

Nursing care plans: proposal for parents with schoolchildren who are overweight or obese

Planes de cuidados de enfermería: propuesta para padres con escolares que padecen sobrepeso u obesidad

Planos de cuidados de enfermagem: proposta para pais com escolares em idade escolar com excesso de peso ou obesidade

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Abstract

Introduction: Inadequate dietary practices causes childhood overweight and obesity, habits that are learned in the family and social environment; in Mexico, prevalence increased by 1.1% compared to 2012. Having Nursing Care Plans will provide guidance to reduce obesity in the family by promoting healthy nutritional habits. **Objective:** To design nursing care plans aimed at parents of overweight or obese children, feasible to implement within the family environment. **Methodology:** The proposal for the preparation of the nursing care plan of the Permanent Commission of Nursing in Mexico was used. The delimitation of the problem was by assessing 30 parents with children from 5 to 11 years old who were overweight or obese; the construction of the care plans were carried out according to the analysis using the NurseTheory of Self-Care Deficit, the North American Nursing Diagnosis Association taxonomy, the Nursing Outcomes Classification, and the Nursing Interventions Classification, these classified according to nursing systems proposed by Orem. **Results:** Basic conditioning factors were identified, such as poor nutritional habits in the family, and obesity and overweight in schoolchildren, from which five care plans were created: Ineffective role performance, ineffective health maintenance behaviors, deficient knowledge, tendency to adopt risk behaviors for health and ineffective eating dynamics at preschool and school. **Conclusion:** Continue the development of care plans to prevent and reduce obesity in childhood that increases or improves their quality of life.

Key words: Parents; Child; Obesity; Nursing process; Nursing care; Child nutrition (DeCS).

Resumen

Introducción: Prácticas alimentarias inadecuadas ocasionan sobrepeso y obesidad infantil, hábitos que se aprenden en la familia y el entorno social; en México, la prevalencia incrementó un 1.1% en relación al 2012. Contar con planes de cuidados de enfermería brindará una orientación para disminuir obesidad en la familia al fomentar hábitos nutricionales saludables. **Objetivo:** Diseñar planes de cuidados de enfermería dirigido a padres de niños con sobrepeso u obesidad, factibles de implementar dentro del entorno familiar. **Metodología:** Se empleó la propuesta para elaboración del plan de cuidados de enfermería de la Comisión Permanente de Enfermería en México. La delimitación del problema fue mediante valoración a 30 padres/madres con hijos/as de 5 a 11 años que padecían sobrepeso u obesidad. La construcción de los planes de cuidados se realizó según el análisis de la valoración mediante la Teoría Enfermera del Déficit del Autocuidado, la taxonomía North American Nursing Diagnosis Association, Nursing Outcomes Classification y Nursing Interventions Classification, clasificadas de acuerdo con sistemas enfermeros propuestos por Orem. **Resultados:** Se identificaron factores condicionantes básicos como hábitos nutricionales deficientes en la familia, obesidad y sobrepeso en escolares, a partir de los cuales se crearon cinco planes de cuidados: desempeño ineficaz del rol, conductas de mantenimiento ineficaz de la salud, conocimiento deficiente, tendencia a adoptar conductas de riesgo para la salud y dinámica de alimentación ineficaz del preescolar y escolar. **Conclusiones:** Continuar el desarrollo de planes de cuidados para prevenir y disminuir obesidad en la niñez que aumente o mejore su calidad de vida.

Palabras clave: Padres; Niño; Obesidad; Proceso de enfermería; Cuidado de enfermería; Nutrición del niño (DeCS).



Abstrato

Introdução: Práticas alimentares inadequadas causam sobrepeso e obesidade na infância, hábitos que são aprendidos no ambiente familiar e social; no México, a prevalência aumentou 1,1% em relação a 2012. A existência de Planos de Cuidados de Enfermagem dará orientação para reduzir a obesidade na família, promovendo hábitos nutricionais saudáveis. **Objetivo:** Elaborar planos de atenção à enfermagem voltados para pais de crianças com sobrepeso ou obesidade, é viável implementar dentro do ambiente familiar. **Metodologia:** Foi utilizada a proposta para a elaboração do plano de cuidados de enfermagem da Comissão Permanente de Enfermagem no México. A delimitação do problema foi avaliando 30 pais com crianças de 5 a 11 anos com sobrepeso ou obesidade; a construção dos planos de cuidados foi realizada de acordo com a análise utilizando a Teoria da Enfermeira do Déficit de Autocuidado, a taxonomia da Associação Norte-Americana de Diagnóstico de Enfermagem, a Classificação dos Resultados de Enfermagem, e a Classificação das Intervenções de Enfermagem, estas classificadas de acordo com os sistemas de enfermagem propostos por Orem. **Resultados:** Foram identificados factores condicionantes básicos, tais como maus hábitos nutricionais na família, e obesidade e excesso de peso em crianças em idade escolar, a partir dos quais foram criados cinco planos de cuidados: Desempenho ineficaz do papel, comportamentos ineficazes de manutenção da saúde, conhecimento deficiente, tendência para adoptar comportamentos de risco para a saúde e dinâmica alimentar ineficaz na pré-escola e na escola. **Conclusões:** Continuar o desenvolvimento de planos assistenciais de prevenção e redução da obesidade na infância que aumente ou melhore sua qualidade de vida.

Palavras-chave: Pais; Criança; Obesidade; Processo de enfermagem; Cuidados de enfermagem; Nutrição infantil (DeCS).

Introduction

Child obesity is one of the most serious public health problems of the 21st century, characterized by the increase in body fat deposits as a result of the consumption of foods rich in carbohydrates and fats, such as bread, pasta and chocolate; it is currently considered a pandemic due to the number of people affected. In Mexico, by 2018, the population aged 5 to 11 years was 18% overweight and it is increasing as age increases ^(1,2). Therefore, it is necessary and urgent to address it through actions that focus primarily on the promotion of healthy lifestyles. If we do not intervene, over time, it becomes chronic and causes health consequences and the development of non-transmissible diseases ⁽²⁾.

