

# Perceptions of Returnees Concerning Their Rehabilitation and Reinstatement in Swat District, Pakistan: An Evaluative Study

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## Abstract

This article examines the perception of returnees about their reinstatement and rehabilitation in the Swat District of Pakistan. A satisfaction tool, consisting of various domains and indicators, was used for measuring the returnee's perceptions at two periods, i.e., before rehabilitation (BR) and after rehabilitation (AR). Data were elicited through a self-administered structured questionnaire from 382 samples drawn from the 47,943 Kabal Tehsil, Swat population. Data were analyzed through descriptive and inferential statistics. The findings depict that the value of all the domains increased by 25.7%. The paired sample t-test results show a rejection of all the null hypotheses, indicating a significant increase in the overall satisfaction of returnees in the AR period. The findings indicate that in the AR period, the highest increase occurred in SWL (Satisfaction with Life) domain and the lowest in GOV (Government). This study concludes that the satisfaction of returnees can be further improved by focusing on the domains with a lower level of satisfaction, such as the Government and Social Support domains. Additionally, the tool adopted in this study is significant for measuring the satisfaction level of the distressed population in Pakistan and beyond.

## Keywords

Internally displaced persons (IDPs); rehabilitation; returnees; Swat, Pakistan

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## Introduction

Turbulent situations such as wars, conflicts, and natural calamities force people to flee their homes (Akhunzada et al., 2015). People confronted with such conditions are called either temporary migrants or internally displaced persons (IDPs) (Cohen & Deng, 1998), or displaced people (Shaluf, 2007). However, in either case, internal displacement compels a person to leave their home and seek protection within their country. Further, internal displacement is often a legal action taken by the government to protect people from disastrous situations (Amirthalingam & Lakshman, 2015). This is very much true in the case of Swat District, Pakistan. For example, the military operation against the Taliban and militant insurgents in Swat in 2009, and the devastating flood in 2010 forced approximately 2.5 million people to migrate to safer regions (Haider, 2009; Internal Displacement Monitoring Centre, 2018). Due to the abrupt evacuation plan, people had to abandon their businesses and sources of livelihood such as livestock, farm fields, and gardens full of fruits (Sayeed & Shah, 2017). In addition, this departure halted education and other institutions for more than a year (Provincial Disaster Management Authority, 2019). Under the given circumstances, the people of Swat went through immense agony and a challenging period of reinstatement and rehabilitation (Akhunzada et al., 2015). In this study, the participants are internally displaced persons who returned to their homes after restoring law and order situations and wiping out the militants from Swat.

After completing the military operation in Swat in 2010, the sprouting challenges for the government were the restoration of normality, revamping the damaged infrastructure, and the reinstatement and rehabilitation of IDPs (Bangash, 2012). Addressing these challenges, the government promptly started a comprehensive rehabilitation plan in collaboration with national and international organizations. Consequently, damaged infrastructure such as link roads, small bridges, culverts, streets, drainage channels, schools, hospitals, and police stations was rebuilt (Akhunzada et al., 2015; Bangash, 2012; Din, 2010; Provincial Disaster Management Authority, 2019; United Nations Development Programme, 2013). However, bad governance, mismanagement, corruption, and nepotism slowed the rehabilitation process (Bangash, 2012; Elahi, 2016). Further, the government was mainly concerned with security issues rather than addressing economic and social problems (Din, 2010). For example, the United Nations High Commissioner for Refugees (UNHCR) in 2017 reported huge lapses (86%) in funding, seeing as only 14% of the affected people had access to basic needs. In addition, many IDPs returned without registration, increasing difficulties in the reinstatement and rehabilitation initiatives (DAWN, 2010).

Based on the aforementioned facts and gaps, this study intends to evaluate the impact of the rehabilitation initiatives in the reinstatement of returnees in the Swat District. Since no such research has been conducted on gauging the perceptions of the IDPs in the Swat District regarding their reinstatement by rehabilitation plans, this study attempts to provide original insights on this subject through a satisfaction tool. Therefore, this study, grounded in philanthropy and development theories, is significant because it provides original insights and a good body of literature about forced migration and their reinstatement. Further, it highlights the importance of governance concerning the rehabilitation efforts for IDPs and returnees in terms of quantity and quality. This study is essential as it provides empirical evidence about the provision of sufficient, satisfactory, and necessary services and infrastructure for the reinstatement of

returnees. The findings of this study would be of great interest for policymakers, humanitarian organizations, civil society, academicians, and contemporary researchers to understand and address the issues of IDPs in Pakistan and beyond.

This study's main objective is to evaluate the returnee's perceptions about their rehabilitation and reinstatement through a satisfaction tool by measuring and comparing their satisfaction level in the pre-and post-insurgency periods. Accordingly, this study puts forth the following null hypotheses:

H1: There is no difference in the life satisfaction of returnees before and after their rehabilitation and reinstatement.

H2: There is no difference in the psychological well-being of returnees before and after their rehabilitation and reinstatement.

H3: There is no difference in the health status of returnees before and after their rehabilitation and reinstatement.

H4: There is no difference in the time balance of returnees before and after their rehabilitation and reinstatement.

H5: There is no difference in the community attitude of returnees before and after their rehabilitation and reinstatement.

H6: There is no difference in the social support of returnees before and after their rehabilitation and reinstatement.

H7: There is no difference in the education of returnees before and after their rehabilitation and reinstatement.

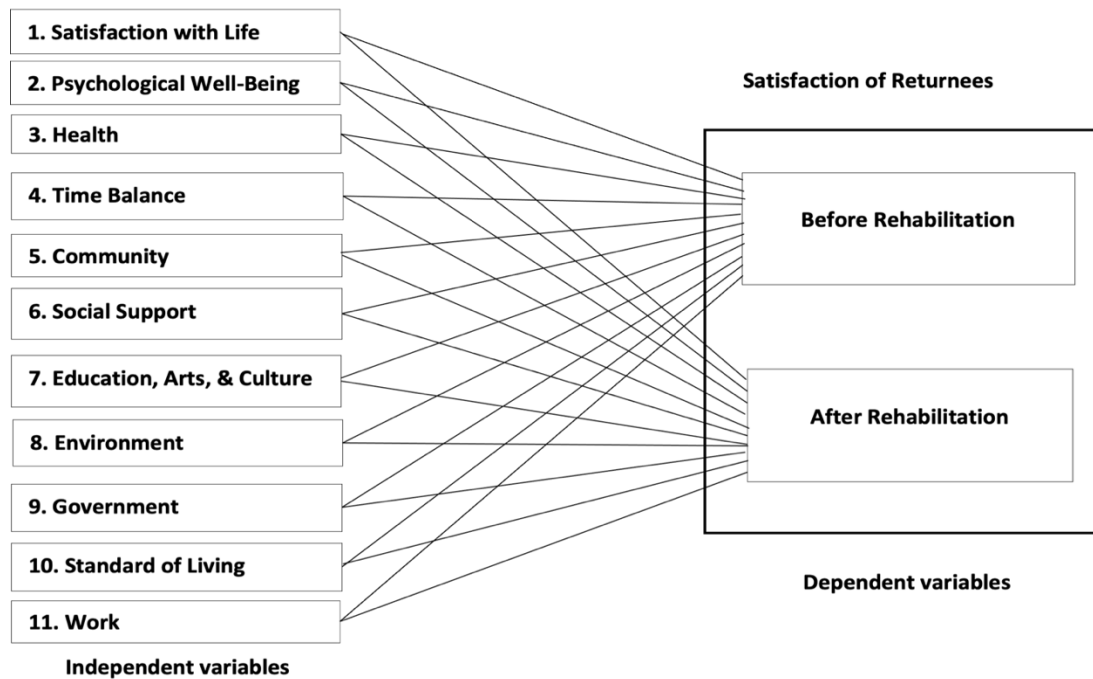
H8: There is no difference in the environment before and after the rehabilitation and reinstatement of returnees.

