

## **Sociodemographic and pharmacotherapeutic profile of transgender persons from a specialized outpatient service in northeastern of Brazil**

**Perfil sociodemográfico e farmacoterapêutico de pessoas transgêneras acompanhadas por um serviço ambulatorial especializado no nordeste do Brasil**

**Perfil sociodemográfico y farmacoterapêutico de personas transgénero acompañadas por un servicio de consulta externa especializado en el noreste de Brasil**

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### **Abstract**

This study describes the sociodemographic and pharmacotherapeutic profile of transgender persons from a specialized outpatient service in Sergipe, northeast of Brazil. This investigation is an observational, cross-sectional, and retrospective research developed from January to May 2022 with a convenience sampling. Data included in the analysis was the number of medical records, age, gender, years of education, and marital status. Also collected from electronic medical records information about drug utilization, such as the type of hormone therapy and other medications currently used, whether prescribed or not. The descriptive analysis involved measures of central tendency (mean, median, and standard deviation). Transgender people included in the study (n=81) were up to 29 (80%) (mean age of 26 years), and 70% (n=57) reported the use of hormone therapy; 17% (n=10) reported consuming it by self-medication. The most used formulation was testosterone cypionate 40.8% (n=20), followed by cyproterone acetate plus estradiol 20.4% (n=10). About 66.7% (n=38) of these people used other medications, as antidepressants (32%; n=24). As a minority population constantly facing situations of social vulnerability, this work will contribute to a more detailed characterization of this population from the investigated service, and then public agencies and organizations that serve this population can obtain more information about the diversity that composes it.

**Keywords:** Gender identity; Health services for transgender persons; Hormones; Transgender persons; Unified Health System.

### **Resumo**

Este estudo descreve o perfil sociodemográfico e farmacoterapêutico de pessoas transgênero de um ambulatório especializado em Sergipe, nordeste do Brasil. Esta investigação é uma pesquisa observacional, transversal e retrospectiva desenvolvida de janeiro a maio de 2022 com amostragem por conveniência. Os dados incluídos na análise foram o número de prontuário, idade, gênero, anos de estudo e estado civil. Também foram coletadas do prontuário eletrônico informações sobre o uso de medicamentos, como o tipo de hormonioterapia e outros

medicamentos utilizados atualmente, prescritos ou não. A análise descritiva envolveu medidas de tendência central (média, mediana e desvio padrão). As pessoas transgênero incluídas no estudo (n=81) tinham até 29 anos (80%) (idade mediana de 26 anos), 70% (n=57) relataram o uso de hormonioterapia, sendo que 17% (n=10) desses relataram automedicação. A formulação mais utilizada foi o cipionato de testosterona 40,8% (n=20), seguido do acetato de ciproterona mais estradiol 20,4% (n=10). Cerca de 66,7% (n=38) dessas pessoas usavam outros medicamentos, como antidepressivos (32%; n=24). Por ser uma população minoritária que enfrenta constantemente situações de vulnerabilidade social, este trabalho contribuirá para uma caracterização mais detalhada dessa população do serviço investigado. Assim, órgãos públicos e organizações que atendem essa população podem obter mais informações sobre a diversidade que a compõe.

**Palavras-chave:** Identidade de gênero; Serviços de saúde para pessoas transgênero; Hormônios; Pessoas transgênero; Sistema único de saúde.

### Resumen

Este estudio describe el perfil sociodemográfico y farmacoterapéutico de personas trans de un servicio ambulatorio especializado en Sergipe, Brasil. Esta investigación es una investigación observacional, transversal y retrospectiva desarrollada de enero a mayo de 2022 con muestreo por conveniencia. Los datos incluidos en el análisis fueron el número de registros médicos, edad, género, años de educación y estado civil. También se recopila información de los registros médicos electrónicos sobre la utilización de medicamentos, como el tipo de terapia hormonal y otros medicamentos que se usan actualmente, ya sea que se receten o no. El análisis descriptivo involucró medidas de tendencia central (media, mediana y desviación estándar). Las personas transgénero incluidas en el estudio (n=81) fueron hasta 29 (80 %) (mediana de edad de 26 años), y el 70 % (n=57) informaron el uso de terapia hormonal; El 17% (n=10) informó consumirlo por automedicación. La formulación más utilizada fue el cipionato de testosterona 40,8% (n=20), seguido del acetato de ciproterona más estradiol 20,4% (n=10). Alrededor del 66,7% (n=38) de estas personas usaban otros medicamentos, como antidepressivos (32%; n=24). Al ser una población minoritaria que enfrenta constantemente situaciones de vulnerabilidad social, este trabajo contribuirá a una caracterización más detallada de esta población desde el servicio investigado. Así los organismos y organismos públicos que atienden a esta población pueden obtener más información sobre la diversidad que la compone.