Obesity is a multifactorial disorder that involves genetic, metabolic, psychosocial and environmental factors, but undoubtedly the inadequate parental perception of the nutritional status of their children is a major factor of great impact; not perceiving the obesity and overweight of their children limits actions to modify



unhealthy lifestyles ⁽³⁾. On the other hand, there are people who know about the disease and its possible consequences; however, in their families they continue to observe these conditions without modifying deficient eating habits and physical activity, which are essential to intervene to prevent and reduce the disease ⁽⁴⁾. Thus, childhood obesity derives mainly from poor eating habits learned in the family and social environment; however, there are also physical inactivity, poor sleep habits and genetic causes. As a result, obese children tend to suffer from respiratory distress, diabetes, hypertension, fractures, cancer and psychological problems ⁽⁵⁾.

It is important to consider that families in a globalized world have adapted to different ways of acquiring food, especially due to socioeconomic aspects, which, for example, to a certain extent facilitate food quickly and at an economic cost, although most of them are unhealthy ⁽⁶⁾. This, in combination with television advertising and food promotion through information and communication technologies, without underestimating the educational level of parents, influences their decision, thus favoring an unhealthy eating style ⁽⁷⁾. Tarqui-Mamani ⁽⁸⁾ shows that the higher educational level of the head of household is related to obesity in schoolchildren, due to the better purchasing power, which favors children to watch television, access to electronic games and have motorized transport, which together reduce their physical activity. Also, there is the ease of giving them money for the purchase of food that is not supervised. Moreover, the continuous incorporation of women to work outside the home, together with their role as the main responsible for food preparation, influences school children's nutrition by reducing food preparation at home; likewise, by having to resort to processed products rich in refined sugars and fats, which are quick to prepare and consume ^(7, 9).

These inadequate dietary practices and the deficit of physical activities cause an increase in childhood overweight and obesity indicators. In the National Health and Nutrition Survey (ENSANUT for its acronym in Spanish "Encuesta Nacional de Salud y Nutrición") 2018, the prevalence of overweight and obesity in school-age children in Mexico increased by 1.1% compared to 2012; which clearly shows that obesity is still present; likewise, Yucatan, Mexico is among the states with an increase in the prevalence of children with obesity, with 19.1% ⁽¹⁰⁾.



In view of the above, it can be identified that the dietary practices of parents are influenced by environmental, economic and labor conditions, cultural habits, skills, knowledge and beliefs that should be considered when planning nursing care, since they limit or favor its implementation in the family⁽¹¹⁾.

The nursing role at the community level will always be a fundamental piece for the prevention and promotion of health, since it has the capacity to deal with health situations that require teaching and education of the family or community⁽¹²⁾. One of the tools used by nursing to achieve these objectives are the Nursing Care Plans (PLACE for its acronym in Spanish "Planes de Cuidados de Enfermería"), through which care is provided in a holistic manner and allows decisions to be made about the health-disease process through the assessment, analysis and interpretation of the findings, the decision of the nursing interventions to be carried out and the way to evaluate the results to be obtained⁽¹³⁾.

The Nursing Theory of the Self-Care Deficit (TEDA for its acronym in Spanish "Teoría Enfermera del Déficit del Autocuidado") offers the nursing professional the tools for quality care, among which we can highlight the care of sick people, who choose decisions to improve their health, and healthy people who wish to maintain or modify risk behaviors⁽¹⁴⁾. In his theory, he defines the basic conditioning factors as those that condition the self-care activity of a person at specific times and under specific circumstances; the self-care requirements (universal, developmental and deviation of health), as the expressions of the objectives to be achieved when intentionally dealing with self-care; a nursing system points out how the nursing professional will contribute to overcome the deficit and that the person recovers self-care and, the methods of assistance, are a sequential series of actions that will resolve or compensate for the limitations associated with the health of people, who are committed to perform their self-care; these are: acting or doing on behalf of another, guiding and directing, offering physical or psychological support, providing and maintaining an environment that fosters personal development, and teaching⁽¹⁵⁾.

Inclusion of the TEDA applied to parents of overweight or obese children through the PLACE, guides them effectively in decision making for the acquisition of knowledge and adequate habits regarding healthy eating and nutrition; as well as to recognize its importance and incorporation in their behavior to achieve adequate self-care in themselves and, therefore, in the other members of their family⁽¹⁶⁾. The objective of



this study was to carry out a PLACE aimed at parents of children with overweight or obesity that could be implemented within the family environment, through nursing actions that would have an impact on the modification or improvement of family nutrition.

Methodology

Methodology proposed for the elaboration of the Nursing Care Plan was used, as established by the current guidelines of the Permanent Nursing Commission (CPE) in Mexico, whose phases are: determination of the problem, construction of the nursing diagnosis, selection of results and selection of nursing interventions (17). For the delimitation of the problem, first, a nursing assessment was made to 30 parents from Cuncunul, a Mayan community in Yucatan, Mexico, who had overweight or obese children aged 5 to 11 years, who wished to participate voluntarily and gave their informed consent, in order to know the usual diet and frequency of food consumption, feeding practices in the family and beliefs and knowledge about childhood obesity. The degree of obesity of the children was determined by means of the World Health Organization's body mass index table for children aged 5 to 18 years, and the quantification of weight and height by means of a mechanical floor scale with a capacity of 150 kg and a portable stadiometer previously calibrated.

