

**Addressing Environmental and Social Challenges: A Mixed-Method Study on the Education and Inclusion of Eunuchs in South Punjab, Pakistan**

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**Abstract**

This study seeks to identify the environmental issues that impede learning opportunities for the transgender community in South Punjab, Pakistan, which exacerbate their lack of access to education. Despite the growing legal acceptance of transgender individuals, several pressing social issues persist, including widespread environmental problems such as water pollution and deforestation. This study utilized a mixed-methods methodology that included both quantitative and qualitative data. According to the survey, nearly all transgender individuals (96%) lacked social protection and a stable income source, and 92% believed that environmental education could have a positive impact on their lives. Individuals with lower educational backgrounds participated in inclusive policies, yet their equality remained restricted. These findings suggest that targeted initiatives addressing environmental concerns and social integration via education are required. Suggestions include promoting collaboration with non-governmental organizations, peer-led education initiatives, government-led projects, and economic empowerment to improve marginalized communities.

**Keywords:** Eunuch Community, Environmental Education, Marginalized Groups, Sustainable Livelihoods, Inclusion Education, South Punjab, Environmental Challenges, Social Challenges

**Introduction**

**Background**

The transgender community in Pakistan is virtually imprisoned or excluded from society, most especially the eunuchs or Hijras (Ahmed et al., 2014). However, laws of most countries protect gender identity, but societal Discrimination still exists in the provision of education and employment for TG persons. Negative, the educational sector in Punjab is very much constrained when it comes to the employment of Transgender persons; very few can afford education. Most of the population is poor; thus, the primary source of livelihood includes pleading or dancing (Butt, 2021). While in educational institutions, social prejudice severely limits them even though they are interested in education. Unfortunately, the current and future dynamics of the education sector do not offer favorable practical government approaches and formal policies to improve their status (Tabassum & S. Jamil, 2014). They get locked out of the socio-cultural, despite the economy, and abhor the politics, making them feel that they lack

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equal worth as other people. Besides, they lack a proper feeling of social responsibility (Ahmed et al., 2014).

### **Marginalization and Educational Barriers**

Studies show that eunuchs and transgender people in Iran and Pakistan are marginalized based on social and political Discrimination, especially in schools. They are socially isolated from the rest of society; they encounter verbal, physical, and sexual abuse, all of which affect their self-worth and the resources that are within their reachable reach (Ahmed et al., 2014). The biggest issue arises with learning institutions where teachers and students harass the transgender person, which makes them drop out of school. This finding subsequently leads to their poor education, which puts a tag on their employment opportunities, hence marginalization (Munir, 2019). Although transgender individuals express a strong desire for education, prejudice, and institutional limitations prevent them from attending mainstream schools. The studies emphasize that more policies and laws should be employed to address these problems, such as actions that can help improve the status of transgender people in educational facilities and in general (Tabassum & Jamil, 2014; Munir, 2019).

### **Environmental Challenges and Poverty**

According to the population surveys, eunuchs (hijras) are overtly discriminated against at a social level in Pakistan and violate the terms of their rights, which in turn has hugely affected their confidence level and availability of basic amenities and services (Ahmed et al., 2014). It continues up to education, as we see here, where schools in rural areas do not even have basic facilities and cannot even provide whole child development, let alone the goals set for it (Qamar, 2014). In Bangladesh also, eunuchs are socially anomalous and denied their fundamental rights and even education. Despite their historical presence in society, they are still poor, illiterate, and laughing stocks, and the school remains unsympathetic to their requirements (Islam, 2016). All these studies reveal that eunuchs face numerous educational difficulties due to societal perception, lack of resources, and lack of educational facilities in most states. Achieving these requires a complex intervention agenda considering the cultural and socioeconomic characteristics of the selected communities in South Asian countries.

### **The Role of Education in Empowerment**

Learning is an effective source for achieving the status of an empowered person and for social integration of the vulnerable population (Gurusamy, 2019; Camilleri-Cassar, 2014). Saharan and Sethi (2009) define inclusive education as supporting the participation of all learners, especially those at risk of exclusion, in educational activities that promote social integration. However, there are other more hidden forms of exclusion that can be inherent in the educational systems. Education strategies should focus less on perceived deficits in youth and more on addressing shortcomings in schooling. This strategy will enhance the credibility of educational outcomes. It is, therefore, important to listen to marginalized young people to get some understanding of supportive or inhibitive educational practices (Camilleri-Cassar, 2014). Inclusive education aims to help all students learn in the same classroom as others with the necessary support structures (Saharan & Sethi, 2009). Anticipated to enhance the actualization of Education for All and the 'learning for development,' the existing approach also fosters the overall human capital potential in every person (Saharan & Sethi, 2009; Aikman & Dyer, 2012).

### **Research Gap**

Although the rights of the transgender community have recently come under discussion, many researchers have given scarce attention to the role of environmental stressors in the educational neglect of eunuchs, especially in rural areas like South Punjab. Many papers concerning the subject of transgender people in Pakistan have addressed only the urban community, and the

investigation is absent of how environmental problems within the counties aggravate eunuchs' educational Discrimination. Although Pakistan has begun making legal changes for transgender people, it still needs reforms in education systems to meet the needs of eunuchs in impoverished areas with poor infrastructure. Hence, this study intends to address this gap by assessing how tasks with environmental degradation and vignetting render eunuchs powerless in accessing education; it also presents possible education programs that may help empower eunuchs.

