

## **AGED PEOPLE'S AFFECTED SEXUALITY AND THE NANDA-I/NOC/NIC LINKS: CROSS-MAPPING**

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### **ABSTRACT**

**Objective:** to map Nursing diagnoses, outcomes and interventions for factors that affect aged people's sexuality.

**Method:** a descriptive study that used the cross-mapping method to establish the links between the NANDA-International Nursing diagnoses, outcomes and interventions, the Nursing Outcomes Classification and the Nursing Interventions Classification, for the factors that affect sexuality identified in aged residents from a public gerontological center in the city of Aguascalientes, Mexico. The data were collected between April and September 2021. A phenomenological study revealed the elements that affect sexuality; subsequently, the Nursing diagnoses were mapped and links with Nursing outcomes and interventions were established, based on specialists' consensus.

**Results:** a total of 11 Nursing diagnoses were mapped, more prevalent among the Perception/Cognition, Self-perception and Health Promotion domains from the NANDA-International taxonomy; as well as 10 different Nursing outcomes from the Nursing Outcomes Classification belonging to the Functional Health, Physiological Health, Psychosocial Health and Health Knowledge and Behavior domains; and 11 Nursing interventions, in the Basic Physiological and Behavioral domains from the Nursing Interventions Classification.

**Conclusion:** Nursing diagnoses, outcomes and interventions were identified, addressing the recognized factors that affect aged people's sexuality.

**DESCRIPTORS:** Sexuality. Older adult. Older adults' health. Nursing process. Standardized terminology in nursing.

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## SEXUALIDADE AFETADA DE PESSOAS IDOSAS E AS LIGAÇÕES NANDA-I/NOC/NIC: MAPEAMENTO CRUZADO

### RESUMO

**Objetivo:** mapear diagnósticos, resultados e intervenções de enfermagem para os fatores que afetam a sexualidade de pessoas idosas.

**Método:** estudo descritivo que utilizou o método de mapeamento cruzado para estabelecer as ligações de diagnósticos, resultados e intervenções de enfermagem da NANDA-Internacional, Classificação de Resultados de Enfermagem e Classificação de Intervenções de Enfermagem, para os fatores que afetam a sexualidade identificados em pessoas idosas residentes em um centro gerontológico público, na cidade de Aguascalientes, México. Os dados foram coletados entre os meses de abril e setembro de 2021. Os fatores que afetam a sexualidade foram obtidos de um estudo fenomenológico, após foram mapeados diagnósticos de enfermagem e estabelecidas as ligações com resultados e intervenções de enfermagem, por meio do consenso de especialistas.

**Resultados:** foram mapeados 11 diagnósticos de enfermagem, mais prevalentes entre os domínios de percepção/cognição, autopercepção e promoção da saúde da taxonomia NANDA-Internacional; 10 diferentes resultados de enfermagem da Classificação de Resultados de Enfermagem pertencentes aos domínios de saúde funcional, saúde fisiológica, saúde psicossocial e conhecimento em saúde e comportamento; e 11 intervenções de enfermagem, entre os domínios fisiológico básico e comportamental da Classificação de Intervenções de Enfermagem.

**Conclusão:** identificaram-se diagnósticos, resultados e intervenções de enfermagem, abordando os fatores reconhecidos que afetam a sexualidade de pessoas idosas.

**DESCRITORES:** Sexualidade. Idoso. Saúde do Idoso. Processo de Enfermagem. Terminologia padronizada em enfermagem.

## SEXUALIDAD AFECTADA DE ADULTOS MAYORES Y LAS CONEXIONES NANDA-I/NOC/NIC: MAPEO CRUZADO

### RESUMEN

**Objetivo:** mapear diagnósticos, resultados e intervenciones de Enfermería para los factores que afectan la sexualidad de adultos mayores.

**Método:** estudio descriptivo que empleó el método de mapeo cruzado para establecer las conexiones entre diagnósticos, resultados e intervenciones de Enfermería de NANDA-Internacional, la Clasificación de Resultados de Enfermería y la Clasificación de Intervenciones de Enfermería, para los factores que afectan la sexualidad identificados en adultos mayores que viven en un centro gerontológico público de la ciudad de Aguascalientes, México. Los datos se recolectaron entre abril y septiembre de 2021. Los factores que afectan la sexualidad se obtuvieron de un estudio fenomenológico, para luego mapear diagnósticos de Enfermería y establecer las conexiones con resultados e intervenciones de Enfermería por medio del consenso de especialistas.

