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# Prototype Design and Amenities Clinic Development for Transgender Community

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**ABSTRACT** The current study aimed to survey the health challenges and concerns faced by transgender community and gender-diverse individuals in Pakistan. The term ‘transgender’ refers to a marginalized group of people often denied adequate healthcare facilities due to social stigma and discrimination. Some of these health concerns may occur due to an exposure to gender minority stress. Gender minority stress is related to transgenders seeking precautionary healthcare less often than other people do. By employing a participatory design approach including focus groups and co-design workshops with transgenders and gender-diverse (TGD) community members, this study attempted to identify their specific health needs. In response to these challenges, the project proposed a comprehensive healthcare solution that includes both a specialized healthcare facility and a mobile app. This app would allow transgenders to access health forums, consult with doctors, receive tailored wellness advice, and schedule appointments, making healthcare more accessible and user-friendly for this vulnerable population. This combination of physical and digital healthcare support is designed to improve the overall health and well-being of transgenders in Pakistan.

**INDEX TERMS** healthcare, health experience, prototype design, transgenders, web

## I. INTRODUCTION

In response to the unique healthcare needs of the transgender and gender-diverse (TGD) community in Lahore, the clinic design proposed in the current study aimed to create a welcoming and inclusive environment for them. Recognizing the challenges faced by individuals whose identities challenge the traditional norms, the clinic sought to provide a safe space in order to examine their overall health and well-being. Lahore, with its vibrant culture and diversity, ought to have a medical institution that embraces inclusivity and specializes in the healthcare needs of the transgender

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community. This project is an attempt to reflect the commitment to dismantling barriers, challenging societal conventions, and prioritizing the health and welfare of transgender individuals [1].

The transgender-inclusive clinic mentioned in this study is not just a physical space, however, it is a testament to the dedication to fostering compassion, acceptance, and awareness of diverse gender identities. The introduction outlined the core values, objectives, and innovative features that define the vision for a transgender-inclusive clinic in Lahore. The identities, behaviors, and expressions of transgenders deviate from the cultural norms associated with their assigned gender at birth. Gender plays a crucial role in the social construction of identity by categorizing individuals as men or women. Contrary to conventional beliefs, gender identity and biological sex are distinct, developing at different stages and in different parts of the body [2].

Despite this understanding, society continues to marginalize those who do not conform to binary gender definitions. Individuals who express non-conforming gender identities face ingrained social biases that clash with traditional gender norms [3]. Transgender individuals are often denied equal opportunities in education [4], frequently experiencing abusive treatment in academic settings based on their gender identity [5]. Many report feeling unsafe, facing verbal and physical harassment, and facing abuse not only from peers, however, also from teachers and staff [6]. Social, cultural, political, and economic discrimination is intertwined, leading to the systematic exclusion of transgender individuals [7].

While the current study focused on the development of a transgender-specific clinic, the treatment of transgender individuals in general government hospitals remains an area requiring improvement. Unfortunately, there is limited data on whether comprehensive surveys have been conducted on the quality of transgender healthcare in these institutions. However, to better serve transgender patients in public healthcare settings, a dedicated section could be introduced within government hospitals. This specialized section could ensure that transgender individuals receive respectful, non-discriminatory treatment, with healthcare professionals trained to cater to their unique medical and psychological needs. Integrating such services would help reduce the feelings of exclusion among them and foster a more inclusive healthcare environment across Pakistan.

### ***A. TRANSGENDERS IN PAKISTAN***

A survey conducted on transgender individuals has reported that about one third of 50 children are recognizable with chronic or potential tendencies. It means that almost 2% of the Pakistan's populace is transgender [8]. According to the mutual consensus of Islamic Republic of Pakistan and the Supreme Court of Pakistan, transgender individuals have been given equal rights of protection as other nationals as stipulated by the Constitution of Pakistan 1973 under article 4 and 9 [9]. The basic rights of employments, education, and health have also been given to transgender individuals by the federal and provincial governments within different government departments [10]. Transgenders are evicted from their houses at some point in their lives entirely on the basis of their gender [5].



**FIGURE 1.** Transgenders in Pakistan

### ***B. TRANSGENDER POPULATION***

According to the 2017 population census conducted by the Pakistan Bureau of Statistics, the total number of transgender individuals in Pakistan was recorded to be 10,418. This marked a significant step in recognizing transgender community as a part of the official population. The majority of transgender population is based in Punjab, which accounts for 6,709 individuals, reflecting its status as the most populous province in Pakistan. Sindh follows with 2,527 transgender individuals, highlighting the region's relatively larger acceptance of transgender people as compared to other areas.