### **Problem Statement**

This paper concerns the eunuch (Transgender) living in South Punjab, Pakistan. Society heavily marginalizes eunuchs, and environmental factors prevent them from attending school. Although laws exist to protect their rights and ensure they receive education and basic needs, society continues to reject and discriminate against them, and schools provide few facilities to support their education. This finding confirms the degree of increased vulnerability due to other environmental factors, including poverty, lack of physical infrastructure, and geographical remoteness, making them less capable of breaking cycles of marginalization. The community in South Punjab is still marginalized and needs to be granted proper education by the region's institutions. Instead of being empowered, they are being further alienated. Such marginalization is systematic and denies them an opportunity to acquire skills and knowledge that would enable them to better their socioeconomic status and enjoy better living standards. Therefore, the eunuch community still lacks education. Most of them need to be more literate, and they have no chance to develop themselves personally or professionally. Ideologically, there is a clear need to understand how eunuchs are marginalized in both environment and education and to examine how education can be provided to them after systematic mapping of the barriers that hinder them from acquiring education. By working on these problems, we will not only ensure the rights of eunuchs but also improve the socioeconomic status of eunuchs in South Punjab.

### **Research Objectives**

1. The goal of this research is to examine the overlap between environmental and social factors that result in eunuchs being denied access to education.
2. The aim is to pinpoint obstacles within the educational system that prevent eunuchs from engaging in learning and to suggest methods for establishing educational settings that are both inclusive and empowering.
3. Examining how education contributes to promoting social integration and economic self-sufficiency among eunuchs in South Punjab.

### **Research Objectives or Questions to be Investigated**

1. What are the effects of environmental challenges and social marginalization on the educational possibilities for eunuchs living in South Punjab?
2. What obstacles do individuals who were castrated, particularly in South Punjab, encounter when seeking to pursue formal education, and how could educational establishments be reorganized to address these difficulties?
3. How can education be utilized as a means of empowerment and socio-economic improvement for eunuchs in South Punjab?

### **Significance of the Study**

This study's importance lies in its concentration on the eunuchs in relation to environmental difficulties and educational enhancement. This section should highlight the importance of inclusive environmental education in addressing marginalization and enhancing living standards.

## **Literature Review**

### **Marginalization and Social Exclusion**

Sexual segregation, as evidenced by the marginalization of eunuchs, of course, social at rural trappings, is social in origin and, therefore, multifaceted. Researches on Hijra in Bangladesh show that the community suffers from substantial marginalization and exclusion in social, economic, and political domains (Hossain et al., 2024; Al-Mamun et al., 2022). This exclusion locks them out of basic facilities, health care, and employment, leaving most of them to turn to begging and prostitution to feed. Such identified communities experience profound social, cultural, political, and economic marginalization due to socio-cultural practices and structural factors (Hossain et al., 2024; Ahmed et al., 2014). Hence, for small landholders, social exclusion depends on elements like access to credit, markets, and other agricultural inputs. Policymakers, educators, and farmer bodies can significantly decrease the rate of socially excluded farming people and contribute to sustainable agriculture development in rural areas (Sikandar et al., 2023). We must initiate and implement large-scale measures to secure social acknowledgment, economic stability, and legal protection for excluded population groups.

### **Environmental Challenges in Rural Areas**

Environmental issues in South Punjab, Pakistan includes water deficiency, forest depletion, and agricultural deterioration, which impacts the poorest and rural people. Irrigation systems and water supply are essential problems, and most require groundwater for domestic and Agricultural uses (Anwar & Bureste, 2015). The land usage pattern indicates rapid urbanization reduced forest cover by 89.3 %, and urban land enhanced its domain by 45.5 % from 2003 to 2018, Ahmad in 2021. These changes have also led to environmental degradation and health problems mainly due to inadequate and poor sanitary conditions, inadequate waste disposal systems, and contaminated water in poor urban areas, especially slums (Khan et al., 2014; Noor et al., 2014). Residents in slum areas are prone to contracting illnesses such as typhoid fever, diarrhea, and malaria because most of them live in poorly constructed houses, and they are ignorant of sound environmental practices (Noor et al., 2014). Exploring these challenges involves enhancing proper environmental management and people's involvement, transforming environmental degraders into activists (Khan et al., 2014; Noor et al., 2014).

### **Educational Awareness and Empowerment**

It is important to note that the educational programs foster the deserved sense of engagement to empower the neglected issue of marginalized communities so that they can champion environmentally responsive programs in the future. Uganda has enhanced sustainable agriculture education programs, increasing crop production, environmental conservation, and economic liberation for village farmers (Ekpe, 2024). In including the implementation of community-based environmental education programs, it has been observed that results have been higher when based on local issues, involving many stakeholders, and oriented toward action (Aguilar, 2018). These programs indirectly contribute to sustainability results because of issue awareness, stakeholder engagement, and resulting actions (Tilbury & Wortman, 2008). Literacy and capacity development can go a long way in women's emancipation, income status, reproductive health, autonomy, and psychological well-being (Akalu & Teka, 2022). Nonetheless, there is always a challenge, like a restricted number of resources and a need for more awareness (Ekpe, 2024). Future development programs should adopt the following: recognition of cultural assets, cultivation of trust, and exploration of process power (Aguilar, 2018). Therefore, several studies have established that specific educational measures for environmental management foster the involvement of disadvantaged sections of society in local conservation. Environmentally critical education on assessment can enhance problem-solving abilities and the public's involvement in managing identified resources (Diduck, 1999). Even though women and Indigenous people are commonly excluded from the decision-making processes in matters of environmental management, they can offer valuable input founded on