**Resultados:** se mapearon 11 diagnósticos de Enfermería, más prevalentes entre los dominios de Percepción/Cognición, Autopercepción y Promoción de la Salud de la taxonomía NANDA-Internacional; al igual que 10 resultados de Enfermería diferentes de la Clasificación de Resultados de Enfermería pertenecientes a los dominios de Salud Funcional, Salud Fisiológica, Salud Psicossocial y Conocimiento en Salud y Comportamiento; para finalizar con 11 intervenciones de Enfermería distribuidas entre los dominios Fisiológico Básico y Comportamental de la Clasificación de Intervenciones de Enfermería.

**Conclusión:** se identificaron diagnósticos, resultados e intervenciones de Enfermería, abordando los factores reconocidos que afectan la sexualidad de adultos mayores.

**DESCRITORES:** Sexualidad. Adulto mayor. Salud de los adultos mayores. Proceso de Enfermería. Terminología de enfermería estandarizada.

## INTRODUCTION

Population aging is a global reality that is advancing at an ever-increasing pace and presents major challenges for health and care systems<sup>1</sup> given that the need for assistance for aged people is multifaceted and Nursing care measures need to be comprehensive, focused on quality and not on quantity<sup>2</sup>. In order to achieve this, it is necessary to rethink the ways of caring for aged people, as well as to develop and integrate physical strategies and, above all, consider those with subjective and oftentimes veiled dimensions, such as sexuality.

Since health professionals, both from public and private institutions, rarely address the topic of aged people's sexuality,<sup>3</sup> this issue ultimately obscures its implications, thereby violating the rights and health of those individuals, limiting comprehensive care and contributing to physical and psychological ailments that diminish quality of life<sup>4-5</sup>. Nursing care measures focused on sexuality are extremely important in old age,<sup>6</sup> as it is an innate human dimension whose development is instinctive and learned, covering biopsychosocial aspects with interactions and impacts in all life stages.

During old age, people experience a series of losses that affect their sexuality, including widowhood, death of contemporary fellows, retirement, partial or total loss of independence, physical decline and cognitive impairment<sup>7</sup>. Added to these there are feelings of shame, oppression and absence of support in dialogue with family and friends that can extend to relationships with health professionals,<sup>8-9</sup> especially nurses, who meet different care demands.

Nurses are health professionals in extensive contact with aged people<sup>10</sup> and this allows them to establish closer and more empathetic therapeutic relationships, which provides opportunities to care for the sexuality of this group. To provide this type of care, it is essential to integrate sexuality into Nursing assistance as a basic human need to be recognized in communities, in hospital environments and in long-term care institutions for older adults.

From this perspective, the Nursing process is a methodological instrument that encompasses nurses' clinical reasoning, enabling to identify human demands related to aged people's sexuality and to implement measures aimed at enhancing health, well-being and quality life in this population segment<sup>11-12</sup>.

Using standardized terminologies in operationalization of the Nursing process is increasingly imperative to guarantee care quality and efficacy, while also generating and providing interoperable and analyzable data, which are crucial for improving the professional practice related to enhancing aged people's sexuality<sup>13-14</sup>.

In this regard, this study addresses how the links between the NANDA-International (NANDA-I) Nursing diagnosis, the Nursing Outcomes Classification (NOC) and the Nursing Interventions Classification (NIC), known collectively as NNN and whose role is to promote aged people's sexual health, can be used in the Nursing process. NNN links ease nurses' critical thinking and reasoning skills, as well as enable documentation through the use of Nursing terminologies capable of creating knowledge that improves aged people's sexual health<sup>13-14</sup>.

However, there is absence of clear proposals on how sexuality care should be approached, based on standardized Nursing terminologies. Therefore, the current study is innovative because it indicates a technology to conduct Nursing care aimed at promoting aged people's sexuality, with the objective of mapping Nursing diagnoses, outcomes and interventions for the factors affecting it.

## METHOD

A descriptive study was conducted using the cross-mapping method<sup>11</sup> to establish the links between NANDA-I<sup>15</sup> (12<sup>th</sup> edition), NOC<sup>16</sup> (6<sup>th</sup> edition) and NIC<sup>17</sup> (7<sup>th</sup> edition), in order to examine factors that affect aged people's sexuality at a public gerontological center from the city of Aguascalientes, Mexico.