**Palabras clave:** Identidad de género; Servicios de salud para las personas transgênero; Hormonas; Persona transgênero; Sistema Único de Salud.

## 1. Introduction

Transgender persons are knowing as whose gender identity differs from the sex assigned at birth. The term transgender embraces transgender men and women as well as non-binary and genderqueer persons (Kruger, Sperandei, Bermudez et al., 2019, Feldman, Luhur, Herman et al., 2021). The desire to live as a person with a gender identity opposite to their biological sex can be associated with a feeling of inadequacy, which can lead the person to induce changes in the body at different levels to feel contemplated. Often, gender identity and desired physical characteristics that differ from sex at birth are associated with gender distress or dysphoria (Silva, Figuera, Allgayer et al., 2021)

Epidemiological studies are still scarce, esteemed that approximately 0.1 – 2% of the population worldwide identify as transgender persons (Chaudhary, Ray & Glass, 2021). In 2021, scientists from UNESP (Universidade Estadual Paulista) published the first population-based study representing Brazilian adults with gender diversity. The sample with gender diversity represents about 2% of the adult population (almost 3 million people), and they are homogeneously located throughout the country, reiterating the urgency of public health policies for these individuals in the five Brazilian sub regions (Spizzirri, Eufrásio, Lima et al, 2021).

Regarding health care for the transgender population, different obstacles hamper access to and use of these services. Among these obstacles, we can exemplify the scarcity of specialized health services in the Health Care Network, the lack of standardization of care, integral and longitudinal person-centered monitoring, and prejudice and misinformation. Health professionals' disrespect and delegitimize transgender identities, in addition to persisting pathologized views of these people (Rocon, Sodré, Zamboni et al., 2018, Augusto, Oliveira & Polidoro, 2020). However, access to hormonal treatment safely and adequately is another critical point in the prism of care for this population.

Brazilian doctors must prescribe hormone therapy for use (Brazil, 2013). However, due to the factors exemplified above, most transgender persons self-medicate and avoid use health services to carry out their hormones, even in the face of significant health problems. Self-medication is an unsafe practice and very established among transgender women, as female hormones, although requiring a medical prescription, obtained easily in pharmacies without prescription. Thus, when these public accesses specialized services, self-hormonization is usually present due to the indication of people from their social networks or information obtained on the internet (Kruger et al., 2019, Arán, Murta & Lionço, 2009).

Given the difficulties in accessing and using resources for the transformation of the body, the Unified Health System (SUS), in Brazil, has formulated policies aimed at this public, such as the National Policy for the Comprehensive Health of Lesbians, Gays, Bisexuals, Transvestites, and Transsexuals (LGBT). More specifically, the SUS Transsexualizing Process was created in 2008, redefined, and expanded in 2013. This rule guarantees multidisciplinary specialized monitoring and access to surgical and hormonal procedures for transgender people (Kruger et al., 2019, Brazil, 2011).

There is growing recognition of the need for adequate health outs to meet the needs of transgender individuals; these needs may go beyond gender transition and require specific treatments, which may compromise transition-related care (Cheung, Ooi, Leemaqz et al., 2018, Stepleman, Yohannan, Scott et al., 2019). Should be consider that these gender-affirming interventions, including hormonal and surgical interventions, are not yet well defined due to the lack of clinical protocols and standard guidelines (Bretherton, Thrower, Grossmann et al., 2019).