In Khyber Pakhtunkhwa (KPK), the census recorded 913 transgender individuals, a smaller number that may reflect more conservative social attitudes prevalent in the province. Balochistan, which has the smallest population overall, also reported the lowest number of transgender individuals with only 109 recorded in the census. Lastly, the Federally Administered Tribal Areas (FATA), now merged with KPK, reported only 27 transgender individuals. It reflects extreme marginalization and the difficulty of conducting accurate population assessments in such a region due to its cultural, political, and social challenges.

While these numbers offer a baseline, they are likely an underestimation, given that many transgender individuals may not have been identified or counted due to social stigma, lack of awareness, or fear of discrimination. The incorporation of transgender individuals in the census was a positive development for Pakistan, as it provided a starting point for more inclusive policies and healthcare initiatives. However, the relatively low numbers highlight the need for targeted efforts to accurately account for this marginalized population and address their specific healthcare, social, and economic challenges.

### ***C. ISSUES***

Since the recognition of transgender individuals is increasing, they are still facing multiple issues orderly to adapt themselves to gender divisions. Some of the challenges encountered by transgenders include disapproval and inequity by their own families. They are forced to place their gender recognition in gender bi-forms, to behave as either males or females. Falling short in doing so may result in detachment from their families, ultimately transferring them to trans-communities where they are taken care of by the Guru. Their rejection from families presses them to be secluded and discouragement from others may cause discrimination [11]. They are not employed for house help, day-care assistance or any other employment which they can adapt easily [4]. These acts of exclusion by their families and communities result in acute health hazards for transgender individuals, incorporating higher risk of sexually transferred illnesses, such as HIV-Aids, mental disorders, and drug consumption [12]. A research reported that among 409 respondents, 84% had paid sex, 94% could recognize a condom, even though 42% revealed that they didn't need one. Moreover, 58% had sexually transferred infections (STIs) and 38% reported numerous infections. The most common infection reported by 50% of the respondents

was syphilis and 18% of the respondents reported to have gonorrhea. Inguinal lymphadenopathy was reported by 7%, while genital sores was reported by 3% and ureteral discharge by 1%. All of these infections were linked with physical exploitation and lack of condom use. Around 43% of transgenders were aware about HIV testing and 34.2% revealed being tested. The general pervasiveness of HIV was about 7.1% [13].

Transgender individuals are not enrolled and accepted in any formal institution. Furthermore, they are not employed in formal jobs and do not receive any kind of formal organizational/family support as well. Someone has to serve them when they grow old. This raises a critical question: who will take care of them when they grow old? The main issue is understanding the challenges they face and figuring out how they can earn a living in their old age. Many transgenders have no regular income. How do they withstand their lives at different phases? How does their community support them? The situation becomes even more difficult for those who grow old and fall ill, as they are pushed further into marginalization within an already marginalized community.

The current study emphasized to open a specialty clinic in Lahore in order to address the healthcare needs of the transgender community. This project goes beyond just the physical infrastructure; it also includes a strong visual campaign and an approachable website that prioritizes user experience (UX/UI). The study focused to start a graphic campaign, visually appealing and sensitive to cultural differences, in order to decrease the stigma around transgender health issues and promote a more accepting and inclusive society. These campaigns are aimed at increasing the influence and reach of programs, form alliances with non-governmental organizations (NGOs) that support transgender rights and health [14].

#### ***D. SOFTWARE USAGE***

All pertinent data and information were gathered to conduct the current study. Sketch up is frequently used to create wireframes and design different parts of the user interface for the clinic. Photorealistic pictures and animations of clinic exteriors and interiors can be produced with Maya. 3D presentations of the clinic's external and internal areas were developed. The creation of poster layouts and storyboards involved employing various strategies using software, such as Adobe Photoshop, Adobe XD, and Adobe

Illustrator. Adobe Premiere Pro software was used to edit and organize the film material for a transgender clinic.

### ***E. PROJECT PLAN: ESTABLISHMENT OF A TRANSGENDER HEALTH CLINIC IN LAHORE***

To facilitate accessibility for the transgender community, the above-mentioned website would provide an easy navigation and live chat functionality for direct communication with doctors. Additionally, the clinic would operate around the clock, ensuring 24/7 availability of doctors for emergencies and consultations [15].

## **II. LITERATURE REVIEW**

To carry out the literature review on transgender health services in Lahore, a thorough examination of the existing research and reports was conducted to identify critical gaps in the current healthcare landscape. The review focused on the availability, accessibility, and quality of healthcare services for the transgender population. Sources, such as the Young Adult Fertility and Sexuality Survey [16], which reported that 11% of transgender individuals in the Philippines were actively living as transgenders, provided a comparative framework to assess the situation in Pakistan. Additionally, definitions from GLAAD Media [17] and the National Center for Transgender Equality were used to clarify the terminology, highlighting that "transgender" is an umbrella term for individuals whose gender identity differs from their assigned sex at birth.

