Cogitare Enfermagem

ORIGINAL ARTICLE

The gender affirmation process and health impacts of transgender people*

HIGHLIGHTS

1. Transgender people often undergo hormone therapy without professional support.
2. Most transgender people have side effects of hormone therapy.
3. The majority of transgender people did not undergo surgical procedures.

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ABSTRACT

Objective: Analyze the impact of the gender affirmation process on the health of the transgender population. **Method:** Transversal and quantitative study, conducted with transsexual individuals from Aracaju, Sergipe, Brazil, between January and September 2023, using sociodemographic and health instruments. The analysis was done using Principal Component Analysis and descriptive statistics. **Results:** Of the 58 participants, 51.7% had side effects during hormone therapy, highlighting headache and elevated blood pressure. About 41.0% performed hormone therapy without the supervision of a qualified healthcare professional. Transsexuals and non-binaries were 16 times (p=0.0002) more likely not to perform the cytopathological examination. These data reinforce the vulnerability scenario of the population in the health context. **Conclusion:** The study demonstrated that institutional barriers drive the transgender population away from health services, generating limitations in access to preventive care with an emphasis on hormone therapy.

KEYWORDS: Transsexualism; Transgender Persons; Health Services for Transgender Persons; Access to Health Services; Health Vulnerability.

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INTRODUCTION

Transgender people are characterized as individuals who do not identify with the sex attributed to birth and with the sociocultural impositions associated with this[1]. Because they do not fit into the cisgender patterns, the transgender segment may experience stigmatizing and discriminatory practices, which relate to resistance in the search and use of health services, even in front of serious clinical frames, in addition to reflecting on the abandonment of treatments and their low life expectancy in the Brazilian scenario, which corresponds to 35 years [2-3].

The incompatibility between anatomical gender and gender identity often leads trans individuals to seek the process of gender affirmation[4]. Such a mechanism consists of a series of bodily modification procedures, through the implementation of surgical interventions and/or hormonal therapy, to reduce biologically induced secondary sexual aspects, as well as introducing sexual characteristics compatible with gender identity[5].

In this perspective, the Transsexual Process (PrTr) was established in 2008 within the Single Health System (SUS). The PrTr covers a range of procedures, outpatient and hospital services aimed at the health of transgender and transsexual people who express the desire to modify physical and sexual characteristics[6]. However, access to the services offered by the PrTr presents several barriers, including the deficit in quantity or variability of resources and procedures, as well as the geographical limitations of health units qualified to offer the PrTr, given that of the ten institutions existing in Brazil, six are located in the southeastern region[7].

Restrictions on access to PrTr are reflected in actions such as indiscriminate use of estradiol, progesterone, and testosterone, performing surgical interventions, and clandestine aesthetic procedures, such as the application of industrial liquid silicone (ILS)[8]. The clandestine application of ILS injections is frequently used by transvestites and transgender women. The use of this substance is associated with various health problems, among which are tissue necrosis, infectious processes, migration of the product to other areas of the body, deformities, pulmonary embolism, and even death [9-10].

Given the above, the present study is justified by the gap in the development of research aimed at the process of gender affirmation and its reflexes in transsexual health, in addition it is reinforced that since it is an invisible population that is often removed from health services, there are several doubts inherent in the specific therapeutic approach for this population group. From this perspective, the study provides important foundations for healthcare professionals in developing care plans tailored to the challenges and real needs of the transgender audience. Thus, the study aims to analyze the impacts of the gender affirmation process on the health of the transgender population.

METHOD

Area of study

This is a cross-sectional study with a quantitative approach, developed in collaboration with members of the actions initiated by the non-governmental organization Astra - Human Rights and Citizenship of Lesbians, Gays, Bisexuals, Transgender, and Intersex (LGBT).

Population and sample

The method applied to recruit and interview the transgender population was the Snowball [11]. In this perspective, the criteria for inclusion in the research include being over 18 years of age and regularly participating in activities developed by Astra, a non-governmental organization (NGO). At the same time, the non-inclusion criteria refer to the presence of severe cognitive impairment.

The strategy for data collection involves establishing contact with the Astra coordination to clarify the research objectives and relevance, as well as exchanging information and experiences regarding the institution's operation, lines of action, and mission. This will enable the adaptation of the research to respect the institutional principles and values. Thus, an institutional agreement was created, which was signed by the NGO manager, ensuring the consolidation of the partnership between Astra and the research group in the data collection process.