Gender transition with hormone therapy involves the administration of testosterone for masculinization or estradiol for feminization, often associated with adjuvant antiandrogens (Cheung et al., 2018) Testosterone and estradiol play essential roles in cardiovascular disease. Hormone therapy with testosterone and estradiol appears to be associated with lipid disorders, and potentially aggravating cardiovascular risk factors such as hypertension and insulin resistance (Maraka, Singh Ospina, Rodriguez-Gutierrez et al., 2017, Streed, Harfouch, Marvel et al., 2017).

As it is a minority population, socially excluded, and subject to situations of violence, this group is prone to fragile mental health, harmful habits and lifestyles, such as the consumption of cigarettes, alcoholic beverages, and illicit drugs, in addition to work in inappropriate or unsafe conditions, such as sex workers (Schwindt, 2020). In a scenario that encompasses different social determinants of health, transgender persons are potentially affected by common mental problems and disorders such as depression and anxiety, which can lead to self-injurious practices, such as substance misuse. Therefore, medication guidance, especially psychotropic and possible drug interactions should be done cautiously.

The importance of the insertion of the pharmacist in the promotion and guidance of the rational and safe use of these drugs is highlighted, as well as in the medication therapy management, in the elaboration of prescription protocols and different guidelines regarding the adverse reactions and adverse effects, forms of acquisition, ways of using hormones, and different doubts that people who access this service may have. Still, it is possible to note that there is the possibility of guidance and management of pharmacotherapy to encourage adherence to drug therapy, both in the use of hormones and other drug classes used for different reported comorbidities that are present in these users (Brazil, 2014). This study aimed to describe the sociodemographic and pharmacotherapeutic profile of users monitored by a specialized outpatient service, the only one in Sergipe, in the northeast of Brazil.

## **2. Methodology**

### ***Study design***

This observational, cross-sectional, and retrospective study from January to May 2022, with transgender persons recruited through convenience sampling, once the present study was carried out in a retrospective period, without interference with the outcomes investigated, involving both recording and description of characteristics concerning the investigated

phenomena, and the use of analysis techniques of trend measures (Barreto & Filho, 2011, Romanowski et al., 2019). These persons that participated in this study were followed up at the multi-professional outpatient service “Portas Abertas – Saúde integral das pessoas transgêneros: cuidar e acolher”, located at the CENSIP (Center for Simulations and Health Practices) of the Federal University of Sergipe, Professor Antonio Garcia Filho Campus in the city of Lagarto, Sergipe, northeast of Brazil.

### ***Participants***

The study included people aged  $\geq 18$  years who were seen at least once during five months, by any of the medical specialties (endocrinology, gynecology, and psychiatry) or with the multidisciplinary team (pharmacy, nutrition, speech therapy, occupational therapy, nursing, and social work) – regardless of whether or not you are using gender-affirming hormone therapy.

### ***Measures***

Sociodemographic data were collected from electronic medical records contained in the Management Application for University Hospitals-AGHU/EBSERH and comprised the following information: medical record number, date of birth, address, marital status, self-reported gender, education, and profession.

All drugs were considered for evaluation of transgender people at the time of the study; these may be for hormone therapy or for existing comorbidity or health condition. In addition, these same drugs were categorized into prescription and non-prescription (self-medication) drugs. This drug information comes from electronic medical records and drug therapy management assessment sheets. Due to the lack of scientific evidence on the effect on gender transition, homoeopathic medicines, Bach flower remedies and medicines that did not have a clear formulation, such as teas, decoctions and tinctures, were excluded.

The present study was approved by the Research Ethics Committee of the Federal University of Sergipe - UFS Lag/HUL (CAAE: 57407322.0.0000.0217) under legal opinion number 5,452,695.

### ***Data analysis***

Data tabulation and analysis were performed in Microsoft Excel version 2021 spreadsheets, then measures of central tendency (mean, median, and standard deviation) were calculated. The information will be presented in graphs and tables.

## **3. Results**

Currently, around 100 transgender persons actively attend some of the services at the trans clinic. During the data collection period, between January and May 2022, 81 transgender persons attended the transgender outpatient services at least once. Of this total of 81% that corresponds to the sample studied, 47.1% (n=41) self-reported as trans women and 41.4% (n=36) as trans men (Table 1). Regarding the age group, 80.2% (n=65) of users are aged up to 29 years. The mean age was 27.2 years (SD  $\pm$  6.1 years), and the median was 26 years (min. 18 – max. 46). It was observed that 74.1% (n=60) reported being single and 43.2% (n=35) had studied for more than 12 years (Table 1).