A key finding from this review was the wide range of identities encompassed by the term "trans" including trans men, trans women, and other non-binary identities. These definitions are essential to understand the diversity within the transgender community and address their distinct health-related needs. Drawing from research conducted by [18], [19], the gap analysis revealed that the existing transgender health services in Lahore significantly lack in inclusivity, accessibility, and quality. The literature pointed out several areas that require urgent attention including the absence of specialized healthcare facilities, inadequate training of medical staff, and a lack of gender-affirming services.

This gap analysis not only highlighted the inadequate current services, however, it also served as the foundation to develop innovative solutions, such as the proposed "healthcare clinic" initiative. It would provide equitable and comprehensive healthcare for the transgender population in

Lahore.

### ***A. IDENTIFIED GAPS***

A comprehensive survey and gap analysis was conducted to identify the existing gaps in the Lahore's healthcare system regarding the needs of transgender individuals. This involved a combination of qualitative and quantitative methods. Firstly, focus group discussions and interviews were held with transgender individuals in Lahore to understand their personal experiences with healthcare services. These discussions provided insights into the challenges they faced including discrimination, lack of specialized care, and inadequate access to gender-affirming services.

Additionally, healthcare professionals and hospital staff were interviewed to assess their level of training and awareness pertaining to the transgenders' healthcare needs. A survey was also distributed to both public and private healthcare facilities to evaluate the availability of services specifically designed for transgender individuals. This survey assessed factors, such as the presence of trained personnel, availability of hormone therapies, psychological support, and inclusivity policies in hospitals and clinics across the city.

Data from the Pakistan Bureau of Statistics and reports from transgender advocacy groups were also analyzed to understand the broader systemic gaps, such as policy deficits and lack of resource allocation. The findings revealed significant areas where the current healthcare system falls short in serving this demographic, providing a clear direction for future improvements and targeted interventions [20].

### ***B. INSUFFICIENT CULTURAL COMPETENCE***

Healthcare professionals may not be aware of transgender patients or may lack the necessary cultural competence. Moreover, healthcare workers do not receive sufficient training on transgender health issues.

#### **1) RESTRICTED AVAILABILITY OF INCLUSIVE SERVICES**

Restricted access to healthcare services designed for transgenders in mind.

Inadequate gender-neutral restrooms and waiting places in medical facilities [21].



## 2) MENTAL HEALTH SUPPORT

Inadequate services for mental health support catered to the specific needs of transgenders. Insufficiently qualified mental health specialists who are aware of the difficulties faced by transgender population [22].

## 3) AWARENESS AND EDUCATION

Insufficient educational initiatives to inform the public and medical professionals about transgender health issues. Sporadic outreach programs to educate transgender individuals about healthcare options.

## 4) LEGAL RIGHTS AND PROTECTION

The rights and legal protection provided to transgenders within the healthcare system are insufficient. Lack of policies addressing concerns, such as name and gender marker changes on official healthcare papers [23].

## III. METHODOLOGY

The campaign consisted of healthcare awareness and also provided information on the provision of equal rights to all citizens and residents regardless of sexual orientation and nationality. The current study aimed to address transgender health issues and also focused to provide a safe environment for them.

Placement of campaign lounged a website and clinic.

Locations in Lahore and National Capital Region.

Urdu and English languages.

Web Posters in the community and health centers

### *A. CONCEPTUAL DESIGN*

The current study emphasized to open a specialty clinic in Lahore that would address the unique medical needs of the transgender population, provide medical assistance to those in need, and raise public awareness of health issues. The creation of a website that acts as a platform for assistance, communication, and linking patients with physicians in various departments is essential to the framework mentioned in the study. Furthermore, in order to increase awareness on the transgender community's access to healthcare, the study recommended the use of posters and other promotional materials [24].

## **B. MOOD BOARD**

For the current research, a color palette featuring shades of pink, light blue, white, black, and grey was employed. The typography was carefully crafted to reflect the mood, with a focus on fostering interaction within the public and Tran's communities and facilitating a deeper understanding of the graphical message conveyed in the poster [25].



**FIGURE 2.** Transgenders in Pakistan

## IV. RESULTS

The primary goal of the current study was to investigate transgenders' experiences pertaining to health issues in order to provide noteworthy perspectives for comprehending this phenomenon using a qualitative method. Two fundamentals were chosen to answer the research questions. Firstly, an understanding of the subject was gained by creating an introduction covering transgender concerns on a national and international level. Lastly, it pinpointed people who could offer the essential details on the occurrence of health difficulties experienced by transgenders. The role and attitude of the family was discussed thoroughly through the participant's points of views. The analysis reported that the families tended to reject the gender identity of their transgender child. Findings from the theme social support revealed that transgenders were stigmatized since they were born. Moreover, they have to endure this behavior by their own family members and the society as well. The social problems faced by transgenders have indicated different social, economic, and psychological effects. Social effects included housing problems, education problems, and healthcare problems. All these problems were faced on the basis of their belonging to transgender community. The transgender community's experience with health issues exposed stigma, attitudes of medical personnel, and public and private healthcare systems. Access to healthcare facilities is impeded for the transgender community by societal stigma. The transgender group is so widely stigmatized in society that it is causing them to fight for their lives.

