Association of Documentation of Legal Residency Status with Nonprescribed Hormone Use Among Hispanic/Latina Trans Women in San Francisco

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Abstract
Undocumented immigrant trans Latinas face significant barriers to attaining gender-affirming health care and may use nonprescribed feminizing hormones. Without medical supervision, nonprescribed hormone use may lead to adverse health outcomes. This study aimed to determine if a history of being an undocumented immigrant was associated with nonprescribed hormone use among trans Latinas. We conducted a secondary analysis using baseline data from the 2016 Trans National study done in the San Francisco Bay Area. Two hundred five trans Latinas participated in the study, of whom 75 (37%) reported a history of being undocumented. We fitted a multivariable logistic regression model to determine whether having a history of being an undocumented immigrant was associated with nonprescribed hormone use while controlling for age, income, time living in San Francisco, history of sex work, and history of problems with accessing health care. The prevalence of nonprescribed hormone use was 55.9% among trans Latinas overall; however, for trans Latinas with a history of undocumented immigration status, the prevalence was 68%. There was a significant, independent association between nonprescribed hormone use and undocumented status (adjusted odds ratio [aOR] = 3.20; 95% confidence interval [CI] = 1.47–6.97). We also found that having a history of sex work was associated with nonprescribed hormone use (aOR = 5.72; 95% CI = 2.69–12.18). The prevalence of nonprescribed hormone use among trans Latinas was high and is associated with a history of undocumented status and sex work. These associations may indicate health care avoidance related to concerns of being criminalized due to their documentation status or source of income (i.e., sex work) among trans Latinas. These findings underscore the need to reduce barriers in gender-affirming care to increase access to medically supervised hormone use, particularly among individuals with a history of undocumented status and engaged in sex work.

Keywords: nonprescribed hormone use; undocumented status; sex-work; trans women

Introduction
Trans women are a diverse group of people who may have specific health needs related to their gender identity. Many trans women choose to medically transition by taking feminizing hormones.1 Feminizing hormones can create feminine secondary sex characteristics and halt or slow the progression of male secondary sex characteristics.2 Physical changes induced by feminizing hormones can do much to alleviate symptoms associated with gender dysphoria3, resulting in better mental health and overall increased wellness. For example, a cross-sectional study found that hormonal therapy was
significantly associated with a higher quality of life among trans women who took hormonal therapy.4

Despite the documented benefits of feminizing hormones, trans women often face barriers to gender-affirming health care, including stigma, provider refusal to offer care, and improper clinician training.5–7 The stigma trans women face in health care is multilevel; it includes institutional laws and practices, personal explicit and implicit biases held by health care providers, and individual stigma that has led to health care avoidance among some trans people.8,9

Barriers to health care may be compounded for immigrant trans women who may have language differences, privacy concerns, and fears related to documentation status and deportation.10,11 Indeed, Latinas have been found to avoid health care due to their immigration status.12 A retrospective cohort study found that undocumented Hispanic immigrants entered care with more advanced HIV infection than documented persons.13 Latinas who are trans may experience similar health care avoidance due to their immigration status and/or fears related to deportation.

To meet their trans-specific health care needs, some trans women use nonmedically supervised hormone therapy, fillers, and surgeries that are not under the guidance of trained and medically licensed clinicians.14 A 2010 study in San Francisco found that 68.7% of trans women were on hormones; however, 49.1% of trans women in the study reported using nonprescribed hormones, with the primary reason being they were unable to access a clinician.15 The use of nonmedically prescribed and supervised hormones can lead to adverse health complications among trans people, especially for those on estrogen.16,17 Documented adverse health complications include loss of erectile function, low libido, pituitary adenoma, and venous thromboembolism.2 Higher rates of estrogen-mediated health complications among trans women can be reduced through clinician education and proper hormone therapy management,18 indicating the importance of clinical guidance for hormone therapy.