The cross-mapping method favors the development of nurses' clinical reasoning and optimizes the clinical practice, especially in the application of standardized terminologies<sup>11</sup>.

The study was developed in five stages: 1) Identification of sociodemographic variables (gender, marital status, religion and schooling) and factors that affect aged people's sexuality; 2) Mapping of the Nursing diagnoses, based on the NANDA-I taxonomy; 3) Mapping of the outcomes sensitive to Nursing interventions, using the NOC taxonomy; 4) Mapping of the Nursing interventions, using the NIC taxonomy; and 5) Analysis of the NNN links established. The cross-mapping was carried out manually by the researchers between November 2022 and March 2023.

In the first study stage, the factors that affect aged people's sexuality at a public gerontological center from the city of Aguascalientes, Mexico, were identified based on the findings of a phenomenological PhD study carried out by the same authors, from which conception and development of this manuscript were derived. It is noted that the aforementioned study is in the publication process. The interviews were conducted between April and September 2021, online due to the course of the COVID-19 pandemic, individually and by prior appointment, lasting a mean of 71 minutes. The participants were recruited through an invitation to all aged individuals registered at the gerontological center and those interested contacted the researchers by telephone. For the virtual meetings in which the interviews were conducted, the participants were asked to be in a private room at their homes and unaccompanied.

The second stage involved mapping the Nursing diagnoses by consulting the NANDA-I<sup>15</sup> taxonomy, where the factors that affect sexuality, previously identified, were crossed with the 13 domains (Health Promotion; Nutrition; Elimination and Exchange; Activity/Rest; Perception/Cognition; Self-perception; Role Relationships; Sexuality; Coping/Stress Tolerance; Life Principles; Safety/Protection; Comfort; Growth/Development) and the 47 classes from the NANDA-I taxonomy, verifying the crossing of diagnostic indicators (Defining characteristics, Related factors, Risk factors, At-risk population and Associated conditions, information that is used to diagnose and distinguish one diagnosis from another).

In the third stage, the outcomes sensitive to Nursing interventions were selected using the NOC taxonomy<sup>16</sup>. The NANDA-I and NOC links proposed in its fifth edition were observed, such as the intersection with the domains (Functional Health, Physiological Health, Psychosocial Health, Health Knowledge and Behavior, Perceived Health, Family Health and Community Health), as well as with the NOC taxonomy outcome classes and titles.

The Nursing interventions were selected in the fourth stage, consulting the NIC taxonomy<sup>17</sup>. The NANDA-I and NIC links suggested in the sixth edition of the NIC were noted, in addition to the intersection of the domains (Basic Physiological, Complex Physiological, Behavioral, Safety, Family, Health System and Community), as well as with the NIC taxonomy intervention classes and titles.

After mapping the Nursing diagnoses, outcomes and interventions, the links established were reached by consensus among the authors of this study, by applying their knowledge about standardized terminologies and aged people's sexuality. It is important to highlight that the authors have extensive experience in standardized Nursing terminology.

The research was reviewed and approved by the Institutional Bioethics Committee of *Universidad de Guanajuato*: CIBIUG-A 68-2021.

## RESULTS

A total of 16 aged individuals took part in the phenomenological study from which the factors that affect sexuality were obtained; their mean age was 70.6 years old (SD±8.1), and most of them were women, married, Catholic and with Elementary School. In this group of interviewees, the most prevalent reported disease was high blood pressure (Table 1).

**Table 1** – Characterization of the aged individuals participating in the study. Aguascalientes, Mexico, 2023. (n=16)

Variable	Frequency	F	%
<b>Gender</b>	Female	9	56
	Male	7	44
<b>Marital status</b>	Married	9	56
	Widowed	4	25
	Single	3	19
<b>Schooling</b>	Elementary School	10	62
	High School	3	19
	Graduate Studies	3	19
<b>Religion</b>	Catholic	16	100

Note: Percentage (%), Frequency (F).

From the first study stage, 10 factors that affect aged people's sexuality emerged and 10 Nursing diagnoses, 10 Nursing outcomes and 11 Nursing interventions were identified through the cross-mapping.

