

# Prevalence and Patterns of Dermatological Diseases in Lesbian, Gay, Bisexual, Transgender, and Queer Population: A Cross-Sectional Survey

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## ABSTRACT

**Objective:** To determine the frequency and types of dermatological conditions including sexually-transmitted infections (STIs) within the lesbian, gay, bisexual, transgender, and queer (LGBTQ) communities.

**Study Design:** A cross-sectional survey.

**Place and Duration of the Study:** Department of Dermatology, Services Hospital, Lahore, Pakistan, from 19 April to 20 May 2023.

**Methodology:** The survey was conducted on members of the LGBTQ community registered with Fountain House, Lahore, aged 18 years and above. Data on demographics, sexual orientation, hormone use, gender-affirming procedures, chronic hepatitis, and STIs and dermatological findings were collected using a structured questionnaire.

**Results:** Among the 143 LGBTQ individuals who participated, the average age was  $53.29 \pm 10.85$  years. Most participants (84.6%) were transwomen while 15.4% were transmen. Regarding sexual orientation, 67.1% selected themselves as gay, 16.1% as bisexual, 1.4% as lesbian, 0.7% as hetero-sexual, and 14.7% chose not to disclose. Dermatological findings were observed in 94 (64%), among which androgenic alopecia (18.18%), generalised xerosis / atopic eczema (11.19%), melisma (4.20%) and infections such as scabies (11.19%), and 52 (36%) did not have any skin disease. For gender affirmation, 2.1% underwent hormonal therapies and 7.69% adopted surgical procedures.

**Conclusion:** The LGBTQ community suffers from many dermatological problems such as androgenic alopecia, atopic eczema, melasma and infections that need to be addressed. Hence training of doctors to cater for the dermatological concerns of this community is important.

**Key Words:** LGBTQ, Transgender skin diseases, Gender affirming procedures, Gender dermatology.

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## INTRODUCTION

Gender is considered as a social identity of a person. The biological gender of an individual is usually assigned at the time of birth but sometimes later. It is based on chromosomes, hormones, genitalia, and secondary sexual characteristics. While the expression of gender is depicted from an individual's mannerisms, choices in clothing, hairstyles, communication patterns, and social roles.<sup>1</sup> The term transgender (trans) refers to individuals whose gender presentation differs from their sex assigned at birth.<sup>2</sup> LGBTQ is an acronym of lesbian, gay, bisexual, transgender, and queer.<sup>3</sup>

In the year 2022, 7.1% US citizens self-identified themselves as either lesbian (1.0%), gay (1.5%), bisexual (4.0%), transgender (0.7%), or other sexual and gender minority identities (0.3%), which is double the percentage estimated in the year 2012.<sup>4</sup> In Pakistan, there are 10,418 individuals belonging to the transgender community according to the official national census of 2017.<sup>5</sup> According to the fact sheet released by the Joints United Nations Programme UNAIDS, there are 52,400 'transgender' persons in Pakistan.<sup>6</sup>

Lesbian, gay, bisexual, and transgender (LGBTQ) individuals suffer from multiple health issues which include specific skin conditions and diseases which badly affect their quality of life, leading to lower self-esteem and ultimately depression.<sup>7</sup> There is a high incidence of sexually-transmitted infections (STIs) acne, and pigmentation issues due to topical steroid application, side effects of hormone therapies, and increased risk of skin cancers. Furthermore, transgender community experiences poor access to gender-affirming and aesthetic procedures such as laser hair removal from qualified personnel. The LGBTQ community seeks health advice less frequently, so their skin diseases and STIs may become complicated if untreated.

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The Association of American Medical Colleges guidelines recommend that LGBT health-related competencies should be included in medical curricula at all levels.<sup>8</sup>

Resident doctors are infrequently exposed to transgender because this community seeks medical advice less often. Therefore, the current research was conducted to identify, understand, and address the unique skin health issues faced by this population. This study investigates the prevalence and types of dermatological conditions considering factors such as gender identity, sexual orientation, and access to healthcare. Additionally, it explores the socioeconomic factors contributing to disparities in skin health outcomes. By increasing awareness and education among healthcare providers about dermatological issues in LGBTQ populations, this research aims to improve diagnosis, treatment, and overall skin health.