A qualitative photovoice study conducted among trans Latinas in North Carolina identified unsafe hormone use as a priority health risk.19 In the same study, trans Latinas reported gender-affirming health care barriers most trans women face, including few providers offering hormone therapy, stigma, and lack of access to formal health care; however, they also reported that a lack of health insurance and a paucity of bilingual health care providers prevented them from accessing prescribed hormones.19 As a result, many used nonprescribed hormones. Anti-immigrant sentiment is also a significant mediator of adverse health outcomes.20,21 The multiple levels of discrimination affecting sexual and gender minorities coupled with the legal barriers for immigrants heightens the fear in accessing health care services.22 Nonprescribed hormone therapy may be one of the few options available to trans Latinas for accessing gender-affirming care. However, the relationship between legal residency status and nonprescribed hormone use among trans Latinas remains underexplored.

The purpose of this study was to determine whether history of undocumented legal residence status among trans Latinas in the San Francisco Bay Area was associated with the use of nonprescribed hormones. There have been studies attempting to describe the reasons for nonprescribed hormone use among trans women overall, but little research has been done with trans Latinas who may face additional barriers due to their immigration status. There is a dearth of literature focused on the lives and health care access for undocumented trans Latinas in general and in the San Francisco Bay Area. Understanding the prevalence of and reasons why trans Latinas access nonprescribed hormones is critical to prevent adverse health outcomes and better serve this population.

Methods

This was a secondary analysis of baseline cross-sectional data from the Trans National study of trans women living in the San Francisco Bay Area from 2016 to 2017 (N = 629). The primary aim of the Trans National cohort study was to assess HIV incidence among trans women living in four cities around the world, and the methods are explained elsewhere.23,24

Respondent-Driven Sampling was used to obtain a diverse sample of hard-to-reach adult trans women from the community in San Francisco in 2016. Eligibility criteria were (1) 18 years and older, (2) resident of San Francisco by self-reporting living in San Francisco, (3) assigned male sex at birth and identified as a gender other than man (e.g., female, trans woman, woman, non-binary, gender queer), and (4) spoke English or Spanish. After providing informed consent, participants completed an interviewer-administered computerized survey that addressed demographics, behavioral history, clinical history, gender identity, access to health care, and enrollment in insurance.
Results

A total of 205 trans women identified as Latina and were included in this analysis. Ninety-eight (48.0%) reported being born in the United States, and 107 (52.2%) reported being immigrants. Overall, trans Latinas mostly identified as transgender (53.2%), and 38.1% identified as female (Table 1). The most common sexual orientation reported was being straight (62.0%), and trans Latinas born in the United States had a higher proportion of reporting being genderqueer, androgyneous, or another sexual orientation.

The most common forms of income were employment for those born in the United States (49.0%) and sex work (28.6%). Those not born in the United States with no history of being undocumented reported income from jobs (26.7%), general assistance and/or food stamps (20%), social security income/SSI (26.7%), and disability (20%). Those not born in the United States with a history of being undocumented reported income
Table 1. Characteristics of Trans Latinas in the Trans National Study, San Francisco, CA; 2016–2017 (N=205)

