

## Article

# Fostering Well-Being in Resettled Communities: Cultivating Cultural Resilience and Sustainable Development in Resettlement Caused by Ghazi Barotha Hydropower Project, Pakistan

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**Abstract:** The construction of hydropower projects is increasingly prevalent worldwide, particularly in the context of climate change mitigation. Community displacement resulting from the construction of these projects raises significant questions about the post-resettlement welfare and satisfaction of the individuals subjected to project-associated relocation and resettlement processes. Accordingly, the purpose of this research is to investigate the influence of physical resources, locational characteristics, the resettlement area, health facilities, housing facilities, communication, and the socio-cultural environment on the satisfaction of resettled people, along with two mediators: sustainable development and cultural resilience in the resettlement of the project-affected communities of the Barotha Hydropower Project (GBHP) in Pakistan. In this cross-sectional study, data are collected from 223 resettlers from three villages (Barotha, Eassa, and Feroze). The researchers examined sustainable development and cultural resilience as mediating factors that play a role in resettlers' satisfaction. The physical resource results indicate that, in the GBHPP, resettled people are unsatisfied, while other variables such as locational characteristics, resettlement area, health facilities, housing facilities, communication, and socio-cultural environment play a significant role in resettlement satisfaction. The role of both mediators, sustainable development and cultural resilience, strengthen the relationship between the predictors and criteria in terms of their value and their contribution to the resettlers' satisfaction. Through the analysis of these variables, this study offers a comprehensive understanding of these factors, which contribute to the satisfaction of resettlers. Additionally, the study seeks to provide insights that can inform the development of strategies that foster the creation of resilient and prosperous resettlement communities. The research conclusions will also aid in developing policies and community initiatives that support the happiness and wellbeing of resettled communities.

**Keywords:** socio-cultural environment; resettlers' satisfaction; sustainable development; cultural resilience; resettlement; communities



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## 1. Introduction

Globally, there is a growing expectation that hydropower developers should distribute benefits to individuals residing in project-affected areas. Demands for benefit sharing are particularly prominent in countries of the Global South, such as Pakistan. This occurs as hydroelectric dam construction is increasingly prevalent worldwide, particularly in the context of climate change mitigation efforts [1,2]. One common policy instrument that

countries and international organizations employ to fulfill their economic and environmental objectives is planned resettlement [3]. Consequently, the development of efficient benefit-sharing mechanisms holds significant practical importance. There has been a global trend toward resettlement in recent years due to projects [4]. Implementing large-scale infrastructure projects frequently requires the relocation of communities to accommodate project-specific needs [5]. The Ghazi-Barotha Hydropower Project (GBHP) in Pakistan is a notable project that seeks to exploit the hydropower capabilities in the province of Punjab and the Khyber Pakhtunkhwa regions [6]. The conventional Social Impact Assessment (SIA) approach has historically involved conducting a predictive analysis to support the regulatory approval process of significant projects. Although such projects can offer many positive impacts, such as heightened energy generation and economic growth, they also have significant social and environmental consequences. Community displacement resulting from resettlement raises substantial questions about the welfare and contentment of individuals subjected to relocation [6,7].

A well-known proverb advises that shifting a home means shifting a mind, i.e., it is challenging for someone to shift from their home. The process of resettlement presents affected individuals with a combination of challenges and opportunities [8]. To assess the overall success and impact of the GBHPs, it is crucial to consider the contentment of resettled communities affected by the project [9]. When confronted with the need to relocate communities due to a significant infrastructure undertaking such as the GBHP, prioritizing the welfare of the resettlers is imperative. The manner in which resettlement procedures are carried out can significantly influence the level of satisfaction experienced by resettled people [10]. Open communication, transparency, and the inclusion of affected communities in decision-making can all contribute to a more orderly and satisfying transition. Providing adequate compensation, the equitable distribution of land, necessary resources, and support services is crucial to ensuring resettlers' satisfaction with the process [10].

Multiple factors influence the satisfaction levels of resettled communities affected by the GBHP. These include the socio-cultural environment, physical resources, locational qualities, resettlement areas, health facilities, housing facilities, and communication infrastructure [11,12]. It is imperative to understand the correlations between such variables and the contentment of individuals who have undergone resettlement, as such information is crucial to developing resettlement communities regarding their well-being and prosperity [9]. There has been increasing acknowledgment of the need for a comprehensive framework to assess dam construction's societal, economic, cultural, and environmental effects on local communities. Dam construction has significantly impacted various social, economic, cultural, and environmental indicators [13,14].

Examining the correlation between these variables and the satisfaction levels among individuals who have undergone resettlement can provide valuable insights for crafting policies and interventions that seek to improve the overall resettlement experience [15]. The sense of fulfillment among communities displaced by the GBHP can be measured in several ways. At the same time, fulfillment can be significantly enhanced through the prioritization of physical resource provision, the careful consideration of locational characteristics, establishing appropriate resettlement areas, guaranteed access to health and housing facilities, facilitating efficient communication, and fostering a positive socio-cultural environment [16].

Mediation can strengthen the connections between physical resources, locational characteristics, resettlement areas, health facilities, housing facilities, communication, socio-cultural environment, and resettler community satisfaction by implementing sustainable development considerations such as resource efficiency, environmental conservation, and social inclusion [17]. Resettled people require a high level of cultural resilience to preserve their sense of identity, well-being, and happiness. It is vital to encourage and enhance cultural resilience to ensure that the cultural legacy of communities is maintained while resettling them. As a result, individuals will have a more satisfying and rewarding resettlement experience [18].

Prior to the implementation of the projects, the donor agencies conducted seven different types of surveys and also gathered data through the use of a census. The data derived from the surveys elucidated that government authorities encounter challenges in effectively meeting the needs of the project-affected community. Key factors contributing to a project's success include compliance with legal statutes, rules, and regulations and establishing an extensive planning framework. In Pakistan, meeting the demands and expectations of the general population is a formidable challenge for any governing body, primarily due to the prevailing economic and political instability conditions. The individuals resettled in Pakistan received monetary compensation before the construction of the GBHP. However, in the case of the GBHP, the resettled individuals received compensation in the form of land and other associated social, economic, and environmental benefits.

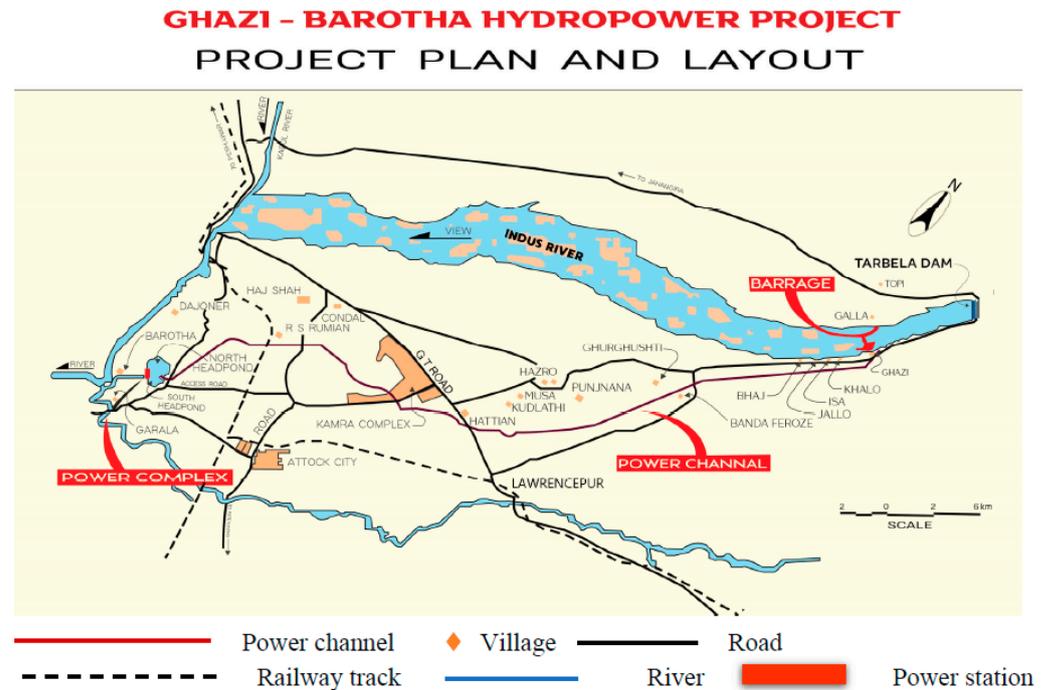
The goal of the GBHP project was to help the public and make policies that would unite the government and the people. However, the resettlement policy changed twice, much to the dismay of the project-affected people. Also, past surveys overestimated the number of people impacted and did not fully reflect the concerns and opinions of affected communities. In stories about the GBHP, it has been said that "sample surveys are not enough to give a clear picture of what people think" (NESPAK, 2012) [19,20]. As a researcher, it is essential to know how happy resettlers currently are with the GBHP. The journey of resettlers began in 2002, so how many miles of happiness will they have crossed from then to 2023?