## METHODOLOGY

This cross-sectional study was conducted at the Department of Dermatology, Services Hospital, Lahore, Pakistan, from 19 April to 20 May 2023. The survey was conducted on transgender population registered with Fountain House, Lahore, under the *Khawaja Sira* Support Programme. All transgender/LGBTQ members of 18 years and above, willing to participate in the study were enrolled after obtaining written informed consent. While those who were not willing to participate were excluded from the survey. A prior approval from the Institutional Review Board of the Hospital, and written permission from the Director of the Fountain House to conduct this research were taken. Sample size calculation was done with the help of the WHO calculator. The parameters set for sample size calculation included a confidence level of 90%, an absolute precision of 7%, and expected frequency of androgenic alopecia among LGBTQ as 56.86%,<sup>9</sup> with a margin of error (d) 7%, the sample size came out to be 143.

Transgender refers to individuals whose gender presentation differs from their gender assigned at birth.<sup>1</sup> Trans man is a person who has transitioned their identity from woman to man, and sometimes their body from female to male.<sup>1</sup> Trans woman is a person who has transitioned their identity from man to woman, and sometimes their body from male to female.<sup>1</sup> Queer is an umbrella identity term used by people who do not conform to norms of heterosexuality and/or the gender binary; it is a reclaimed slur, often used with a political connotation.<sup>1</sup> Lesbian is an identity label sometimes claimed by woman-identified people who form their primary romantic and sexual relationships with other woman-identified people.<sup>1</sup>

Gay is an identity label sometimes claimed by man-identified people who form their primary romantic and sexual relationships with other man-identified people.<sup>1</sup> Bisexual is an identity label sometimes claimed by people who are sexually attracted to two (or more) genders, not necessarily equally or simultaneously.<sup>1</sup> Gender affirmation surgery (GAS) is a collection of surgical procedures performed in patients presenting with a diagnosis of gender dysphoria and transsexualism (T) are both referring to the discomfort or distress caused by the discrepancy between a person's gender identity and that person's gender assigned at birth.<sup>10</sup>

The authors visited on specific days in the Fountain House, allocated for visits of the LGBTQ community. Specific components of the survey questionnaire included demographic information, education, employment status, sexual orientation, intake of hormonal supplements, history regarding gender-affirming surgeries and procedures, their sexual orientation, and perception regarding body image. Patients were inquired about skin concerns and a thorough dermatological examination was done to look for any specific findings such as infections and inflammatory conditions. Information regarding screening for hepatitis B, Hepatitis C, HIV, and Syphilis was obtained from the Punjab AIDS control programme office, where the *Khawaja Sira* are screened for the above-mentioned infections upon registration. Complete anonymity of the participants was maintained. Descriptive statistics, including means and medians for continuous variables and frequency (%) for categorical variables, were calculated. Data were entered into SPSS version 26 and analysed for the interpretation of results.

## RESULTS

A total of 143 LGBTQ were included. The mean age of the study participants was  $53.29 \pm 10.85$  years, ranging between 20 and 85 years. A total of 121 (84.6%) were transwomen and 22 (15.4%) were transmen. Educational status showed that 53.8% were illiterate, 24.5% had middle school education, 18.2% had high school education, and 3.5% had college degree. Sexual orientation, occupational status, and income status are given in Table I.

**Table I: Characteristics of the study participants (n = 143).**

Parameters	Frequency	Percent
Educational status		
Illiterate	77	53.8%
Middle school	35	24.5%
High school	26	18.2%
College degree	5	3.5%
Sexual orientation		
Bisexual	23	16.1%
Gay	96	67.1%
Heterosexual	1	0.7%
Lesbian	2	1.4%
Did not disclose	21	14.7%
Occupational status		
Beggar	32	22.38%
Clerk	3	2.10%
Dance worker	16	11.19%
Dancing + begging	3	2.10%
Makeup artist	2	1.40%
Sex workers	1	0.70%
Social worker	5	3.50%
Tailor	24	16.78%
Unemployed	32	22.38%
Others	25	17.48%
Income (PKR / thousands)		
<5	47	32.87%
5-7	23	16.08%
7-10	24	16.78%
>10	49	34.27%
Screening		
Hepatitis-B	0	0%
Hepatitis-C	8	5.59%
HIV	16	22.8%
Syphilis	8	5.59%
Hormonal therapy		
Estrogen	1	0.7%
Progesterone injection	2	1.4%
Surgery		
Laser hair removal	9	6.3%
Silicon breast implant	1	0.7%
Breast augmentation / silicone implant	1	0.7%