| Trans-Latina demographics | U.S. born (n=98) | No history of undocumented status (n=30) | History of undocumented status (n=77) | Total (n=205) |
|---------------------------|------------------|------------------------------------------|---------------------------------------|---------------|
| **U.S. born**              |                  |                                          |                                       |               |
| N (%)                     | 98 (100.0)       | 30 (100.0)                               | 77 (100.0)                            | 205 (100.0)   |
| **Education**             |                  |                                          |                                       |               |
| Less than high school     | 12 (12.2)        | 6 (20.0)                                 | 4 (5.2)                               | 22 (10.3)     |
| High school diploma/GED  | 20 (20.41)       | 14 (46.7)                                | 37 (48.1)                             | 71 (34.6)     |
| Some college/technical    | 31 (31.6)        | 4 (13.3)                                 | 19 (24.7)                             | 54 (26.3)     |
| College degree/beyond     | 35 (35.7)        | 6 (20.0)                                 | 17 (22.1)                             | 58 (28.3)     |
| **Time in the United States** |                |                                          |                                       |               |
| 1–4 years                 | —                | 9 (30.0)                                 | 8 (10.7)                              | 17 (8.3)      |
| 5–10 years                | —                | 0 (0.0)                                  | 10 (13.3)                             | 10 (5.0)      |
| 11–15                     | 1 (3.3)          | 19 (25.3)                                | 20 (19.1)                             |               |
| 16–20                     | —                | 6 (20.0)                                 | 12 (16.0)                             | 18 (8.8)      |
| 21+                       | —                | 14 (46.7)                                | 26 (34.7)                             | 40 (19.6)     |
| **Time in SF**            |                  |                                          |                                       |               |
| 0–2 years                 | 23 (24.0)        | 9 (30.0)                                 | 15 (20.0)                             | 47 (23.4)     |
| 3–6 years                 | 12 (12.5)        | 3 (10.0)                                 | 5 (6.7)                               | 20 (10.0)     |
| 7–10                      | 8 (8.3)          | 1 (3.3)                                  | 18 (24.0)                             | 18 (8.8)      |
| 11+                       | 53 (55.2)        | 17 (56.7)                                | 37 (49.3)                             | 37 (18.3)     |
| **Age**                   |                  |                                          |                                       |               |
| 18–19                     | 0 (0.0)          | 1 (3.3)                                  | 0 (0.0)                               | 1 (0.5)       |
| 20–24                     | 16 (16.5)        | 2 (6.7)                                  | 7 (9.3)                               | 25 (12.4)     |
| 25–29                     | 21 (21.7)        | 4 (13.3)                                 | 6 (8.0)                               | 31 (15.4)     |
| 30–34                     | 10 (10.2)        | 3 (10.0)                                 | 10 (13.3)                             | 22 (10.9)     |
| 35–39                     | 13 (13.4)        | 2 (6.7)                                  | 13 (17.3)                             | 28 (13.9)     |
| 40–44                     | 10 (10.3)        | 5 (16.7)                                 | 17 (22.7)                             | 32 (15.8)     |
| 45–49                     | 8 (8.3)          | 2 (6.7)                                  | 7 (9.3)                               | 17 (8.4)      |
| 50–59                     | 14 (14.4)        | 7 (23.3)                                 | 14 (18.0)                             | 33 (16.3)     |
| 60+                       | 6 (6.2)          | 4 (13.3)                                 | 3 (4.0)                               | 13 (6.4)      |
| **Extremely low income for SF** |            |                                          |                                       |               |
| Above poverty level       | 31 (31.3)        | 4 (13.3)                                 | 9 (12.2)                              | 44 (21.7)     |
| At or below Poverty level | 66 (68.6)        | 26 (86.7)                                | 67 (88.2)                             | 159 (78.3)    |
| **Gender identification** |                  |                                          |                                       |               |
| Female                    | 43 (43.9)        | 10 (33.3)                                | 25 (32.5)                             | 78 (38.1)     |
| Transgender               | 42 (42.9)        | 20 (66.7)                                | 47 (61.0)                             | 109 (53.2)    |
| Androgyous                | 2 (2.0)          | 0 (0.0)                                  | 1 (1.3)                               | 3 (1.5)       |
| Genderqueer               | 7 (7.1)          | 0 (0.0)                                  | 1 (1.3)                               | 8 (4.0)       |
| Questioning               | 0 (0.0)          | 0 (0.0)                                  | 1 (1.3)                               | 1 (0.5)       |
| Other                     | 4 (4.1)          | 0 (0.0)                                  | 2 (2.6)                               | 6 (3.0)       |
| **Sexual orientation**    |                  |                                          |                                       |               |
| Straight                  | 46 (47.4)        | 20 (66.7)                                | 61 (79.2)                             | 127 (61.9)    |
| Gay/lesbian               | 5 (5.2)          | 3 (10.0)                                 | 4 (5.3)                               | 12 (5.9)      |
| Bisexual                  | 16 (16.5)        | 5 (16.7)                                 | 4 (5.3)                               | 25 (12.4)     |
| Pansexual                 | 12 (12.4)        | 0 (0.0)                                  | 0 (0.0)                               | 12 (5.9)      |
| Queer                     | 11 (11.3)        | 1 (3.3)                                  | 3 (4.0)                               | 15 (7.4)      |
| Questioning               | 3 (3.1)          | 0 (0.0)                                  | 0 (0.0)                               | 3 (1.5)       |
| Other                     | 5 (5.1)          | 1 (3.3)                                  | 5 (6.7)                               | 11 (5.3)      |
| **Income: (% of group)**  |                  |                                          |                                       |               |
| Job                       | 48 (49.9)        | 8 (26.7)                                 | 29 (38.7)                             | 85 (42.1)     |
| GA, food stamps           | 28 (28.8)        | 6 (20.0)                                 | 24 (31.2)                             | 58 (28.3)     |
| SSI                       | 32 (32.7)        | 8 (26.7)                                 | 7 (9.1)                               | 47 (22.9)     |
| Disability                | 11 (11.2)        | 6 (20.0)                                 | 3 (4.0)                               | 20 (9.8)      |
| Unemployment              | 2 (2.06)         | 0 (0.0)                                  | 1 (1.3)                               | 3 (1.5)       |
| Main partners income      | 11 (10.2)        | 1 (3.3)                                  | 7 (9.1)                               | 19 (9.3)      |
| Family’s income           | 20 (20.4)        | 4 (13.3)                                 | 8 (10.4)                              | 32 (15.6)     |
| Sex work                  | 28 (28.6)        | 4 (13.3)                                 | 10 (13.0)                             | 42 (20.5)     |
| Drug dealing              | 2 (2.0)          | 0 (0.0)                                  | 2 (1.0)                               |               |

