magalhães, Geovana Raíra Pereira de Sousa, Denise Silva dos Santos and Tamires Kelly dos Santos Lima Costa;

3 – writing and/or critical review: Juliana Macêdo Magalhães, Thays Magda Dias Gomes, Marly Marques Rêgo Neta and Delmo de Carvalho Alencar;

4 – approval of the final version: Juliana Macêdo Magalhães, Geovana Raíra Pereira de Sousa, Denise Silva dos Santos, Tamires Kelly dos Santos Lima Costa, Thays Magda Dias Gomes, Marly Marques Rêgo Neta and Delmo de Carvalho Alencar.

References

1. Andrade AA, Ohno PM, Magalhães CG, Barreto IS. Treinamento de pais e autismo: uma revisão de literatura. Ciên Cogn [Internet]. 2016 [cited 2021 Mar 11];21(1):7-22. Available from: http://www.cienciasecognicao.org/revista/index.php/cec/article/view/1038

2. Santos RC. Aumento de prevalência de Autismo: 1 a cada 44 crianças. Observatorio Autista® [Internet]. 2021 [cited 2018 Nov 28]. Available from: https://observatoriodoautista.com.br/2021/12/08/aumento-de-prevalencia-de-autismo-1-a-cada-44-criancas/

3. Paiva Júnior F. EUA publica nova prevalência de autismo: 1 a cada 44 crianças, com dados do CDC. Canal Autismo [Internet]. 2021 [cited 2018 Nov 28]. Available from: https://www.canalautismo.com.br/noticia/eua-publica-nova-prevalencia-de-autismo-1-a-cada-44-criancas-segundo-cdc/

4. Albach G. Escolas se adaptam a crianças com autismo. A Tarde [Internet]. 2018 abr 2 [cited 2018 Nov 24]. Available from: https://atarde.com.br/bahia/bahiasalvador/escolas-se-adaptam-a-criancas-com-autismo-948551

5. Boudjarane MA, Grandgeorge M, Marianowski R, Misery L, Lemonnier É. Perception of odors and tastes in autism spectrum disorders:

A systematic review of assessments. Autism Res. 2017;10(6):1045-57. DOI: 10.1002/aur.1760

6. Castro K, Faccioli LS, Baronio D, Gottfried C, Perry IS, Riesgo R. Feeding behavior and dietary intake of male children and adolescents with autism spectrum disorder: A case-control study. Int J Develop Neurosc. 2016;53(1):68-74. DOI: 10.1016/j.ijdevneu.2016.07.003

7. Pinto RNM, Torquato IMB, Collet N, Reichert APS, Souza Neto VL, Saraiva AM. Autismo infantil: impacto do diagnóstico e repercussões nas relações familiares. Rev Gaúcha Enferm. 2016; 37(3):1-9. DOI: 10.1590/1983-1447.2016.03.61572

8. Nascimento YCML, Castro CSC, Lima JLR, Albuquerque MCS, Bezerra DG. Transtornos do espectro autista: detecção precoce pelo enfermeiro na Estratégia Saúde da Família. Rev baiana enferm. 2018;32:e25425. DOI: 10.18471/rbe.v32.25425

9. Mota M, Cunha M, Santos M, Olm Cunha ICK, Alves M, Marques N. Intervenções de enfermagem pré-hospitalar: revisão narrativa. Enferm foco. 2019;10(4):122-8. DOI: 10.21675/2357- 707X.2019. v10.n4.2527

10. Viegas LM, Fernandes AMA, Veiga MAPLF. Intervenção de enfermagem no estresse do cuidador familiar do idoso com dependência: estudo piloto. Rev baiana enferm. 2018;32:e25244. DOI: 10.18471/rbe.v32.25244

11. Hartweg DL, Pickens J. A concept analysis of normalcy within Orem's self-care deficit nursing theory. Self Care Depend Care Nurs [Internet]. 2016 [cited 2018 Nov 28];22(1):4-13. Available from: https://static1.squarespace.com/static/55f1d474e4b03fe7646a4d5d/t/56feb8e0f850820b9f00a168/1459534056695/Vol22_No01_Spring_2016-1.pdf

12. Dodou HD, Lopes LV, Souza MLP. Aplicação do processo de enfermagem fundamentado na Teoria de Orem. Rev Eletrôn Saúde Interdisc. 2016;1:39.

