Chest binding and respiratory complaints in transgender men

Uso de binder *e queixas respiratórias em homens transexuais*

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Abstract

Introduction: Chest binders are an important resource for building masculinity in transgender men without mastectomy, although they can cause respiratory and thoracic damage if misused. **Objective:** To analyze the association between chest binding and chest complaints in transgender men. **Methods:** This was a quantitative cross-sectional study conducted at the Trans Space of the Hospital das Clínicas de Pernambuco and the LGBTQI Patrícia Gomes outpatient clinic of the Lessa de Andrade polyclinic in Recife (Pernambuco State, northeastern Brazil). Sixty transgender men aged >18 years were included, and data on sociodemographics, general health, chest binding, and respiratory complaints in the thoracic region were collected. Descriptive analysis was performed, and prevalence ratios (PR) were estimated with a confidence interval (CI) of 95% to associate between binder use and complaints in the chest region. **Results:** The average was 27.25 years, of which 81.7% did not undergo mastectomy and 53.3% used chest binders. The use of chest binders was significantly associated with complaints in the chest region (PR = 2.73), difficulty breathing (PR = 2.27), and chest pain (PR = 1.82). **Conclusion:** This study demonstrated a higher prevalence of complaints in the chest and respiratory region in transgender men who use chest binders. This reinforces the need to broaden the view on the health of this population. Gender construction strategies are essential for the quality of life and mental health of transgender men, and binders are an important ally in this process.

Keywords: Gender dysphoria. Mastectomy. Transsexualism.

Resumo

Introdução: *O uso de binder é um importante recurso para a construção da masculinidade nos homens transexuais não mastectomizados, contudo, pode acarretar danos respiratórios e torácicos se usado de forma inadequada.* ***Objetivo:*** *Analisar a associação entre o uso de binder e as queixas torácicas em homens transexuais.* ***Métodos:*** *Estudo transversal quantitativo realizado no Espaço Trans do Hospital das Clínicas de Pernambuco e no ambulatório LGBTQI Patrícia Gomes da Policlínica Lessa de Andrade, em Recife, PE. Foram incluídos 60 homens transexuais, com idade acima de 18 anos, e foram coletadas informações sociodemográficas, de saúde geral, uso de binder e queixas na região torácica. Foi realizada a análise descritiva e estimadas as razões de prevalência (RP) com intervalo de confiança (IC) de 95% para a associação entre o uso de binder e queixas na região do tórax.* ***Resultados:*** *A média foi de 27,25 anos; destes, 81,7% não realizaram mastectomia e 53,3% faziam uso de binder. O uso de binder teve associação significativa com queixas na região do tórax (RP = 2,73), dificuldade para respirar (RP = 2,27) e dor no tórax (RP = 1,82).* ***Conclusão****: Este estudo demonstrou que há prevalência maior de queixas na região do tórax e queixas respiratórias nos homens transexuais que fazem uso de binder. Isto reforça a necessidade de ampliar o olhar sobre a saúde dessa população. Estratégias de construção de gênero são essenciais para a qualidade de vida e saúde mental de homens transexuais, sendo o uso de binder um importante aliado neste processo.*

Palavras-chave: *Disforia de gênero. Mastectomia. Transexualidade.*

Introduction

Gender incompatibility with biological sex is currently diagnosed as gender dysphoria.[1] The anguish felt by people who do not identify with their biological sex is overwhelming and leads them to seek, at any price, "gender reassignment," which consists of a set of psychical, sociocultural, and organicist interventions that range from changing their names and clothing to hormonal alterations and surgeries.[2]

Starting in the 1980s, health issues of the LGBTQI+ (lesbian, gay, bisexual, transgender, queers, and intersex) population in Brazil began to gain visibility. The creation of the National LGBT Health Policy in 2011 was a watershed for public health policies in Brazil and a milestone in recognizing the demands of this vulnerable population.[3]