The following instruments were used in the assessment: a) Usual diet and frequency of food consumption (18), b) Comprehensive Feeding Practices Questionnaire (CFPQ) (19), c) Obesity Belief Scale in Children (ECOI) (20) and d) Parents'/guardians' perception of nutrition and physical activity in school children (21). After the assessment and through the results obtained, for the construction of the nursing diagnoses, an analysis of the assessment was carried out with the TEDA, proposed by the Faculty of Nursing (22) for the identification of the human responses of parents of families with school children with overweight or obesity. This analysis made it possible to identify a) basic conditioning factors and b) self-care requirements (universal, developmental and health deviation) (15). The diagnoses were written based on the North American Nursing Diagnosis Association (NANDA) taxonomy (23). The writing of the PLACE, which integrate the selection of nursing outcomes and interventions, was carried out using the Nursing Interventions Classification (NIC) (24) and the Nursing Outcomes Classification (NOC) (25) taxonomies; likewise, the planning of nursing



interventions was considered according to the TEDA when specifying the nursing systems: totally compensatory (TC), partially compensatory (PC) and supportive-educational (EA). In this PLACE proposal, the NIC nursing actions were referred to as assistance methods.

The study was based on the Regulations of the General Law of Health (LGS for its acronym in Spanish) on Health Research, title two, chapter 1, Art.13, 14, 16 and 17. According to Article 13, the dignity of the parents/guardians was respected, their rights and welfare prevailed; according to Article 14, paragraph VII, a favorable opinion was obtained from the Ethics and Research Committee of the Faculty of Nursing, with registration number 21/18; the privacy of the research subjects was ensured as stipulated in Article 16 and, according to Article 17, the present research is classified as non-risk research. Furthermore, according to Art. 20, 21 and 22, informed consent was applied in writing and under the requirements proposed by the LGS, free of coercion and under the full knowledge of the participants regarding the activities performed in the research. Finally, Chapter 2, Art. 28 and 29, due to the authorization of health and civil authorities of the community ⁽²⁶⁾.

Results

According to the results of the anthropometric measurements in children, overweight and obesity were identified more frequently in male than in female schoolchildren and, with respect to age, more frequently in boys and girls aged 8 and 11 years, and less frequently in boys and girls aged 6 and 7 years.

The analysis of the nursing assessment with the TEDA allowed the following data to be identified as basic conditioning factors and self-care requirements: the parents had an average age of 33 years, they were women, the developmental stage was the adult stage, nutritional health status was inadequate in all the families, the identified life patterns were the consumption of modern processed foods and physical inactivity.

Among the family system factors were relatives and children with overweight or obesity; among the sociocultural factors, the lack of involvement of the children in the purchase and planning of meals stood out, and the predominant perception was that obese children are healthier than thin children. As for the



availability of resources, a low level of schooling, dedication to agriculture, grocery trade, employees, housewives, and lack of healthy foods in the family predominated.

With respect to the self-care requirements affected, among the universal requirements, the maintenance of a sufficient food intake and a balance between activity and rest were identified. In the developmental requirements, preventing or overcoming the effects of conditions and life situations that can negatively affect human development and, finally, in the health deviation requirement, overweight and obesity in school children have been identified.

According to the analysis undertaken, the main nursing diagnoses identified were ineffective role performance, ineffective health maintenance behaviors, deficient knowledge, tendency to adopt health risk behaviors and ineffective preschool and school feeding dynamics, which allowed the elaboration of the proposal of five PLACES that include nursing results and interventions/help methods according to the identified human responses, (Table 1).

Table 1. Proposed nursing care schemes, 2022.

PLACE 1			
Nursing diagnosis ⁽²³⁾		Nursing outcome ⁽²⁵⁾	
Domain 7. Role relationship Class 3. Role performance 00055 Ineffective role performance related to childhood. economically disadvantaged and undereducated individuals evidenced by inadequate external support and inadequate knowledge of role requirements.	Domain VII. Family health Class DD. Parenting 2905 Parenting role performance: second Definition: Parental actions to provide a school-age child with a safe, nurturing and positive physical, emotional, spiritual and social environment from age 6 up to age 11.	Measurement scales Never demonstrated 1 Rarely demonstrated 2 Sometimes demonstrated 3 Frequently demonstrated 4 Always demonstrated 5	Indicators 290516 Promotes regular physical exercise. 290517 Helps the child maintain optimal weight. 290526 Provides adequate nutrition.

Nursing interventions/Assistance methods ⁽²⁴⁾



<p>Domain 7. Community Class C. Community health promotion 8700 Program development.</p> <p>Definition: planning, implementation, and evaluation of a coordinated set of activities designed to increase the well-being or to prevent, reduce, or eliminate one or more health problems of a group or community.</p>	<p>Nursing System: EA Prepare a working group, including appropriate members of the community, to focus on the priority need or problem. Identify alternative proposals to address the needs or problems. Identify resources and constraints to program implementation. Monitor the progress of program implementation. Modify and improve the program.</p>	<p>Domain 5. Family Class X. Care during the life span 7040 Primary caregiver support (parents)</p> <p>Definition: providing the necessary information, advice and support to enable the primary care of the patient to be provided by someone other than a health professional.</p>	<p>Nursing System: EA Identify the level of knowledge of the primary caregiver. Work with the caregiver to assess strengths and weaknesses. Acknowledge the difficulties of the primary caregiver's role. Support decisions made by the primary caregiver.</p>
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PLACE 2

Nursing diagnosis ⁽²³⁾		Nursing outcome ⁽²⁵⁾		
<p>Domain 1. Health promotion Class 2. Health Management 00292 Ineffective health maintenance behaviors related to difficulty in decision making evidenced by inadequate knowledge about basic health practices, ineffective choices in daily life to achieve health goal and pattern of lack of health-seeking behavior.</p>	<p>Domain VI. Family Health Class X. Family well-being 2606 Family health status.</p> <p>Definition: Overall health and social competence of a family.</p>	<p>Measurement scales Severely compromised 1 Substantially compromised 2 Moderately compromised 3 Slightly compromised 4 Not Compromised 5</p>	<p>Indicators 260605 Physical health of members. 260606 Physical activity of members. 260602 Adequate measures for child care. 260604 Access to health care system. 260611 Provision of nutritious food.</p>	
<p>Nursing interventions/Assistance methods ⁽²⁴⁾</p>				