(continued)
| Trans-Latina demographics                       | U.S. born \( (n = 98) \) | No history of undocumented status \( (n = 30) \) | History of undocumented status \( (n = 77) \) | Total \( N(\%) \) |
|-----------------------------------------------|---------------------------|-----------------------------------------------|-----------------------------------------------|-----------------|
| Alimony/child support                         | 1 (1.0)                   | 0 (0.0)                                       | 0 (0.0)                                       | 1 (0.5)         |
| Student loans                                  | 5 (5.2)                   | 0 (0.0)                                       | 0 (0.0)                                       | 5 (2.4)         |
| HIV status (lab result)                        |                           |                                               |                                               |                 |
| Positive                                       | 28 (28.6)                 | 11 (36.7)                                     | 19 (24.7)                                     | 58 (28.3)       |
| Total tests run                                | 98                        | 30                                            | 77                                            | 205             |
| HCV status (lab result)                        |                           |                                               |                                               |                 |
| Positive                                       | 21 (29.2)                 | 2 (10.0)                                      | 8 (15.4)                                      | 31 (21.4)       |
| Total tests run                                | 72                        | 20                                            | 53                                            | 145             |
| Mental health                                  |                           |                                               |                                               |                 |
| Depression                                     | 61 (62.9)                 | 14 (46.7)                                     | 32 (42.7)                                     | 107 (52.9)      |
| PTSD                                           | 32 (32.9)                 | 8 (26.7)                                      | 17 (22.7)                                     | 57 (28.2)       |
| Anxiety                                        | 59 (60.2)                 | 13 (43.3)                                     | 36 (46.8)                                     | 108 (52.7)      |
| Health insurance                               |                           |                                               |                                               |                 |
| HMO (%yes in that group)                       | 18 (18.4)                 | 3 (10.0)                                      | 5 (6.5)                                       | 26 (12.7)       |
| Medi-Cal/medicaid                              | 55 (56.1)                 | 21 (70.0)                                     | 38 (49.4)                                     | 114 (56.0)      |
| Medicare                                       | 5 (5.1)                   | 0 (0.0)                                       | 1 (1.3)                                       | 6 (3.0)         |
| Veterans administration                        | 0 (0.0)                   | 0 (0.0)                                       | 0 (0.0)                                       | 0 (0.0)         |
| Tricare                                        | 1 (1.0)                   | 0 (0.0)                                       | 0 (0.0)                                       | 1 (0.5)         |
| Healthy SF                                     | 15 (15.3)                 | 9 (30.0)                                      | 30 (39.0)                                     | 54 (26.3)       |
| Other                                          | 7 (7.2)                   | 0 (0.0)                                       | 5 (6.5)                                       | 12 (5.9)        |
| No insurance                                   | 7 (7.2)                   | 0 (0.0)                                       | 5 (6.7)                                       | 12 (5.9)        |
| Services accessed (% from 97)                  |                           |                                               |                                               |                 |
| Trans thrive/API Wellness Center               | 26 (26.5)                 | 11 (36.7)                                     | 15 (19.5)                                     | 52 (25.4)       |
| Transgender surgery access SFDPH               | 8 (8.2)                   | 2 (6.7)                                       | 9 (12.0)                                      | 19 (9.3)        |
| LGBT Center/transgender employment             | 19 (19.4)                 | 9 (30.0)                                      | 9 (11.7)                                      | 37 (18.1)       |
| Lyon Martin Health Center Services             | 11 (11.2)                 | 3 (10.0)                                      | 6 (8.0)                                       | 20 (9.8)        |
| Tri-City Health Center                         | 5 (5.1)                   | 0 (0.0)                                       | 3 (4.0)                                       | 8 (4.0)         |