local experience and knowledge relative to the sustainable use of resources. Environmental activism influences different social IPA and groups' integrity, yet the subject requires more investigation of marginalized communities (Wolbring & Gill, 2023). Combining art and science in environmental educational systems allows youth, especially in developing countries, to foster awareness, effective communication, and participation in the work toward societal change (Trott et al., 2020). These approaches help such groups to contest regimes of representations that exclude them, interface with the powers that be, and come out to play proactive parts in the local environmental conservation and utilization processes.

### **Methodology**

The present study's approach involves identifying the effects of environmental problems and social marginalization on the eunuch people of South Punjab, majorly concentrating on educational rights and freedom. To enhance the richness and validity of the data collected, the research design uses both quantitative and qualitative methods of data collection to capture the community's voice and opinion.

### **Research Design**

Quantitative data were collected to get an overview of essential tendencies, while qualitative data offered specific, individual observations. To assess the environmental awareness level of eunuch's self-completion questionnaires were used to assess the environmental awareness of eunuchs in the form of a pro-environmental attitudinal scale and to know obstructions in their way to getting an education; in-depth Interviews were used. Consequently, 16 items on the interview schedule were developed out of the sub-total above. The last ten questions were multiple choice on a Likert scale of Yes and No, and the first six questions were about the demographic characteristics of the eunuchs of South Punjab.

### **Data Collection Methods**

The following methods were employed to collect data:

**Survey:** Using a structured interview schedule, data was collected from 25 eunuchs of south Punjab regarding their knowledge about environmental problems, education level, and sustainable livelihood. Other questions also addressed in the survey related to prejudice, racism, and their understanding of governmental measures. **Interviews:** 10 Some ten participants were interviewed based on the semi-structured questions to know the impact of social and educational exclusion. The author gained qualitative evidence from these interviews regarding how the clients experience prejudice, adverse environmental conditions, and insufficient promotions targeting empowered futures. **Policy and Program Review:** The study analyzed the existing government policies and educational programs implemented in South Punjab to identify areas of exclusion for eunuchs. This assisted in presenting recommendations for designing additional equitable learning interventions.

### **Sampling**

The target population of this research was the eunuch community of the South Punjab. Thus, respondents to the survey and interviews were purposively selected from across different educational, livelihood, and socio-economic status backgrounds. **Survey Sample Size:** Twenty-five eunuchs completed questionnaires, offering quantitative insight into their level of environmental concern and masculine education shortcomings. **Interview Participants:** The respondents included ten community members, four of whom were involved in education-focused activities and five of whom participated in environmental activities.

## Data Analysis

**Quantitative Data:** The collected survey data was, therefore, analyzed using statistical tests, frequency distributions, and cross-tabulations to obtain key findings on environmental awareness, social protection/assistance, and accessibility to education.

**Qualitative Data:** Content analysis was used to code all the interviews to draw out common themes on discrimination, educational marginalization, and the prospect offered by environmental education to the eunuch populace.

## Ethical Considerations

The consent of all participants to participate in the study was secured before they completed it. All the information gathered from the respondents was anonymized when collecting and analyzing the data. Also, the research applied the ethical standards of research involving vulnerable groups, and the human rights of the participants were respected. The use of this mixed-method strategy enabled the study to identify the systematic barriers to participating in positive change initiatives by eunuchs in South Punjab while at the same time identifying education and environmental factors that could enlighten the subject about change possibilities.

## Results and Discussions

### Demographic Attributes of Eunuchs in South Punjab

**Table 1: Feelings of eunuchs related to gender**

Gender	Frequency	Percent	Valid Percent	Cumulative Percent
Male	3	12.0	12.0	12.0
Female	12	48.0	48.0	60.0
Not prefer to say	10	40.0	40.0	100.0
<b>Total</b>	<b>25</b>	<b>100.0</b>	<b>100.0</b>	

The gender-related feelings of the eunuchs are presented in Table 1. Of the respondents, 12 of 25 (48% were male) and 48 of 25 (12%) were female. Remarkably, 40% of the participants preferred not to share their gender identity. The cumulative percentage also shows that by the time the responses from the female category are included, 60% of the responses come from the participants who identified themselves as female, and 40% came from the participants who did not want to disclose their gender.

**Table 2: Age of eunuchs in South Punjab**

Age	Frequency	Percent	Valid Percent	Cumulative Percent
Under 20	1	4.0	4.0	4.0
20-30	14	56.0	56.0	60.0
31-40	10	40.0	40.0	100.0
<b>Total</b>	<b>25</b>	<b>100.0</b>	<b>100.0</b>	

The age structure of eunuchs in South Punjab is presented in Table 2. A total of 25 respondents were present, but only 4% were under 20 years of age. The highest proportion of participants (56%) were aged between 20 and 30 years. In contrast, 40% of respondents were aged between 31 and 40 years. In terms of the cumulative percentages, it was found that the 20-30 age group had the highest response percentage, and the 31-40 age group had 40% of the total percentage.