<p>Domain 3. Behavioral Class R. Coping Assistance. 5250 Decision assistance. Definition: providing information and assistance to a patient who must make a health care decision.</p>	<p>Nursing System: EA Assist parents in being able to clarify values and expectations that can assist in making critical life decisions. Advise parents of the existence of alternative views and solutions in a clear and supportive manner. Facilitate collaborative decision making. Provide information requested by parents. Serve as a liaison between parents and their own family. Act as a liaison between parents and other health professionals.</p>	<p>Domain 3. Behavioral Class S. Patient education 5515 Improve access to health information Definition: To assist people with limited capacity to obtain, process and understand information related to health and disease.</p>	<p>Nursing System: EA Identify the status of access to health information at the onset of parental contact with informational and/or formal assessments. Determine parents' experience with the health care system including health promotion, health protection, disease prevention, health care and maintenance, and time spent in the health care system. Determine what parents already know about the family's health status or risk and relate the new information to what they already know.</p>
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PLACE 3

Nursing diagnosis ⁽²³⁾	Nursing outcome ⁽²⁵⁾	
<p>Domain 5. Perception/cognition Class 4. Cognition 00126 Deficient knowledge related to improper information evidenced by the inaccurate declarations with respect to a subject and the improper behavior.</p>	<p>Domain IV. Health knowledge and behavior. Class S. Knowledge with respect to Health promotion. 1854 Knowledge: Healthy diet. Definition: Degree of knowledge transferred by a nutritious and balanced diet.</p>	<p>Indicators 185403 Relationship between diet, exercise and weight. 185407 Recommended nutritional guidelines. 185408 Foods compatible with the recommended nutritional guidelines. 185413 Food portion guidelines. 185414 Interpretation of the nutritional information of food labels. 185420 Importance to</p>



				<p>have breakfast.</p> <p>185421 Importance of distributing food intake throughout the day.</p> <p>185423 Strategies to prevent saturated fats.</p> <p>185424 Strategies to prevent foods with high caloric value and low nutritional value.</p>
Nursing interventions/Assistance methods (24)				
<p>Domain 3. Behavioral Class S. Patient education 5566 Parental education: family upbringing of children</p> <p>Definition: Help parents understand and foster the physical, psychological and social growth and development of their infant, preschool or school-age child/children.</p>	<p>Nursing system: EA</p> <p>Teach parents the importance of a balanced diet, three meals a day and nutritious snacks.</p> <p>Review the specific nutritional needs of specific age groups.</p> <p>Inform parents about community resources.</p>			
<p>Domain 3. Behavioral Class P. Cognitive therapy 5520 Make learning easier</p> <p>Definition: Fostering the ability to process and understand information.</p>	<p>Nursing system: EA</p> <p>Provide developmentally appropriate information.</p> <p>Ensure that teaching materials are up to date.</p> <p>Provide educational materials to illustrate important and/or complex information.</p> <p>Use appropriate multiple teaching modes</p>	<p>Domain 6. Health system Class Y. Mediation of health system. 7330 Cultural intermediation.</p> <p>Definition: Intentional use of culturally appropriate strategies for bridging the gap or mediate between the patient's culture and the biomedic health system</p>	<p>Nursing system: EA</p> <p>Determine the nature of the conceptual differences between the parents and the parents and the nurse practitioner about the health problems or treatment plan.</p> <p>Identify, with parents, cultural practices that may negatively affect health so that parents can make informed choices. Use simple language preventing the use of technicalities.</p> <p>Provide information to health professionals about the culture of parents.</p> <p>Helping other health professionals understand and accept the reasons for parental noncompliance.</p> <p>Change</p>	



conventional interventions in a culturally appropriate form.

PLACE 4

Nursing diagnosis ⁽²³⁾		Nursing outcome (25)		
Domain 1. Health promotion	Class 2. Health management	Domain VII. Community health	Measurement scales	Indicators
00188 Trend to adopt health risk behaviors related to economic precariousness evidenced by failure to adopt measures to prevent health problems.		Class CC. Protection of Community health	Scarce 1 Fair 2 Good 3 Very good 4 Excellent 5	280903 Supply of community education programs on obesity prevention. 280905 Supply of children's programs to promote physical activity. 280908 Provision of healthy meals in the school cafeterias. 280910 Supply of School programs to prevent obesity. 280911 Supply of community programs to promote the activity. 280913 Availability of community resources to support weight loss.
		2809 Social risk control: Obesity		
		Definition: Community actions to reduce obesity and related chronic diseases.		

Nursing interventions/Assistance methods ⁽²⁴⁾

Domain 5. Family	Nursing system: EA
Class X. Care during life	Discuss strengths and weaknesses with the caregiver.
7040 Support to the main caregiver	Explore with the caregiver how the patient is coping.
Definition: Provide the information, advice and support necessary to facilitate primary patient care by someone other than a healthcare professional.	Inform the caregiver about health and community care resources. Teach the caregiver strategies for accessing and making the most of health and community care resources.