The psychic experience of a gender that disagrees with the sex is a matter of self-identity, self-recognition of belonging to one's most primary home (i.e., "the body one inhabits"), triggering a fragmentation and emptying of the ego and self-esteem, which may lead to anguish and deep depression.[4] Transgender men are people who identify themselves as men but are biologically classified as women.[5]

In order to contain the anguish of non-self-identification, achieve cisgender standards, recognition, and acceptance, transgender men often opt for clinical methods (surgery and hormone therapy) accompanied by social and cultural resources of gender production, such as chest binders and straps.[6]

The chest binder, the sociocultural apparatus investigated herein, is a bandage or vest of elastic fabric that compresses the breasts, disguising the volume and leaving the chest with a more rectilinear mold. This device is considered an important tool in constructing male self-identity.[7]

It is important to make a more critical analysis regarding the chest binder since its use reduces thoracic mobility and can lead to several physical disorders. Studies have shown that chest binders and other similar garments, when used inadequately, produce physical-physiological consequences that may cause immediate or future damage to health, such as bruising and abrasions on the skin, difficulty breathing, and pain in the chest region, all of which result from compression, in addition to the possibility of damage to the spine and breast dysplasia.[8] Peitzmeier et al.[9] interviewed and analyzed 1,800 transgender men from several continents and found a high relationship between the use of chest binders and harm to users' health in almost the entire sample.

Given the above and the lack of research on the subject, this paper aimed to analyze the association between chest binding and thoracic complaints in transgender men using as an investigative model on two subpopulations, one admitted at the Hospital das Clínicas of the Universidade Federal de Pernambuco (HC-UFPE) and the other at the Lessa de Andrade polyclinic, both in Pernambuco State, northeastern Brazil.

Methods

This is an exploratory cross-sectional study that was conducted in the Trans Space of HC-UFPE and the LGBTQI Patrícia Gomes outpatient clinic of the Lessa de Andrade polyclinic both in Recife, Pernambuco State. Data collection was conducted between December 2, 2019, and February 28, 2020. This study was approved by the Ethics Committees of HC-UFPE (no. 3,550,523) and Faculdade Pernambucana de Saúde (no. 3,316,770). All research participants signed the informed consent form (ICF).

The Trans Space exists since 2014 and is made up of a multidisciplinary team consisting of psychologists, psychoanalysts, physical therapists, nurses, psychiatrists, surgeons, and social workers. The LGBTQI Patrícia Gomes space has existed since 2017 and is made up of a multidisciplinary team with psychologists, psychoanalysts, physical therapists, nurses, psychiatrists, and social workers.

No sample calculation was performed because we worked with the universe of transgender men users of the two aforementioned outpatient clinics between 2019 and 2020. All registered users were invited to participate in the study, and sampling loss was considered after three contacts and not attending the interview. Transgender men >18 years of age, whether users of chest binders or not, were included, and those in the gestational process were excluded due to the physiological changes of pregnancy.

Data collection was carried out on a previously scheduled date at the outpatient clinic where the participant had routine care. We prepared an instrument divided into blocks of sociodemographic information, general health information, chest binder use (presence or absence and time of use in months, days per week, and hours per day), and complaints in the chest region (presence or absence of complaints in the region, pain, and breathing difficulties).

A descriptive analysis of the data was performed to characterize the sample of the study population. For comparison between the use of chest binders and complaints in the chest region, the prevalence ratio (PR) was estimated with a confidence interval (CI) of 95% and Pearson's chi-square test. All analyses were performed using the Statistical Package for the Social Sciences (SPSS) software (version 18.0).

Results

Sixty transgender men were evaluated. Of these, 28 were from the HC-UFPE and 32 from the Patrícia Gomes outpatient clinic, with a mean age of 27.25 years (SD: 7.76; min: 18; max: 53). The predominant level of education was complete high school education (46.7%), followed by incomplete higher education (31.7%) (Table 1). Data characterizing the sample showed that most individuals reported practicing physical activities, not having undergone a mastectomy, and using chest binders (Table 1). Regarding the time of chest binding, the mean was 26.19 months (SD = 24.41), with a mean of 5.19 days (SD = 2.26) of use per week and 8.47 h per day (SD = 3.75) (Table 1).