**Table 3:** Profession of eunuchs in South Punjab

Professions	Frequency	Percent	Valid Percent	Cumulative Percent
Dancing and begging	2	8.0	8.0	8.0
Begging and sex working	5	20.0	20.0	28.0
Dancing, Begging and Sex Working	8	32.0	32.0	60.0
Job	2	8.0	8.0	68.0
Manager of eunuchs as Guru	1	4.0	4.0	72.0
Not Prefer to say	7	28.0	28.0	100.0
<b>Total</b>	<b>25</b>	<b>100.0</b>	<b>100.0</b>	

Table 3 lists the professions of the eunuchs in South Punjab. Out of all the combinations of professions in which dance, beg, and engage in sex work were performed, 32% of participants reported the most common occupations. Another 20% beg and mysophobia from sex, and 8% dance and beg, respectively. 8% committed to official sectors, and 4% worked as chiefs of other eunuchs. Of the respondents, 28% are employed, but 28% would like to remain anonymous regarding what they do in detail. 72% of the responses were captured before adding those who indicated that they did not want to disclose their occupation.

**Table 4:** Education of eunuchs in South Punjab

Education Level	Frequency	Percent	Valid Percent	Cumulative Percent
Uneducated	9	36.0	36.0	36.0
Primary	8	32.0	32.0	68.0
Elementary	6	24.0	24.0	92.0
SSC	2	8.0	8.0	100.0
<b>Total</b>	<b>25</b>	<b>100.0</b>	<b>100.0</b>	

The education level of the eunuchs in South Punjab is summarized in Table 4. % of uneducated respondents Surface data analysis shows that 36% of respondents did not receive formal education. Of the respondents, 32% had primary education, and 24% had elementary education. These are the few educational backgrounds of the participants, with only 8% having attended secondary school education (SSC). The relative bar chart of education level reveals that 68% of the respondents have an educational level up to primary school; the remaining 32% have primary school education and above or secondary school education and below.

**Table 5:** Location of eunuchs in South Punjab

Location	Frequency	Percent	Valid Percent	Cumulative Percent
Urban	12	48.0	48.0	48.0
Rural	13	52.0	52.0	100.0
<b>Total</b>	<b>25</b>	<b>100.0</b>	<b>100.0</b>	

Table 5 presents the geographical location of eunuchs in the South Punjab region of TOOL. The data also showed that 48% of the respondents were from urban areas, while 52% were from rural areas. The total percentage reaches 100% if we consider both, and it seems that they are rather close to each other—the division between urban and rural areas is nearly equal.

**Table 6:** Residential Status of eunuchs in South Punjab

<b>Residential Status</b>	<b>Frequency</b>	<b>Percent</b>	<b>Valid Percent</b>	<b>Cumulative Percent</b>
With Guru	10	40.0	40.0	40.0
With Group of Eunuchs	7	28.0	28.0	68.0
Independent	3	12.0	12.0	80.0
Not prefer to say	5	20.0	20.0	100.0
<b>Total</b>	<b>25</b>	<b>100.0</b>	<b>100.0</b>	

Table 6 presents the living conditions of Eunuchs in South Punjab. The survey revealed that 40% of the respondents lived with at least one Guru, while 28% lived with other Eunuchs in their houses. Another 12% of respondents lived independently. Moreover, as many as 20% of respondents did not want to report their living status. The individual percentages indicate that 80% of the respondents are willing to describe their residential status, whereas the remaining 20% are open-minded about this issue.

### Statistical Analysis of overall

**Table 7:** Statistical Analysis of study

<b>No.</b>	<b>Variables</b>	<b>N</b>	<b>Mean</b>	<b>Std.Dev</b>
1	Feelings related gender	25	2.00	.91287
2	Age	25	2.36	.56862
3	Profession	25	4.36	2.62805
4	Education	25	2.04	.97809
5	Location	25	1.52	.50990
6	Residential Status	25	2.44	1.60935
7	Are you aware of the environmental issues in your community (e.g., clean water, unhygienic living conditions)?	25	1.16	.37417
8	Have you ever received education on environmental sustainability?	25	1.88	.33166
9	Do you believe environmental education can improve your livelihood?	25	1.08	.27689
10	Would you participate in community-based environmental education programs?	25	1.84	.37417
11	Do you feel you receive enough social protection from the government regarding environmental and livelihood challenges?	25	1.96	.20000
12	Do you have access to sustainable sources of livelihood in your community?	25	1.72	.45826
13	Do you feel respected and valued as an equal member of society?	25	2.00	0.00000
14	Are you able to express your social and environmental concerns without fear of discrimination?	25	1.96	.20000
15	Do you expect society to address environmental and social challenges that you face?	25	2.00	0.00000
16	Do you believe the government should create more inclusive policies to address the livelihood and environmental challenges faced by eunuchs?	25	1.16	.37417



Table 7 summarizes responses from 25 participants in the study "Bridging the Gap: Gender, Environment and Social Inclusion Education: Empowering Eunuchs in South Punjab, Pakistan." Every variable assesses different characteristics of the respondents: demographic information, environmental sensitivity, social coverage/shelter, and incorporation.