H9: There is no difference in governance before and after the rehabilitation and reinstatement of returnees.

H10: There is no difference in the living standard of returnees before and after their rehabilitation and reinstatement.

H11: There is no difference in the work environment of returnees before and after their rehabilitation and reinstatement.

The dependent variable (satisfaction of returnees) and the independent variables, consisting of eleven domains of the study, are shown in Figure 1 below.

**Figure 1:** Dependent and Independent Variables

*Note: Compiled by researchers*

## Conceptual framework of the study

The framework of this study was based on a philanthropy and development theory (See, for example, Harrow & Jung, 2016). The approach of philanthropy demonstrates developing a relationship between the social well-being of people and the factors that create social issues (Ostrander, 2015). Besides, it refers to how and why the foundation will use its resources to achieve its mission and vision. The theory guides the foundation in aligning their strategies such as governance, operational, and accountability procedures, and grant-making profiles and policies with their resources and mission (Patton et al., 2015). This means the theory guides the utilization of the available resources, the structure of endowment, and priorities. Moreover, this theory aligns portfolios of projects and organizations in which the foundation invests its funds and other resources such as its expertise, knowledge, relationship, and credibility to accomplish the objectives (Duncan, 2004).

The development theory consists of modernization and a linear stage model. This theory supports the development of changing economic and social capabilities, priorities, and choices by organizing the required resources (Leigh & Blakely, 2016). The modernization aspect of the theory highlights the role of the government in the modernization and facilitation of sustainable development. Hickey (2016) argued that modernization theory postulates the transition from traditional, rural, and agricultural society to a secular, urban, and industrial sector. From the perspective of rehabilitation projects, this theory provides a helpful scheme for the developmental assistance of different measures required by the government of Pakistan to

reinstate and improve the socioeconomic conditions of the returnees in the Swat District (Inglehart, 2018).

The linear stage model also directs the government to increase the rehabilitation projects to enhance the reinstatement and economic growth of the Swat District. Furthermore, the linear stage growth model outlines constraints to economic growth in a society (Schumpeter, 2017). Drawing on this, the linear stage model is essential as it enables the government of Pakistan to increase its rehabilitation projects to enhance the reinstatement and economic growth of returnees in the Swat District.

## Literature review

Turbulence and displacement of the human population are intertwined concepts. In developing and underdeveloped countries such as Pakistan, Tanzania, Turkey, Rwanda, Sudan, and Uganda, the displacement of people is provoked by conflicts, wars, earthquakes, floods, and development projects (Depetris-Chauvin & Santos, 2017). Most of the forced displacement has resulted in a decline in the social and economic conditions of the displaced people (Cernea, 2008; Randell, 2016; Scudder, 2005). For example, a UNHCR (2017) report stated that when the refugees of Nigeria returned from Cameroon, they were suffering from living conditions due to lack of shelter, shortage of food, sanitation, and water.

Similarly, Sert (2014) argued that when the IDPs return to their lands after conflicts or disastrous situations, they often find their land barren, eroded, and usurped by others. The land loss creates a significant economic challenge for the returnees in rural areas because the land is the primary source of living. For example, when returned, the displaced people in Bosnia found their homes and properties taken by other ethnic groups (Toal & Dahlman, 2011). In the context of the Swat District, since most of the displaced people lived in rural areas and were heavily dependent on agriculture and gardening, the displacement deprived them of their primary source of livelihood. Upon their return to Swat, the IDPs found their lands and irrigation eroded and destroyed by flood, and homes, schools, and other basic infrastructure damaged by insurgency (Nyborg et al., 2012).

Displacement affects the social life of people. Family and friends' lives play a vital role in constructing socio-cultural and emotional boundaries between self and others (Cangia et al., 2018). Subjective well-being is highly influenced by family relations and social networks (Setiadi & Hidayah, 2021). This is very much true in the case of Swat because the displaced population's social life suffered as they lost their social network, an essential factor of solidarity in Pashtun society (Saeed, 2012; Sanaullah, 2020).

Studies show that migrants have a better return after being displaced than their places of origin, such as significant employment opportunities and access to good education and health facilities (Laverde-Rojas & Correa, 2020). Janta et al. (2021) stated that mobility often increases the lifelong skills and competencies of returned migrants by enhancing the potential employability and career opportunities. The successful implementation of rehabilitation and reinstatement initiatives for the displaced people can generate positive social and economic outcomes (Cernea & McDowell,

2000; Partridge, 1993). Rafiq et al. (2021), in a study conducted in the Swat region of Pakistan, found that rehabilitation initiatives increased the happiness index of returnees by 5.3% compared to 3.89% before rehabilitation. Likewise, Melin (2003), in a study conducted in Sweden, argued that rehabilitation has made 70% of the people satisfied in general, but vocational rehabilitation had low life satisfaction. Eklund and Fugl-Meyer (1991) noted in a study conducted in Northern Sweden that successful vocational rehabilitation increases vocational satisfaction. It can be argued that the successful execution of the rehabilitation projects increases the beneficiaries' life satisfaction and social well-being.

Infrastructure development is essential in the rehabilitation process. It has to be implemented to benefit the affected people regarding income generation and fulfill other amenities of life (Dash, 2008). Jaysawal (2013) stated that rehabilitation and resettlement is a development program model to ensure technical and economic options for the people. A successful rehabilitation project should be aimed not only to provide income opportunities but also to improve the welfare of the affected people in a way that helps the victims to resume their lives, education, jobs, and businesses after the loss (Elahi, 2016). Similarly, Anand (2016) argued that general psychological support and subjective well-being should be incorporated in rehabilitation initiatives. This implies that the resettlement programs have to focus on both short-term and long-term rehabilitation.

The short-term could be a one-time relief. The long term means rebuilding physical infrastructure, creating economic opportunities, assuring livelihood, and consolidating the cultural and social cohesion among people (Jaysawal, 2013). Dalal (2015) emphasized the diversification of resources in camps for the displaced people that could shift from a camp to a city. It means that camps are a temporary place for the displaced people where only humanitarian aid is provided until the provision of a durable solution. It implies that the success of socioeconomic policies fails unless it focuses on achieving the displaced people's actual development. Drawing on this, we argue that Swat District's rehabilitation initiatives successfully achieved short-term goals. However, the long-term goals are not completed yet as the schools, business, tourism in specific, and other infrastructures are required.

Rational need assessment of the internally displaced persons (IDPs) is vital for chalking out their rehabilitation and reinstatement. The state should ensure inclusive rehabilitation of IDPs (Depetris-Chauvin & Santos, 2017). Heidbrink (2021) argued that a state must perceive internal displacement as a social problem that must be logically addressed. Din (2010) argued that the government should take immediate measures to return the IDPs to their original places of residence and ensure necessary reinstatement facilitation. Moreover, rehabilitation projects provide temporary anesthetics. For sustainable living standards, the provision of employment and business opportunities is essential for the better inclusion of IDPs and the country's well-being (Salgado-Gálvez, 2018; Serghiou et al., 2016).