| Other services                                 | 20 (20.4)                 | 9 (30.0)                                      | 20 (25.3)                                     | 49 (23.8)       |
| No services                                    | 22 (22.5)                 | 4 (13.3)                                      | 16 (21.0)                                     | 42 (20.5)       |
| Gender-affirming surgeries                     |                           |                                               |                                               |                 |
| Laser hair removal                             | 32 (32.7)                 | 9 (30.0)                                      | 22 (29.0)                                     |                 |
| Penectomy                                      | 1 (1.0)                   | 1 (3.3)                                       | 0 (0.0)                                       |                 |
| Orchitectomy                                   | 9 (9.3)                   | 3 (10.0)                                      | 3 (4.0)                                       |                 |
| Vaginoplasty                                   | 7 (7.1)                   | 4 (13.3)                                      | 4 (5.2)                                       |                 |
| Breast implants                                | 11 (11.2)                 | 6 (20.0)                                      | 27 (35.1)                                     |                 |
| Facial feminization                            | 3 (3.1)                   | 3 (10.0)                                      | 9 (11.7)                                      |                 |
| Dermal filler                                  | 3 (3.1)                   | 0 (0.0)                                       | 0 (0.0)                                       |                 |
| Electrolysis                                   | 6 (8.7)                   | 0 (0.0)                                       | 2 (4.3)                                       |                 |
| Voice surgery                                  | 1 (1.5)                   | 0 (0.0)                                       | 0 (0.00)                                      |                 |
| Tracheal shave                                 | 2 (3.0)                   | 0 (0.0)                                       | 1 (2.1)                                       |                 |
| Fat transfer                                   | 0 (0.0)                   | 0 (0.0)                                       | 1 (2.1)                                       |                 |
| Voice therapy                                  | 2 (2.9)                   | 0 (0.0)                                       | 0 (0.0)                                       |                 |
| No surgery done                                | 50 (51.6)                 | 13 (43.3)                                     | 38 (50.7)                                     |                 |
| History of sex work                            |                           |                                               |                                               |                 |
| No                                             | 26 (27.0)                 | 12 (40.0)                                     | 27 (35.0)                                     | 65 (31.9)       |
| Yes                                            | 71 (73.0)                 | 18 (60.0)                                     | 50 (64.9)                                     | 139 (68.1)      |
| Currently on hormones?                         |                           |                                               |                                               |                 |
| No                                             | 31 (32.0)                 | 8 (26.7)                                      | 28 (36.4)                                     | 67 (32.7)       |
| Yes                                            | 67 (68.4)                 | 22 (73.3)                                     | 49 (64.0)                                     | 138 (67.3)      |
| Hormones covered by insurance?                 |                           |                                               |                                               |                 |
| Among those taking hormones                    |                           |                                               |                                               |                 |
| No                                             | 9 (13.3)                  | (0.00)                                        | 3 (6.3)                                       | 12 (8.8)        |
| Yes                                            | 58 (86.6)                 | 22 (100)                                      | 45 (93.8)                                     | 125 (91.2)      |
| Taken nonprescribed hormones?                  |                           |                                               |                                               |                 |
| No                                             | 50 (51.0)                 | 16 (53.3)                                     | 24 (31.0)                                     | 90 (44.5)       |
| Yes                                            | 48 (49.0)                 | 14 (46.7)                                     | 53 (69.0)                                     | 115 (56.9)      |
|                                                | 98                        | 30                                            | 77 (100)                                      | 205             |