Of the 10 Nursing diagnoses mapped, the most prevalent domains in the NANDA-I taxonomy were as follows: 30% (n=3) from Domain 1 – Health Promotion (perception of well-being or normality of function and the strategies used to maintain control and improve this well-being or normality of function); 30% (n=3) from Domain 6 – Self-perception (perception of oneself); 20% (n=2) from Domain 5 – Perception/Cognition (human processing system that includes attention, orientation, sensation, perception, cognition and communication); 10% (n=1) from Domain 8 – Sexuality (sexual identity, sexual function and reproduction); and 10% (n=1) from Domain 12 – Comfort (sense of well-being and mental, physical or social tranquility).

Consequently, a total of 10 different Nursing outcomes derived from the NOC taxonomy and belonging to the Domains were mapped, as follows: 1 – Functional Health (n=1); 2 – Physiological Health (n=2); 3 – Psychosocial Health (n=4); and 4 – Health Knowledge and Behavior (n=3).

In the NIC, 11 Nursing intervention titles were mapped within Domain 1 – Physiological: Basic (care measures that support physical functioning) and Domain 3 - Behavioral (care measures that support psychosocial functioning and ease lifestyle) changes, which constitute the NIC taxonomy. Chart 1 below presents the NANDA-I/NOC/NIC links.

**Chart 1 – Factors that affect aged people’s sexuality and the NANDA-I/NOC/NIC links. Aguascalientes, Mexico, 2023.**

Factors that affect sexuality	Diagnostic indicators	Diagnoses (NANDA-I) <sup>15</sup>	Outcomes (NOC) <sup>16</sup>	Interventions (NIC) <sup>17</sup>
Information deficit	Inaccurate statements about a subject matter Inadequate knowledge about sexuality	Deficient knowledge (00126)	Knowledge: sexual function (1815)	Teaching: sexuality (5624)
Loneliness	Absence of company Partner longing Difficulty socializing	Risk of loneliness (00054)	Psychosocial adaptation: life change (1305)	Behavior change: social skills (4362)
Low self-esteem	Self-negative verbalizations	Situational low self-esteem (00120)	Self-esteem (1205)	Strengthening self-esteem (5400)
Risk behaviors	Non-condom use Use of over-the-counter medications	Risk-prone health behavior (00188)	Health-seeking behavior (1603)	Behavioral change (4360)
Desire for scientific information about sexuality	Desire to improve knowledge about sexuality	Improved knowledge readiness (00161)	Knowledge: sexual function (1815)	Teaching: sexuality (5624)
Difficulty communicating with sexual partner	Desire to improve communication	Enhanced communication readiness (00157)	Communication: expression (0903)	Enhanced socialization (5100)
Physiological changes	Vaginal dryness Impaired erection and ejaculation	Sexual dysfunction (00059)	Sexual functioning (0119)	Perineal care (1750) Sexual counseling (5248)
Body image deterioration	Physical changes caused by aging (wrinkles, sagging skin, etc.)	Body image disturbance (00118)	Body image (1200)	Body image improvement (5220)
Diseases and physical decline	Ineffective everyday life choices to achieve health goals	Ineffective health self-management (00276)	Self-control: chronic disease (3102)	Self-care assistance (1800)
Social and family criticism	Stereotypes Prejudices Moral judgment	Personal identity disturbance risk (00225)	Personal identity (1202)	Improved coping (5230)

## DISCUSSION

The NNN links proposed can assist nurses in promoting aged people’s sexual health, as they allow for a systematized and individualized approach to Nursing care. This is because they ease the clinical reasoning process, as they provide a standardized language and logical structure for developing the care plan<sup>12</sup>.

To recognize Nursing diagnoses and, subsequently, outcomes and interventions, it is necessary to structure each person’s care needs. Therefore, this study derives from a survey where phenomenological interviews were conducted, whose depth allows researchers to access the most intimate part of the human experience and, thus, get to know the other’s reality<sup>18</sup> to be able to understand aged people’s feelings, behaviors, emotions, attitudes and opinions about sexuality.

It is important to highlight that each aged person is a unique and singular being, requiring an individualized and humanized approach by nurses<sup>19</sup>. In terms of sexuality, it is necessary to assess the needs, aspirations and possibilities of each aged person, taking into consideration the cultural, ethical and legal aspects associated with this topic, as aged people's sexuality is a right to be guaranteed and valued by nurses. In view of this, by using Nursing interventions from the NIC taxonomy, these professionals can contribute for this population group to experience their sexuality in a full, healthy and satisfactory way.