### *A. POSTER DESIGN*

The poster design shows transgenders' health rights in Pakistan. Urdu posters are easy to understand not only in rural areas, however, also in urban areas. They have a proper step and a guideline for transgenders and is easy to understand [26].

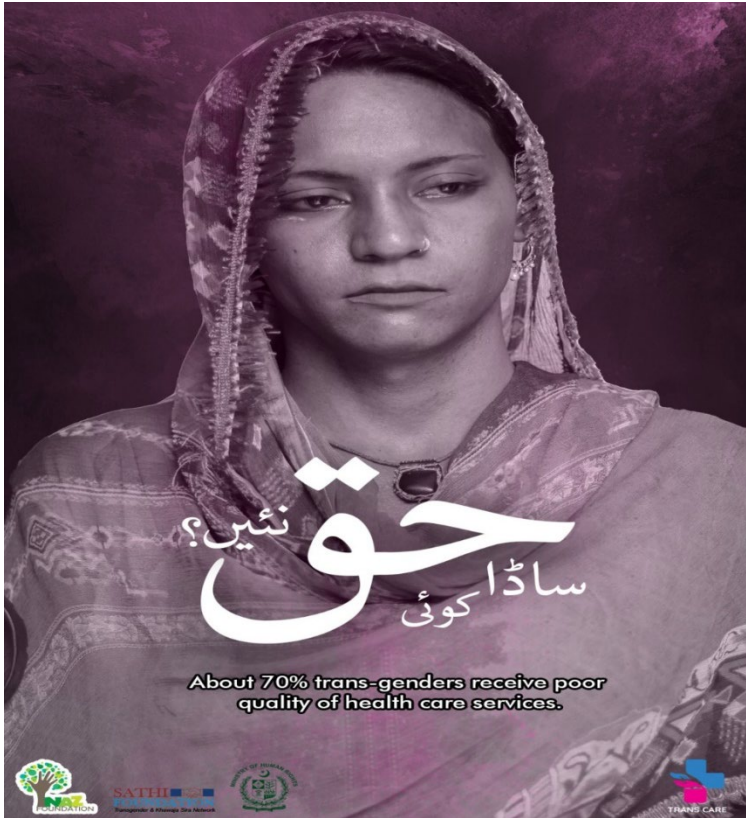


FIGURE 3. Poster Design for Campaign



FIGURE 4. Poster Design for Promotion of Transgender Health Clinic

## ***B. WEB INTERFACE DESIGN***

Initially, ideas and layouts were sketched up as a part of the transgender health clinic website design process. The development of the website interface, which prioritized making the user experience pleasant, began after the finalization of the sketches.

The homepage of the website greets visitors in a kind and inclusive manner. The clinic's goal to providing inclusive healthcare for transgenders is briefly described in the introduction. Prominent links or details regarding the online and local support groups for transgenders and their allies are also mentioned. The website provides language options so that users may view the content in multiple languages, ensuring accessibility and inclusivity. This feature ensures that everyone has access to the website's resources and content while also acknowledging the users' varied language origins [27].

## ***C. LOGO DESIGN AND CONCEPT***

Creating a logo requires specialized labor. It entails ingenuity, invention, the application of color, and, of course, signs and symbols. It has to do with an entity's signature and visual personality. The primary logo is in pink and blue color, and the monogram's hands' positions and postures convey the theme of healthcare [28].