PLACE 5

Nursing diagnosis ⁽²³⁾	Mersin outcome (25)
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Domain 2. Nutrition Class 1. Ingestion 00270 Dynamics of inefficient feeding of the preschool and school related to Influence of communication means with respect to eating high-calorie unhealthy food due to excessive eating.	Domain II. Physiological health Class K. Digestion and nutrition. 1004 Nutritional status Definition: Extent to which nutrients are ingested and absorbed to meet metabolic needs.	Measurement scales Severe deviation from normal range 1 Substantial deviation from normal range 2 Moderate deviation of the normal range 3 Slight deviation from normal range 4 No deviation from normal range 5	Indicators 100401 Nutrient ingestion. 100402 Food ingestion. 100405 Ratio between weight and size.
Nursing interventions/Assistance methods ⁽²⁴⁾			
Domain 1. Physiological: basic Class D. Nutritional support 5246 Nutritional counseling Definition: Use of an interactive support process focused on the need for dietary modification.	Nursing system: EA Set realistic short- and long-term goals short- and long-term goals for change in nutritional status. Helping parents consider factors such as age, growth and developmental growth, past dietary experiences injuries, diseases, culture and economics in planning ways to meet nutritional needs. Determine parental knowledge of the four basic food groups, as well as perception of needed dietary changes. Discuss meal purchasing habits and budget limits.	Domain 3. Behavioral Class S. Patient education 5566 Parenting education: Family upbringing of children Definition: Helping parents to understand and promote growth and physical, psychological and social development of your infant, preschool or school-age child/children.	Nursing system: EA Teach parents the importance of a balanced diet, three meals a day and snacks. Balanced diet, three meals a day and snacks. Identify and instruct parents on the use of various strategies they can use in managing their child's behavior.

Source: Own development. Nursing system: Educational support (EA).

Discussion

Based on the objective set forth in order to make a PLACE proposal aimed at parents of overweight and obese children, feasible to implement within the family environment, it was possible to identify that overweight and obesity were more prevalent in boys than in girls; with respect to age, the condition was more prevalent in boys and girls between 8 and 11 years of age. Similar results were found by Castro, et al. ⁽²⁷⁾, who determined that male schoolchildren were those who presented the highest prevalence of obesity in a representative population between 10 and 11 years of age. Naranjo-Orellana, et al., ⁽²⁸⁾ similarly, proved through a study conducted during six years in three public schools in Algaba (Seville) in boys and girls



between 6 and 11 years of age that there was a tendency of weight gain in children with some of the criteria used to determine overweight and obesity; which ratifies the results observed in the present study, despite having fewer participants..

In this study, one of the basic conditioning factors that stood out was the participation of the totality of women, which is consistent with Nazar et al. ⁽²⁹⁾, who concluded that, in most of the studies analyzed, the sample included more mothers than fathers, so they share the opinion of considering the involvement of fathers to promote a favorable health status in children. In addition, basic conditioning factors were found to be deficient status of nutritional health in the families, together with parents with low paid jobs; likewise, a maintenance of insufficient food intake, considered in this study, as a universal self-care requirement affected in the families, which favor the lack of healthy food in the homes and the greater consumption of modern processed food, the latter, as a model of life identified in the families evaluated. In this regard, López-Sobaler, et al. ⁽³⁰⁾ argued in their study that some strategies should be implemented to improve the factors associated with obesity, such as low socioeconomic level in families, among others, in order to favor healthier diets and promote more active lifestyles.

In the families of the participants in this study, it was discovered a high consumption of processed foods and, among the most prominent were the daily consumption of tortillas and sugar and, from 1 to 4 times per week, pasta, crackers and sausages. In a study conducted in two communities in Yucatan, Mexico, something similar was observed because processed foods, such as corn tortillas, corn dough, edible oil and sugar, were consumed in a general and frequent manner ⁽³¹⁾. This shows the need to address the factors associated with obesity, as pointed out by López-Sobaler, et al ⁽³⁰⁾. The proposal of interventions through PLACE with parents to reduce and/or eradicate overweight or obesity in children, with a methodological design that nursing professionals should use continuously at the levels of prevention and health care, allow improving healthy lifestyles in the healthy or sick person. The PLACE in this project propose a series of primary interventions aimed at guiding, based on scientific evidence, healthy nutrition in schoolchildren. Arguments that are shared by several researchers, who mention that an inclusive food education is necessary, firstly, to perform a study and diagnosis of the social and food issues, followed by a methodological design to address



and/or eradicate or improve them ⁽³²⁾.

In the present study, among the basic socio-cultural conditioning factors, the lack of involvement of the children in the purchase and planning of meals was identified. This could be reversed through the intervention proposal of PLACE 1, by considering the design of a program to encourage it. González, et al., ⁽³³⁾ stated that it is necessary to develop programs to improve family habits, so that children acquire a more adequate perception of eating patterns and healthy habits, which will undoubtedly contribute to the current worldwide problem.

Moreover, among the basic conditioning factors of sociocultural type, a perception was obtained from parents who think that obese children are healthier than thin children, identifying that the perception of mothers in relation to the weight of their children has an impact on the development of obesity ⁽³⁴⁾, which allows the intake of much more food than recommended; thus resulting in overweight and obesity in children. For this reason, it is necessary to propose communication strategies between parents and the medical doctor.

The PLACE 3 proposal considered the importance of recognizing food as an element of cultural identity, which is why it is necessary to establish assertive communication between parents and health professionals to create culturally accepted strategies that benefit the nutritional status of children and at the same time rescue culinary eating habits that have been altered by globalization and migration ⁽³⁵⁾.

The feeding style that was reflected in the mothers in this study, due to their family life model, allowed the intake of modern processed foods and promoted the lack of physical activity; in their study Flores-Peña, et al. found that mothers of preschool children with overweight or obesity did not perceive that their children had a poor nutritional status, and that their maternal style of infant feeding was of low demand and responsibility ⁽³⁶⁾. Consequently, they urge to plan interventions that would help mothers to accept when their child is overweight or obese and that this is a disease, as well as to promote in them a maternal style of infant feeding with high demand and responsibility.

It was also identified as a basic conditioning factor, in terms of availability of resources, a low level of schooling in mothers, as well as overweight and obesity in children, a self-care requirement affected by the



type of health deviation observed in the families, which predicts the relationship between this conditioning factor; in this regard Anaya-García, et al, ⁽³⁷⁾ in their research, referred that the parents' level of schooling, as well as the economic income, affect the type of food and its accessibility, which can contribute to the nutritional status of children.