The present research, which focuses on promoting well-being within resettled communities in relation to the GBHP in Pakistan, intends to contribute to sustainable development. It achieves this by advocating for the safeguarding of cultural resilience, placing emphasis on comprehensive community well-being, and aligning with international sustainability objectives. The practical insights and ethical issues presented in this work offer a comprehensive framework for the implementation of development practices that are compassionate, culturally sensitive, and sustainable. These findings serve as a model for future resettlement programs, establishing a precedent for their successful execution.

The recognition is made that development programs ought not to lead to the degradation of cultural identity and socio-economic stability of resettled communities. Cultural legacies serve as more than sources of pride and identity; they also enhance the general well-being of individuals and communities. Following the Sustainable Development Goals (SDGs), this study highlights the logic of addressing concerns about poverty alleviation, gender parity, renewable energy, and community advancement [21], and the need to utilize growth to accomplish these objectives, rather than perceiving it as an obstacle. Including individuals in decision-making is a moral obligation and a pragmatic strategy for achieving sustainable development and satisfaction [22]. This study provides a rationale for the significance of prioritizing the sustained welfare of resettled communities. Sustainable development ensures that beneficial effects persist over time while simultaneously addressing the immediate issues associated with resettlement.

This expression does not merely constitute a statement but encapsulates the genuine sentiments residing within the depths of the human heart. The act of relinquishing one's personal space and making sacrifices for the betterment of one's nation and homeland is an arduous undertaking that should not be underestimated. What is the assurance that, upon making such sacrifices, a person can preserve their previous memories while adapting to a new environment? It is essential to improve the overall well-being of resettlers to understand the influence of the socio-cultural environment on their level of satisfaction. Resettlement projects frequently confront difficulties in preserving the happiness and well-being of the communities they are intended to serve. Migration has the potential to destabilize social networks, cultural practices, and the cohesiveness of communities. This line of inquiry contributes to our understanding of the intricate relationship between social, cultural, and developmental aspects. Sustainable development and cultural resilience play a role in the relationship between criteria and predictors. Our primary focus is on the members of the local community who have been affected by the GBHP, depicted in

Figure 1. This study focuses on post-resettlement behaviors and the overall satisfaction levels experienced by community members. Hence, it transmits immense worth for all stakeholders by providing the motivation to manage the effectiveness of the resettlement process for the displaced communities and lift their level of satisfaction as well.



**Figure 1.** The location and plan layout of the GBHP.

The remainder of this paper is ordered as follows: the following section offers a literature review of various theories, describing the phenomenon and its significance, as well as the variables' empirical relationship; The Data Descriptions and Research Methods section discusses the data explanation and methodology. The Results and Discussions section provides empirical analysis using the software PLS-SEM (version 3.5), and our arguments in detail, supported by previous studies. Lastly, the final section offers a conclusion, suggestions, and recommendations with policy implications.

## 2. Literature Review

### 2.1. The Significance of Dams from a Historical Perspective

There are assets or advantages that a man has in his life, and when these specific assets or advantages are destroyed in front of a man's eyes, it causes a profound amount of anguish within the man's heart. There are replacements for destroyed homes and lost land; however, both of these are losses that cannot be recovered [23]. Due to the severe effects of large reservoirs, the International Union for Conservation of Nature and the World Bank sponsored a symposium in Switzerland in April 1997, from which the International Commission on dams was born. Since its inception in May 1998, the Commission has evaluated several problems that developing nations face. The commission assessed them worldwide and gave a solution for constructing 125 dams in developing nations globally (WCD, 2000) [24]. Roughly one and a half billion or even more people live in water basins that are considered "highly stressed," meaning that they have many issues surrounding local food production and economic growth [25,26].

Hydropower, therefore, can satisfy the fundamental needs necessary for the progression of the economy and society. There is much potential to use renewable energy sources in nations still in the process of achieving rapid growth. These opportunities must be capitalized upon to contribute to the nation's growth and improve people's lives. Hydropower is the renewable energy source that leads the pack in terms of technological advancement, and

it also boasts the lowest cost per unit of energy produced [27]. Relocation planning should harness the new economic activity made available by the principal investment. Where suitable, vocational training, employment counseling, transport to jobs, jobs in the principal investment project or resettlement activities, the establishment of industry, incentives for firms to open in the area, credit and extension for small businesses or reservoir aquaculture, and preference in public sector employment should be considered [28,29].

## 2.2. *The Legal Framework and Governing Institutions of Pakistan*

The Ministry of Water and Power plays a leading role in executing policies related to water and power matters throughout Pakistan. Following Schedule II, Rule 3(3) of the Rules of Business 1973, establishing the Water and Power Development Authority (WAPDA), occurred through enacting a statute in 1958. This organization was bestowed with a substantial mandate, encompassing several tasks such as power generation, transmission, and distribution, as well as responsibilities related to irrigation, water supply, drainage, and flood control. Approximately 54% of the nation's aggregate electrical power-producing capacity is possessed by this entity, which also caters to 88% of Pakistan's total energy consumer base.

When Pakistan's National Water Policy (NWP) was being developed in 2018, one of its goals was to provide a comprehensive and extended policy framework to promote water conservation. In Pakistan, where water scarcity, increased demand, and other water-related issues are increasingly pressing, this framework aims to address these issues. The role of this body (NWP) is to provide suggestions and strategies for maximizing the use of available water resources while simultaneously protecting the environment and fostering social and economic advancement.

The policy places significant importance on implementing integrated water resource management (IWRM) principles, which entail the comprehensive coordination of surface water, groundwater, and rainwater resource management. The IWRM objectives encompass the promotion of optimal water utilization, minimization of water wastage, and preservation of ecological balance. The abbreviated version of IWRM refers to a methodical strategy that enables the coordinated development and management of connected water, land, and other resources. The fundamental goal is to maximize economic and social well-being equitably while ensuring critical ecosystems' long-term viability.

The provisions outlined in Sections 6–10 of Pakistan's Land Acquisition Act of 1894, which pertain to the acquisition, evaluation, entitlements, and reimbursement in meeting the resettlement principles and requirements, and also deal with foreign donors and international agencies that support financially and technically for the construction of the dams. The principles and requirements of project-affected people (PAP) emphasize the importance of community involvement and assistance while also considering the adverse socio-cultural losses that may arise. Additionally, rehabilitating vulnerable groups is a crucial aspect that needs to be addressed [30]. This analysis is based on information obtained from the Punjab Laws website. To uphold adherence to resettlement principles, a Project Non-Governmental Organization (PNGO) known as Ghazi Barotha Taraqati Idara (GBTI) was established to oversee the valuation process and implement different steps to ensure fairness [10].

## 2.3. *Project Impact on Affected People*

Large dams have varying impacts on communities. The flooding of reservoir areas yields substantial impacts, often encompassing extensive land areas spanning many square kilometers [31]. The enduring and irreversible consequences of this phenomenon profoundly impact communities that reside or depend on land within inundated areas [32]. Communities situated downstream, which rely on the uninterrupted flow of rivers, may also experience adverse consequences resulting from dams, even in the absence of physical displacement [23]. This paper employs the terms "resettlement" and "displacement" interchangeably, acknowledging that these communities are encompassed within a larger

category known as “project-affected people.” It is important to note that the term “project-affected people” (PAPs) encompasses individuals impacted by a project, although not all of them may experience involuntary displacement [33].

The construction of dam projects that affect the land, more significant events that prompt people to relocate, and different kinds of the involuntary displacement of populations also fall under this category of “project-affected people” (PAPs) [9]. When the government decides on relocation and forces impoverished people to leave where they currently reside, they are dissatisfied because their level of satisfaction drops to an unacceptable level [12]. The effects of resettlement on indigenous community economies, especially on their social and cultural lives, are the primary focus of this study [9]. Individuals forced to leave the area around a reservoir are not solely experiencing the loss of their land and other fixed assets, but also the deprivation of their livelihoods [34]. The author indicates livelihood reconstruction strategies for farmers while acknowledging the importance of considering the needs of those without land to work, share-croppers, workers, and individuals engaged in other careers. Moreover, specific individuals may opt to transition into alternative occupations [35,36].

#### *2.4. Social Challenges*

Reservoir resettlement results in a decline in resettlers’ livelihood capital and lifestyle changes [37]. The underlying assumption posits that significant stress levels characterize the resettlement process, yet individuals gradually acclimate to their novel circumstances as time progresses. The resettlement process can be divided into four distinct stages: adjustment and management, community formation, and economic development [38]. The relocation process gives rise to social challenges that affect the entire resettled population. Specifically, the negative consequences experienced by men, such as diminished self-esteem and frustration, can result in a heightened propensity for violence against women and children [39].