Data Collection

Validation process

Between August and December 2022, quantitative data collection instruments underwent validation by a committee of three expert judges in studies on the LGBTQIAP+ population. The researchers were invited and selected via non-probability sampling, using the Lattes Curriculum for analysis. After assessing the guidelines of the experts, the questionnaires were adapted to consolidate the study's variables.

Characterization of instruments

Quantitative instruments

The semi-structured quantitative data collection tool, "Socio-demographic Assessment", was applied through Google Forms from January 2023 to September 2023. The questionnaire was made available in a link format for the Astra manager. The instrument was based on the studies of the Brazilian Institute of Geography and Statistics[12], the National Network of Transsexual Persons[13] and Barrientos-Delgado and collaborators[14]. Such a tool is composed of the following variables: gender identity, sexual orientation, ethnic description, highest level of education, and monthly income. In addition, the instrument "Sexual Health and Body Image" was applied, of a quantitative nature, based on the studies of the National Network of Transsexual Persons[12] and Carone and collaborators[15]. The instrument consists of the variables: hormone therapy, body modification, surgical interventions, and side effects.

Data Analysis

The tabulation and organization of the database were performed using the Excel program, and then analyzed statistically with the Statistical Package for the Social Sciences (SPSS) 25.0, to obtain absolute and relative frequencies, along with a 95% confidence interval to present statistical significance ($p < 0.05$). The Analysis of Principal Components (APC) was performed using the PAST 4.0 program, and BioEstat 5.0 was utilized for evaluating the *Odds Ratio*. The sample was grouped according to the gender identity of the individuals.

Ethical aspects

The study was approved by the Ethics and Research Committee (CEP) of the Universidade de Tiradentes-UNIT with opinion 5,742,860, CAAE: 61245522.7.0000.5371.

During the development of the methodological stages, the ethical and legal aspects were considered and safeguarded in accordance with Resolution No. 466/2012. Participants received guidance and clarification on voluntary participation, study objectives, and methodological stages. Participants who agreed to participate signed a Free and Informed Consent Clause.

RESULTS

The study included 58 transgender men, aged between 18 and 61, of whom 23 (39.7%) were transgender men, while the most observed sexual orientation was heterosexual, 22 (37.9%). The study showed that, among the respondents, 30 (51.8%) have a secondary education as their highest level of education, and 24 (41.4%) are black. A pattern of economic vulnerability was observed, characterized by most individuals lacking a monthly income and earning up to one minimum wage (Table 1).

Table 1. Distribution of sociodemographic data of the transsexual population. Aracaju, SE, Brazil, 2023

(continue)

Age	**n (%)**
18 to 24 years old	22 (37.9)
25 to 29 years old	14 (24.2)
30 to 35 years old	8 (13.8)
36 to 41 years old	8 (13.8)
42 to 46 years old	4 (6.9)
47 to 51 years old	1 (1.7)
> 60 years old	1 (1.7)
Gender identity	**n (%)**
Transgender woman	18 (31.0)
Transgender man	23 (39.7)
Non-binary	17 (29.3)
Sexual orientation	**n (%)**
Heterosexual	22 (37.9)
Lesbian	6 (10.3)
Gay	6 (10.3)
Bisexual	8 (13.8)
Pansexual	14 (24.2)
Asexual	2 (3.5)
Ethnicity	**n (%)**
Black	24 (41.4)
White	16 (27.6)
Brown	16 (27.6)
Indigenous	1 (1.7)
Cannot answer	1 (1.7)
Education (maximum)	**n (%)**
Elementary school	9 (15.5)
Secondary school	30 (51.8)
Higher education	12 (20.7)
Professional technical education	6 (10.3)
Master's degree	1 (1.7)

Table 1. Distribution of sociodemographic data of the transsexual population. Aracaju, SE, Brazil, 2023

(conclusion)

Monthly income (individual)*	n (%)
No income	25 (43.1)
Up to 1 minimum wage	22 (37.9)
1 to 3 minimum wages	6 (10.3)
3 to 6 minimum wages	3 (5.2)
Prefer not to declare	2 (3.5)

Legend:*Value of the minimum wage: R$ 1,320 (US$ 238.13).
Source: The authors (2023).