Table 1 - Characterization of the education and interest parameters of the subpopulations of transgender men admitted at the Trans Space of the Hospital das Clínicas de Pernambuco (HC-UFPE) and the LGBTQI Patrícia Gomes outpatient clinic of the Lessa de Andrade polyclinic, both in the city of Recife (Pernambuco State), between the years 2019 and 2020

Demographic and clinical characteristics	Transgender men (n = 60)
Education	n (%)
Incomplete primary education	2 (3.3)
Complete primary education	3 (5.0)
Completed high school	28 (46.7)
Incomplete university education	19 (31.7)
Complete university degree	8 (13.3)
Practices physical exercise	n (%)
Yes	34 (56.7)
No	26 (42.4)
Mastectomy	n (%)
Yes	11 (18.3)
No	49 (81.7)
Chest binding	n (%)
Yes	32 (53.3)
No	28 (46.7)
Time of chest binder use	Mean (SD)
Months	26.19 (24.41)
Days per week	5.19 (2.26)
Hours per day	8.47 (3.75)

Note: SD = standard deviation.

Regarding symptoms in the chest region of transgender men regardless of chest binding, there were three reports: complaints in the chest region (any uncomfortable sensation), pain in the chest region, and difficulty breathing (Table 2). Moreover, transgender men who wear chest binders had 1.82 (SD = 1.15 - 2.89) more complaints of pain in the chest region. The same was true for difficulty breathing (i.e., those who wear chest binders had twice as much difficulty breathing). Overall, the results show a positive and strong association between chest complaints and chest binding (PR = 2.73) (Table 2).

Table 2 - Bivariate analysis of binder use and chest complaints in transgender men (n = 60) admitted at the Trans Space of the Hospital das Clínicas de Pernambuco (HC-UFPE) and the LGBTQI Patrícia Gomes outpatient clinic of the Lessa de Andrade polyclinic, both in the city of Recife (Pernambuco State), between 2019 and 2020

	Cheast binding - n (%)		Prevalence ratio	p-value*
	Yes (n = 32)	No (n = 28)	(CI = 95%)	
Complaints in the chest region				
Yes	25 (42)	9 (15)	2.73 (1.40 - 5.31)	< 0.001
No	7 (11)	19 (32)		
Pain in the chest region				
Yes	17 (28)	6 (10)	1.82 (1.15 - 2.89)	0.012
No	15 (25)	22 (37)		
Difficulty breathing				
Yes	17 (28)	3 (5)	2.27 (1.46 - 3.52)	0.001
No	15 (25)	25 (42)		

Note: *Pearson's chi-square test.

Discussion

This study showed that transgender men who use chest binders had a higher prevalence of respiratory and chest complaints. The analysis of the sociodemographic profile of the participants indicated that most transgender men assisted at the outpatient clinics surveyed are young and do not have a complete university degree, corroborating other reports in the literature.[10,11] These findings may be associated with the difficulty of transgenders in claiming their social rights due to non-conformity with the heteronormativity of gender,[12,13] a fact that stands out for causing great disharmony in the self-esteem of the individual as every human being needs, to some extent, social recognition, especially by their peers.[14]

The use of chest binders as a resource for constructing and self-affirming masculinity is considered a necessary and non-elective daily activity because minimizing the breasts or any other feminine attribute in transgender men is a reason for relief in anguish, providing significant relief benefits associated with mental and emotional health.[15] What this paper highlights is the concern of "how" the chest binder is used and at what "frequency" do patients undergo chest compression. It is often an interim measure until thoracic reconstruction surgery (mastectomy) is performed.