Integrating industrial programs and communication, the construction of large dams within the prevailing socio-cultural environment gives rise to novel social structures that present advantages and limitations for individuals of both genders [40]. The role of social media platforms enhances individuals’ ability to access local resources and adapt to their new environment more positively. However, it is essential to note that the study was concluded before the occurrence of these adaptations [41]. This study examines the insufficient outcomes experienced by resettled individuals. It comprehensively analyzes the culture, livelihood, and gender-related consequences resulting from the resettlement process associated with large-scale hydro-power projects. Several scholarly publications suggest alternative impact management strategies and analytical frameworks that could assist practitioners in effectively framing and managing impacts [39].

#### *2.5. Empirical Relationship among Variables*

The act of displacing individuals is a complex and challenging process. Displacement and resettlement encompass a range of social mobility activities that are diverse and subject to variation [8]. Physical resources significantly influence the contentment and overall well-being of individuals in communities that are resettled [42]. This study examines the correlation between locational characteristics and the level of satisfaction experienced by resettlers residing in resettlement communities. The researchers investigated the link between these two factors to determine the function that locational qualities play in determining the level of overall satisfaction experienced by resettled people during relocation [43].

The significance of the quality of resettlement sites is determined by the level of contentment that new residents feel they have achieved and the nature of their overall experiences in their new towns after the relocation process [44]. Regarding healthcare access, physical and emotional well-being, and general contentment with their towns, resettlers’ satisfaction levels are influenced by the quality of the health facilities in their communities [44]. These facilities include hospitals, clinics, and healthcare services. The

housing quality, encompassing elements such as the state of housing, infrastructure, resources, and accessibility, impacts on the satisfaction of resettlers in terms of how they live, their sense of belonging, and their overall well-being [45].

The socio-cultural environment determines the level of contentment, a sense of being part of something, and general happiness that resettlers experience inside their new communities after the resettlement [45,46]. Social impact assessment (SIA) is a tool used to evaluate and manage the social effects of development programs on individuals and their satisfaction [47,48]. Communities can work toward ensuring the happiness and well-being of people who have been resettled by including sustainable development in the procedure for resettling people. In order to contribute to an affirmative relocation experience and encourage long-term sustainable growth for all parties involved, it is essential to cultivate an inclusive environment, which is supporting and environmentally conscious [49].

Resettled people need basic necessities to sustain themselves and live happily [1,50]. Relocation following displacement is not a simple task since people want superior facilities in their new location compared to the old one. A project's path to success should be lined with a structure that has been carefully developed and researched [51]. This can only be accomplished if the project's planning is carried out according to the wishes and goals of the project-affected people. Before leaving their home location to participate in a project planning and resettlement process, each person has their own set of hopes and objectives [52]. When the basic requirements are met and facilities for their needs are available, the life of the resettlers can only then be considered sustainable [52].

Housing quality directly affects health; a comfortable house and proper infrastructure lead to better health outcomes [53]. Most people want the environment of a new place to be friendly and green compared to the previous one [53]. The physical location and absence of noise matter when people resettle in a new place. The study of Posthumus et al. (2014) [54] investigated previous studies showing that planned projects and resettlements keep people happier than unplanned projects and resettlement. An open environment, large room size, sanitary conditions, and proper waste management lead to more satisfaction in a new place [55].

People who are forcibly resettled without consideration create dissatisfaction among the resettlers [54]. In this sense, assessing and comprehending the resettlers' degree of satisfaction is difficult. Thus, be aware of the degree of satisfaction. It is crucial to be aware of and inspect the promised and provided facilities. This could help researchers learn more about people's satisfaction levels and quality of life.

## 2.6. Resettler Issues

The financial compensation is not enough to keep resettlers from falling into poverty and is insufficient to restore or improve their standard of living [56,57]. According to Cernea, the primary dangers that resettlers face are losing their land, their jobs, and their homes; being marginalized; experiencing food insecurity; losing access to the resources of common property; experiencing an increase in morbidity; and experiencing a disarticulation of their communities, all of which lead to poverty [33,58,59].

## 2.7. Resettlement Models

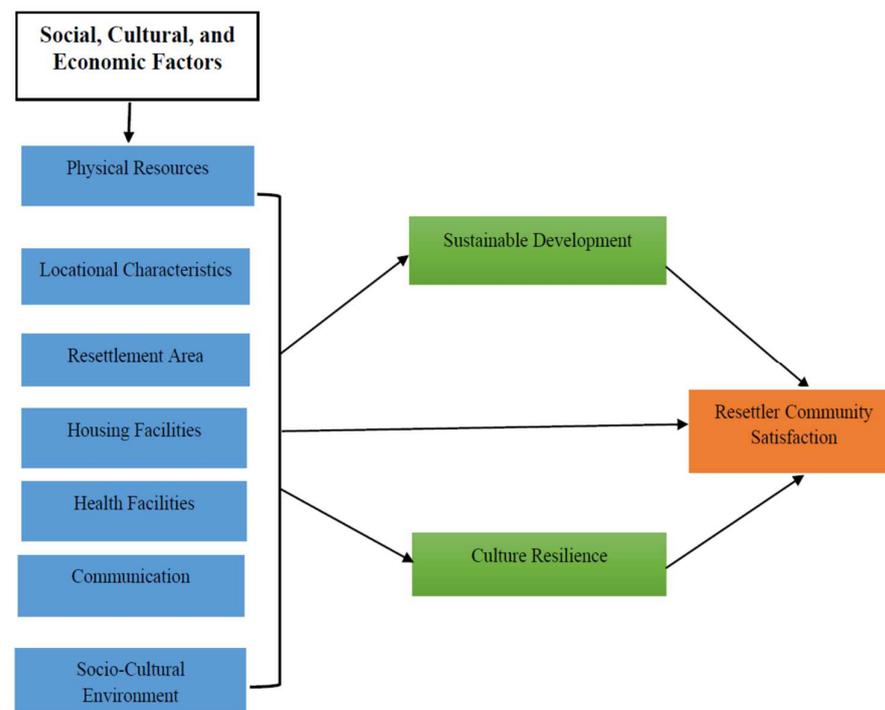
The model of a social framework by [60] for projects serves as a valuable tool for comprehending, evaluating, strategizing, and overseeing the social implications linked to large-scale projects, particularly those that entail the relocation or displacement of individuals. Utilizing the project planning matrix (PPM) [61] allows those making decisions to effectively discern project objectives and aims and strategize for project deliverables and resources. The above technique facilitates strategic project planning, offering an impartial foundation for project evaluation and articulating assumptions about causal relationships [61]. With a reformist approach to the management of projects, businesses can foster continuous enhancement, improve project results, and adjust to changing project requirements. Incremental modifications, stakeholder participation, constant evalu-

ation, and risk administration produce a responsive, adaptive, and goal-oriented project environment [62]. An influential theoretical framework that elucidates the dynamics of the population response to the resettlement procedure over sequential phases is crucial [63].

These projects' main contribution is to support and raise social well-being. The study of the resettlers' satisfaction after resettlement informs researchers, readers, and policy-makers of the importance of resettlement. The above literature guided the development of the conceptual framework, the variables, and the dimensions used to achieve this study's objectives.

### 2.8. Development of Conceptual Framework

The relationship among the variables was explained in the literature review; the empirical relationship guided the nature of the relationship among the variables. There are seven independent variables (physical resources, locational characteristics, resettlement areas, housing facilities, health facilities, communication, and socio-cultural environment), two mediator variables (sustainable development and culture resilience), and a dependent variable (resettler satisfaction communities) used in the conceptual framework in Figure 2. Cornea's model has been adopted by a large number of empirical research projects to study and assess the consequences before and after resettlement [64].



**Figure 2.** Conceptual Framework Model.

### 2.9. Justification of the Conceptual Framework

The social ecological model elucidates the complex link between individuals and the environment in which they find themselves by taking into account the various aspects of society, including social, economic, and cultural aspects. Academic study and practical experience gained by researchers through in-person visits impact the formation of conceptual connections between ideas.

The hypothesis development based on the conceptual framework is presented in Table 1 to perceive the nexus among the study variables.