Overall, disastrous situations put governments under pressure to rehabilitate and reinstate the affected community. As in the case of IDPs and returnees of Swat, reinstatement was an uphill task for the government because it required substantial funds, expertise, and management (Fransen et al., 2017). However, addressing such situations requires collaboration with humanitarian organizations (Khan & Mehmood, 2016). Thus, with the help of many international aid organizations, the government of Pakistan initiated a comprehensive plan of rehabilitation

and reinstatement for the returnees of Swat District in 2010 (Hameed, 2015). This study, therefore, intended to analyze the impact of the rehabilitation initiatives through the use of a satisfaction tool measuring the perception of the returnees regarding their satisfaction in various domains in the pre-and post-displacement periods.

## **Methodology of the study**

### **Study design and sampling procedure**

This research employed a quantitative study design. The target population was all the returnees in the Swat District. However, the study was specified to Kabal Tehsil of Swat due to the following reasons: 1) Kabal Tehsil had the highest displacement (100%) and suffered colossal damage compared to other areas (Bangash, 2012); 2) it remained the epicenter of rehabilitation projects; 3) time and financial constraints to researchers to cover other regions of Swat; and 4) acquaintance, essay accessibility, and commuting for the researchers in this region.

A sample size of 382 was drawn via Krejcie and Morgan's model (1970) from the 47,943 population of different administrative units of the Kabal Tehsil (see Appendix 1). Kabal Tehsil has different administrative zones. For example, the urban areas are called Municipal Committees (MC). It comprises one administrative unit known as 'Charge no 02', which has seven small units called circles. The rural area is known as Qanoongo Halqa (QH), comprised of twelve subunits known as Patwar Circles (PCs). The PCs are divided into twenty-six villages (Pakistan Bureau of Statistics, 2018). Data were elicited from the household head (HH), selected through purposive or judgmental sampling technique. According to Clark and Creswell (2015), researchers often choose participants "on purpose" and those more appropriate for the study.

### **Data collection process**

The data collection process was conducted from February 2019 to July 2019. Data were elicited through a self-administered structured questionnaire consisting of a 5-point Likert scale for various domains. A self-administered structured questionnaire is convenient for collecting data from a large sample size (Clark & Creswell, 2015). The Likert scale consisted of 1 to 5 options, where option '1' was the lowest level of satisfaction, and option '5' was the highest. However, a reverse code mechanism was used in several questions and domains. For example, the agreement option indicated disagreement to some options and thus be considered a low level of satisfaction. Therefore, in the reverse code mechanism, Options 1 & 2 and 4 & 5 were swapped, whereas Option '3', being a neutral opinion, was unchanged.

The questionnaire for this study was adopted from Musikanski et al. (2017), with slight modifications fitting to the structural context of Swat, in which a satisfaction tool using the socioeconomic indicators was developed and applied for data elicitation. Both convergent and discriminant validity were used to perform the construct validity for this study. The convergent validity exists when there is a strong correlation among different constructs, while discriminant validity refers to the extent to which one construct is distinctive from other constructs (Hair et al.,

2014). The validity test was essential to ensure that the tool was reliable and appropriate for testing the data to obtain desired results. Similarly, the coefficient of Cronbach alpha was used to test the reliability of the questionnaire. The Cronbach alpha value lower than the threshold 0.60 indicates that items had a low coefficient, and such things were removed from the questionnaire to improve the questionnaire's reliability. For this purpose, ten survey questionnaires were distributed as a pilot study. It helped the omission of several irrelevant, complex, and ambiguous questions.

This study was conducted per the approved research ethical guidelines of the University of Technology Malaysia (IRB Reference No UTM.K.55.01.03/13.11/1/4). For example, informed consent was sought from all the respondents before filling in the questionnaire. The participants' confidentiality and anonymity were ensured using pseudonyms and codes. The participants had the freedom to withdraw themselves or their views during the data collection process. The survey was distributed amongst 400 respondents. Some of the answers were discarded due to ambiguity, so the final 382 respondents were considered.

## Data processing and analysis procedure

The questionnaire data were converted into a tabulated form using MS Excel 2010 and made for further quantitative analysis. Then SPSS 20 was used for the statistical analysis of data. Descriptive statistics such as frequency, mean, charts, and standard deviation were used for data analysis. Inferential statistics such as paired sample t-test were applied to test the hypotheses and compare the mean value of two samples of the same size (Xu et al., 2017). In this study, two samples were used to compare returnees' satisfaction in the pre-and post-rehabilitation periods (See Appendix 2).

When there was a composite indicator, an appropriate weight was assigned to the sub-indicators to adjust and balance the indicator's value according to the sub-indicators importance (Becker et al., 2017). There are various statistical and non-statistical methods used for assigning weight to indicators. In this research, the indicators' weight and threshold were assigned by a non-statistical method, the public opinion method drawn from the original respondents' responses. The public opinion method is appropriate when the data is collected from a large population (Mercer et al., 2019). The threshold or cut-off values of the indicators are shown in Table 1 below.

**Table 1:** Threshold and Weightage of the Indicators and Domains

| Domain weight                                     | Indicator |       |                              |            |               |
|---------------------------------------------------|-----------|-------|------------------------------|------------|---------------|
|                                                   | No        | Code  | Name                         | Weight (%) | Threshold (%) |
| <b>Satisfaction with Life</b>                     | 01        | SWL1  | Worthwhile life              | 34         | 80            |
| SWL = (SWL1*0.34) + (SWL2*0.33 + (SWL3*0.33)      | 02        | SWL2  | Happy life                   | 33         | 80            |
|                                                   | 03        | SWL3  | Worried life                 | 33         | 80            |
| <b>Psychological Well-Being</b>                   | 04        | PSWB1 | Meaningful life              | 34         | 80            |
| PSWB = (PSWB1*0.34) + (PSWB2*0.34) + (PSWB3*0.32) | 05        | PSWB2 | Interest in daily activities | 34         | 80            |
|                                                   | 06        | PSWB3 | Future Optimism              | 32         | 80            |
| <b>Health</b>                                     | 07        | H1    | Health condition             | 69         | 60            |
| H = (H1*0.69) + (H2*0.31)                         | 08        | H2    | Work accomplishment          | 31         | 80            |