Fein et al.[16] analyzed 148 transgender people and reported that 100% of transgender men considered mastectomy the most decisive procedure for feeling comfortable, and 81% considered chest binders the most important among non-surgical alternatives. This study corroborates the concept proposed by Freud at the beginning of the last century, which recognizes the penis as the male phallus and the breasts as the female phallus, hence the importance and need for transgender men to hide or remove this social phallus.[17]

In the present study, most (81.7%) of the transgender men had not undergone mastectomy, highlighting the concern with the long-term effects of chest binding. The low rates of mastectomies performed among the study

participants may be because there is only one referral center that is qualified to perform this surgery in the state where the study was carried out. The distribution of the facilities accredited to perform transgender surgeries in Brazil makes access difficult for the transgender population. In general, the qualified hospitals are located in metropolitan regions with insufficient infrastructure to meet all the demands.[18]

The average time of chest binder use by the interviewed patients was over two years, averaging about five days per week and over eight hours per day, demonstrating that inappropriately prolonged use, contrary to the current recommendations of the transmasculine and lesbian, gay, bisexual, transgender and queer community organizations for the healthy use of chest binder and similar devices.[9]

In this study, most transgender men presented complaints in the chest region, as well as pain and difficulty breathing. The prevalence of chest pain was 1.82 times higher in people who wear chest binders compared to those who do not, corroborating another study where breast pain (48.8%), shoulder pain (38.9%), back pain (53.8%), and any other type of pain (74%) were reported.[9]

Difficulty breathing had a prevalence of just over twice as high among binder users. Among the various symptoms associated with chest binding cited in the literature, the most common were back pain (53.8%), overheating (53.5%), chest pain (48.8%), and shortness of breath (46.6%).[9]

Jarrett et al.[19] studied transgender men around the world and found that 1,132 (88.9%) of those who used chest binders reported experiencing negative symptoms related to use, and reported significance in the association between reporting pain and respiratory symptoms and the need to seek health care. Nevertheless, although 82.3% of the respondents believed it was important to discuss chest binding with their physician, only 14.8% sought health care related to it.

In a worldwide study with 1,800 transgender men in a self-reported questionnaire on chest binding, Peitzmeier et al.[9] found that over 97% of respondents reported at least one of 28 negative outcomes attributed to its use. Frequency of use was the factor most consistently associated with negative health outcomes (22 of 28 speculated outcomes), and duration was also independently associated with at least 13 of 28 expected outcomes.

All the aforementioned similar studies strongly corroborate the data presented herein regarding the importance of multidisciplinary monitoring and care for chest binding as well as how and how often it is used.

Our findings shed light on an imminent demand for mastectomy surgeries and the use of chest compression devices, albeit the need for referral centers is still disproportionate to the number of men who consider themselves transgender. The low demand for medical care may be driven by a lack of access to health care professionals with whom patients feel safe and comfortable, not just the general fear and discomfort of chest exams and surgery.[19] A study conducted at the Center for Transyouth Health and Development in Los Angeles noted that 13% of transgender men say they do not seek medical service because they are ashamed of their female-contoured bodies, especially their breasts.[20]

The evidence of this study has the clinical applicability of showing the high prevalence of respiratory and chest complications that chest binding can cause in the transgender male population, proving the importance of developing strategies to prevent and treat these symptoms.

Conclusion

This study showed that respiratory and chest complaints are higher in transgender men who use chest binders, thus highlighting that improving the care and attention to the health of the transgender population in Brazil is pivotal. However, the literature still lacks more in-depth information about the extent of respiratory damage and lung function that this method can cause in the long term.

Gender construction strategies are essential to the quality of life and mental health of transgender men. Measures that accelerate the process of mastectomy surgery for those who wish to undergo it in order to reduce the time of chest binder use may be a strategy to minimize the deleterious effects associated with the rib cage caused by prolonged use.

Authors' contribution

WJS, RBS, DFR, LMFR, and AGCC were responsible for designing and writing the manuscript. WJS, RBS, DFR, and AGCC carried out data analysis and interpretation.

GJBM assisted in drafting the manuscript and, together with AGCC, in the important intellectual critique of the content. All authors approved the final version.

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