**Table 1** - Distribution of sociodemographic data on transgender people from a specialized outpatient clinic (n= 81). Lagarto, Sergipe, Brazil (January to May 2022).

Investigated variables	n	%
<b>Self-referred gender (n= 87)</b>		
Trans* woman	41	47,1
Trans* man	36	41,4
Travesti	3	3,4
Not referred	1	1,1
<b>Age group</b>		
18 a 29	65	80,2
≥30	16	19,8
<b>Marital status</b>		
Single	60	74,1
Married	5	6,2
Other	16	19,8
<b>Education - years of study</b>		
< 12	9	11,1
> 12	37	45,7
Not referred	35	43,2

\*Trans: transgender. Source: Authors.

About the pharmacotherapeutic profile of users, 70.4% (n=57) were using hormone therapy during the study period. As for self-medication, 17.5% (n=10) of users reported using their hormones without a medical prescription (Table 2). Among the most used hormones, testosterone cypionate corresponded for 40.8% (n=20) of consumption, the hormone therapy for trans men to develop male characteristics. Then, cyproterone acetate plus estradiol was used in 20.4% (n=10) of the cases of trans women to obtain female characteristics. However, a fact that deserves to be highlighted is that 22.4% (n=11) of trans persons could not inform the name of the hormones in use.

Concerning hormone therapy, 66.7% (n=38) of the people assisted reported using other medications in their routine (Figure 1). In the “others” category was included the drugs that corresponds to 18.7%, such as antihypertensives, lipid-lowering drugs, hypoglycemics, proton pump inhibitors, statins, and antiparasitic drugs.

**Table 2** - Distribution of variables related to the pharmacological profile of transgender persons from a specialized outpatient clinic. Lagarto, Sergipe, Brazil (January to May 2022).

<b>Investigated variables</b>	<b>n</b>	<b>%</b>
<b>Hormone therapy currently in use (n=81)</b>		
Yes	57	70,4
No	17	21,0
Not referred	7	8,6
<b>Self-medication (n = 57)</b>		
Yes	10	17,5
No	45	78,9
Not referred	2	3,5
<b>Hormone therapy drugs currently in use</b>		
Testosterona cypionate	20	40,8
Cyproterone acetate + estradiol	10	20,4
17-beta estradiol	4	8,2
Other	4	8,2
Not referred	11	22,4
<b>Hormone therapy simultaneous a other drugs used from different pharmacological groups?</b>		
Yes	38	66,7
No	19	33,3

Source: Authors.

#### 4. Discussion

The present study had a primarily young sample, under 29 years old, with a prevalence of trans women and a predominance of more than 12 years of study among the participants. This profile of gender identity found is consistent with what was observed in the results of the work by Krüger et al. (2019), in which 54.5% identified as trans women.

These findings reinforce the results found in other studies, such as the mapping of 1788 transgender persons in São Paulo in 2021, which revealed that 43% are trans women, followed by 23% trans men (Cedec, 2021). Similar results were founded in studies by Grinsztejn, Jalil, Monteiro et al. (2017) and Pinto, Teixeira, Barros et al. (2017), carried out in Rio de Janeiro and São Paulo, respectively, where the identity pattern of most studies was maintained, predominantly composed of those who self-reported as trans women.

Another significant aspect was age; the median in the present study was 26 years old. In work carried out in Fortaleza by Martins, Kerr, Macena et al. (2013), with 304 participants, half of the sample was younger than 24 years old. In the study by Grinsztejn, Jalil, Monteiro et al. (2017) in Rio de Janeiro and Baixada Fluminense, the 345 participants had a median age of 28 years. In the Federal District of Brazil, a study of transgender women shows that the mean age was 24 years. Studies carried out with trans persons mostly present young people, and the socio-demographic profile of older persons remains unknown (Kruger et al., 2019).