HCV, hepatitis C virus; PTSD, post-traumatic stress disorder.
from a job (37.7%), general assistance and/or food stamps (31.2%), and sex work (13.0%). One hundred fifty-nine (78.3%) trans Latinas reported an income at or below the poverty level for San Francisco. Seventy-seven (37.6%) reported a history of being undocumented. Among U.S.-born trans Latinas, 71 (73.2%) reported a history of doing sex work as a source of income. Among immigrants with and without a history of documentation, 18 (60.0%) and 50 (65.0%) reported a history of engaging in sex work, respectively.

Fifty-eight (28.3%) of trans Latinas tested positive for HIV. Those trans Latinas not born in the United States but without a history of being undocumented had the highest HIV prevalence (37.7%). Thirty-one (21.4%) of trans Latinas tested antibody positive for the HCV. U.S.-born trans Latinas had the highest HCV prevalence of 29.2%, while 10% of immigrants without a history of being undocumented had HCV, as did 15% of immigrants with a history of being undocumented. Mental health conditions were highest for U.S.-born trans Latinas. Among U.S.-born trans Latinas, 63.3% reported depression, 32.7% reported PTSD, and 60.2% reported anxiety. Among immigrants with documentation, 46.7% reported depression, 26.7% reported PTSD, and 44.8% reported anxiety. Among immigrants with a history of being undocumented, 44.2% reported symptoms of depression, 23.4% reported PTSD, and 46.8% reported anxiety.

In this study, 193 (93.0%) trans Latinas reported having health insurance coverage. The two most common reported health insurance plans were Medical/Medicaid (55.6%) and the health access program Healthy San Francisco (26.3%). Seventy-two trans Latina immigrants (93.5%) with a history of an undocumented status had some form of health insurance access. Most (67.3%) trans Latina participants reported currently using hormone therapy, and 115 of the participants in this study (56.1%) had a history of non-prescribed hormone use. Among trans Latinas not born in the United States with a history of being

Table 2. Left: Bivariate Associations with Non-Prescribed Hormone Use Among Trans Latinas. Right: Multivariable Associations With Non-Prescribed Hormone Use Among Trans Latinas. Trans National Study San Francisco, CA; 2016–2017 (N = 205)