**Figure 5.** Identification of Logo

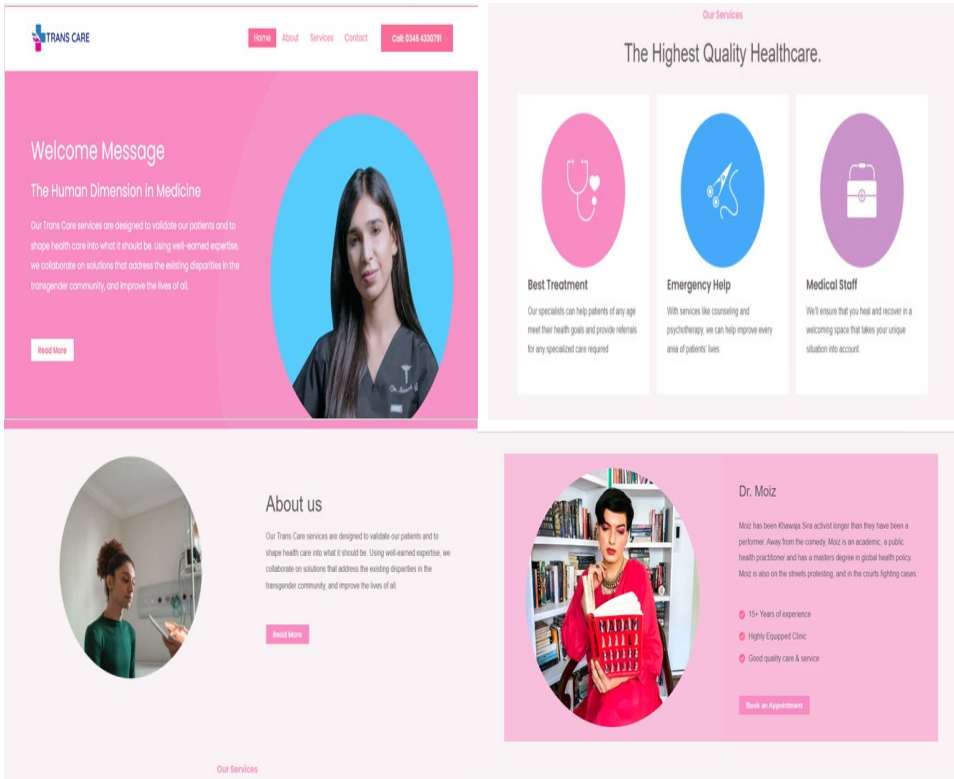


FIGURE 6. The Interface and Design of the Website

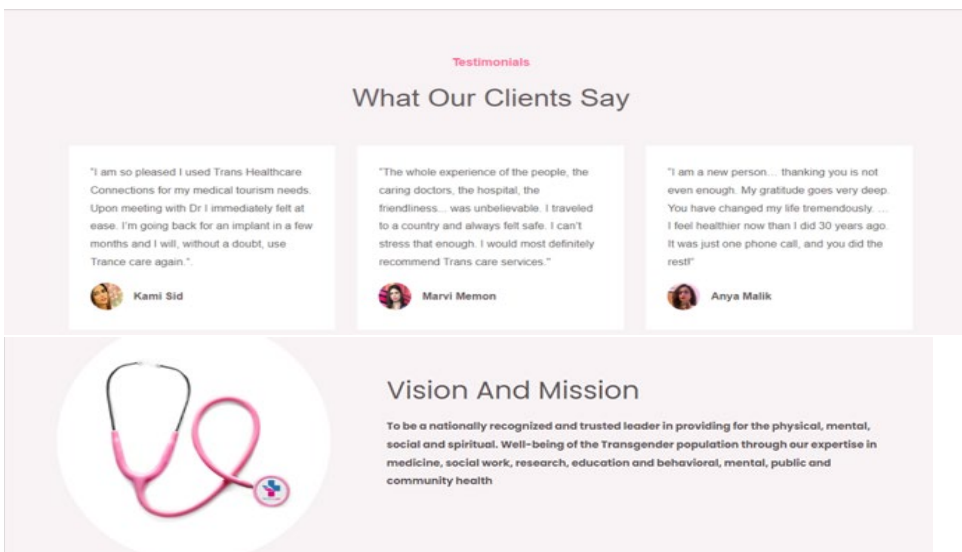


FIGURE 7. The Interface and Design of the Website



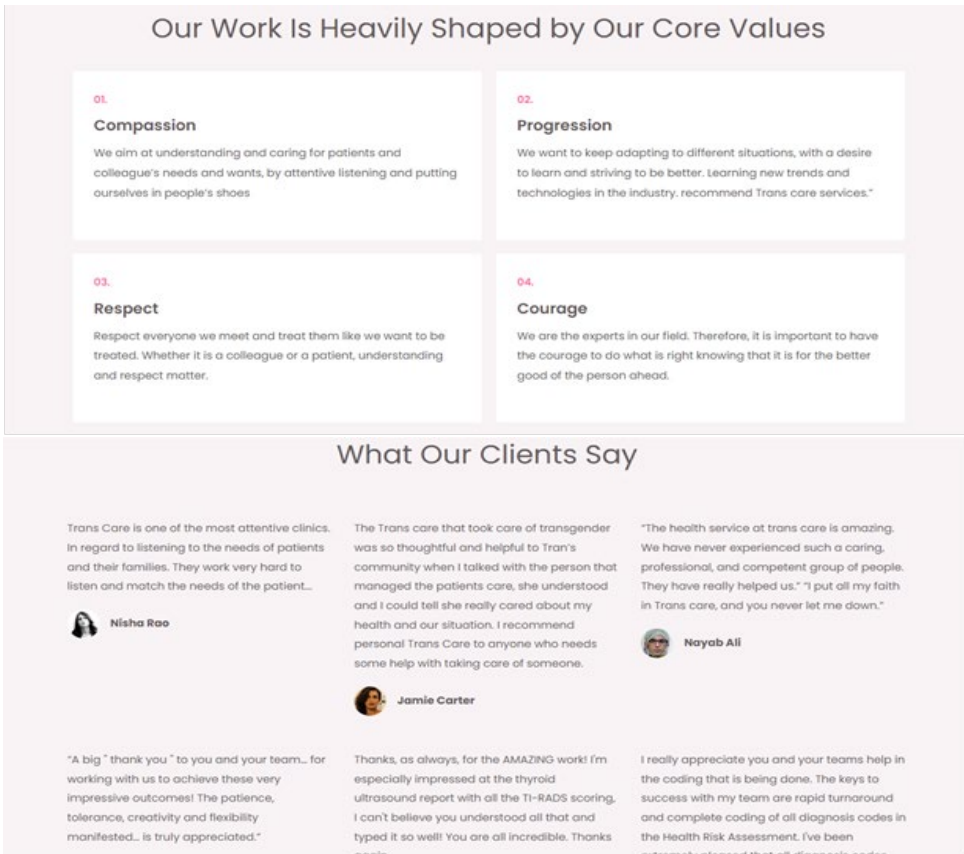
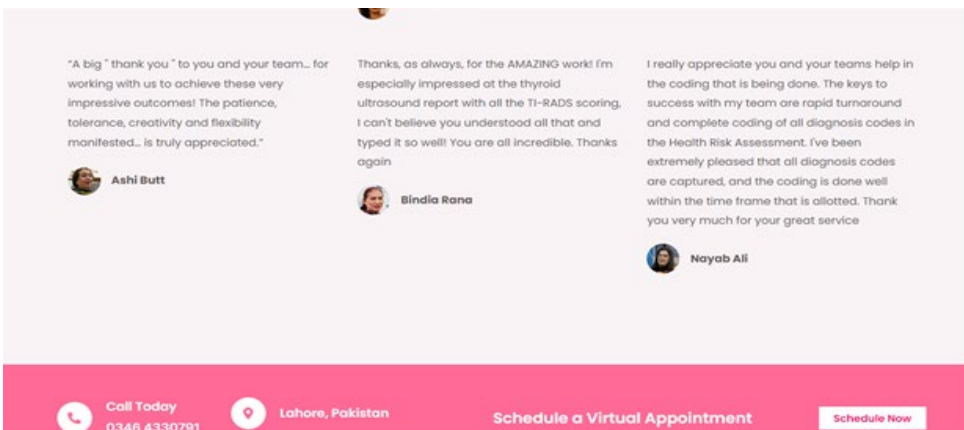
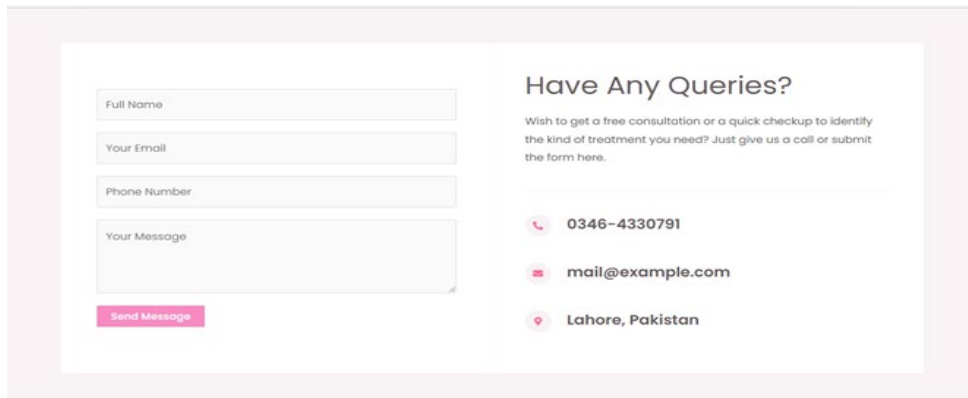


FIGURE 8. The Interface Design of the Website





**FIGURE 9.** The Interface Design of the Website

#### ***D. DESIGN PROCESS***

In order to conceptualize the thoughts for the current study, genuine pictures were utilized while designing the posters. The process began with sketches to decide on the logo's arrangement, the poster's design, and the website's prototype designs. Unique photography was used in this project and a photo session was organized to get excellent images for the poster design [9]. To guarantee that the photos had the best possible lighting, composition, and resolution, professional photography tools and methods were used. After the photoshoot, the original images were enhanced and modified using a variety of digital techniques to make it more in line with the design goals. The photographs were edited and polished with the help of a software, that is, Adobe Photoshop, which is used to change the colors, contrast, and other visual components to get the desired look. Overall, the combination of original imagery from the photoshoot and digital editing tools enabled to create a visually stunning and impactful poster design that effectively conveys message to the audience.