When evaluating the gender affirmation processes, it was found that 29 (50.0%) affirmed that they perform or have already performed hormone therapy, of which the largest proportion had the follow-up of a qualified health professional. Another survey referred to the body modification through surgeries; in this scenario, the majority (75.9%) of the respondents deny the use of this mechanism. Of the total volunteers who performed body modification surgeries, the majority (85.7%) claim to have performed in legalized health units (Table 2).

Table 2. Body modification processes in the transsexual segment. Aracaju, SE, Brazil, 2023

Do you undergo or have you undergone hormone therapy?	n (%)
Yes	29 (50.0)
No	28 (48.3)
Prefer not to state	1 (1.7)
Was the hormone therapy procedure carried out under the supervision of a health professional?	**n (%)**
Yes	17 (58.6)
No	12 (41.4)
Have you had or do you have any side effects during hormone therapy?	**n (%)**
Yes	15 (51.7)
No	14 (48.3)
Have you ever had body modification surgery?	**n (%)**
Yes	14 (24.1)
No	44 (75.9)
If you have undergone any body modification surgery, was it carried out in a legal health facility?	**n (%)**
Yes	12 (85.7)
No	2 (14.3)
If you have undergone hormonal interventions or body modification surgeries, which health system did they take place in?	**n (%)**
Public system	7 (12.1)
Private system	12 (20.7)
Both systems	5 (8.6)
Does not perform	34 (58.6)

Source: The authors (2023).

According to the data presented in Table 2, the majority of the respondents reported having had side effects during hormone therapy. Figure 1 shows the distribution of adverse events due to hormone therapy. In trans women, the combined effects are highlighted: nausea/vomiting + dizziness + headache + increased systemic blood pressure (PA) – 5 (37.5%). In comparison, trans men showed headaches + an increase in PA 7 (42.8%).

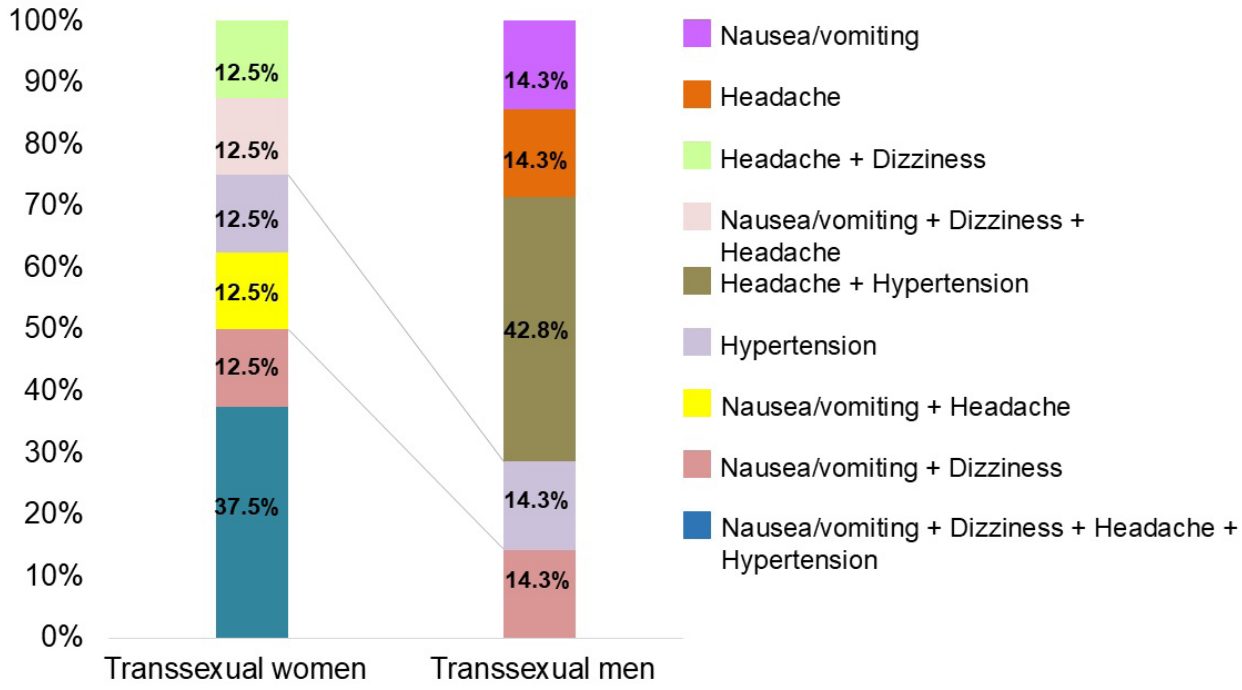

Figure 1. Distribution of side effects of hormone therapy in transgender women and men. Aracaju, SE, Brazil, 2023

Source: The authors (2023).