**Table 1.** Hypothesis on Based on Conceptual Framework.

Hypothesis Statements	Analysis Tools for Hypothesis
All predictors have a significant association with resettlers' satisfaction in the model.	Correlation
There is a significant variation in resettlers' satisfaction in communities due to all predictors.	Variation
There is a mediating role of sustainable development and culture resilience, linked with predictors and criteria.	Mediation

### 3. Data Descriptions and Research Methods

This study empirically investigates the relationship among the four constructs; socio-cultural and economic factors are the independent variables, while the dependent variable is the resettler community's satisfaction. Two mediating variables play a role in the relationship between the predictors and criteria: sustainable development and cultural resilience. The socio-cultural environment in resettlements pertains to the social and cultural elements that exert influence and have consequences on the welfare and adaptability of communities that have undergone displacement and relocation as a result of development initiatives. The term "resettlers' satisfaction" pertains to the degree of contentment and overall welfare encountered by individuals or groups who have undergone resettlement due to development initiatives. The concept of sustainable development in resettlements pertains to the strategic organization, implementation, and administration of displacement and relocation procedures in a manner that attends to the immediate needs of the impacted populations and fosters enduring environmental, social, and economic sustainability. Cultural resilience pertains to the ability of displaced and relocated populations to maintain and modify their cultural identity, customs, and legacy despite substantial upheaval and transformation. To put complex theoretical correlations to the test practically, structural equation modeling (SEM) has become standard practice [65]. Confirmatory factor analysis (used to assess latent variables in quantitative survey research) and path analysis (used to examine probable causal linkages between variables) are brought together in SEM. This modeling is used to check the testing of a hypothesis by using the complex structure of variables in the construct. The socio-cultural economy [66] has seven dimensions: physical resources, locational characteristics, resettlement areas, housing facilities, communication, and socio-cultural environment. The independent variable, socio-cultural environment, contains 17 questions. The dependent variable, resettler community satisfaction [67], contained questionnaire statement 6, and the mediating variables, sustainable development [68] and cultural resilience [69], contained questionnaire statements 5 and 6, respectively.

#### 3.1. Data Collection Method

The finite population collection method has been utilized for data gathering at the GBHP; the involved population is based in three districts: Attock in the Punjab province, Swabi, and Haripur are in Khyber Pakhtunkhwa (KPK) province, Pakistan. See Table 2, below. The finite population formula offered in Equation (1) by [70,71] is as follows:

$$n' = \frac{n}{1 + \frac{z^2 \times \hat{p}(1-\hat{p})}{\epsilon^2 \times N}} \quad (1)$$

Table 2 depicts "n" as the sample size, z as the z-score,  $\hat{p}$  as the population proportion,  $\epsilon$  as the margin of error, and N as the population size.

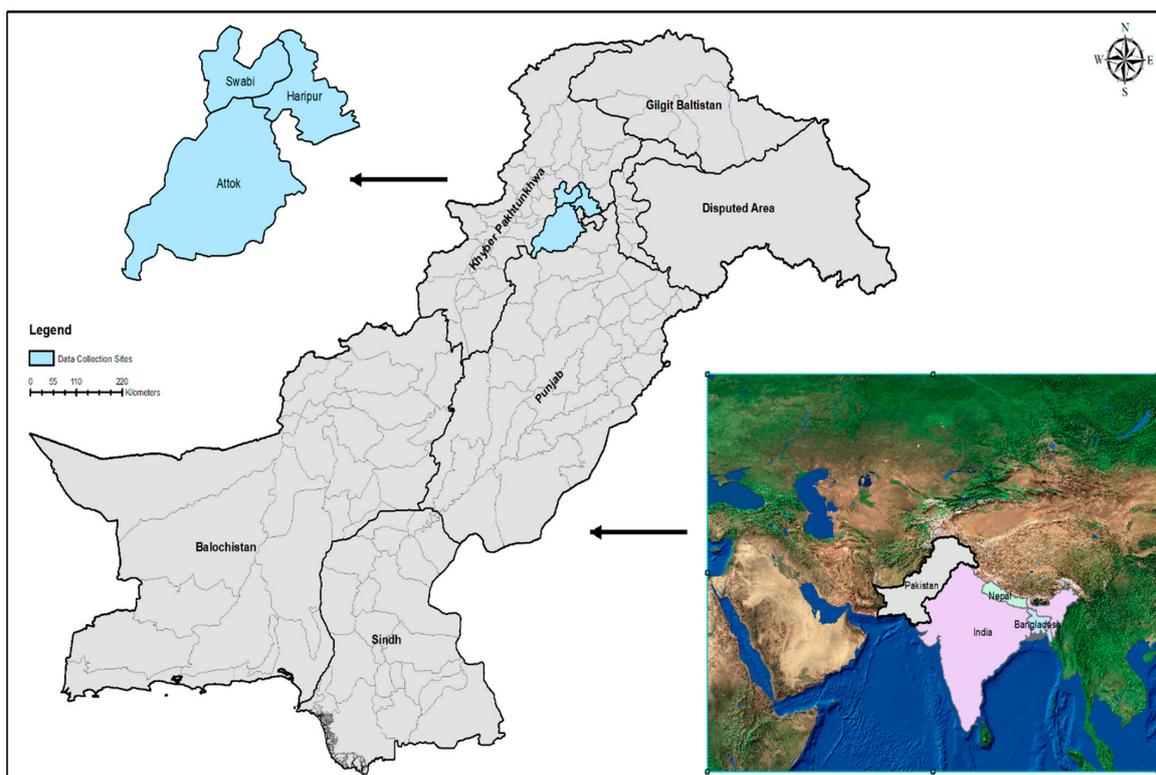
**Table 2.** Finite population method.

z	SD	E	N	n			
1.96	0.0544	0.0068		245.8624	INFINITE		
						Author Source	246
1.96	0.644	0.084	26,000	223.857	FINITE		
NA	SDA			nA			
450	0.073	Barotha		63.2303456			
NB	SDB			nB			
600	0.063	Eassa		72.7582059			223.857
NC	SDC			nC			
550	0.083	Feroza		87.868045			

Notes: (Total population is 26,500 of three districts’ affected villages). Source P-NGO, 2020 [6]. Authors’ Explanations: The following outlines the yellow color specifics of Cochran’s sample size formula. Using the unlimited formula based on your own estimates of the z-score (based on confidence level), population proportion, and margin of error, we can get an estimate of a sample size required for a population of limited size. The red color represents the sample size of the individual village.

**3.2. Research Instrument and Pilot Testing**

In this research, a self-constructed questionnaire was used based on the information the researcher collected. The researcher guided the objectives of the study to collect the relevant information. After that, the researcher developed a questionnaire with a 5-point Likert scale, SD1- SA5. A literature review supported the questionnaire, and we collected data from 223 people in the target population. To enhance its reliability and validity, a pilot study consisting of 44 people (20% of 223) [70] from each of the three impacted areas was carried out (see Figure 3). As a result of this study, no significant items from the first version of the questionnaire were removed. Additionally, the survey instrument was linguistically adapted from English to Urdu.



**Figure 3.** Data collection map of GBHP district.

## 4. Data Analysis, Results, and Discussion

### 4.1. Demographic Information

The total respondents in this study are 223 (see Table 3), of whom 145 (65.02%) are male and 78 (34.97%) are female. The ages of the participants are categorized into three groups: 65 respondents are below 30, 130 are below 40, and 50 are below 38. The education demographic is divided into intermediate, bachelor, master, and other; the number of participants is 50, 130, 33, and 10 for each level of education attainment. Single (not married) respondents are 133, and there are 90 married participants. The research items are listed in Table 4.

**Table 3.** Demographic of the study population.

Items	Frequency (N = 223)	(%)
Gender		
Male	145	65.020
Female	78	34.970
Age		
Below 30	65	29.150
Below 40	130	58.300
Below 50	28	12.560
Education		
Intermediate	50	22.422
Bachelor	130	58.296
Master	33	14.798
Others	10	4.484
Marital Status		
Single	133	59.641
Married	90	40.359

**Table 4.** Research statements of the instrument.

Items	Statements	Ref.
PR1	The basic necessities of life are available.	[72,73]
PR2	There is promised infrastructure of the house	[74]
PR3	There is environmental stability in residential areas.	[75]
LC1	There are sanitation facilities and hygiene practices in the resettled area.	[76]
LC2	The residential area is safe and secure.	[76]
LC3	Resettlers can easily access any service.	[76,77]
RA1	The new settlement is near the previous one.	[78]
RA2	The selection of area is to fulfill the needs.	[79]
HF1	There are basic health facilities provided to resettled communities.	[79,80]
HF2	Health education programs conducted with the resettlers	[80,81]
HOF1	The premises of the home are enough for a family.	[82]
HOF2	The premises of the home fulfill the living needs.	[82]

Table 4. Cont.