| Domain weight                             | Indicator |       |                                            |            |               |
|-------------------------------------------|-----------|-------|--------------------------------------------|------------|---------------|
|                                           | No        | Code  | Name                                       | Weight (%) | Threshold (%) |
| <b>Time Balance</b>                       | 09        | TB1   | Time balance                               | 52         | 80            |
| TB = (TB1*0.52) + (TB2*0.48)              | 10        | TB2   | Feeling rushed                             | 48         | 80            |
| <b>Community</b>                          | 11        | COM1  | Feelings for community                     | 17         | 80            |
| COM = (COM1*0.17) + (COM2*0.16) +         | 12        | COM2  | Relationship with community                | 16         | 80            |
| (COM3*0.10) + (COM4*0.11) +               | 13        | COM3  | Fairness of people                         | 10         | 80            |
| (COM5*0.23) + (COM6*0.23)                 | 14        | COM4  | Personal Safety                            | 11         | 80            |
|                                           | 15        | COM5  | Volunteerism                               | 23         | 80            |
|                                           | 16        | COM6  | Donation                                   | 23         | 80            |
| <b>Social Support</b>                     | 17        | SS1   | Satisfaction with friends and family       | 21         | 80            |
| SS = (SS1*0.21) + (SS2*0.42) + (SS3*0.37) | 18        | SS2   | Feeling loved                              | 42         | 80            |
|                                           | 19        | SS3   | Feeling lonely                             | 37         | 60            |
| <b>Education, Art &amp; Culture</b>       | 20        | EDAC1 | Access to sports & recreational activities | 21         | 80            |
| EDAC = (EDAC1*0.21) + (EDAC2*0.21) +      | 21        | EDAC2 | Access to artistic & cultural activities   | 21         | 80            |
| (EDAC3 + 0.19) + (EDAC4*0.39)             | 22        | EDAC3 | Skills through informal education          | 19         | 80            |
|                                           | 23        | EDAC4 | Discrimination                             | 39         | 60            |
| <b>Environment</b>                        | 24        | ENV1  | Access to nature                           | 40         | 80            |
| ENV = (ENV1*0.40) + (ENV2*0.20) +         | 25        | ENV2  | Natural environment                        | 20         | 80            |
| (ENV3*0.20) + (ENV4*0.20)                 | 26        | ENV3  | Nature enjoyment                           | 20         | 80            |
|                                           | 27        | ENV4  | Pollution                                  | 20         | 80            |
| <b>Government</b>                         | 28        | GOV1  | Government corruption level                | 19         | 80            |
| GOV = (GOV1*0.19) + (GOV2*0.12) +         | 29        | GOV2  | Government competency                      | 12         | 80            |
| (GOV3*0.35) + (GOV4*0.34)                 | 30        | GOV3  | Trust in national government               | 35         | 80            |
|                                           | 31        | GOV4  | Trust in local government                  | 34         | 80            |
| <b>Standard of Living</b>                 | 32        | SOL1  | Personal finances                          | 47         | 80            |
| SOL = (SOL1*0.47) + (SOL2*0.53)           | 33        | SOL2  | Eating Mutton                              | 53         | 80            |
| <b>Work</b>                               | 34        | WO1   | Work satisfaction                          | 25         | 80            |
| WO = (WO1*0.25) + (WO2*0.27) +            | 35        | WO2   | Work compensation                          | 27         | 80            |
| (WO3*0.24) + (WO4*0.24)                   | 36        | WO3   | Work productivity                          | 24         | 80            |
|                                           | 37        | WO4   | Work autonomy                              | 24         | 80            |

*Note: Compiled by the researchers*

Accordingly, the total 100% satisfaction was equally divided in a 5-point Likert scale as such: 1 = Lowest level of agreement or satisfaction = 20%, 2 = 40%, 3 = 60%, 4 = 80%, and 5 = Highest level of agreement or satisfaction = 100%. According to the procedure, the strongly agree (100% threshold) and agree (80% threshold) responses were accepted and counted, whereas those that showed disagreement were discarded. Similarly, some indicators where the 'neutral response' meant a sort of agreement (60% threshold) were also considered. After collecting the public opinion, the following formula was used to assign a weight to an indicator.

$$\text{Indicator weight} = (X/Y) * 100$$

Where X is the sum of the acceptable responses (agree and strongly agree and neutral for some indicators) for an indicator that needs to assign a weight, Y is the sum of the total number of responses of all the indicators in a domain. For example, in the meaningful life (PSWB1) indicator, 154 respondents chose the 'agree' option, and 31 respondents chose the 'strongly agree' option; hence the total number of respondents who achieved the satisfaction threshold in the PSWB1 indicator was 185. Similarly, a total of 189 and 176 respondents showed agreement in interest in daily life activities (PSWB2) and future optimism (PSWB3) indicators, respectively. Therefore, the value of Y is 550, which was the sum of respondents in all three indicators. Thus the weight of the PSWB1 indicator was calculated and rounded to 34%. Similarly, the PSWB2 indicator weight was also calculated and rounded to 34%. The PSWB3 indicator weight was 32%. After giving weight to an individual indicator, the corresponding domain's weight was also calculated.

## Findings of the Study

The findings of this study were extracted in three stages: A) calculating the percentage sufficiency of an indicator, B) use of descriptive statistics, and C) application of the paired sample t-test.

### A. Calculating the percentage sufficiency of indicators

The indicators' s percentage sufficiency or satisfaction level was calculated by using the following formula:

$$Is = \left( \frac{\sum_{i=1}^{n=382} xi * z}{Y} \right) 100$$

where

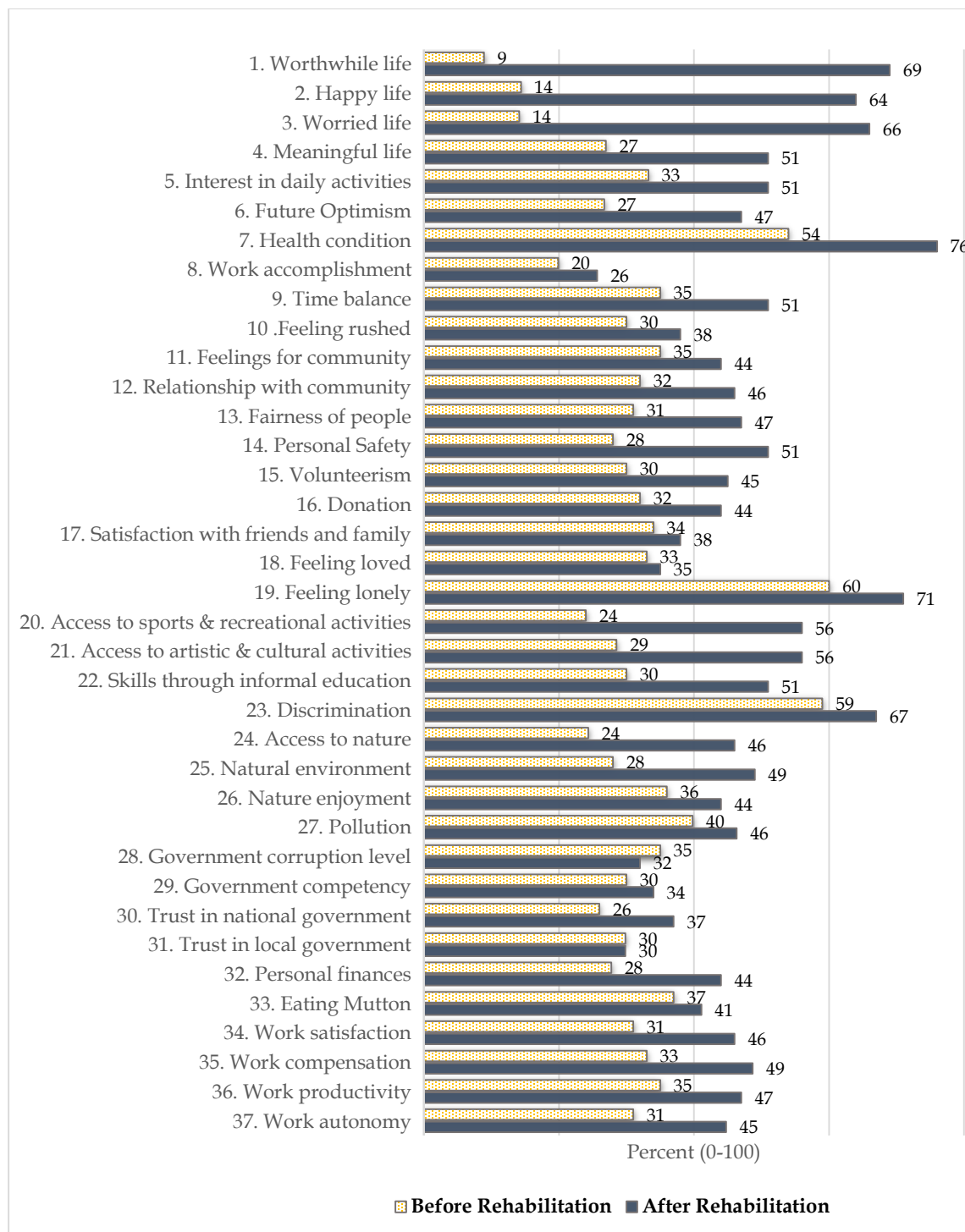
*Is* is Indicator's percentage sufficiency, *i* is respondent number from 1 to 382,  
*x* is the respondent, *z* = 1 if the respondent achieved threshold; otherwise, *z* = 0, and  
*Y* is the total number of respondents, equal to 382.