The NNN links ease Nursing care planning and evaluation, contributing to improving assistance and education in sexual health for aged people. Therefore, the demands to care for their sexuality go beyond biological issues specific to the senescent aging process, leaving the social and emotional spheres undervalued and underestimated in this care, as professionals do not master strategies for approaching the topic<sup>20</sup>. Consequently, talking openly about sexuality with aged people helps to break prejudices and taboos, raise awareness among professionals linked to preventive care and integrate gerontological assistance in care spaces.

Among aged people's sexuality care needs, it is possible to highlight deficient knowledge, as they themselves recognize that they do not have enough information about their sexuality and point out that they need to be better educated to improve their experiences and expressions. In addition, this finding has already been reported by health professionals when highlighting the importance of sex education for this age group<sup>21-22</sup>. Similarly, information and attention to physical changes and sexual dynamics, sexually transmitted infections and medication use to improve sexual potency are also neglected in health services<sup>21</sup>.

In a more extensive manner, this deficient learning affects communication in couples, which in turn tend to have their sexuality restricted as they get older, creating certain distance between the partners. Consequently, this favors single or widowed aged individuals experiencing emotional deprivation, social isolation and reduction/absence of romantic contact, with a risk for isolation<sup>13</sup>. Therefore, there is a desire on the part of the aged person to improve dialogue with their partner on issues related to sexuality, and it is essential that nurses and other professionals encourage them to receive comprehensive health care.

Aged people are also exposed to situational low self-esteem arising from the physical, emotional and social changes they encounter during the aging process and old age, which consequently affect their sexuality. One of the situations that most interferes with aged people's self-esteem is sexual dysfunction, which generates shame, discomfort and anguish<sup>23</sup>. Nonetheless, erectile dysfunction and hypoactive sexual desire are the most prevalent disorders among men and women aged at least 60 years old<sup>24</sup>. However, despite the understanding of these sexual problems in aged people, these topics still continue to be frequently overlooked by Nursing care and their team<sup>25</sup>.

In addition, there is little perception regarding the health risk among aged people in terms of sexual practices and expressions, which are also a reflection of lack of knowledge and inadequate training of health service teams. Considering this, a number of research studies reveal cases of sexually transmitted diseases, indicating risk behaviors practiced by this group<sup>26-27</sup>; in addition to denouncing Internet use for the consumption of pornographic content, sexting and long-distance relationships, revealing a significant number of aged individuals in a state of physical and emotional vulnerability<sup>28-30</sup>.

Another requirement for care arises from the physical changes underwent by aged people during the aging process and old age, which can lead to a breakdown in identity due to the way their body image is perceived. Most aged people recognize these changes and try to adapt to them; however, others live in disgust with their bodies and need support to improve their self-concept and manage their sexuality experiences in their changed body<sup>31</sup>.

However, there are still some prejudiced attitudes among health professionals regarding aged people's sexuality, and this type of attitude makes it difficult for these people to access and manage their own sexual health<sup>29,32</sup>. Therefore, it is essential to implement strategies that promote and guide care based on real needs, either expressed and/or identified by nurses and other professionals involved.

In this way, using standardized terminologies to apply the Nursing process becomes a tool capable of guiding nurses in the implementation of measures aimed at aged people's sexuality, as certain studies<sup>12,33</sup> have shown that this approach can aid in Nursing interventions focused on this particular perspective.

Thus, the Nursing diagnoses mapped can assist nurses in identifying human requirements associated with aged people's sexuality and support the implementation of their practices, understanding sexuality as an intrinsic element to human behavior and personality<sup>12</sup>.

Therefore, it is worth highlighting that the term "sexuality" is not only limited to the sexual act but to an individual component, linked to all life phases and aspects. Thus, envisioning sexuality in old age means providing emotional well-being, health maintenance and quality of life<sup>21,34</sup> since, within the Nursing process context, it is up to nurses to assess the affected human needs related to sexuality,<sup>34</sup> which are oftentimes linked to self-esteem and to lack of knowledge on the topic.