In the present study, in addition to the identification of the consumption of modern processed foods, a life pattern of physical inactivity in families was identified and, therefore, the universal self-care requirement affected, called "imbalance between activity and rest", which evidently contributes to the onset of obesity in children, together with other associated factors such as, for example, genetics, dietary patterns and intestinal microbiota ⁽³⁸⁾.

Through the implementation of the proposed PLACE and the development of a health program with families, other professionals can also be involved in the prevention and decrease of obesity in children, this program should primarily include the promotion of healthy eating habits and physical activity; in this context Pérez-Herrera, et al., ⁽³⁸⁾ expressed the need for the involvement of a multidisciplinary team in the treatment of obesity, such as the government, parents themselves, and health institutions.

In the present study, the diagnoses structured to propose the PLACES such as ineffective role performance, ineffective health maintenance behaviors, and poor knowledge were similar to the diagnoses identified by Laguado ⁽³⁹⁾ to strengthen the growth and development of children by parents, and even the nursing interventions and outcomes reported were similar in this research, including parenting education and being parents, respectively.

This planning of nursing care was possible by making use of the NANDA, NIC and NOC taxonomies, tools that favor the professional work of nursing from the provision of care, health education, care and knowledge management, as argued by Ramírez, et al. ⁽⁴⁰⁾ by allowing the standardization of the language used in the execution of care, apply critical thinking, obtain security, and professional growth.

Finally, the worldwide COVID-19 pandemic appeared during the time this study was in progress, which caused a modification of the sampling for the participation of mothers in the nursing assessment; nevertheless, it is considered that with the mothers who participated, sufficient data were obtained for the



preparation of the proposed PLACEs. The low participation of mothers was probably due to fear and not knowing how to act in the face of the pandemic, even though they were interested in participating when there was no COVID-19 pandemic ⁽⁴¹⁾.

Conclusions

Based on the results obtained in this study, it is possible to confirm the existence of several affected basic conditioning factors and self-care requirements in families, which have contributed to overweight and obesity in their children; these factors give the opportunity to conduct further research on the interventions applicable in the communities, since it is necessary to continuously address the health condition of overweight and obese children, in which parents, particularly the father, should be part of the diagnosis, planning, implementation and evaluation of the care.

In this study, the level of schooling of the mothers, their family income and their perception of their children's illness were key to understanding the poor nutritional health status of the families. Consequently, consumption of modern processed foods, maintenance of insufficient food intake and physical inactivity were identified. Parents, even without basic schooling, should and could be responsible for promoting sufficient and adequate food education to enable them to raise their children correctly, by participating enthusiastically and voluntarily in projects that can be implemented in schools, health institutions and governmental spaces, among others. This in turn will allow them, despite their family income, to plan the purchase of healthy foods they can afford and to value local and regional foods in their communities, as well as to be creators of these, which contribute to sufficient food maintenance in their homes. In addition, they will unlearn erroneous and inculcated knowledge throughout their lives, thus becoming aware of the importance of reducing and/or eradicating obesity in their families, primarily in children, who will transmit the knowledge to new generations.

Finally, it was seen that families do not always involve the participation of their children in the purchase and planning of meals, which is why children, despite obtaining basic knowledge of healthy eating from schools, are not always able to give their opinion, decide and participate in the preparation of meals. Therefore, it is



essential to involve children in these household tasks, so that from an early age they can be responsible for what they eat, knowing how to identify healthy and unhealthy foods.

Therefore, the design of the proposed PLACE programs addressed to parents with overweight or obese children, arises from the need to participate with the people who are responsible for the children's health; also, because they are the ones with whom they live most of the time, from whom they acquire the first experiences and the motivation to modify or improve their eating and physical activity habits learned at home.

It is recommended that nursing professionals continue with the development of proposals for individualized and standardized nursing care plans that influence the prevention and nursing treatment of obesity in children, applicable to teachers, community leaders and other family members or individuals in constant interaction with children.

Conflicts of interest

The authors stated that there is no conflict of interest.

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Bibliographic References

1. Fundación Interamericana del Corazón. Obesidad infantil. FICArgentina [Internet]. Buenos Aires, Argentina; s.f. [cited Jul 21, 2021]. Available at: <https://www.ficargentina.org/informacion/alimentacion/obesidad-infantil/>
2. Muñoz FL, Arango C. Obesidad infantil: un nuevo enfoque para su estudio. Salud Uninorte [Internet]. 2017 [cited Nov 18, 2020];33(3):492-503. Available at: <https://doi.org/10.14482/sun.33.3.10916>
3. Rico S, Rodríguez FJ, Gil G, Calderón JF, Martínez M. Influencia del entorno familiar en el desarrollo del sobrepeso y obesidad infantil en Valverde de Leganés. Eur. J. Develop. Educa. Psychop [Internet]. 2016 [cited Nov 17, 2020];4(1):17-29. Disponible <https://dialnet.unirioja.es/servlet/articulo?codigo=5761695>
4. Ruvalcaba JC, Hernández J, García JR, Lozano A, Morales LI, Hernández MS, et al. Factores desencadenantes de obesidad infantil, un problema de salud pública. JONNPR [Internet]. 2018 [cited Nov 17, 2020];3(8):614-626. Available at: <https://dx.doi.org/10.19230/jonnpr.2542>
5. Moreira DC, Rodríguez VP, Mera JP, Medranda RG, Medranda FJ, Avendaño GC. Factores de riesgo más relevantes en el aumento de obesidad infantil. Revista Científica de Investigación Actualización del Mundo de las Ciencias [Internet]. 2018 [cited Apr 21, 2022];2(4):24-40. Available at: <https://www.reciamuc.com/index.php/RECIAMUC/article/view/220>
6. Ayudo G, Castillo MT. Globalización y nostalgia. Cambios en la alimentación de familias yucatecas.