For example, as shown in Figure 2 below, in the BR (before rehabilitation) period, 34 respondents achieved an 80% satisfaction threshold in the Worthwhile Life indicator, whereas 348 respondents did not, producing approximately 9% sufficiency. On the other hand, in the AR (after rehabilitation) period, 269 respondents achieved the threshold, producing approximately 69% sufficiency.

Based on the above-mentioned calculation, Figure 2 indicates the highest increase in the AR period happened in the Worthwhile Life indicator, followed by Worried Life (increased by 52%); Happy Life (50%); Access to Sports and Recreation (32%); Access to Artistic and Cultural Festivals (27%); Meaning Life (24%); Personal Safety (23%); Health Conditions, and Access to Nature (22% each); Skills Through Informal Training, and Natural Environment (21% each); Future Optimism (20%); Interest in Daily Activities, and Nature Enjoyment (18% each); Time Balance, Fairness of People (16%); Volunteerism, and Work Satisfaction (15%); Relationship with Community, and Work Autonomy (14%); Donation, and Work Productivity (12%); Feeling Lonely, and Trust in National Government (11%); Feeling for Community (9%); Feeling Rushed (8%); Work

Accomplishment, and Pollution (6%); and Satisfaction with Friends and Relatives, Government Competency, and Eating Mutton (4%). However, indicators about the Trust in the Local Government remained the same in the AR and BR. Interestingly, the indicator about Government Corruption Level decreased by 3% in the post-rehabilitation period.

**Figure 2:** Indicator's Sufficiency Before Rehabilitation and After Rehabilitation



*Note: Compiled by researchers*

## B. Use of descriptive statistics

The descriptive statistics of both the data samples are shown in Table 2 below.

**Table 2:** Descriptive Statistics Before Rehabilitation and After Rehabilitation

|         | Domain pair BR & AR             | Mean | N   | Std. Deviation | Std. Error Mean |
|---------|---------------------------------|------|-----|----------------|-----------------|
| Pair 1  | Satisfaction with Life BR       | 2.71 | 382 | 0.983          | 0.050           |
|         | Satisfaction with Life AR       | 3.26 | 382 | 1.016          | 0.052           |
| Pair 2  | Psychological Well-Being BR     | 2.85 | 382 | 1.035          | 0.053           |
|         | Psychological Well-Being AR     | 3.31 | 382 | 1.018          | 0.052           |
| Pair 3  | Health BR                       | 2.93 | 382 | 1.066          | 0.055           |
|         | Health AR                       | 3.20 | 382 | 1.083          | 0.055           |
| Pair 4  | Time Balance BR                 | 3.02 | 382 | 1.123          | 0.058           |
|         | Time Balance AR                 | 3.20 | 382 | 1.123          | 0.057           |
| Pair 5  | Community BR                    | 2.96 | 382 | 1.138          | 0.058           |
|         | Community AR                    | 3.17 | 382 | 1.125          | 0.058           |
| Pair 6  | Social Support BR               | 2.93 | 382 | 1.158          | 0.059           |
|         | Social Support AR               | 3.00 | 382 | 1.133          | 0.058           |
| Pair 7  | Education, Arts & Culture BR    | 2.87 | 382 | 1.093          | 0.056           |
|         | Education, Arts & Culture AR    | 3.24 | 382 | 1.088          | 0.056           |
| Pair 8  | Environment BR                  | 2.92 | 382 | 1.101          | 0.056           |
|         | Environment AR                  | 3.21 | 382 | 1.134          | 0.058           |
| Pair 9  | Government BR                   | 2.93 | 382 | 1.133          | 0.058           |
|         | Government AR                   | 2.97 | 382 | 1.123          | 0.057           |
| Pair 10 | Standard of Living / Economy BR | 2.90 | 382 | 1.168          | 0.060           |
|         | Standard of Living / Economy AR | 3.03 | 382 | 1.196          | 0.061           |
| Pair 11 | Work BR                         | 2.98 | 382 | 1.067          | 0.055           |
|         | Work AR                         | 3.24 | 382 | 1.083          | 0.055           |

The above table depicts an increase in the mean value of all domains in the post-rehabilitation (AR) period. For example, the mean value of the Satisfaction With Life (SWL) domain increased by 0.56, Psychological Well-Being (PSWB) domain by 0.46, Health (H) domain by 0.27, Time Balance (TB) domain by 0.18, Community (COM) domain by 0.21, Social Support (SS) domain by 0.07, Education, Art and Culture (EDAC) domain by 0.37, Environment (ENV) domain by 0.29, Government (GOV) domain slightly increased by 0.04, Standard of Living/Economic (SOL) domain by 0.12, while the mean value in the Work (WO) domain increased by 0.26.

The average mean value of all domains in the post-rehabilitation (AR) period increased by 25.7%. Similarly, the highest increase (5.08%) in the AR occurred in the SWL domain, while the lowest increase (0.34%) occurred in the GOV domain. Overall, the increase in all domains indicated that returnees were satisfied with the rehabilitation and reinstatement schemes.

## C. Application of the paired sample T-test

The paired sample t-test was applied to compare the two data samples collected before and after launching the rehabilitation projects, as shown in Table 3 below.

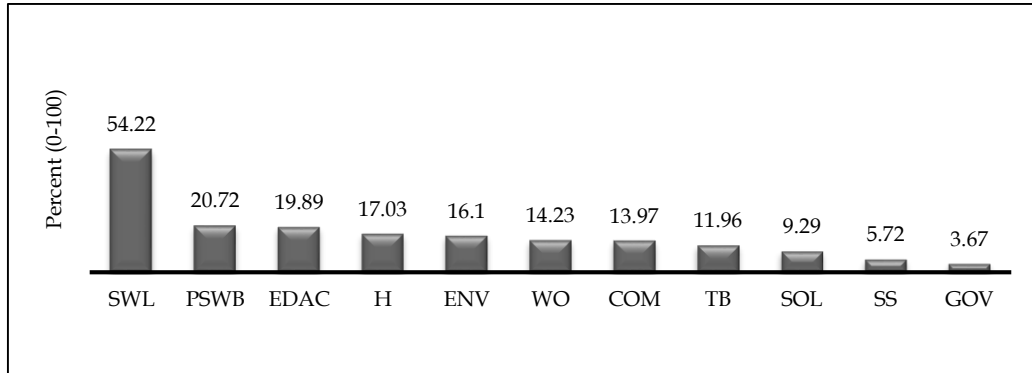
**Table 3:** Results of Paired Sample T-Test