| Characteristic                        | Bivariate model | Multivariable model |
|--------------------------------------|-----------------|---------------------|
|                                      | OR (95% CI)     | p                   | aOR (95% CI)     | p       |
| Age                                  | 1.02 (0.99–1.04)| 0.091               | 1.02 (0.99–1.06)| 0.106   |
| Poverty                              | 1.63 (0.83–3.21)| 0.159               | 1.51 (0.66–3.48)| 0.330   |
| U.S. born                            | Reference       | Reference           | Reference       | Reference |
| Documented immigration status         | 0.91 (0.40–2.06)| 0.824               | 0.78 (0.29–2.06)| 0.610   |
| History of undocumented immigration status | 2.30 (1.23–4.29)| 0.009               | 3.37 (1.55–7.33)| 0.002   |
| Gender identification                |                |                     |                |         |
| Female                               | —               | —                   | —               |         |
| Transwoman                           | 0.87 (0.48–1.57)| 0.644               | —               |         |
| Queer/additional                     | 0.33 (0.11–0.97)| 0.044               | —               |         |
| Time living in San Francisco         |                | Reference           | Reference       | Reference |
| 0–2 years                            | —               | —                   | —               | —       |
| 3–6 years                            | 1.08 (0.38–3.07)| 0.892               | 1.25 (0.37–4.20)| 0.720   |
| 7–10 years                           | 0.95 (0.37–2.44)| 0.912               | 0.33 (0.10–1.07)| 0.664   |
| 11 + years                           | 1.26 (0.63–2.51)| 0.512               | 0.74 (0.30–1.79)| 0.500   |
| Enrolled in healthy SF               | 2.57 (1.31–5.04)| 0.006               | —               | —       |
| Education                            |                | Reference           | Reference       | Reference |
| Less than high school                | —               | 0.46 (0.14–1.59)    | 0.177           |         |
| HS diploma/GED                       | 0.48 (0.23–0.99)| 0.047               | 0.46 (0.14–1.59)| 0.177   |
| Some college/technical               | 0.91 (0.44–1.87)| 0.796               | 1.21 (0.37–3.98)| 0.226   |
| College degree or beyond             | 0.32 (0.12–0.86)| 0.024               | 1.06 (0.32–3.46)| 0.752   |
| History of sex work                  | 4.24 (2.26–7.94)| 0.000               | 5.41 (2.56–11.41)| 0.000   |
| HIV result (+)                       | 0.91 (0.75–1.10)| 0.311               | —               | —       |
| HCV result (+)                       | 0.88 (0.61–1.28)| 0.518               | —               | —       |
| Problems getting health care         | 1.55 (0.63–3.84)| 0.344               | 1.86 (0.66–5.23)| 0.237   |
| Breast augmentation                  | 2.51 (1.21–5.21)| 0.014               | —               | —       |
| Facial feminization                  | 12.33 (1.59–95.70)| 0.016             | —               | —       |
| Ever used fillers                    | 6.38 (2.55–15.96)| 0.000               | —               | —       |
| Housing instability                  | 2.4 (1.30–4.42)| 0.005               | —               | —       |
| Depression                           | 1.52 (0.87–2.65)| 0.136               | —               | —       |
| Anxiety                              | 1.66 (0.96–2.91)| 0.071               | —               | —       |
| PTSD                                 | 1.92 (1.01–3.62)| 0.045               | —               | —       |

aOR, adjusted odds ratio; CI, confidence interval.
undocumented, 49 (64.0%) were currently on hormones, and 53 (68.8%) reported having used nonprescribed hormones at some point.

In the multivariable analyses, nonprescribed hormone use was significant and independently associated with greater odds of a history of undocumented status (adjusted odds ratio \(aOR=3.37\), 95% confidence interval \([CI]=1.55–7.33\)) and a history of sex work \((aOR=5.41, 95\% \ CI=2.56–11.41)\), while controlling for age, poverty status, time living in San Francisco, education, and reporting having problems getting health care coverage (Table 2).

Discussion

Nonprescribed hormone use was associated with having a history of undocumented immigration status for trans Latinas in the San Francisco Bay Area. In this sample, a large proportion of trans Latinas overall used nonprescribed hormones, however trans Latinas with a history of being undocumented were significantly more likely to report nonprescribed hormone use relative to U.S.-born immigrants or trans Latina immigrants who did not report a history of being undocumented (68% for undocumented trans Latinas, vs. 49.5% and 46.7% for U.S.-born and trans Latinas with documented immigration status, respectively).

The finding that having a history of being undocumented was associated with accessing hormones outside the health care system is consistent with studies that being undocumented presents a significant barrier to gender-affirming health care.\(^\text{11}\) Trans Latina immigrants with a history of being undocumented in our sample may have experienced greater racism and stigma, and faced more barriers to economic opportunities, which may have restricted their access to gender-affirming care due to lack of health insurance and health care avoidance.\(^\text{19}\) Trans Latinas with a history of being undocumented may have also been reluctant to engage with the health care system for fear of deportation, and instead turned to other resources to access nonprescribed hormones.\(^\text{19}\) The use of entitlement programs like Medicaid can delay or negate the process for obtaining legal residency in the United States,\(^\text{28}\) and trans Latinas may forgo gender-affirming care access from entitlement programs to reduce risk of jeopardizing their path toward becoming a documented immigrant.