**Feelings Related to Gender:** The mean score of two equals the majority of participants who do not conform to the traditional masculine/feminine stereotype or did not wish to disclose.

**Age:** The mean of 2.36 indicates that the majority of the respondents are aged between 20 and 30, which is in accordance with earlier observations made in Table 2 above.

**Profession:** The overall mean is 4.36, SD = 2.63, which means that respondents represented various occupations, such as dancing and begging while selling sex, having paid jobs, and working as Gurus.

**Education:** The mean score of 2.04 suggests low literacy levels in education, as many respondents have either primary or elementary level education or none at all, with a smaller mean score in secondary education (SSC) schooling.

**Location:** The mean of 1.52 indicates that about fifty employees live in urban and rural areas, with fifty–working in rural areas.

**Residential Status:** The participants' residential status has a moderate mean ( = 2.44) but a high standard deviation (SD = 1.61), indicating that while some live with a Guru or a group of eunuchs, others live alone.

**Awareness of Environmental Issues:** The mean value of 1.16 shows that the public is aware of environmental problems concerning such rights as clean water and living conditions in the community.

**Received Education on Environmental Sustainability:** The study's mean index is 1.88, which reveals that the majority of the participants do not have formal education in environmental sustainability; the findings indicate deficiency.

**The belief that Environmental Education Can Improve Livelihood:** Most respondents, with a low mean of 1.08, affirm that environmental education has the potential to raise their standards of living.

**Willingness to Participate in Community-Based Environmental Education Programs:** This is a mean of 1.84, meaning that though some individuals will not mind participating in such programs, most are still a little reluctant.

**Social Protection from the Government:** The mean of 1.96 indicates that most respondents to this study say they need adequate social protection from the government for environmental or livelihood issues.

**Access to Sustainable Sources of Livelihood:** Since the mean score was 1.72, participants need access to sustainable livelihood opportunities within the community.

**Feeling Respected and Valued as Equal Members of Society:** A mean of 2.00 indicates that the respondents do not feel respected or valued as equal citizens in society, thus resulting in minority marginalization.

**Ability to Express Social and Environmental Concerns without Fear of Discrimination:**

In particular, a mean of 1.96 indicates that all the respondents but a very few feel that they cannot freely voice their concerns because of discrimination.

The expectation that society will address their environmental and social challenges: It makes sense; they are not hopeful that society will try to address the challenges that affect them. This is evidenced by the mean of 2.00.

**The belief that the Government Should Create Inclusive Policies:** An average of 1.16 points indicates a favorable agreement among respondents that the government should develop more policies to manage their environmental and source of income challenges. Overall, this table highlights several key insights: The respondents have some knowledge of environmental issues but still need education and government support. Many adhere to environmental education and view the necessity of inclusive policies, yet they feel they need to be heard. This means a very large social and environmental disparity that requires special attention and insertion in any society.

**Themes of Key Community Members Interviews****1. Environmental and social challenges regarding education:**

The participants identified social prejudices, cultural Dalits, and environmental challenges as critical challenges hindering eunuchs' access to education. What emerged was how social exclusion and hostile built environments prevent them from accessing schools. Natural taboos and environmental hardships create barriers to education for eunuchs.

**2. Systemic Discrimination is evidenced within educational structures.**

Information was available concerning the prejudices the eunuchs faced regarding teachers and fellow students, who might harbor prejudiced views against them, exclusion from the curriculum, and lack of social amenities needed in their day-to-day lives. Participants expounded on why eunuchs were not receiving policies that shield them from bullying and exclusion in schools. stigmas, cultural taboos, and environmental hardships create barriers to education for eunuchs.

**3. Lack of Educational Program according to the needs of eunuchs**

The problem is the need for education programs within the given facility that cater to the needs of the program participants. Several interviewees noted the lack of programs explicitly responding to the situation; for example, no education programs offer skills or vocational training suitable to eunuchs' status. It also examined the lack of applicability of flexible education paradigms for minority populations and the impact of social stigmas, cultural taboos, and environmental hardships on creating barriers to education for eunuchs.

**4. Education as a tool in Social Inclusion:**

The discussion focused on observations of how eunuchs could be accommodated into society through education. Concerning the variation of power and self-esteem, participants discussed situations where education results influenced these aspects of lives. Of social stigmas, cultural taboos, and environmental hardships that create barriers to education for eunuchs.

**5. Education for the Empowerment of the Economic Status:**

The provision, access, and demand for education supporting sustainable livelihoods was another common feature. The participants highlighted the need for skills training for employment provisions to lift people from poverty and exclusion. Education and environmental hardships create barriers to education for eunuchs.

Discussions revealed how societal rejection and unsafe physical spaces inhibit their access to educational institutions.