| Domain's pair difference |                         | Paired Differences |          |                 |                                           |        | t       | df  | Sig (2-tailed) |
|--------------------------|-------------------------|--------------------|----------|-----------------|-------------------------------------------|--------|---------|-----|----------------|
|                          |                         | Mean               | Std. Dev | Std. Error Mean | 95% Confidence Interval of the Difference |        |         |     |                |
|                          |                         |                    |          |                 | Lower                                     | Upper  |         |     |                |
| Pair 1                   | SWL in BR – SWL in AR   | -0.56              | 0.202    | 0.010           | 0.580                                     | 0.539  | -54.221 | 382 | 0.000          |
| Pair 2                   | PSWB in BR – PSWB in AR | -0.46              | 0.436    | 0.022           | 0.505                                     | 0.418  | -20.715 | 382 | 0.000          |
| Pair 3                   | Health BR - Health AR   | -0.27              | 0.306    | 0.016           | -0.298                                    | -0.236 | -17.034 | 382 | 0.000          |
| Pair 4                   | TB in BR – TB in AR     | -0.18              | 0.300    | 0.015           | -0.213                                    | -0.153 | -11.959 | 382 | 0.000          |
| Pair 5                   | COM in BR – COM in AR   | -0.21              | 0.289    | 0.015           | -0.235                                    | -0.177 | -13.970 | 382 | 0.000          |
| Pair 6                   | SS in BR – SS in AR     | -0.07              | 0.253    | 0.013           | -0.100                                    | -0.049 | -5.722  | 382 | 0.000          |
| Pair 7                   | EDAC in BR – EDAC in AR | -0.37              | 0.364    | 0.019           | -0.407                                    | -0.334 | -19.893 | 382 | 0.000          |
| Pair 8                   | ENV in BR- ENV AR       | -0.29              | 0.350    | 0.018           | -0.323                                    | -0.253 | -16.097 | 382 | 0.000          |
| Pair 9                   | GOV in BR - GOV AR      | -0.04              | 0.202    | 0.010           | -0.058                                    | -0.018 | -3.669  | 382 | 0.000          |
| Pair 10                  | SOL in BR – SOL in AR   | -0.1204            | 0.253    | 0.013           | -0.146                                    | -0.095 | -9.289  | 382 | 0.000          |
| Pair 11                  | Work BR – Work AR       | -0.26243           | 0.360    | 0.018           | -0.299                                    | -0.226 | -14.230 | 382 | 0.000          |

The above-tabulated data depicts the results of the paired t-statistics and calculated sig-values and the different domains, from Pair 1 to Pair 11. If the computed value of t-statistics ranged between - 1.96 to + 1.96, the null hypothesis must be accepted. The above table indicates the calculated value of *t* for the Pairs. Since the *t* value for all the domains (Pair-1 to Pair-11) fell outside the range of -1.96 to + 1.96, all null hypotheses (H-1 to H-11) were rejected. This implies that the returnees' satisfaction level was not the same at the pre-and post-rehabilitation periods.

Further, the calculated *p* value for all the domains (Pair-1 to Pair-11) was less than 0.05, confirming a significant difference, i.e., an increase in the satisfaction level of the returnees in the AR period.

Overall, the study's findings indicated a significant improvement in returnees' satisfaction in all domains, as shown in Figure 3 below.

**Figure 3:** Domain's Sufficiency Increase After Rehabilitation

*Note: Compiled by the researchers based on Table 4 t-statistics values*

Figure 3 indicates that in the AR period, the highest increase occurred in SWL (Satisfaction with Life) domain (54.22%) followed by a 20.72% increase in PSWB (Psychological Well-Being), 19.89% in EDAC (Education, Art, and Culture), 17.03% in H (Health), 16.1% in ENV (Environment), 14.23% in WO (Work), 13.97% in COM (Community), 11.96% in TB (Time Balance), 9.29% in SOL (Standard of Living), 5.72% in SS (Social Support), and 3.67% increase in GOV (Government).

## Discussion

The average mean value of all domains in the after rehabilitation (AR) period increased by 25.7%. Similarly, the highest increase in the AR occurred in the SWL domain (5.08%), while the lowest (0.34%) occurred in the GOV domain. Overall, the increase in all domains indicates that returnees were satisfied with the rehabilitation and reinstatement schemes. Further, the statistical results show a rejection of all the null hypotheses. This stipulates that the returnees' level of satisfaction at the pre-and post-rehabilitation periods is not the same. The calculated average of the eleven domains, as shown in Figure 3, reveals that the overall average satisfaction of the returnees in the AR period increased by nearly 17%. Our study findings are aligned with the findings of Randell's (2016) study conducted in Brazil. For example, Randell (2016) found that a compensation-based resettlement program benefits displaced households. They identified that after displacement, the subjective well-being improved for most households, particularly those whose primary source of income was not farming.

Similarly, research on displacement in China found that the housing conditions of displaced residents were somewhat better than other residents (Li & Song, 2009). On the contrary, a study of Orang Asli in Malaysia (Abdullah et al., 2016) found that nearly half of the respondents were not satisfied with resettlement development schemes. This study assumes that the satisfaction level of the affected people depends on their social and economic circumstances in their original place of residents. However, the implementation mechanism of the resettlement schemes influences the satisfaction of the affected population.

The findings of this study indicate that in the AR period, the highest increase occurred in SWL (Satisfaction with Life) domain (54.22%) followed by a 20.72% in PSWB (Psychological Well-Being), 19.89% in EDAC (Education, Art, and Culture), 17.03% in H (Health), 16.1% in ENV (Environment), 14.23% in WO (Work), 13.97% in COM (Community), 11.96% in TB (Time Balance), 9.29% in SOL (Standard of Living), 5.72% in SS (Social Support) and 3.67% increase in GOV (Government). Studies endorse these findings of our research. For example, Azam and Bakar (2017) identified that infrastructure development schemes positively impact economic growth and human well-being. They claimed that regional productivity could be amplified by providing appropriate infrastructure, i.e., roads, communication, health, and education, by utilizing the resources more efficiently.

Likewise, the developmental model of Rostow (1960) also advocated infrastructure development as a prerequisite for the take-off stage of development. Drawing on this, in coordination with Pakistan's government, the UNDP implemented 207 rehabilitation and reconstruction schemes, including 12 minor bridges, 123 streets, 19 drainage channels, 51 culverts, and two link roads in the Swat District (Provincial Disaster Management Authority, 2019). This study claims that restoring the economic infrastructures, such as transport and communication, irrigation, energy, banking, and the social infrastructure, such as health, education, and housing, significantly improved the satisfaction of returnees in Swat District, Kabal region in specific.

However, the displacement caused the internally displaced persons (IDPs) to lose one year of schooling and therefore remain behind in education compared to children in other cities. Upon their return to Swat, they traveled long distances for health-related issues and medications (Nyborg et al., 2012; Ullah et al., 2017). Accordingly, the foremost priority of the rehabilitation projects was to restore the education and health system. As a result, the government succeeded in reconstructing 122 damaged schools in Swat. They reconstructed five Basic Health Units (BHUs), rehabilitated eight health facilities, reconstructed the Burns and Trauma Centre, and provided furniture and medical equipment to 47 health facilities (Provincial Disaster Management Authority, 2019).

Despite the shortage of schools and health facilities, our study shows that the EDAC and health domains improved by 19.89% and 17.03%, respectively. It is essential to mention here that the militants were against the modern western educational system in Swat and wanted it replaced with the Islamic education obtained from mosques and madrasa. That is why the rebels threatened the school-going kids, especially the girls. In the given threatening and chaotic situation, the parents were hesitant to send their children to schools. This resulted in a significant fall in people's education and health, thus generating various social and psychological problems such as fear, insecurity, stress, and anxiety (Murphy et al., 2018). However, the successful military operation helped improve the security situation and restored order. Resultantly, people started everyday life and sent their kids to school.