These different results and studies founded to demonstrate that there are limitations regarding the access and use of these health services for restricted portions of the population. It's necessary to understand what happens to the group population that negatively influences their access and why they don't use health services. We recognize that it is essential to delve into aspects of conditioning factors and social determinants of health that directly imply the access and use of these services.

Concerning the pharmacotherapeutic profile, a high prevalence of hormone consumption is presumed in this

population. This study shows that about 71% use hormones and 17% are self-medication with drugs with significant systemic repercussions. Silva, Silva, Soares et al. (2022) discuss a study carried out with 127 trans women, in which approximately 95% reported the use of hormones and, of this amount, a significant 68% refer to the practice of self-medication. Silva et al. (2022) study involved only trans women, which explains the discrepancy between the values.

The values discovered for hormonal self-medication in this research, as in other studies, could be explained this outcome and may result from the absence of trained professionals. In this scenario, capacitated professionals could prescribe hormone therapy more safely, as well as the quality of access and use of medical services, reducing social barriers imposed on the public, such as abuse, bullying, neglect, and even discrimination by health professionals (Kruger et al., 2019). The presence of a pharmacist's clinic can reduce the practice of self-medication (Regional Pharmacy Council – Paraná, 2016), the prescription of these drugs, the stigma in health services, and the interference of low socioeconomic status in the access to specialized professionals.

As for the type of hormone most used, the most frequent for trans men is testosterone cypionate. Cyproterone acetate combined with estradiol was the hormone most used by trans women. This profile was similar to that found in the Augusto et al. (2022) study, which investigated the most used hormones in seven specialized establishments for trans persons in the Rio Grande do Sul.

It is worth noting that the National Medicines Policy (PNM) provides for the population's access to essential medicines included in the National Medicines List (Brazil, 2001). However, in the last update of Rename (national list of essential medicines), for the trans population, among the options of sex hormones present, there is a lack of androgen hormones included. Cyproterone acetate, finasteride, and some conjugated estrogens was incorporated in the RENAME. However, hormone therapy with drugs available may not be enough to cover the different possibilities of effective and safe prescription necessary to solve the needed health of this public.

This fact can be a consequence of the lack of Clinical Protocol and Therapeutic Guidelines (PCDT) that meet the public policies of access to the Transsexualization Process provided for in the National LGBT Comprehensive Health Policy (PNSILGBT) that subsidize changes in Rename (Kruger et al., 2019, Brazil, 2011).

Antidepressants were the most used among the other drugs mentioned in this study. A recent survey reported that approximately 56% of transgender patients with depression and 40% with anxiety were diagnosed. These data are consistent with research carried out in Passo Fundo (RS) (Freire, Figueiredo, Gomide et al., 2014). Freire et al. (2014) describe that 77% of trans persons refer to the use of psychotropic drugs, especially selective serotonin reuptake inhibitors (SSRIs) antidepressants – the most commonly used therapeutic group in depressive conditions. Difficulties in access, discrimination, failure to meet patient expectations in inducing desired characteristics, and the access and utilization of free public health services and resources are a few factors attributed to depression.

We recognize that this study has the limitation of having worked with a small sample whose total universe (number of transgender persons existing in Sergipe or even in Brazil) is unknown, making it difficult to extrapolate the results. Added to this fact, the sample's memory bias and the different electronic means of recording the attendance. Despite the present limitations, this study describes the sociodemographic and pharmacotherapeutic profile of 81% of active users of the investigated outpatient clinic. The results reported brings new possibilities to discuss public policies aimed at the health of trans populations and new avenues for future research.

## 5. Final Considerations

The number of studies with robust evidence on the health of the transgender population worldwide and in Brazil is still tiny. The almost non-existence of data on this population is mainly due to its exclusion from demographic censuses. Given this



scenario and taking into consideration the significant importance of this social group, this work will help better characterize these people so that public agencies and organizations that serve this population can obtain more information about the diversity that composes it.

Furthermore, the awareness of health service managers to invest in physical structure, human resources, process organization, and team training is expected. In addition, they can design future interventions with the help of users for the prevention, identification, and resolution of pharmacotherapeutic problems. Moreover, undoubtedly, it provides greater visibility to Trans persons because knowing the perception of these users is to give voice to the subjects in the process of empowerment of care.

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## Authors' disclosure statements

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