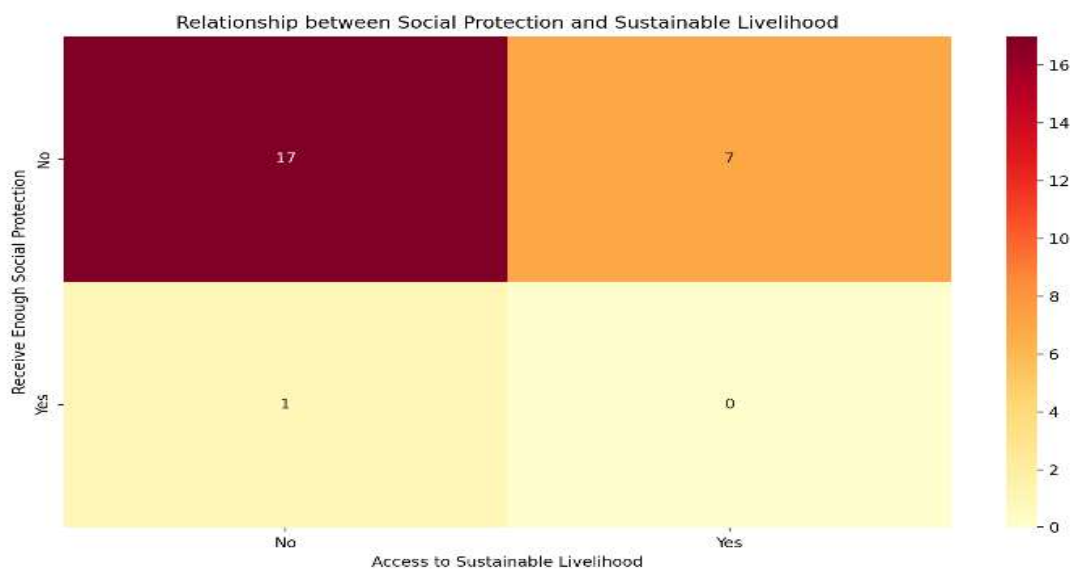
These themes summarize the qualitative interview evaluation and contradict the study's goals.

### Competitive Analysis

**Table 8:** Social protection and sustainable livelihood

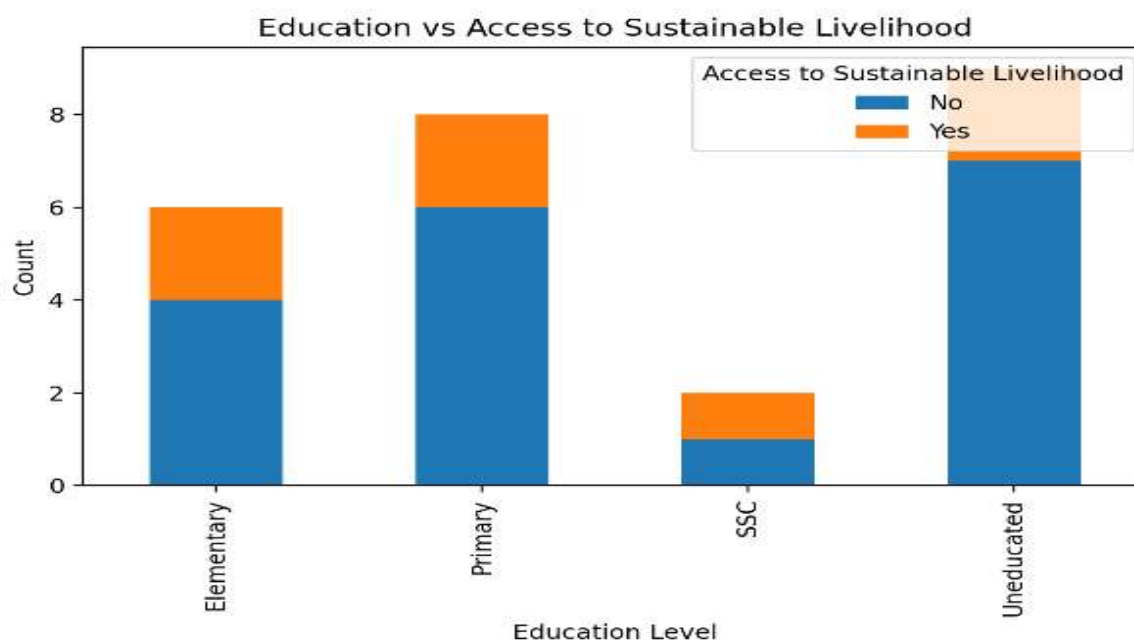
	Proportion %
No	96
Yes	4

These percentages reveal that most respondents lack adequate social protection and do not have sustainable means of income.



**Figure 1:** Heat map of relationship between social protection and sustainable livelihood

This heat map also contains a cross-tabulation between social protection and sustainable livelihood. Most respondents are in the lower right quadrant, which means that almost all participants receive neither adequate social protection nor a sustainable livelihood.