- estudios sociales [Internet]. 2017 [cited Dec 23, 2020];50(27):1-18. Available at: <https://dx.doi.org/10.24836/es.v27i50.479>
7. Castronuovo L, Gutkowski P, Tiscornia V, Allemandi L. Las madres y la publicidad de alimentos dirigida a niños y niñas: percepciones y experiencias. Salud colectiva [Internet]. 2016 [cited Dec 23, 2020];12(4):537-550. Available at: <https://doi.org/10.18294/sc.2016.928>
 8. Tarqui C, Alvarez D, Espinoza P. Prevalencia y factores asociados al sobrepeso y obesidad en escolares peruanos del nivel primario. Rev. Salud Pública [Internet]. 2018 [cited Dec 23, 2020];20(2):171-176. Available at: <https://doi.org/10.15446/rsap.V20n2.68082>
 9. Andreatta MM, Martínez A. Alimentación cotidiana y normas de género: un etnodrama. Revista de Ciencias sociales [Internet]. 2017 [cited Dec 23, 2020];73:9-29. Available at: <http://apostadigital.com/revistav3/hemeroteca/andreatta.pdf>
 10. Shamah T, Cuevas L, Romero M, Gaona EB, Gómez LM, Mendoza LR, et al. Encuesta nacional de salud y nutrición 2018-19: resultados nacionales. Secretaria de Salud [Internet] México; 2020 [cited Nov 17, 2020]. Available at: https://ensanut.insp.mx/encuestas/ensanut2018/doctos/informes/ensanut_2018_informe_final.pdf
 11. Varela MT, Tenorio AX, Duarte C. Prácticas parentales para promover hábitos saludables de alimentación en la primera infancia en Cali, Colombia. Rev Esp Nutr Hum Diet [Internet]. 2018 [cited Dec 23, 2020];22(3):183-192. Available at: <https://dx.doi.org/10.14306/renhyd.22.3.409>
 12. Domínguez S, Valdivieso B, Martínez RM, Aznar S, Romero C, Villalvilla DJ. Familias + Activas: Enfermería familiar y comunitaria ante el reto de la atención a la obesidad infantil en atención primaria. RqR Enfermería Comunitaria (Revista de SEAPA) [Internet]. 2019 [cited Nov 17, 2020];7(3):28-40. Available at: <https://dialnet.unirioja.es/servlet/articulo?codigo=7071442>
 13. Ramírez A. Proceso de enfermería; lo que sí es y lo que no es. Enfermería universitaria [Internet]. 2016 [citado 23 dic 2020];13(2):71-73. Available at: <https://doi.org/10.1016/j.reu.2016.05.001>
 14. Naranjo Y, Concepción JA, Rodríguez M. La teoría déficit de autocuidado: Dorothea Elizabeth Orem. Gaceta Médica Espirituana [Internet]. 2017 [cited Dec 23, 2020];19(3): agregar páginas. Available at: http://www.scielo.sld.cu/scielo.php?script=sci_arttext&pid=S1608-89212017000300009
 15. Berbiglia VA. Teoría del déficit de autocuidado en enfermería. En: Raile AM, editores. Modelos y teorías en enfermería. 8º ed. Barcelona, España: Elsevier; 2015, p. 728.
 16. Navarro Y, Castro M. Modelo de Dorothea Orem aplicado a un grupo comunitario a través del proceso enfermería. Enfermería global [Internet]. 2010 [cited Dec 23, 2020]:19:1-14. Available at: <https://scielo.isciii.es/pdf/eg/n19/clinica3.pdf>
 17. Secretaria de Salud. Lineamientos generales para la elaboración de planes de cuidados de enfermería. Secretaria de Salud [Internet]. México; 2011 [cited Nov 17, 2020]:49. Available at: http://www.cpe.salud.gob.mx/site3/publicaciones/docs/lineamiento_general.pdf
 18. Pérez IO, Nazar BA, Salvatierra IB, Pérez-Gil RS, Rodríguez L, Castillo BM, et al. Frecuencia del consumo de alimentos industrializados modernos en la dieta habitual de comunidades mayas de Yucatán, México. Estudios sociales [Internet]. 2012 [cited Aug 20, 2019];20(39):156-184. Available at: http://www.scielo.org.mx/scielo.php?script=sci_arttext&pid=S0188-45572012000100006
 19. Musher D, Holub S. Comprehensive feeding practices questionnaire: Validation of a new measure of parental feeding practices. Journal of Pediatric Psychology. [Internet] 2007 [cited Aug 20, 2020];32(8):960-972. Available at: <https://academic.oup.com/jpepsy/article/32/8/960/928185>
 20. Vera VP, Bastías A, Mena L. Construcción de una escala de creencias de obesidad en niños. Revista Mexicana de Psicología [Internet] 2004 [cited Jul 20, 2018];21(2):191-202. Available at: <https://biblat.unam.mx/es/buscar/construccion-de-una-escala-de-creencias-de-obesidad-en-ninos->
 21. Facultad de Enfermería de la Universidad Autónoma de Yucatán. Sobrepeso y obesidad en escolares de Cuncunul asociado a las determinantes en salud: ambiente social y estilos de vida. Tizimín, Yucatán: Facultad de Enfermería; 2019. p.82.
 22. Tun D. Análisis de la valoración con la teoría de D. Orem. Presentado en curso; 2019; Facultad de Enfermería de la UADY.