**Table II: Dermatological diseases among study participants.**

Dermatological examination	Frequency	Percent
Androgenic alopecia	26	18.18%
Generalised xerosis	16	11.19%
Scabies	16	11.19%
Melasma	6	4.20%
Intertrigo	6	4.20%
Eczema	5	3.50%
Seborrheic dermatitis	4	2.80%
Pityriasis versicolour	3	2.10%
Topical steroid damaged skin	2	1.40%
Acne	1	0.70%
Tinea cruris	1	0.70%
Folliculitis	1	0.70%
Warts	1	0.70%
Ichthyosis vulgaris	1	0.70%
Lichen simplex chronicus	1	0.70%
Other	4	2.80%
Total	143	100%

Screening for STIs revealed that none of the participants tested positive for Hepatitis-B. However, 8 (5.59%) participants tested positive for HCV, 16 (22.8%) for HIV, and 8 (5.59%) for syphilis. Regarding gender affirmation hormonal therapy, one participant (0.7%) was taking estrogens, while 2 (1.4%) were receiving progesterone injections. Among these participants, 11 (8.03%) underwent different kinds of surgeries. i.e. LASER hair removal, silicon breast implant, and breast augmentation (Table I). Dermatological examination revealed that 91 (64%) suffered from dermatological findings and 52 (36%) did not have any dermatological complaints. The most common dermatological finding was androgenic alopecia 26 (18.18%) followed by generalised xerosis 16 (11.19%) and scabies 16 (11.19%) as shown in Table II. There was no significant statistical difference noted for various dermatological conditions among transmen and transwomen ( $p = 0.990$ , chi-square test).

## DISCUSSION

In the present study, the majority (84.6%) were transwomen, while 15.4% were transmen. This is in line with the results of an Indian study, where authors observed 48 (94%) people as transwomen, while only 3 (6%) as transmen among trans population.<sup>9</sup> On the other hand, a study done on the American population reported only 63% as transwomen.<sup>10</sup> The present study's results are closer to the results of the Indian study, because in the subcontinent region, majority of the trans population who show up themselves to the community are transwomen, while transmen mostly remain ambiguous due to specific sociocultural setups. Educational status of the study population showed that 77 (53.8%) were completely uneducated, while 35 (24.5%) went to middle school, 26 (18.2%) attended high school, and only 5 (3.5%) earned a college degree. According to a previous study, only 10% of transgender population in Pakistan are educated.<sup>11</sup> Although the present study's results reveal a much higher percentage of educated trans community, but this is mainly because the authors have dealt with the trans population of urban regions, and in rural areas situation might be different. Butt *et al.* emphasise that very few trans-affirmative educational institutions are present in Pakistan and students show antipathy towards their trans schoolmates.<sup>12</sup> According to an American survey, timing of attaining milestones of transgender identification is very

important since they had noticed that people who got aware of their trans identity in adolescence were less likely to attain a higher degree as compared to those who experienced their transgender milestones in adulthood.<sup>13,14</sup> Conron *et al.* conducted a survey on the higher educational experiences of transgender people in the US and noted that only 20.9% trans people got chance to join career programmes and 9.2% reached graduate schools. The greatest challenge trans people face at workplace is ridicule from colleagues and employers.<sup>15</sup>

The sexual orientation of the majority revealed them to be gay 96 (67.1%) and bisexual 23 (16.1%). The probable reason for this sexual attraction trend is due to the fact that the majority of the present study population were transwomen, so feeling themselves as belonging to the female gender they will naturally attract towards their male counterparts or become bisexual. Defreyne *et al.* emphasise that sexual orientation, once established towards one specific gender, remains almost constant as according to their study it remained unchanged in 900 transgenders after starting hormonal treatments for their gender affirmation even after three years of treatment.<sup>16</sup>