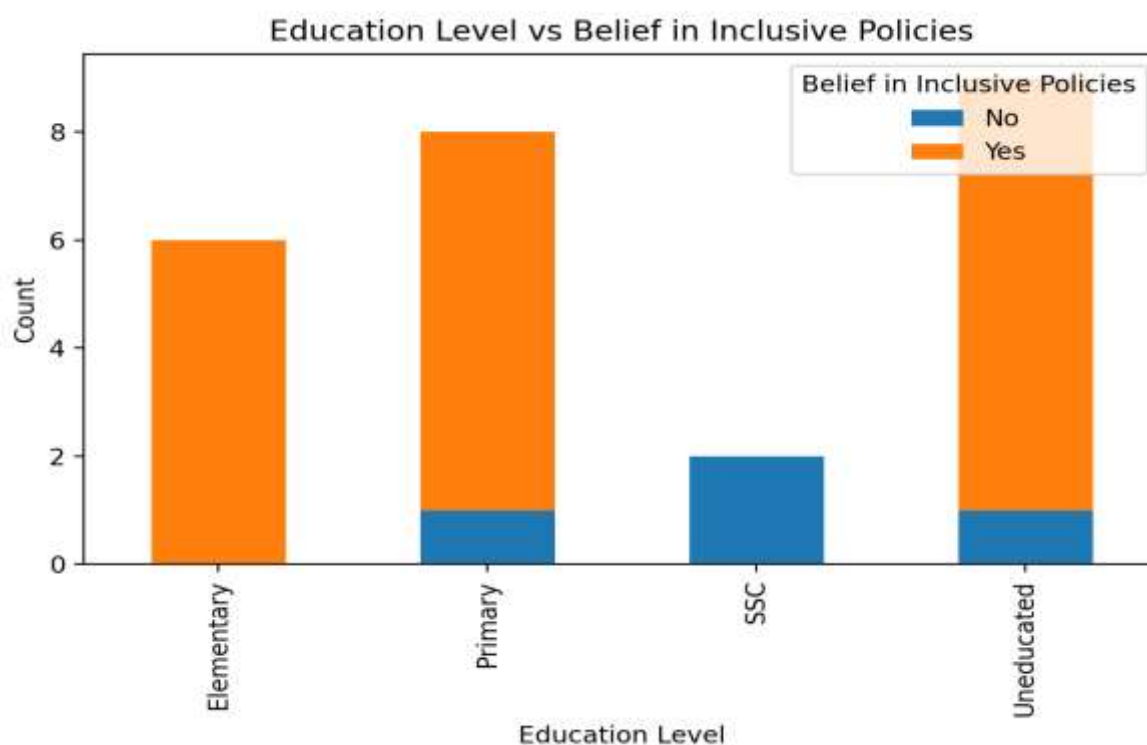
**Figure 2:** Graphical Representation of Education Vs Access to Sustainable Livelihood

This bar chart represents sustainability access to livelihood as a function of education. Overall, access to sustainable livelihoods seems to be low regardless of the level of education achieved, although a marginally higher proportion indicated access to SSEWL if they only had SSC education.

**Table 9:** The relationship between education level and the belief in the need for more inclusive government policies for eunuchs.

	No	Yes
Elementary	0	6
Primary	1	7
SSC	2	0
Uneducated	1	8

Table 9 presents education levels and agreement on perceived requirements for expanding government policies on education. Out of 6 respondents with elementary education, all perceived the need for such policies. Regarding low educational level, 85% of the respondents agreed that they do not know about the availability of social services for the elderly, while 1 out of 8 disagreed. Not surprisingly, all eight uneducated respondents also felt the need for participation, with one responding negatively. However, those with an SSC (secondary school) education are somewhat reluctant about this idea, as both respondents of that group do not think there is a need for broader policies.



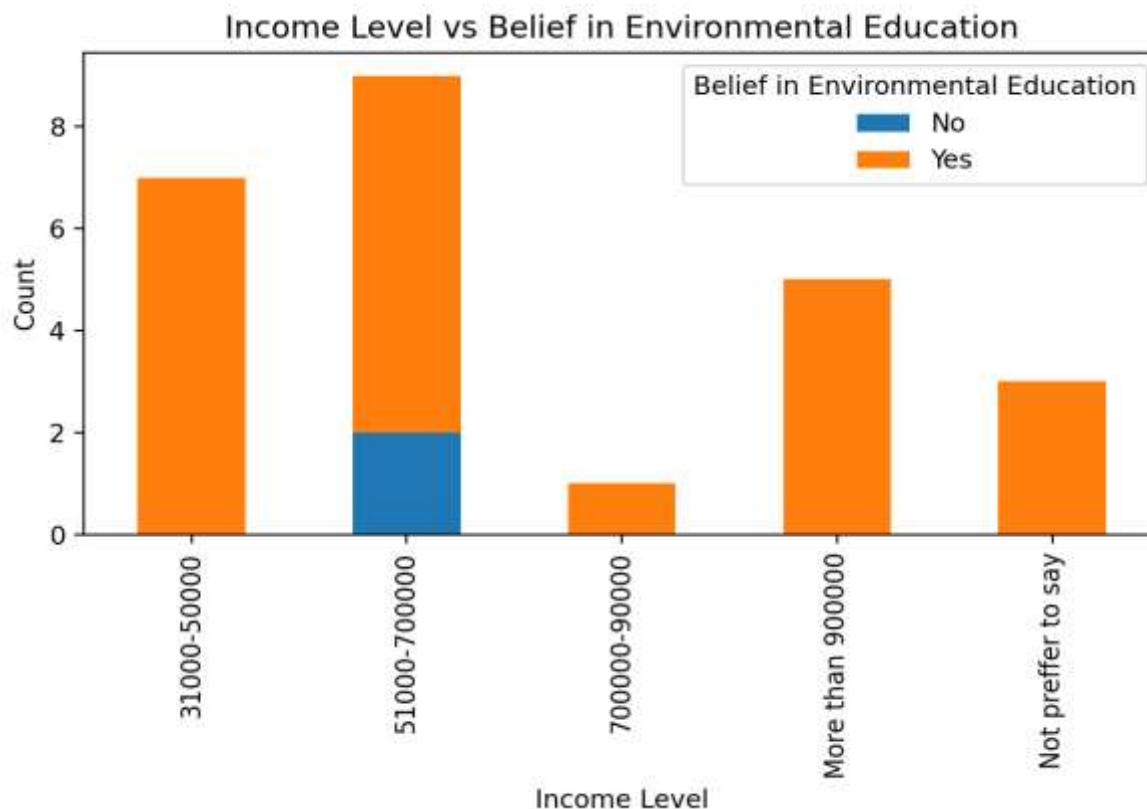
**Figure 3:** Graphical Representation of Education Vs Belief in inclusive policies