Items	Statements	Ref.
C1	The initiative has been taken to adopt technology.	[83]
C2	The local language is a good medium of communication.	[84]
SCE1	The people follow culture and exchange sharing	[85]
SCE2	Natural resources contribute to the quality of life.	[85]
SCE3	There are social support services within the resettlement area.	[85]
SD1	There is a system to manage waste.	[86,87]
SD2	There is a recycling unit available.	[86,87]
SD3	Agricultural practices enhance production.	[86,87]
SD4	There are business opportunities.	[86,87]
SD5	Residential people learn skills for development.	[86,87]
RSC1	In most ways, my life is close to my ideal here.	[80,81]
RSC2	The conditions of my life are excellent here.	[81,88]
RSC3	I am satisfied with my life here.	[81,88]
RSC4	I am satisfied with public facilities	[81,88]
RSC5	I am satisfied with the housing unit	[80,81]
RSC6	I am satisfied with the community environment.	[81]
CR1	Resettlers organize cultural promotion programs.	[69,89]
CR2	Cultural preservation is affected by language barriers.	[69,89]
CR3	Different cultural families share their values with the resettlers.	[69,89]
CR4	Culture can be enhanced by sharing values, ethics, and care.	[69,89]
CR5	The sustainability and growth due to cultural adoption	[69,89]
CR6	The maintenance of cultural value due to acting upon the cultural norms	[69,89]

#### 4.2. Statistical Analysis

In Table 5, the factor loadings represent the strength and direction of the link amid the observed variables and the primary latent factors. The factor loading of variables PR1 0.607 to PR3 0.520 perfectly defines their respective factors. Moreover, the factor loading of LC1 to LC3 is adequate for strong loading that ranges from 0.522 to 0.634. Similarly, the factor loading of RA1 to RA2, HF1 and HF2, H1 and H2, C1 to C2, SCE1 to SCE3, SD1 to SD6, CR1 to CR6, and finally RSC1 to RSC6 have significant loading of their respective factors. In the end, the strength of the correlations among the observed variables and their corresponding factors is generally shown by the factor loadings. A stronger correlation across the variables and underlying components is indicated by higher loadings. It is crucial to remember that the context and type of the analysis determine how these elements and their loadings should be interpreted.

The overall acceptability of the data for factor analysis is evaluated using the KMO measure of sample competence. The KMO value in Table 6 can be anything between 0 and 1, with values closer to 1 suggesting more adequate sampling. Here, the KMO value is 0.721, indicating a moderately good level of sampling adequacy in the data. A KMO value above 0.6 is considered satisfactory, whereas values above 0.8 are considered great. Meanwhile, the KMO value in the above table is 0.721, which falls within the suitable range, which shows that the data are appropriate for factor analysis. Further, the KMO measure assesses how much of the variance in the observable variables can be accounted for by underlying factors. A higher KMO score means that the variables are acceptable for factor analysis since they have enough shared variance. In conclusion, the KMO score of

0.721 indicates that the variables may be suitable for the removal of underlying factors because the data utilized for factor analysis have a respectable level of sampling adequacy.

**Table 5.** Factor loading for the construct model.

Factor Loading		
	Initial Factor	Extraction
PR1	The basic necessities of life are available.	0.607
PR2	There is promised infrastructure of the house	0.773
PR3	There is environmental stability in residential areas.	0.520
LC1	There are sanitation facilities and hygiene practices in the resettled area.	0.614
LC2	The residential area is safe and secure.	0.650
LC3	Resettlers can easily access any kind of service.	0.634
RA1	The new settlement is near the previous one.	0.682
RA2	The selection of area is to fulfill the needs.	0.523
HF1	There are basic health facilities provided to resettled communities.	0.688
HF2	Health education programs conducted with the resettlers	0.666
HOF1	The premises of the home are enough for a family.	0.489
HOF2	The premises of the home fulfill the living needs.	0.600
C1	The initiative has been taken to adopt technology.	0.611
C2	The local language is a good medium of communication.	0.559
SCE1	The people follow culture and exchange sharing	0.667
SCE2	Natural resources contribute to the quality of life.	0.643
SCE3	There are social support services within the resettlement area.	0.575
SD1	There is a system to manage waste.	0.850
SD2	There is a recycling unit available.	0.891
SD3	Agricultural practices enhance production.	0.676
SD4	There are business opportunities.	0.586
SD5	Residential people learn skills for development.	0.546
RSC1	In most ways, my life is close to my ideal here.	0.594
RSC2	The conditions of my life are excellent here.	0.498
RSC3	I am satisfied with my life here.	0.554
RSC4	I am satisfied with public facilities	0.601
RSC5	I am satisfied with the housing unit	0.730
RSC6	I am satisfied with the community environment.	0.686
CR1	Resettlers organize cultural promotion programs.	0.655
CR2	Cultural preservation is affected by language barriers.	0.673
CR3	Different cultural families share their values with the resettlers.	0.600
CR4	Culture can be enhanced by sharing values, ethics, and care.	0.551
CR5	The sustainability and growth due to cultural adoption	0.595
CR6	The maintenance of culture value due to acting upon the cultural norms	0.559

Note: Based on the authors' estimations.

**Table 6.** Results of KMO test.

KMO and Bartlett's Test			
Kaiser–Meyer–Olkin measure of sampling adequacy			0.721
Bartlett's test of sphericity		Approx. chi-square	3177.752
		d.f	45
		sig.	0.00

Note: Based on the authors' estimations.

Table 7 shows that Cronbach's Alpha, the rho A, CR, and AVE all have values that fall within acceptable ranges, indicating that most of the variables have good reliability. This conclusion is based on the analysis that was provided. Nevertheless, it is essential to remember that the conclusion regarding the sufficiency of reliability is contingent on the particular environment and research topic in question.

**Table 7.** Reliability analysis.

Subjected Dimensions	Cronbach's Alpha	rho_A	CR	(AVE)
Communication	0.856	0.858	0.897	0.63
Cultural resilience	0.810	0.811	0.857	0.500
Health facilities	0.849	0.860	0.892	0.62
Housing facilities	0.702	0.704	0.795	0.500
Locational characteristics	0.809	0.821	0.868	0.57
Physical resources	0.764	0.804	0.836	0.52
Resettler community satisfaction	0.709	0.749	0.789	0.500
Resettlement areas	0.728	0.780	0.815	0.500
Socio-cultural environment	0.700	0.833	0.800	0.51
Sustainable development	0.746	0.781	0.821	0.510

Note: Based on the authors' estimations.

**Hypothesis 1 (H1).** *All predictors have a significant association with resettlers' satisfaction in the model.*

The empirical relationship between the independent and dependent variables is demonstrated in Figure 4, and the results showed a relationship between these predictors and the level of satisfaction. Therefore, the hypothesis was confirmed, and the researchers related their findings to show a correlation between the predictors and the dependent variables, which indicates that these characteristics provide a high level of satisfaction.

Table 8 shows the correlation results, which are extracted through SEM. There are three possible values: 0 for no correlation, 1 for a strong positive correlation, and  $-1$  for a strong negative correlation. The values range from 0 to 1. The first row's value of 0.72 shows the relationship between the variables communication and CR. There is a moderate positive correlation between these two variables. Similarly, the association between communication and housing facilities, 0.72, is also a moderately positive correlation. Further, the relationships between physical resources and communication, 0.251; health facilities and cultural resilience, 0.413; and housing facilities and cultural resilience, 0.568, are likewise moderately positive. Furthermore, there are comparatively stronger positive correlations between physical resources and sustainable development, 0.743, and similarly, housing facilities and sustainable development, 0.746, and lastly, the relationship between sustainable development and resettlement areas is 0.985. In conclusion, the above correlation matrix reveals the relationships among the different factors. Some factors show moderate positive

correlations with each other, and in the end, some factors show no significant relation. The association hypothesis was proven to be correct.