Similarly, business and markets opened after a terrible long interval—this ensured freedom of work, mobility, and speech to the suffocated masses of Swat. Still, the returnees in the Swat District faced economic adversities that affected their lives. The devastating flood in 2010 ruined the entire economic and social infrastructure and wiped out the rehabilitation projects' efforts and work (Ruiz & Vargas-Silva, 2013). According to Farooq (2017), in the beginning, the returnees were dependent upon governmental financial assistance, which negatively affected the country's

economy. However, national and international organizations, specifically the UNDP, helped restore life and economic development (Gunaratna, 2017). As a result, approximately one million people benefited from restoring the infrastructures and development schemes (Chaudhary et al., 2020).

Undoubtedly, the role of the government is crucial in the restoration of normality after disastrous situations. Specifically, creating an effective and efficient public policy, protection of human rights, the dispensation of justice, provision of jobs, health facilities, shelter, schooling, entertainment facilities, and other social support can help the reinstatement and restoration of people, displaced people in particular (Hollinger & Sienkevych, 2019). The satisfaction of the IDPs and returnees depends on the government's performance, as good governance is a vital area for measuring people's satisfaction (Ramesh, 2011). The findings revealed that AR, the GOV domain, has the lowest increase (3.67%). It means the majority of the respondents were dissatisfied with the performance of the local government. Nevertheless, they perceived the truth, but the military took charge of the local government due to the region's security threats. Therefore, the researcher's personal opinion is that blaming the local government could be a biased assessment in such a situation.

## Conclusion

This research intended to examine the satisfaction of the returnees in the Swat District of Pakistan regarding their rehabilitation and reinstatement. Data were collected from 382 samples in one of the affected regions, Kabal, Swat. The data were statistically analyzed via paired sample t-test. The average mean value of all domains in the post-rehabilitation (AR) period increased by 25.7%. The highest increase (5.08%) occurred in the SWL domain, while the lowest increase (0.34%) occurred in the GOV domain. However, the increase in all domains indicates that returnees were satisfied with the rehabilitation and reinstatement schemes. The results show that the returnees' satisfaction level at the pre-and post-rehabilitation periods was not the same because the null hypotheses were rejected.

Further, the calculated  $p$  value for all the domains (Pair-1 to Pair-11) is less than 0.05, confirming a significant difference, i.e., a 16.98% increase in the satisfaction level of the returnees in the AR period. Specifically, the results indicated that in the AR period, the highest increase occurred in SWL (Satisfaction with Life) domain (54.22%) followed by a 20.72% increase in PSWB (Psychological Well-Being), 19.89% in EDAC (Education, Art, and Culture), 17.03% in H (Health), 16.1% in ENV (Environment), 14.23% in WO (Work), 13.97% in COM (Community), 11.96% in TB (Time Balance), 9.29% in SOL (Standard of Living), 5.72% in SS (Social Support), and 3.67% in GOV (Government). These findings provide a strong justification for priorities within the selected dimensions in terms of policy design. This implies that rehabilitation and reinstatement initiatives can be improved by focusing on the domains with lower satisfaction levels, such as the Government and Social Support. This study is significant as it provides a tool to evaluate the impact of rehabilitation projects on IDPs, returnees, and migrants in Pakistan and beyond.

## Study limitations

The scope of the study is limited to the returnees of the Swat District. However, due to time and financial constraints, the views of IDPs and returnees regarding rehabilitation and reinstatement in other regions such as district, Dir Lower, Bunner, Shangla, Bajaur, South, and North Waziristan were not included. Similarly, due to the strict gender-segregated social structure of Swat and lack of accessibility, women were excluded from the data elicitation process. Moreover, this study only uses a quantitative methodology.

## Future research directions

This study suggests that for future research, a holistic mapping and study of the issues of internally displaced persons (IDPs) and returnees in other regions of Pakistan would provide a more profound and divergent insight into the topic. Similarly, the data collected from different groups such as women would offer a further understanding and different perspectives about the issues and challenges of IDPs and returnees. Moreover, the use of qualitative data would help provide subjective explanations about the issues and challenges of IDPs and returnees.

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## Appendices

### Appendix 1

| Region   | Admin Unit      | Sub Unit     | Total Population | Target population (No of HH) | Sample Size | Sample Size (%) |
|----------|-----------------|--------------|------------------|------------------------------|-------------|-----------------|
| Kabal MC | CHARGE-NO 02    | CIRCLE NO 01 | 15,842           | 1,934                        | 15          | 4               |
|          |                 | CIRCLE NO 02 | 20,274           | 2,413                        | 19          | 5               |
|          |                 | CIRCLE NO 03 | 19,381           | 2,220                        | 18          | 5               |
|          |                 | CIRCLE NO 04 | 14,963           | 1,764                        | 14          | 4               |
|          |                 | CIRCLE NO 05 | 21,450           | 2,488                        | 20          | 5               |
|          |                 | CIRCLE NO 06 | 10,552           | 1,288                        | 10          | 2               |
|          |                 | CIRCLE NO 07 | 15,641           | 1,781                        | 14          | 4               |
|          |                 | <b>TOTAL</b> | <b>118,103</b>   | <b>13,888</b>                | <b>110</b>  | <b>29</b>       |
| Kabal QH | BARABA-NDI PC   | AMAMDERI     | 2,614            | 329                          | 3           | 1               |
|          |                 | BARABANDI    | 19,374           | 2,329                        | 19          | 4               |
|          |                 | DELAY        | 1,625            | 221                          | 2           | 1               |
|          |                 | GHAWARAJA    | 3,472            | 396                          | 3           | 1               |
|          |                 | NINGUWALI    | 11,793           | 1,377                        | 11          | 2               |
|          |                 | <b>TOTAL</b> | <b>38,878</b>    | <b>4,652</b>                 | <b>37</b>   | <b>9</b>        |
|          | BARASA-MAI PC   | BARASAMAI    | 16,114           | 1,656                        | 13          | 4               |
|          |                 | TAL          | 12,819           | 1,491                        | 12          | 3               |
|          |                 | <b>TOTAL</b> | <b>28,933</b>    | <b>3,147</b>                 | <b>25</b>   | <b>7</b>        |
|          | DARDIAL PC      | DARDIAL      | 19,090           | 2,027                        | 16          | 4               |
|          |                 | <b>TOTAL</b> | <b>19,090</b>    | <b>2,027</b>                 | <b>16</b>   | <b>4</b>        |
|          | GADI PC         | DADAHARA     | 6,720            | 791                          | 6           | 2               |
|          |                 | GADI         | 10,193           | 1,092                        | 9           | 2               |
|          |                 | <b>TOTAL</b> | <b>16,913</b>    | <b>1,883</b>                 | <b>15</b>   | <b>4</b>        |
|          | KALAKA-LAY PC   | GALACH       | 11,925           | 1,325                        | 11          | 3               |
|          |                 | KALAKALAY    | 13,070           | 1,557                        | 12          | 3               |
|          |                 | <b>TOTAL</b> | <b>24,995</b>    | <b>2,882</b>                 | <b>23</b>   | <b>6</b>        |
|          | KOTLAI PC       | AKHONKALAY   | 2,882            | 318                          | 2           | 1               |
|          |                 | DAGAY        | 6,506            | 709                          | 6           | 2               |
|          |                 | KOTLAI       | 11,243           | 1,087                        | 9           | 2               |
|          |                 | <b>TOTAL</b> | <b>20,631</b>    | <b>2,114</b>                 | <b>17</b>   | <b>5</b>        |
|          | KOZABA-NDI PC   | KOZABANDI    | 30,459           | 4,037                        | 32          | 8               |
|          |                 | <b>TOTAL</b> | <b>30,459</b>    | <b>4,037</b>                 | <b>32</b>   | <b>8</b>        |
|          | LOWARA-DEVLI PC | LOWARADEVLI  | 16,834           | 2,000                        | 16          | 4               |
|          |                 | NASRAT       | 5,611            | 709                          | 6           | 2               |
|          |                 | SAMDEVLI     | 7,648            | 858                          | 6           | 2               |
|          |                 | <b>TOTAL</b> | <b>30,093</b>    | <b>3,567</b>                 | <b>29</b>   | <b>8</b>        |
|          | QALAGA-Y PC     | MANJA        | 8,141            | 940                          | 7           | 2               |
|          |                 | QALAGAY      | 17,834           | 1,758                        | 14          | 4               |
|          |                 | <b>TOTAL</b> | <b>25,975</b>    | <b>2,698</b>                 | <b>21</b>   | <b>6</b>        |
|          | SHAHDER-I PC    | SHAHDERI     | 26,222           | 2,921                        | 23          | 6               |