23. Heather T, Shigemi F, Takáo F. Diagnósticos de enfermería. Definiciones y clasificación 2021 – 2023. 12° ed. EE. UU: Thieme; 2021. p. 589.
24. Butcher HK, Bulechek GM, Dochterman JM, Wagner CM. Clasificación de Intervenciones de Enfermería. 7° edición. España: Elsevier; 2018. p.506
25. Moorhead S, Swanson E, Johnson M, Maas ML. Clasificación de Resultados de Enfermería. Medición de Resultados en Salud. 6° ed. España: Elsevier; 2019. p.668
26. Cámara de Diputados del H. Congreso de la Unión. Reglamento de la Ley General de Salud en Materia de Investigación para la Salud. Secretaría General [Internet]. México; 2014 [actualizado 02 abr 2014; cited Dec 23, 2020]. Available at: http://www.diputados.gob.mx/LeyesBiblio/regley/Reg_LGS_MIS.pdf
27. Castro M, Muros J, Cofré C, Zurita F, Chacón R, Espejo T. Índices de sobrepeso y obesidad en escolares de Santiago (Chile). Journal of Sport and Health Research [Internet]. 2018 [cited May 04, 2022];10(2):251-256. Available at: [https://dialnet.unirioja.es/servlet/articulo?codigo=6532480#:~:text=Del%20total%20de%20ni%C3%B1os%20estudiados,\(26%2C7%25%20vs.](https://dialnet.unirioja.es/servlet/articulo?codigo=6532480#:~:text=Del%20total%20de%20ni%C3%B1os%20estudiados,(26%2C7%25%20vs.)
28. Naranjo J, Alonso FJ, Carranza MD, Rueda JD. La prevalencia de sobrepeso y obesidad en escolares de educación primaria depende del criterio diagnóstico utilizado. Datos del estudio longitudinal "OBIN" 2011-2017. Revista Andaluza de Medicina del Deporte [Internet]. 2018 [cited May 04, 2022];11(4):192-198. Available at: <https://dialnet.unirioja.es/servlet/articulo?codigo=6841610>
29. Názar G, Pertemann F, Martínez MA, Leiva AM, Labraña AM, Ramírez K. Actitudes y prácticas parentales de alimentación infantil: Una revisión de la literatura. Rev Chil Nutr [Internet]. 2020 [cited May 04, 2022];47(4):669-676. Available at: <http://dx.doi.org/10.4067/S0717-75182020000400669>
30. López AM, Aparicio A, Salas MD, Loria V, Bermejo LM. Obesidad en la población infantil en España y factores asociados. Nutr Hosp [Internet]. 2021 [cited May 04, 2022];38(Extra 2):27-30. Available at: https://scielo.isciii.es/scielo.php?script=sci_abstract&pid=S0212-16112021000500007
31. Pérez O, Nazar A, Salvatierra B, Pérez SE, Rodríguez L, Castillo MT., et al. Frecuencia del consumo de alimentos industrializados modernos en la dieta habitual de comunidades mayas de Yucatán, México. Estudios Sociales [Internet]. 2012 [cited May 04, 2022];20(39):158-185. Available at: <http://www.scielo.org.mx/pdf/estsoc/v20n39/v20n39a6.pdf>
32. Zafra E. Educación alimentaria: salud y cohesión social. Salud Colectiva [Internet]. 2017 [citado 17 nov 2020];13(2):295-306. Available at: <https://dx.doi.org/10.18294/sc.2017.1191>
33. González N, Rodríguez V, Sancho ML, Rodríguez G, Marqués I, Fajo M, et al. Percepción de hábitos nutricionales saludables en una muestra de niños de educación primaria de Huesca. Boletín de la Sociedad de Pediatría de Aragón, La Rioja y Soria [Internet]. 2019 [cited Dec 23, 2020];49(1):28-agregar fin de página. Available at: <https://dialnet.unirioja.es/servlet/articulo?codigo=7103050>
34. Flores CH. Educación a las madres para combatir obesidad infantil. Rev Mex Pediatr [Internet]. 2018 [cited May 04, 2022];85(5):187. Available at: <https://www.medigraphic.com/pdfs/pediat/sp-2018/sp185g.pdf>
35. Leyva DA, Pérez A. Pérdida de las raíces culinarias por la transformación en la cultura alimentaria. Revista Mexicana de Ciencias Agrícolas [Internet]. 2015 [cited Dec 23, 2020];6(4):867-881. Available at: <https://dialnet.unirioja.es/servlet/articulo?codigo=6442678>
36. Flores Y, Acuña A, Cárdenas VM, Amaro MD, Pérez ME, Elenes JR. Asociación de la percepción materna del peso del hijo y estilos maternos de alimentación infantil. Nutr Hosp [Internet]. 2017 [cited May 04, 2022];34:51-58. Available at: <http://dx.doi.org/10.20960/nh.975>
37. Anaya SE, Álvarez MM. Factores asociados a las preferencias alimentarias de los niños. Revista Eleuthera [Internet]. 2018 [cited May 04, 2022];18:58-73. Available at: <http://www.scielo.org.co/pdf/eleut/v18/2011-4532-eleut-18-00058.pdf>
38. Pérez A, Cruz M. Situación actual de la obesidad infantil en México. Nutr Hosp [Internet]. 2019 [citado 04 may 2022];36(2):463-469. Available at: <http://dx.doi.org/10.20960/nh.2116>
39. Laguado J. Cuidado de enfermería a padres para fortalecer el crecimiento y desarrollo de sus hijos. Revista CUIDARTE [Internet]. 2013 [cited Mar 15, 2022];4(1):550-556. Available at: <http://www.scielo.org.co/pdf/cuid/v4n1/v4n1a17.pdf>
40. Ramírez CL, Téllez OS. Aplicación taxonómica NANDA, NIC y NOC en los planes de cuidados de



enfermería. En: Téllez SE, García M, editores. Modelo de cuidados en enfermería NANDA, NIC y NOC. 1º ed. México, D.F: McGrawHill; 2012, p. 154.

41. Ticona E. COVID-19. Determinantes sociales de la salud y participación comunitaria en el estado actual de la pandemia COVID-19. An Fac med [Internet]. 2020 [cited May 04, 22];81(2):145-147. Available at: <https://doi.org/10.15381/anales.v81i2.18470>

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