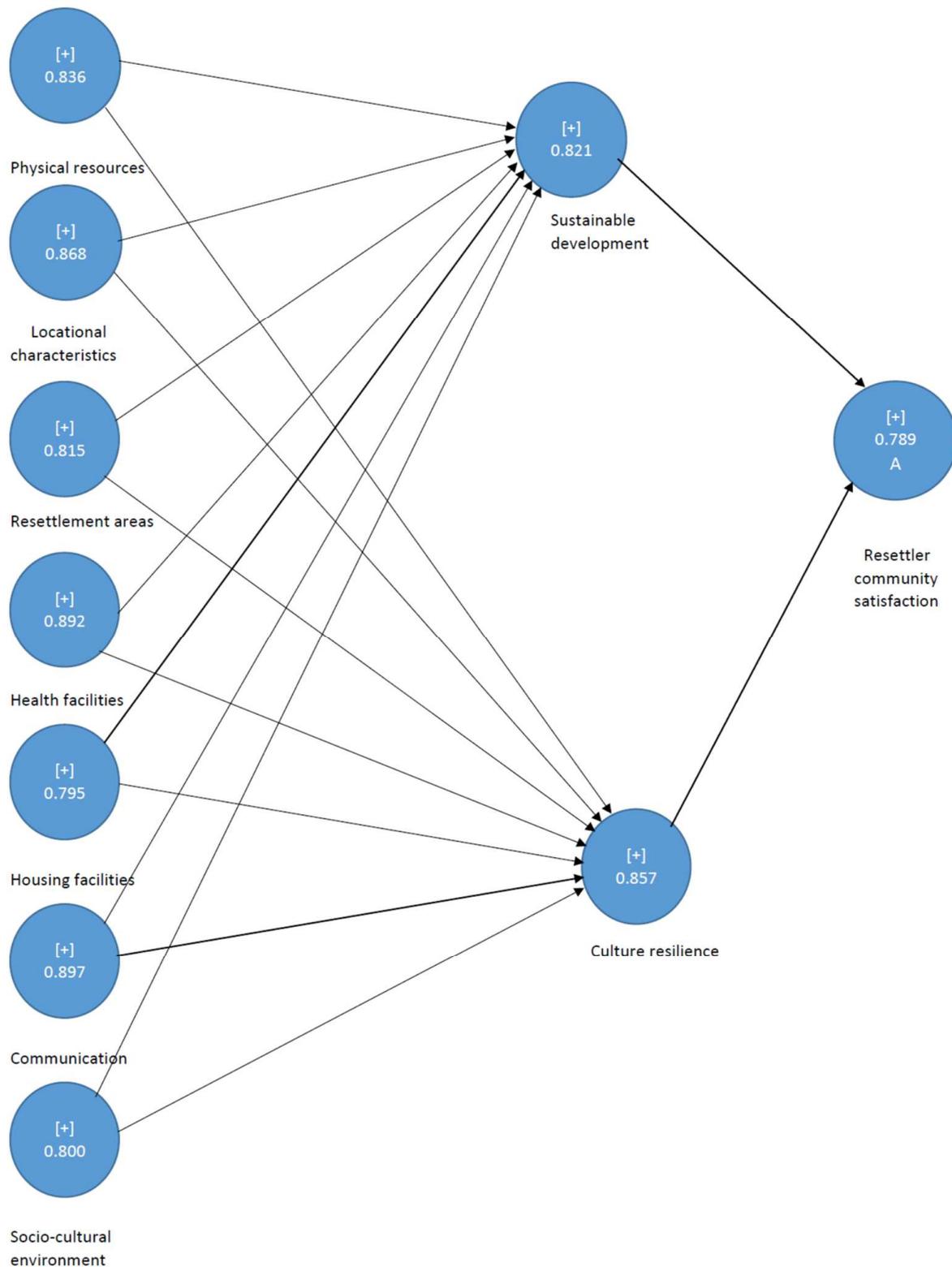


Figure 4. Full path paradigm for resettler communities of GBHP.

**Table 8.** Correlation matrix.

	Co	CR	HF	HOF	LC	PR	RSC	RA	SCE	SD
Co	0	0	0	0	0	0	0	0	0	0
CR	0.72	0	0	0	0	0	0	0	0	0
HF	0.375	0.413	0	0	0	0	0	0	0	0
HOF	0.688	0.568	0.435	0	0	0	0	0	0	0
LC	0.303	0.728	0.243	0.339	0	0	0	0	0	0
PR	0.251	0.337	0.842	0.367	0.285	0	0	0	0	0
RSC	0.202	0.453	0.326	0.325	0.595	0.452	0	0	0	0
RA	0.392	0.39	0.675	0.483	0.241	0.417	0.45	0	0	0
SCE	0.083	0.119	0.122	0.182	0.101	0.25	0.223	0.117	0	0
SD	0.389	0.418	0.551	0.746	0.317	0.443	0.432	0.985	0.119	0

Note: Based on the authors' estimations.

**Hypothesis 2 (H2).** *There is a significant variation in resettler community satisfaction due to all predictors.*

Table 9 shows that the relationships between physical resources, resettlement areas, socio-cultural environment, and cultural resilience are not always highly significant. So far, no discrepancies regarding cultural resilience have been found between the values of physical resources, resettlement areas, and socio-cultural environment. Therefore, the variation hypothesis is both plausible and accepted; as Table 9 indicates, there is a variation in the criterion as a function of all the predictors.

**Table 9.** Direct relationships among the variables.

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics ( O/STDEV )	p Values
Communication -> cultural resilience	0.425	0.431	0.04	10.756	0.000
Communication -> sustainable development	-0.07	-0.067	0.027	2.627	0.009
Cultural resilience -> resettler community satisfaction	0.288	0.284	0.051	5.699	0.000
Health facilities -> cultural resilience	0.082	0.079	0.033	2.49	0.013
Health facilities -> sustainable development	-0.105	-0.104	0.033	3.195	0.002
Housing facilities -> cultural resilience	0.052	0.05	0.028	1.852	0.055
Housing facilities -> sustainable development	0.26	0.255	0.037	7.054	0.000
Locational characteristics -> cultural resilience	0.45	0.448	0.034	13.4	0.000
Locational characteristics -> sustainable development	0.034	0.033	0.017	1.964	0.050
Physical resources -> cultural resilience	0.002	0.006	0.029	0.08	0.936
Physical resources -> sustainable development	0.097	0.097	0.025	3.89	0.000
Resettlement areas -> cultural resilience	0.029	0.025	0.027	1.064	0.288
Resettlement areas -> sustainable development	0.785	0.786	0.032	24.305	0.000
Socio-cultural environment -> cultural resilience	0.045	0.044	0.027	1.702	0.090
Socio-cultural environment -> sustainable development	-0.035	-0.035	0.018	1.923	0.055
Sustainable development -> resettler community satisfaction	0.231	0.235	0.043	5.377	0.000

Note: Based on the authors' estimations.

**Hypothesis 3 (H3).** *There is a mediating role of sustainable development and culture resilience linked to predictors and criteria.*

Physical resources > cultural resilience > satisfaction of new settlers. Resettlers' contentment is directly proportional to how their communities and resettlement locations foster cultural resilience. The satisfaction felt by new settlers is directly correlated to the degree to which communities and locations have fostered sustainable growth. In communities, the value of these mediation analyses demonstrated that no significant values have been detected; hence, these pathways do not have a mediating effect. The role played by the mediating variables is absent from these previously discussed structures. The mediator theory is viable and has been accepted with significant merit as a result of the fact that it has been demonstrated that mediators play a more prominent role in the relationship between IV and DV.

Physical resources -> cultural resilience -> resettler community satisfaction; resettlement areas -> cultural resilience -> resettlers community satisfaction; locational characteristics -> sustainable development -> resettler community satisfaction. The value of these mediation analyses showed that no significant values have been observed, so these paths have no mediating effect, as shown in Table 10. The contribution of the mediating variables is not apparent among these mentioned constructs. In light of the fact that mediators have been shown to have a more substantial role in the relationship between IV and DV, the mediator hypothesis is viable and has been accepted with significant merit.

**Table 10.** Mediating effects among the construct variables.

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	p Values
Communication -> cultural resilience -> resettlers community satisfaction	0.123	0.122	0.02	6.076	0.000
Health facilities -> cultural resilience -> resettlers community satisfaction	0.024	0.023	0.011	2.222	0.027
Housing facilities -> cultural resilience -> resettler community satisfaction	0.015	0.014	0.008	1.782	0.035
Locational characteristics -> cultural resilience -> resettler community satisfaction	0.13	0.128	0.027	4.791	0.000
Physical Resources -> cultural resilience -> resettler community satisfaction	0.001	0.002	0.008	0.08	0.936
Resettlement areas -> cultural resilience -> resettler community satisfaction	0.008	0.007	0.008	1.026	0.305
Socio-cultural environment -> cultural resilience -> resettler community satisfaction	0.013	0.012	0.008	1.687	0.032
Communication -> sustainable development -> resettler community satisfaction	0.016	-0.016	0.007	2.276	0.023
Health facilities -> sustainable development -> resettler community satisfaction	0.024	-0.024	0.009	2.625	0.009
Housing facilities -> sustainable development -> resettler community satisfaction	0.06	0.06	0.015	3.988	0.000
Locational characteristics -> sustainable development -> resettler community satisfaction	0.008	0.008	0.005	1.633	0.103
Physical resources -> sustainable development -> resettler community satisfaction	0.022	0.023	0.008	2.788	0.006

Note: Based on the authors' estimations.

The results of the principal components latent variable structural equation modeling (PLS-SEM) are expanded upon by the importance-performance map analysis (IPMA) in Table 11, which considers each construct's performance. Consequently, inferences can be

made on two dimensions (i.e., both importance and performance), which is of the utmost significance in order to prioritize managerial measures.

**Table 11.** Importance-performance matrix (IPMA).

Constructs	LV Performances
Communication	70.5151
Cultural resilience	69.8885
Health facilities	73.5546
Housing facilities	62.2741
Locational characteristics	70.9389
Physical resources	73.5433
Resettlements areas	64.5151
Socio-cultural environments	57.8885
Sustainable development	71.5546

The connections between the variables are graphically shown in Figures 5 and 6. These help to explain the relationships among the model's components and how they interact. Researchers can also learn more about the nature and direction of the associations between their SEM variables. In conclusion, the results of this study confirm the nexus among the variables, and based on such estimates, all three hypotheses have been accepted, as shown below in Table 12.