In turn, the outcomes sensitive to Nursing interventions will be useful for nurses to evaluate the effectiveness of Nursing care measures undertaken for aged people's sexuality. Therefore, the Nursing outcomes mapped in the NOC can help measure and document which Nursing interventions were efficient with regard to sexuality<sup>14</sup>.

The Nursing outcomes mapped in the NOC taxonomy were prevalent in Domain III (Psychosocial Health), corresponding to the description of the individuals' psychological and social functioning,<sup>13</sup> considering that, in general, aged people are more susceptible to developing depression due to their own aging process, contact with multiple losses and illness, rendering mental health care essential. Therefore, Nursing assessments and interventions focused on the psychosocial perspective are vital due to the vulnerabilities and changes during the aging process and old age. In this sense, aged people's emotional balance promotes the development of resilient characteristics, increasing well-being, acceptance, pleasure and understanding, as well as modifying their relationships with the environment, family and community<sup>35-36</sup>.

The Nursing interventions mapped can support nurses in writing their care prescriptions, including aged people's sexuality. The cross-mapping indicated predominance of Nursing interventions in Domain III (Behavioral) from the NIC taxonomy, where care to support psychosocial functioning is listed, easing lifestyle changes<sup>17</sup>.

Nursing interventions focused on aged people's health behaviors can generate lifestyle changes, improve self-assessed health, psychoemotional balance, physical and cognitive status, and amplify life satisfaction gained through positive affects, supporting sexual health<sup>37,38</sup>.

The expression of sexuality in aged people is influenced by psychosocial and biological determinants, including discriminatory beliefs<sup>35</sup> common in Nursing professionals' absent speeches and practices, which emphasizes the urgency of efforts to educate, restore self-esteem and provide more comprehensive health for these individuals.

In addition to the Nursing diagnoses mapped in this study, in Domain 8 (Sexuality) from the NANDA-I taxonomy we find diagnoses related to sexual identity, sexual function and reproduction, which can be consulted by nurses to evaluate aged people's sexuality in a more expanded way. The NOC and NIC taxonomies also present other Nursing outcomes and interventions aimed at promoting sexuality, which can be applied to the care plan.

Therefore, when the factors that influence the expression and experience of sexuality in old age are taken into account, aged people are provided with the opportunity to meet the biopsychosocial needs that affect their quality of life and, consequently, improve it<sup>39</sup>. For aged people, normalization and understanding combined with care for the sexuality dimension mean visibility and the opportunity to receive Nursing care targeted at the real or potential health problems faced.

One of the study limitations was having tested the proposal of NNN links in the empirical field, as the initial purpose was to present their possibilities for promoting care for aged people's sexuality in light of the factors identified. Consequently, the intention was to highlight the urgency of content validation studies of the links recommended, as this is a constant concern in the assessment of Nursing phenomena, through which diverse clinical evidence is collected that will establish rigor and authenticity.

## CONCLUSION

Based on the factors identified that affect aged people's sexuality, it was possible to map Nursing diagnoses, outcomes and interventions and, thus, propose an organized structure based on Nursing terminology to care for people's sexuality in old age. The factors identified that affect aged people's sexuality and the NNN links are distributed among the biological, psychological and social dimensions, a human perspective transversal to existence, requiring individual and comprehensive care on the part of Nursing.

It is therefore concluded that the NNN links stated can contribute to gerontological Nursing care and meet different care aspects focused on aged people's sexuality. Therefore, the mapping can be used as a guide in developing sexuality care plans for this population.

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## NOTES

### ORIGIN OF THE ARTICLE

Extracted from the thesis - "Meaning of sexuality from the perspective of corporeality in aged people", presented to the PhD Graduate Program in Nursing Sciences of *Universidad de Guanajuato*, in 2023

### CONTRIBUTION OF AUTHORITY

Conception of the study: González-Soto CE, Cardoso RB, Lima CFM.

Data collection: González-Soto CE.

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Discussion of the results: González-Soto CE, Cardoso RB, Lima CFM, Guerrero-Castañeda RF, Caldas CP, Félix NDC.

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### APPROVAL OF ETHICS COMMITTEE IN RESEARCH

Approved by the Interinstitutional Bioethics Committee of *Universidad de Guanajuato*, opinion CIBIUG-A68-2021.

### CONFLICT OF INTEREST

There is no conflict of interest.

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