13. Orem DE. Nursing: concepts of practice. New York: McGraw-Hill; 1985.

14. NANDA Internacional. Diagnósticos de enfermagem da NANDA: definições e classificação 2018-2020. 11a ed. Porto Alegre: Artmed; 2018.

15. Bulechek GM, Butcher HK, Dochterman JM, Wagner CM. Classificação das Intervenções de Enfermagem (NIC). 6a ed. Amsterdã: Elsevier; 2016.

16. Wertalik JL, Kubina Jr RM. Interventions to Improve Personal Care Skills for Individuals with Autism: A Review of the Literature. Rev J Autism Dev Disord. 2017;4(1):50-60. DOI: 10.1007/s40489-016-0097-6

17. Rodrigues PMS, Albuquerque MCS, Brêda MZ, Bittencourt IGS, Melo GB, Leite AA. Self-care of a child with autism spectrum by means of Social Stories. Esc Anna Nery. 2017;21(1):e20170022. DOI: 10.5935/1414-8145.20170022

18. Costa TMS, Souza Neto VL, Cruz Domingos MM, Silva BCO, Negreiros RV, Silva RAR. Diagnósticos, resultados e intervenções de enfermagem em pacientes com esclerose múltipla. Rev Cubana Enferm [Internet]. 2017 [cited 2021 Feb 24]:33(3). Available from: http://www.revenfermeria.sld.cu/index.php/enf/article/view/1331/291

19. Bultas MW, Johnson NL, Burkett K, Reinhold J. Translating Research to Practice for Children With Autism Spectrum Disorder: Part 2: Behavior Management in Home and Health Care Settings. J Pediatr Health Care. 2016;30(1):27-37. DOI: 10.1016/j.pedhc.2015.09.009

20. Barry S, O'Sullivan EA, Toumba KJ. Barriers to dental care for children with autism spectrum disorder. Eur Arch Pediatr Dent. 2014;15(2):127-34. DOI: 10.1007/s40368-013-0075-y

21. Lopez Cazaux S, Lefer G, Rouches A, Bourdon P. Toothbrushing training programme using an iPad® for children and adolescents with autism. Eur Arch Paediatr Dent. 2019;20(3):277-84. DOI: 10.1007%2Fs40368-018-0396-y

22. Duhanyan K, Harper JM, Heal N, Luiselli JK. Effects of preference on performing a self-care skill among children with autism spectrum disorder. J Child Family Behavior Therapy. 2019; 41(2):110-6. DOI: 10.1080/07317107.2019.1599261?journalCode=wcfb20

23. Torkomian Joaquim RHV, Silva FR, Lourenço GF. The make-believe and games as an intervention strategy for an infant with delay in child development. Cad Bras Ter Ocup. 2018;26(1): 63-71. DOI: http://dx.doi.org/10.4322/2526-8910.ctoAO1169

24. Ahlers KP, Gabrielsen TP, Lewis D, Brady AM, Litchford A. Supporting individuals with autism spectrum disorder in understanding and coping with complex social emotional issues. School Psychol Int. 2017;38(6):586-607. DOI: 10.1177/0143034317719942

25. Dovgan KN, Mazurek MO. Relations among activity participation, friendship, and internalizing problems in children with autism spectrum disorder. Autism. 2019;23(3):750-8. DOI: 10.1177/1362361318775541

Received: June 2, 2021

Approved: April 4, 2022

Published: April 28, 2022