Table 2 shows that the smallest proportion of transsexuals underwent surgical body modification procedures. The majority of transsexual women, 57.1% performed surgical interventions in the breasts (placement of silicone prostheses), while 28.6% underwent surgical interventions in the face, glutes, and thighs, and 14.3% in the face. Already, 100% of transsexual men have undergone surgical procedures on their breasts (mastectomy).

According to the analysis of the main components (PCA), the first two components of the PCA, PC1 and PC2, explain most of the data variation (68.48%). Thus, it was possible to group transgender people into three distinct subgroups, based on the degree of similarity in the interactions among members of each set. The formation of the subgroups presented the following conformation: the subgroup G1, is formed by the axes PC1+ and PC2+, totals 28 individuals, the subgroup G2, is formed by the axes PC1- and PC2+, totals 13 individuals and the subgroup G3, is formed by the axes PC1- and PC2-, totals 16 individuals.

The subgroup G1 is composed of individuals who have not undergone hormone therapy and who have not undergone surgical interventions of body modification, being heterogeneous and composed of trans women, trans men, and non-binary individuals. Regarding the use of the social name, 4 (100%) of transgender women and 12 (75%) of non-binary men stated that society generally respects their social name, while 5 (62.5%) of transgender men report disrespect (Table 3).

The subgroup G2 is composed of men and women who have undergone hormone therapy and body modification surgeries. The majority of trans women report having undergone hormone therapy without the supervision of a healthcare professional. In contrast, 6 (100%) of trans men claim to have had the supervision of healthcare professionals during hormone therapy. Regarding the side effects of hormone therapy, the majority of trans women reported occurrence, while the majority of trans men denied side effects. Regarding performing body modification surgeries, 2 (28.57%) of transsexual women report that they performed these procedures in unlawful health units (Table 3).

Table 3. Distribution of statistical data extracted from the PCA for the grouping of transsexual individuals. Aracaju, SE, Brazil, 2023.

Group 1 (28 individuals)						
Variables	**Transgender woman (4)**		**Transgender man (8)**		**Non-binary (16)**	
	Yes (%)	**No (%)**	**Yes (%)**	**No (%)**	**Yes (%)**	**No (%)**
Respect for the use of the social name	100	0	37.5	62.5	75	25
Undergoing hormone therapy	0	100	0	100	0	100
Body modification	0	100	0	100	0	100

Group 2 (13 individuals)						
Variables	**Transgender woman (7)**		**Transgender man (6)**		**Non-binary (0)**	
	Yes (%)	**No (%)**	**Yes (%)**	**No (%)**	**Yes (%)**	**No (%)**
Respect for use of social name	85.71	14.29	100	0	0	0
Undergoing hormone therapy	100	0	100	0	0	0
Professional health guidance	28.57	71.43	100	0	0	0
Side effects	71.43	28.57	33.33	66.67	0	0
Body modification	100	0	100	0	0	0
Legalized unit	71.43	28.57	100	0	0	0
System used	**Publ.**	**Priv.**	**Publ.**	**Priv.**	**A.**	**NR**	**NR**
	85.71	14.29	66.67	16.66	16.66	0	0

Group 3 (16 individuals)								
Variables	**Transgender woman (6)**		**Transgender man (10)**				**Non-binary (0)**	
	Yes (%)	**No (%)**	**Yes (%)**		**No (%)**		**Yes (%)**	**No (%)**
Respect for use of social name	83.33	16.67	80		20		0	0
Undergoing hormone therapy	100	0	100		0		0	0
Professional guidance	16.67	83.33	90		10		0	0
Side effects	50	50	50		50		0	0
Body modification	0	100	0		100		0	0
System used	**Publ. (%)**	**NI (%)**	**Publ. (%)**	**Priv. (%)**	**A. (%)**	**NI (%)**	**NR**	**NR**
	33.33	66.67	20	30	20	30	0	0

Legend: **Publ**- Public Health System; **Priv**- Private Health System; **A**- Both Health Systems; **NI**- System not informed; **NR**- Did not perform.

Source: The authors (2023).