#### ***E. PROJECT'S FOUNDATIONAL TENETS***

The campaign's main goals included raising public awareness of healthcare and the government's obligation to grant all citizens and residents the same rights, regardless of their nationality or sexual orientation. In addition to overcoming transgender health challenges, the study would help in providing transgender patients a safe and supportive environment in medical facilities [14].



## 1) LAYOUT SAMPLES

Layouts play a crucial role in design process, significantly impacting the overall aesthetics and effectiveness of a composition. Throughout the design process, layouts are carefully considered and refined until the ideal arrangement for the poster design is achieved. Firstly, a number of layout ideas might be investigated, any of which could be the basis for additional work. These initial layouts undergo many iterations and revisions to enhance clarity and attractiveness. Elements, such as image placement, text alignment, and visual hierarchy are adjusted to optimize the layout's effectiveness in conveying the intended message. Through this iterative process, layouts evolve from their original stages into clearer and more appealing forms, ensuring the final design [14].

## 2) COLOR THEME

The combination of colors used influences the project considerably pertaining to the transgender identity. Three colors, that is, pink, light blue, and white were thoughtfully chosen to elicit particular feelings and express peculiar ideas. The color pink, which denotes the identity of transgenders, acts as the design's central element. However, it is crucial to remember that, in contrast to how it is portrayed here, pink is frequently connected to traditional femininity and feelings throughout the world [15].

Light blue, on the other hand, is frequently linked to masculinity; it balances out the pink and symbolizes the range of gender experiences. Contrarily, white denotes cleanliness and purity and gives the design a feeling of neutrality and clarity. The current study sought to dispel gender stereotypes and advance inclusivity and acceptance of a range of gender identities by utilizing pink as a symbol of transgender identification. The contrast between positive and negative auras produced by the combination of pink, light blue, and white draws attention to the subtleties and complexity of gender identity. The project aimed to stimulate feelings, prompt thoughts, and promote understanding and acceptance of transgenders and their experiences through the careful selection of colors [19].



FIGURE 10. Color Themes of Design

### 3) PLANS FOR TRANS CARE CLINIC

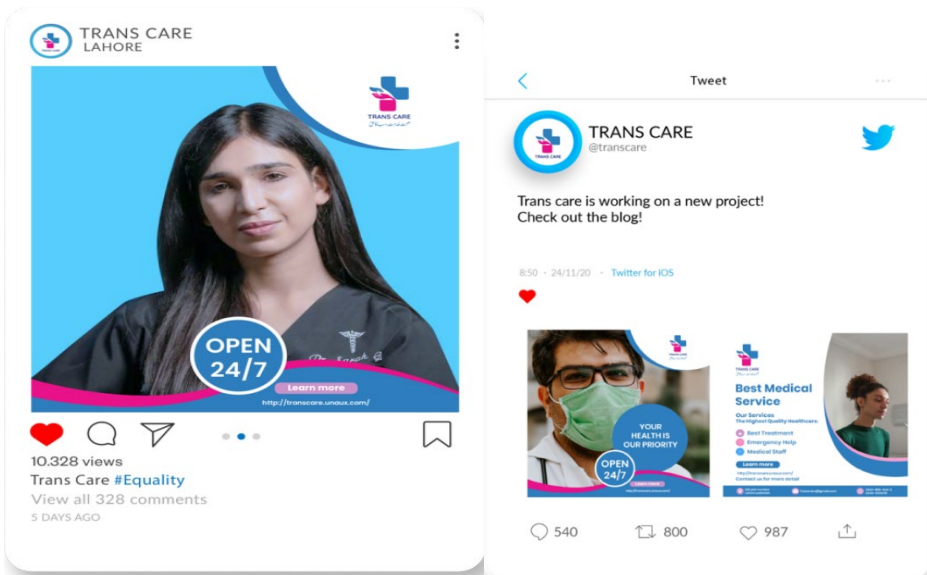
The proposed clinic would serve the transgender population by offering easy access to treatment for them without the complications they faced in the past. It would have two floors, a ground floor and an upper floor, with all the amenities found in other clinics [18].