The self-esteem of transgenders depends substantially upon their livelihood. This study shows that 32 (22.38%) were unemployed, and beggary (22.38%), tailoring (16.78%), and dance work (11.19%) were common sources of livelihood. Nazir and Yasir in their study found that out of 100 respondents from five districts of the KPK province of Pakistan, 57% of the total population was unemployed and rest were either self-employed or employed by others. The majority of them were engaged in professions of prostitution, singing/dancing, and beggary.<sup>17</sup>

The average monthly income was more than 10,000 (rupees) in 34.27% and less than 5 thousand (rupees) in 32.87%. Shannon described that transgenders mostly work part-time and compared to cisgenders of their age either have very low incomes or are unemployed.<sup>18</sup>

The screening for STIs in the study population revealed that the commonest disease was HIV (22.8%), followed by hepatitis C (5.59%) and syphilis (5.59%). In a recent survey, for the estimation of seroprevalence of four important STIs among transgenders of Punjab, Pakistan, the commonest infections were syphilis (20.7%) followed by HCV (7.3%), HIV (4.4%), and HBV (1.7%).<sup>19</sup> Gender affirmation through various surgical procedures gives trans people psychological satisfaction by minimising the discrepancy of their sexual identities. It was noticed that 6.3% had their laser hair removal done and 2 (1.4%) underwent breast augmentation procedures. In an Indian study, 27 (53%) out of 51 underwent breast augmentation and 33 (64.7%) had laser hair removal done. The significantly low percentage of the gender-affirming procedures in the present survey respondents might be due to social, religious, and economic constraints.<sup>9</sup>

Finding out the various cutaneous problems was the core concern of this survey as transgender people engage very less in health activities due to the fear of discrimination by health

care givers or people around them. It was found that 64% were positive for various dermatological findings and 36% were negative. It was observed that the most common dermatological complaints among the present study's participants were generalised xerosis and eczema. In a recent research conducted in the US, there was an appreciable difference in atopic eczema prevalence in sexually diverse (11.1%) to straight people (7.2%).<sup>20</sup>

Androgenic alopecia was a common finding noted in this study. The majority of the study population consisted of transwomen 121 (84.6%) and transmen 22 (15.4%). Among them, only 3 transmen gave history of hormonal therapy. Trans people receiving masculinising hormonal therapy, develop androgenic alopecia 2.5 times faster than cisgender women.<sup>21</sup>

Ravindran *et al.* had noted melasma and topical steroid-damaged skin in 10 (20.8%), while the authors of this study found melasma in 8.39% and steroid-damage in 2.7%. The high percentage noted by Ravindaran *et al.*, who conducted their study on the South Indian population with Fitzpatrick skin type IV-V, may be attributed to melasma. The use of formula creams to improve complexion is trend in this population.<sup>9</sup> The present study's authors also noted some other skin problems such as dermatophytic infections, viral warts, and ichthyosis in very few members. As such no local or international data to compare these findings are available.

To date, there is limited data available regarding dermatological problems for the LGBTQ population. The present research will contribute further to understanding the needs of this underprivileged subset of the population. The study has limitations as it catered the population of a single urban region. It is recommended to conduct further studies on wider scale.

## CONCLUSION

LGBTQ may have specific skincare needs related to hormone therapy, surgeries, or other medical treatments that can affect skin health. The present research contributes to increased awareness for healthcare providers to offer more inclusive and sensitive care, ensuring that transgender individuals feel comfortable seeking treatment for skin issues. Raising awareness about skin diseases in transgender people can educate both healthcare providers and the general public, promoting empathy and reducing prejudice.

## ETHICAL APPROVAL:

This study was initiated after obtaining ethical approval (Ref. No: IRB/2023/1113/SIMS) from the Ethical Review Board of Services Institute of Medical Sciences / Services Hospital, Lahore, Pakistan.

## PATIENTS' CONSENT:

A written informed consent was obtained from the participants.

## COMPETING INTEREST:

The authors declared no conflict of interest.

## AUTHORS' CONTRIBUTION:

SS: Acquisition, analysis, and interpretation of data for the work.

FA: Design of the work and final approval.

AUH, MZ, AWA: Data collection.

All authors approved the final version of the manuscript to be published.

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