The subgroup G3 consists of trans women and men who have undergone hormone therapy and who have not undergone surgical interventions of body modification. Most trans women stated that they had undergone hormone therapy without guidance from a healthcare professional, while almost all trans men had professional follow-up during hormone therapy (Table 3).

As regards the cytopathological examination, the target audience represented 36 cisgender women and 33 trans and non-binary men. It was observed that the frequency of examination differed between the two groups, as 24 (66.66%) of cisgender women take the examination annually, while 16 (48.48%) of trans and non-binary men do not (Figure 2). It was possible to verify that trans and non-binary men were 16 times more likely not to undergo the cytopathological examination, compared to cisgender women (95% CI between 3.29 and 77.76; *p=0.0002*).

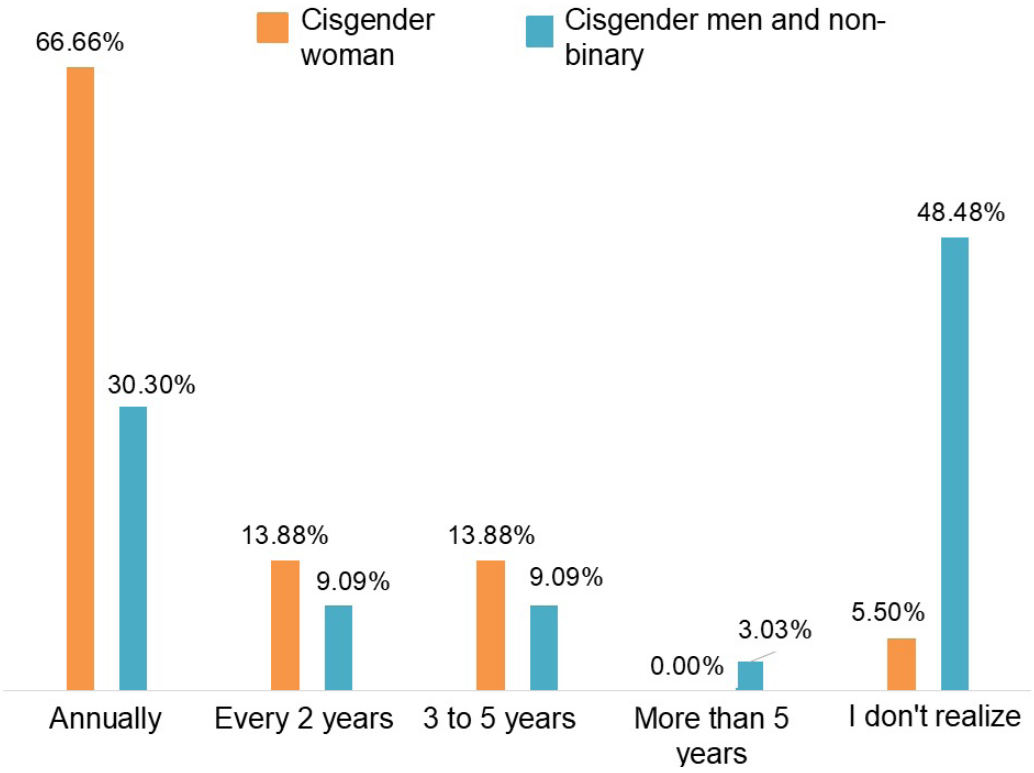

Figure 2. Comparison between the frequency of cytopathological examinations in cisgender women X trans and non-binary men, Aracaju, SE, Brazil, 2023

Source: The authors (2023).

DISCUSSION

The present study highlights fragilities in the level of education of the transgender population and their reflection in the low socioeconomic status of these individuals. According to the dossier published in 2022 by the *Associação Nacional de Travestis e Transexuais* (ANTRA), only 0.02% of transsexuals are enrolled in universities[16].

There are, therefore, social disparities, especially in the scarcity of opportunities for access to inclusive education and in occupying well-paid positions. It is also highlighted that the limitations of public policies aimed at the development of actions that encourage the opening of formal vacancies for the transgender public, contribute to the fact that a

large proportion of transgender people are unemployed or in subemployment such as prostitution, being exposed to a scenario of socioeconomic vulnerability[17-18].

The gender affirmation process has the potential to promote positive impacts on the health of the transsexual public, as it reduces the effects of incongruence between gender identity and biological characteristics through procedures such as surgical interventions, legal recognition of gender, and hormone therapy[19]. In this sense, the present study demonstrates how such mechanisms affect the health of transgender men and women in different ways.