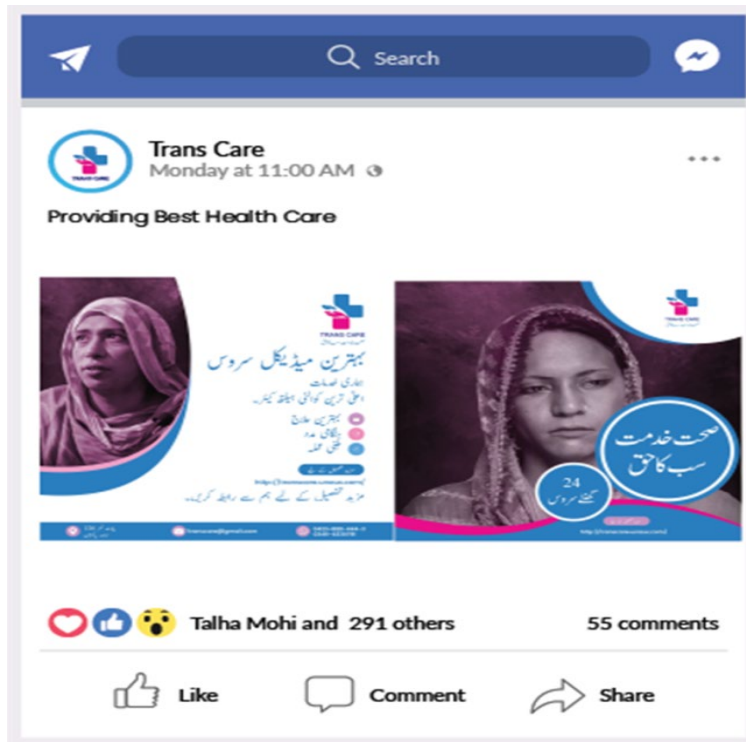


**FIGURE 11.** Architectural 3d Designs of Trans Care Clinic



FIGURE 12. Facebook Page Layout





**FIGURE 13.** Instagram and Twitter Page Layout

## V. DISCUSSION

The study's initial research question aimed to determine the kind of social support available to the transgender population. Thematic analysis was used to categorize the participant data into themes in order to answer this research question. According to the findings, the transgender community is among the most marginalized groups in society and has long been the target of prejudice and stigma. The transgender population is still not accepted as a regular part of society, despite the fact that we live in a fast-paced, technologically advanced era where people are learning to adapt to change. They have always faced discrimination and stigma. The transgender community has constantly been the target of physical abuse and life is hard for them. Moreover, they even do not have access to the basic necessities of life. Their gender identity halts their social life, they have housing issues and getting education is not meant for them. Moreover, healthcare is something which is the biggest issue of their life since no one is willing to check upon them or treat them. Their physical problems go unaddressed

which is a cause of different psychological problems. These findings are similar with the previous researches, which indicated that transgender individuals are discriminated either socially, culturally, politically, or economically. They are abused and not allowed to access education [2], [7] due to the community's dimorphic standards [3], as well as many of them have reported physical attacks.

The second question of the study aimed to focus on the effects of health issues and obstacles on transgenders and how they confront these issues. The response to this question showed that the transgender population has always experienced stigma from the public and that healthcare personnel has a very disrespectful and uncooperative attitude when providing services to the transgender community. Resultantly, the transgender community is unable to access healthcare facilities due to this stigma. Healthcare professionals' attitudes paint a depressing picture of this community, where access to basic healthcare is nonexistent due to traditional social norms. The findings are similar with the previous researches, which reported that social prejudices in our community are powerful [4]. These incorporate lack of access to doctor or rejection from healthcare assistance, leading to long-term health effects including disability and death [5], peoples' apprehension regarding spread of diseases [7].

### ***A. CONCLUSION***

In Pakistan, transgender individuals are deprived of their rights since they are considered and treated as a vulnerable segment of the society. As discussed earlier, transgender individuals face multiple issues during their life span on the basis of their gender identities. These issues lead towards numerous consequences including physiological, psychological and sociological hazardous impacts. There is a scarcity of literature to assess the health-related challenges of elder transgenders in Pakistan. Therefore, the main aim of this study was to examine the experiences of transgenders. These include assessing their health-related challenges to come up with notable perceptions in regards to understand this phenomenon through a qualitative approach. Transgender community is unable to access medical facilities due to the way society degrades and mocks them. Additionally, access to public and private healthcare by transgender community is equally difficult. This research shed light on different issues faced by transgender community apart from their health challenges. It was concluded that health



issues faced by transgender community cannot only be termed as technical problems, rather a social construction of an issue.

The challenges faced by transgender community are not due to the lack of services provided, however, these are caused by the attitudes of people. The society has labeled them as a minority which is deprived of its basic rights. If the society would change its attitude towards them, then this world may become a different place for them to live in

### ***B. FUTURE RECOMMENDATIONS***

In a nutshell, the aforementioned discussion points to the transgender community in Pakistan as a vulnerable and disenfranchised part of society that has experienced prejudice from both families and society at large. They experience stigma, harassment, and discrimination due to their gender identification. The transgender community is denied access to housing, healthcare, education, and career opportunities. Diverse initiatives must be taken to ensure that the transgender population receives the recognition they deserve and that solutions to the problems they confront are developed. To address the concerns faced by the transgender community, several preventive and intervention strategies should be implemented.

### **CONFLICT OF INTEREST**

The authors of the manuscript have no financial or non-financial conflict of interest in the subject matter or materials discussed in this manuscript.

### **DATA AVAILABILITY STATEMENT**

The data associated with this study will be provided by the corresponding author upon request.

### **FUNDING DETAILS**

No funding has been received for this research.

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