The finding also indicates that individuals with primary education and those without formal education are more likely to perceive calls for more inclusive government policies.

**Table 10:** Comparison of eunuchs believe on environmental education and their livelihood.

	Proportion %
Yes	92
No	8

Table 3 indicates that the majority (92%) of eunuchs strongly agreed that environmental education can enhance their living standards.



**Figure 4:** Graphical Representation of Income Level Vs Belief in Environmental Education

This bar chart reveals that at all income levels, most eunuchs have confidence in environmental education to boost their lives.

### Summary and Discussion

The research outcomes of this study reveal that eunuchs in South Punjab suffer from environmental degradation and are socially vice-estimated as well. Disasters like water shortage, forest depletion, and the absence of arable land are, in many ways, problems among the eunuch minorities because society does not empower such individuals to participate fully in economic and social activities. This phenomenon is complimented by a significant challenge they face of not being able to access sufficient, sustainable livelihood options, a challenge that is linked to the barriers they encounter in their education and social lives, and 96% of all respondents stated they do not have access to social protection or adequate sustainable livelihoods. This is worsened by educational institutions needing to meet their needs, producing them half-ready for employment. In addition, 92% of the respondents believe that education about the environment could improve their lives much more given the present circumstances, and they have yet to gain prior knowledge of environmental education since they are discriminated against or denied equal educational opportunities. They also discover that those with less formal schooling are more likely to support government policies of inclusion; there is an element of wanting change. Nevertheless, passing laws to address these issues has not changed much; today, eunuchs still have little opportunity to get formal education and find a decent job and, therefore, remain poor. This paper offers insight into the abovementioned issues when carrying out the literature review laws. According to Ahmed et al. (2014), who argued about marginalization and social exclusion, these aspects have greatly affected eunuchs in rural areas with limited access to educational facilities and thus few livelihood chances. Thus, 96

percent of respondents are without social protection, which correlates with socio-cultural and economic marginalization highlighted in previous research. In addition, lack of education awareness and pollution of the environment perpetuate this culture of exclusion. Whereas environmental degradation, including water crisis and deforestation, has a more negative impact on low-income communities, eunuchs being part of such communities, according to Khan et al. (2014) and Noor et al. (2014). According to the study, most respondents did not even know some environmental issues, distancing them from sustainable practices. This reality supports other research showing that no specific education programs are undertaken for disadvantaged groups. One of the possible solutions seen in the literature that the study backs is the shift to community-based environmental education (Aguilar, 2018), with the respondents being unanimous in their belief that improved environmental education could enhance their quality of life (92%).

### **Recommendations**

- 1. Develop Inclusive Educational Programs:** Since eunuchs represent a specific group with specialized requirements and circumstances, proper educational intervention concerning sustainable farming, water use, and the environment should be developed for them. Such programs could prepare them to participate in sustainable income-generating activities.
- 2. Strengthen Government Policies:** Government agencies ought to take the initiative and devise more friendly policies for minority groups, such as the eunuchs. This may include student scholarships, other financial support to reach society, and vocational training opportunities championing sustainability.
- 3. NGO Partnerships:** Local people and non-government organizations (NGOs) should collaborate to make awareness and share such information with eunuchs. Some NGOs can link the targeted groups of people and the institutions owing to their intermediary roles. Engaging with local NGOs to develop peer-led environmental education and advocacy will significantly benefit the socio-economic status of eunuchs. All educational institutions should achieve environmentally sensitive and socially sensitive policies that meet the required resources for eunuchs to participate in sustainable livelihood activities.
- 4. Promote Social Inclusion:** Educational institutions need to take necessary steps to minimize the problem by incorporating anti-stigma campaigns. One possible way to do this is to use fellow patients to create and undertake community-based awareness creation sessions, which would promote more acceptance in the community.

### **Conclusion**

Adding to his previous work, Brown finds another major problem for eunuchs in South Punjab: environmental problems and social exclusion, two intertwined issues. Thus, this study shows that despite the value of environmental education in empowering the eunuchs and their ability to enhance their standard of living, the barriers that exist prevent a concessionary environment catering to the eunuchs' plight in existing political structures, inadequate and inefficient policies, and lack of proper education to GLFWIs initiatives. It will now take more than concerted effort from both Governmental and Non-Governmental Organizations to make policies that will provide eunuchs the tools they need to improve their social and economic status.

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