This study presents a tendency associated with transsexual women to perform the process of hormone therapy without professional supervision. This data may relate to different patterns of care from a gender perspective, according to the study that identified that the female gender presents a greater predisposition to seek regular health care, compared to the male gender. Thus, the fact that transgender men are biologically bound to the female sex can influence professional follow-up during hormone therapy[20].

In this perspective, it was possible to observe that the lack of professional support during hormone therapy resulted in the intensification of the manifestation of side effects in transsexual women, when compared to transsexual men, who, in the majority, claimed to have professional guidance during hormone therapy. This result reinforces the importance of healthcare professionals in preventing complications and providing safe and effective treatments[21].

A study conducted in Bahia reveals that facilities for obtaining estradiol and progesterone without a prescription are prevalent in Brazilian pharmaceutical environments, creating a favorable condition for self-medication practices, which poses a risk factor for adverse events. In addition, barriers to accessing healthcare can stimulate self-medication, as well as socioeconomic conditions, which can lead individuals to believe that the higher the hormone level administered, the faster the desired body changes will occur[22]

Hormone therapy can trigger metabolic, cardiovascular, and endocrine changes that vary between transgender men and women, due to differences in the substances used and their distinct physiological mechanisms[23]. When evaluating the distribution of side effects in the study, it was found that an increase in blood pressure was a common occurrence among both genders. However, the mechanisms involved in this condition are different; in transsexual men, hypertension is linked to increased blood viscosity associated with the use of testosterone[24], whereas in transsexual women, it is related to the repercussions of estrogen in the risk of thromboembolic events[25].

The study highlighted that the majority of transsexuals did not undergo surgical interventions of body modification; this fact may be associated with the difficulty of accessing the Transsexualizing Process (PrTr). Although specialized health units offer a variety of surgical procedures, such as hysterectomy, thyreoplasty, breast prosthesis implants, and mastectomy, the waiting time for the acquisition of surgeries is still considered high, causing many individuals not to have access to the desired interventions. In addition, there are geographical restrictions, especially in the northeastern region, which has only one hospital equipped with the services of the PrTr, located in the metropolitan area of Recife [26].

The difficulty in accessing the body modification procedures can increase the risks of using services without adequate structural and professional regulation, predisposing

serious health consequences, such as rejection of implants, occurrences of infections and bleeding, anesthetic complications and even deaths of [27-28].

Regarding the screening of cervical cancer in non-binary and non-hysterectomized trans men, the present study highlighted the low adherence of this population in performing the periodic cytopathological examination. Such findings corroborate the study conducted in the United States, which highlighted that about 51% of transsexual participants did not perform the cytopathological examination in the last 3 years. The study also highlighted that the majority of transsexual people prefer to carry out self-sampling of HPV as primary screening for cervical cancer, to avoid embarrassing situations attributed to discrimination and the unpreparedness of professionals during the cervicovaginal sampling [29].

As a limitation of the study, the difficulty of accessing the population is highlighted, as it is a historically marginalized group. The capture of participants for the study was a complex process, resulting in a restricted sample.

CONCLUSION

The present study enabled the analysis of the effects of the gender affirmation process on the health of the transgender population in the northeast of Brazil, demonstrating that hormone therapy is a mechanism often applied to obtain physical characteristics compatible with gender identity. Transsexual women are more likely to perform hormone therapy without the supervision of a health professional, and this is associated with an increased incidence of side effects. It was found that the majority of transsexuals did not undergo positive surgeries; this data may be associated with the difficulty of accessing health services.

The research has significant implications for the areas of health and nursing, as it provides a sociodemographic and clinical survey on the impacts of the gender affirmation process on transsexual health. Understanding these parameters contributes to the training in the follow-up of individuals undergoing hormonal therapy and positive surgeries, seeking to reduce risks and promote better clinical outcomes, while also encouraging the development of a more equitable and inclusive healthcare system.

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Substantial contributions to the conception or design of the work; or the acquisition, analysis, or interpretation of data for the work - **Santana JT, Cardoso IG, de Oliveira VTP, Madi RR, Martins MCV, de Melo CM.** Drafting the work or revising it critically for important intellectual content - **Santana JT, Madi RR, de Melo CM.** Agreement to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved - **Santana JT, de Melo CM.** All authors approved the final version of the text.

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