#### 4.3. Results and Discussion

In this study, we used partial least squares equation modeling (Smart PLS-SEM) to explore resettlers' satisfaction, which is affected by many social, cultural, and economic factors in the GBHP. Factors like physical resources, locational characteristics, resettlement area, health facilities, housing facilities, communication, and socio-cultural environment contributed to the resettlers' satisfaction, along with two mediators: sustainable development and cultural resilience. This study focused on resettlers affected by the GBHP, specifically, in three villages (Barotha, Eassa, and Feroze) built due to the GBHP. The reason for selecting the area was to check whether these factors—physical resources, locational characteristics, resettlement area, health facilities, housing facilities, communication, and socio-cultural environment—contributed to the resettlers' satisfaction, sustainable development, and cultural resilience. This study confirmed that all predictors significantly contribute to the resettlers' satisfaction.

Resettlement shifts people to other places; this means the basic necessities of life required for survival need to be provided [90,91]. Home infrastructure and environmental stability are the causes of resettlement satisfaction in the case of the GBHP. In previous studies, living necessities, home infrastructure, and environmental stability were the factors that increased the level of satisfaction of resettled people [92]. The home's location is a new place with sanitation facilities and hygiene practices [93]. In the case of the GBHP, the resettlers are satisfied with the locational characteristics, which positively impact their satisfaction.

In previous research, the health facilities have remained an issue for resettlers. In this case, the basic health facilities and health education are provided by the project authority and hospitals that are working in these three villages [93], and the people are satisfied with the GBHP. The good housing premises fulfill basic needs, so previous studies supported the idea that health facilities are considered major contributors to projects. The link between health and house facilities brings a positive attitude, and residents are satisfied [94]. In the case of the GBHP, sharing values about culture, natural resources, and social support services contribute to relocated peoples' satisfaction.

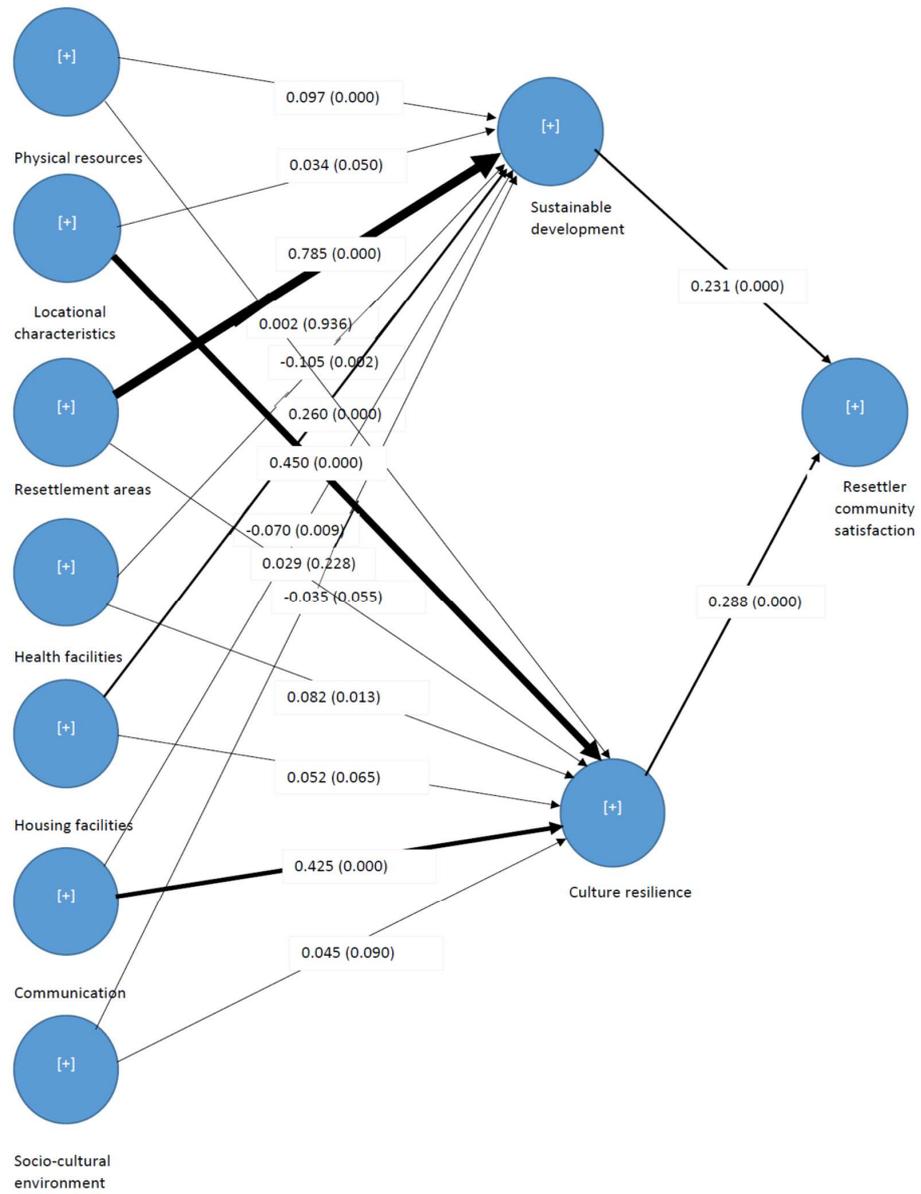


Figure 5. Final construct with all estimations.

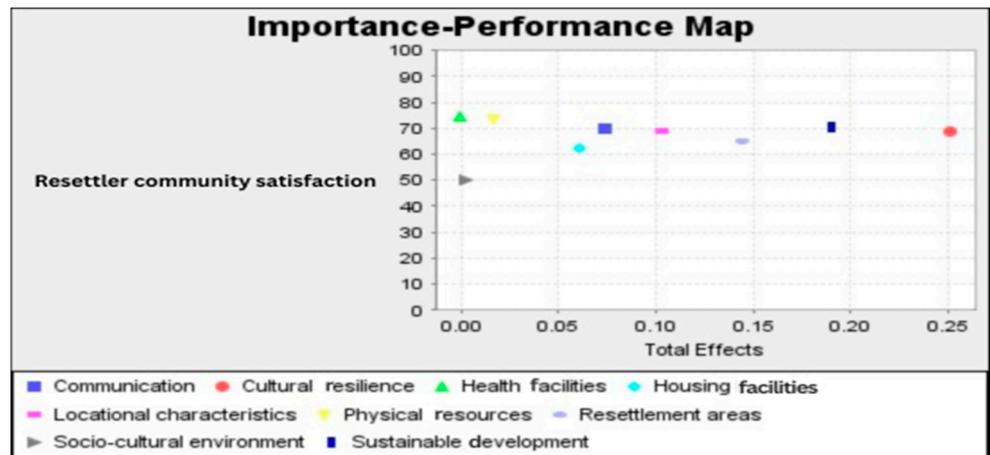


Figure 6. Importance-performance map for all variable dimensions.

**Table 12.** Hypothesis decisions.

Sr. No.	Statements Narration	Decisions
1	All predictors have a significant association with resettlers' satisfaction in the model.	Accepted
2	There is a significant variation in resettlers' community satisfaction due to all predictors.	Accepted
3	There is a mediating role of sustainable development and cultural resilience, linked to predictors and criteria.	Accepted

Regarding the quality of life, natural resources also play an important role. The level of satisfaction of resettlers depends on the quality of facilities, fulfillment of basic needs, and employment. In the case of the GBHP, proper waste management and a recycling unit is promoting a better environment [93]. Related to this, modern agricultural methods and techniques are used in the GBHP. Previous studies have indicated that a green-friendly environment and modernization in every sector significantly change human attitudes [50,95]. The results of this suggest that there is a green-friendly environment in the GBHP.

From a sociological point of view, the research method of empirical investigation used in this study is quite uncommon. The researchers employed PLS-SEM for most of the conducted investigations, which were cross-sectional studies; however, when it came to assessing people's satisfaction levels in relation to their relocation, this method was not utilized. Therefore, this study presents an original methodology. In addition, this study provides further information regarding the satisfaction of those who have been resettled, their current perspectives towards resettlement, and their present conditions.

Dam construction has brought about onerous resettling processes in many countries for local populations [96]. In the context of Pakistan, it is noteworthy that a significant proportion, roughly 50%, of the populace impacted by the advancement of hydropower projects remain to be reinstated [9]. The government and main stakeholders need to work together to promote a more people-oriented strategy that can improve the well-being of afflicted communities [97]. Each group experiences a significant variation in the levels of satisfaction following the resettlement [98]. The post-resettlement support policy for populations impacted by dams is intended to build a sustainable livelihood strategy for communities that have been uprooted, and it is intended to do so within the context of an approach oriented toward people [99,100]. According to the findings of interviews, the resettlement site directly impacted the resettlers in terms of their social integration, the reconstruction of their social networks, the restoration of production, social adaptation, and the development and improvement of the living environment for their offspring [96]. In addition, consistent social and economic planning for pre- and post-actions to increase their existing livelihood resources is required for effective relocation, as was found by an earlier study. This requirement is crucial for completing the relocation [101]. The contentment of the communities depends on an ongoing improvement of all areas of life, whether in the social, economic, or environmental spheres. This may cause a change in an individual's perception and lead to an increase in the amount of satisfaction [102]. When considering the intricate nature of the design, compensation based on the securitization of land assets will display high economic feasibility for major hydropower projects that involve a significant number of resettlements. The success of the subsequent field tests of this concept will be contingent on the degree to which hydropower developers and governments collaborate [35].