We also found that nonprescribed hormone use was associated with sex work among trans Latinas. Almost two thirds of participants reported a history of doing sex work. When comparing between U.S. born, documented immigrants, and immigrants with a history of being undocumented, trans Latinas born in the United States had the highest proportion of a history of sex work and sex work as a current source of income, speaking to the importance of sex work as a source of income regardless of immigration status. For trans women, the higher rates of unemployment, poverty, and homelessness than the general population contribute to engagement in sex work as a means of income.\(^\text{29}\) Sex work can create a number of structural barriers to health care, and thus hormone access. Due to a lack of formal employment, trans Latinas who do sex work may face structural barriers to health care as they do not have access to employer-sponsored insurance. The stigma associated with sex work has also been documented as a significant barrier to health care and presents a challenge to reaching individuals who engage in sex work.\(^\text{30,31}\) Trans Latinas who do sex work may also be fearful of criminalization if their health care provider finds out about their occupation. Trans Latinas who engage in sex work may also not be available for medical visits as clinics are primarily open during business hours.

The use of nonprescribed hormone use among trans Latinas in our study presents a cautionary tale for San Francisco and other places where trans-specific services exist in that availability does not mean access or utilization for all trans people. San Francisco and neighboring counties have trans-specific services, including surgery access, and health insurance access. In fact, there are numerous trans-specific services in the San Francisco Bay Area, as demonstrated in our data showing that most had used trans-specific services in San Francisco and 90% of trans Latinas had health care insurance or were enrolled in the city’s health care access program. Also, city policies are in place to ensure immigrants can access health care. In 1989, San Francisco passed the “City and County of Refuge,” and in 2007, San Francisco launched Healthy San Francisco, a health access program for its most marginalized communities, including those living in poverty and undocumented people.\(^\text{32,33}\)

Despite these policies and services, trans Latinas, especially those with a history of being undocumented, are using nonprescribed hormones, suggesting that while these policies are necessary and helpful, they may not be sufficient to ensure maximum uptake of medically supervised gender-affirming care. The use of nonprescribed hormones among trans Latinas with a history of undocumented status and those who report sex work may be an
indication that this vulnerable population is avoiding engagement in health care services out of fear of criminalization of their source of income (i.e., sex work) and their documentation status.

The primary limitation of this study is that these data are cross-sectional and reporting on past experiences of using nonprescribed hormones and prior undocumented status. Thus, the lack of information on the temporal sequence between our exposure and outcome limits our ability to conclude definitively that nonprescribed hormone use is predicted by sex work and being undocumented among trans Latinas. Data were also self-reported and social desirability bias, especially concerning documentation status and sex work, could lead to underreporting. Additionally, all participants were trans Latinas living in San Francisco, which could limit the generalizability of our findings. Due to the lack of census data on trans women anywhere in the world, it is difficult to determine how representative our study population is to the general trans Latina community. However, this study is valuable in that it highlights the vulnerabilities trans Latinas face while in San Francisco, informing areas of need that we need to address.

Despite limitations, the association between factors that could be criminalized and use of nonprescribed hormones among trans Latinas observed in this study gives us important insight into the potential barriers to care faced by some of the most vulnerable members of the trans women population in San Francisco. The use of nonprescribed hormones poses a considerable health risk for trans Latinas who may face heightened risk for pulmonary issues, blood clots, and other life-threatening health complications that are preventable with regular medical monitoring. Trans Latinas, like all trans people who desire feminizing hormones, should have a right to a safe and quality health care free from the fear of criminalization and deportation. Future research is needed to determine why and how the existing services are not meeting the needs for hormones and how to build trust in the system among those most vulnerable to criminalization and deportation in the trans Latina community.

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Abbreviations Used
aOR = adjusted odds ratio
CI = confidence interval
HCV = hepatitis C virus
PTSD = post-traumatic stress disorder

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