This approach aligns with the findings of previous studies, that communities should play an active role in shaping their own futures, emphasizing the importance of community-driven decision-making processes [103]. This statement emphasizes the importance of sustainable development activities with larger global goals that strive to promote a more equitable and sustainable global society [104]. The aforementioned notion is expanded upon

by offering insights into the development of community-based organizations that advocate for the community's rights and enable various cultural and economic endeavors. This study provides further evidence regarding the importance of long-term sustainability by highlighting the persistent elements of well-being and cultural resilience [104]. The preceding work makes a valuable contribution to the academic discourse on topics such as cultural resilience, sustainable development, resettling satisfaction, and ethical considerations in the context of resettlement.

The main focus of resettlement programs is on moral and social responsibility. This study examines how morality, human rights, and social responsibility are included in the planning and execution of relocation initiatives. It highlights the importance of addressing these issues when working on significant development initiatives. One of the primary challenges is how to sustain the long-term wellbeing of populations who have been resettled. This project investigates how strategies and interventions employed during and after relocation impact these communities' long-term resilience and well-being. It recognizes that immediate alleviation and long-term prosperity are crucial elements of well-being. This study offers valuable information for future relevant studies. By examining the resettlement experiences of the GBHP, this article provides insightful information about the best practices, potential roadblocks, and areas that should be improved in future development initiatives. It might impact tactics employed in Pakistan and elsewhere, setting the bar for more considerate, culturally sensitive, and ecologically sustainable development techniques.

Because it might be difficult for people to sacrifice land to which memories are tied, the resettlers must have a high quality of life and be satisfied with their post-resettlement lives. Most of the moral and cultural values associated with the demographics were not disregarded when analyzing the demographic factors prior to raising concerns regarding resettlement. Second, the researcher noticed when performing interviews that the population's requirements included education, health, and business opportunities. Given that the GBHP resettlers were happy, and as their lifestyles and perspectives on the GBHP pointed to a strong positive association, this study provides specifics regarding the satisfaction they experienced.

## **5. Conclusions, Suggestions and Recommendations, Implications, and Future Insights**

### *5.1. Conclusions*

Regardless of the good intentions and careful planning behind resettlement, the act of being resettled has significant effects on individuals and communities. The scale of the social consequences and the significance of the circumstance is such that the resettlement process typically assumes a dominant role in the lives of individuals and communities alike for an extended period. Settlement programs are designed to offer individuals or groups compelled to leave the provision of alternative housing and avenues for better livelihoods. Understanding the impact of the socio-cultural environment on the satisfaction levels of individuals who have been resettled is of the utmost importance. If the physical resources are not adequately provided for, the resettled communities' cultural values degenerate, leading to unhappiness in the settled areas. Individuals' lives can become unbalanced and less satisfying due to the connection between locational features and sustainable development. If the locational facilities are not satisfied, the pace of sustainable development will slow down, ultimately resulting in a lower degree of satisfaction. The mediating effect of sustainable development and cultural resilience on the relationship between the socio-cultural environment and resettlers' satisfaction has been narrated, and these mediating variables have been found to strengthen this relationship. The socio-cultural context inside resettlement communities considerably impacts the satisfaction level experienced by resettlers, as shown in Table 13. To a large extent, the level of contentment experienced by resettlers can be attributed to key mediating elements such as sustainable development and cultural resilience. It is possible to achieve more prosperous and inclusive resettlement programs by first understanding the socio-cultural environment and working to mitigate

its effects while also considering the mediating roles that sustainable development and cultural resilience play.

**Table 13.** Decision regarding hypothesis for supporting the conclusion.

Sr. No.	Hypothesis Statements	Analysis Tools for Hypothesis	Decisions
1	All predictors have a significant association with resettlers' satisfaction in the model.	Correlation	Accepted
2	There is a significant variation in resettler community satisfaction due to all predictors.	Variation	Accepted
3	There is a mediating role of sustainable development and cultural resilience linked to predictors and criteria.	Mediation	Accepted

### 5.2. Practical Implementations

This practical application method focuses on involving the community, preserving culture, and long-term growth, and it aims to improve the health and happiness of the Pakistani communities that had to move because of the GBHP.

- Talk to people who have been resettled, find out what they need, and figure out how the relocation has affected their health.
- Find cultural traditions that are in danger and start programs to protect and share cultural material.
- Create training programs in communities to help people understand how important cultural heritage is and how it fits into the bigger picture of sustainable development.
- Offer training and skill-building programs that align with cultural norms and allow people to make a living.
- Establish a robust tracking system to see how programs affect the community's happiness, cultural resilience, and economic well-being.
- Support laws that protect the rights of communities and work with the right groups to ensure that rules align with culture preservation and social justice.
- To make the community more resilient overall, give disaster preparedness, health care, and social support network training and tools.
- Keep track of your work, lessons learned, and best practices. Then, share what you've learned with other development projects to have a more significant effect.

### 5.3. Suggestions and Recommendations

It is entrusted upon government projects to make sure that the individuals who have been displaced are not only granted appropriate reparation for their incurred losses but also offered comprehensive support to establish a new means of sustenance in alternative locations.

In practical terms, when choosing an energy project, it is crucial to consider the interests and perspectives of all stakeholders involved in the planning and execution of initiatives aimed at restoring and developing livelihood resources. This approach is necessary to prevent any potential negative consequences.

- To achieve sustainable development, addressing political and economic challenges is imperative.
- The achievement of any project can be possible if all stakeholders are actively involved and the process of alleviating poverty risks and generating new opportunities for the local community has been a success.
- The Water and Power Development Authority (WAPDA) has the potential to enhance communication with various key stakeholders, including local communities, non-governmental organizations (NGOs), and international donor agencies. These stakeholders have historically been insufficiently consulted during the planning and execution phases of hydropower initiatives.

- The establishment of social bonds and the cultivation of individual family culture within households are contingent upon the conscientious consideration of the populace by policymakers and government officials during the formulation and implementation of project policies and regulations.
- The satisfaction of the resettlers depends on the facilitation and provision of a better environment for the wellbeing of their living style.
- The funding agencies must cooperate in these projects; in this way, the resettlers' compensation and process of loans will be easy.

#### 5.4. Future Insights and Policy Implementation

This topic aims to guide emerging researchers on adopting panel approaches and qualitative methods to enhance their understanding of the subject matter and expand their knowledge base. The topic can be modified to examine the socio-cultural environment's impact on the satisfaction level reported by resettlers, utilizing a gender and intersectionality framework. Moreover, this study aims to investigate the influence of age, ethnic background, gender, and other interconnected identities on individuals' pleasure experiences. Additionally, it seeks to explore the role of cultural resilience and equitable growth as potential mediators in this relationship. This post-study analysis examines the experiences and perceptions of individuals following their resettlement, focusing on their emotional well-being and lifestyle choices. Further pre- and post-data collection will provide the researcher with valuable insights into the advantages and disadvantages of the research.

This paper aims to establish a set of comprehensive recommendations for the facilitation of meaningful community participation, consultation, and consent. For example: propose the implementation of a policy framework that requires the active engagement of the community in decision-making processes pertaining to resettlement; engage in partnerships with cultural institutions, experts in the area, and communities to foster the development of cultural preservation programs. The objective is to support the enhancement of skills and the provision of vocational training initiatives specifically designed to meet the needs and requirements of the local community. Construct and furnish educational and healthcare infrastructures close to relocated populations; engage in collaborative efforts with professionals specializing in environmental studies to comprehensively evaluate potential environmental consequences. Implementing oversight systems is crucial for effectively monitoring and enforcing adherence to legal and ethical norms. Formulate a comprehensive and enduring strategic plan, incorporating significant milestones, and appropriately allocate resources to ensure sustained assistance for resettled populations beyond the initial resettlement period. Create a framework to facilitate the exchange of information and foster collaborative efforts; promote the organization of regular meetings, training sessions, and the facilitation of knowledge sharing among initiatives with comparable obstacles.

**Author Contributions:** Conceptualization, S.A. and G.S.; methodology, S.A.; software, S.A.; validation, S.A. and G.S.; formal analysis, S.A.; investigation, G.S.; resources, G.S.; data curation, S.A.; writing—original draft preparation, S.A. and G.S.; writing—review and editing, G.S., A.H. and A.R.; visualization, S.A., G.S., A.H. and A.R.; supervision, G.S.; project administration, G.S.; funding acquisition, S.A. and G.S. All authors have read and agreed to the published version of the manuscript.

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