| Region           | Admin Unit   | Sub Unit     | Total Population | Target population (No of HH) | Sample Size | Sample Size (%) |
|------------------|--------------|--------------|------------------|------------------------------|-------------|-----------------|
|                  |              | <b>TOTAL</b> | <b>26,222</b>    | <b>2,921</b>                 | <b>23</b>   | <b>6</b>        |
|                  | TAGHMA PC    | SHALHAND     | 11,325           | 1,039                        | 8           | 2               |
|                  |              | TAGHMA       | 4,949            | 589                          | 5           | 1               |
|                  |              | <b>TOTAL</b> | <b>16,274</b>    | <b>1,628</b>                 | <b>13</b>   | <b>3</b>        |
|                  | TOTANO-BANDI | GHAKHIBANDI  | 5,646            | 535                          | 4           | 1               |
|                  | PC           | TOTANOBANDI  | 18,162           | 1,964                        | 16          | 4               |
|                  |              | <b>TOTAL</b> | <b>23,808</b>    | <b>2,499</b>                 | <b>20</b>   | <b>5</b>        |
| <b>Sub Total</b> |              |              | <b>420,374</b>   | <b>47,943</b>                | <b>381</b>  | <b>100</b>      |

## Appendix 2

| Indicator No (BR) vs. (AR) |      | The Likert scale comparison of respondent's satisfaction perceptions between Before Rehabilitation (BR) and After Rehabilitation (AR) in different domains |              |              |              |              |            |
|----------------------------|------|------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|--------------|--------------|--------------|------------|
|                            |      | 1                                                                                                                                                          | 2            | 3            | 4            | 5            | Total      |
| 1. SWL1                    | (BR) | 133 (34.81%)                                                                                                                                               | 148 (38.74%) | 67 (15.53%)  | 27 (7.06%)   | 7 (1.83%)    | 382 (100%) |
|                            | (AR) | 4 (1.04%)                                                                                                                                                  | 39 (10.20%)  | 70 (18.32%)  | 146 (38.21%) | 123 (32.19%) | 382 (100%) |
| 2. SWL2                    | (BR) | 78 (20.41%)                                                                                                                                                | 175 (45.81%) | 74 (19.37%)  | 43 (11.25%)  | 12 (3.14%)   | 382 (100%) |
|                            | (AR) | 12 (3.14%)                                                                                                                                                 | 50 (13.08%)  | 72 (18.84%)  | 165 (43.19%) | 83 (21.72%)  | 382 (100%) |
| 3. SWL3                    | (BR) | 17 (4.45%)                                                                                                                                                 | 37 (9.68%)   | 71 (18.58%)  | 144 (37.69%) | 113 (29.58%) | 382 (100%) |
|                            | (AR) | 73 (19.10%)                                                                                                                                                | 134 (35.07%) | 69 (18.06%)  | 39 (10.20%)  | 19 (4.97%)   | 382 (100%) |
| 4. PSWB1                   | (BR) | 34 (8.90%)                                                                                                                                                 | 123 (32.19%) | 122 (31.93%) | 83 (21.72%)  | 20 (5.23%)   | 382 (100%) |
|                            | (AR) | 15 (3.92%)                                                                                                                                                 | 64 (16.75%)  | 118 (30.89%) | 154 (40.31%) | 31 (8.11%)   | 382 (100%) |
| 5. PSWB2                   | (BR) | 39 (10.20%)                                                                                                                                                | 105 (27.48%) | 111 (29.05%) | 103 (26.96%) | 24 (6.28%)   | 382 (100%) |
|                            | (AR) | 21 (5.49%)                                                                                                                                                 | 67 (17.53%)  | 105 (27.48%) | 139 (36.38%) | 50 (13.08%)  | 382 (100%) |
| 6. PSWB3                   | (BR) | 36 (9.42%)                                                                                                                                                 | 116 (30.36%) | 128 (33.50%) | 88 (23.03%)  | 14 (3.66%)   | 382 (100%) |
|                            | (AR) | 19 (4.97%)                                                                                                                                                 | 71 (18.58%)  | 116 (30.36%) | 138 (36.12%) | 38 (9.94%)   | 382 (100%) |
| 7. H1                      | (BR) | 47 (12.30%)                                                                                                                                                | 102 (26.70%) | 142 (37.17%) | 72 (18.84%)  | 19 (4.97%)   | 382 (100%) |
|                            | (AR) | 31 (8.11%)                                                                                                                                                 | 67 (17.53%)  | 138 (36.12%) | 109 (28.53%) | 37 (9.68%)   | 382 (100%) |
| 8. H2                      | (BR) | 36 (9.42%)                                                                                                                                                 | 83 (21.72%)  | 112 (29.31%) | 113 (29.58%) | 38 (9.94%)   | 382 (100%) |
|                            | (AR) | 26 (6.80%)                                                                                                                                                 | 74 (19.37%)  | 107 (28.01%) | 126 (32.98%) | 49 (12.82%)  | 382 (100%) |
| 9. TB1                     | (BR) | 36 (9.42%)                                                                                                                                                 | 83 (21.72%)  | 112 (29.31%) | 113 (29.58%) | 38 (9.94%)   | 382 (100%) |
|                            | (AR) | 26 (6.80%)                                                                                                                                                 | 74 (19.37%)  | 107 (28.01%) | 126 (32.98%) | 49 (12.82%)  | 382 (100%) |
| 10. TB2                    | (BR) | 41 (10.73%)                                                                                                                                                | 100 (26.17%) | 111 (29.05%) | 96 (25.13%)  | 34 (8.90%)   | 382 (100%) |
|                            | (AR) | 33 (8.63%)                                                                                                                                                 | 83 (21.72%)  | 104 (27.22%) | 117 (30.62%) | 45 (11.78%)  | 382 (100%) |
| 11. COM1                   | (BR) | 45 (11.78%)                                                                                                                                                | 98 (25.65%)  | 101 (26.43%) | 104 (27.22%) | 34 (8.90%)   | 382 (100%) |
|                            | (AR) | 31 (8.11%)                                                                                                                                                 | 89 (23.29%)  | 102 (26.70%) | 111 (29.05%) | 49 (12.82%)  | 382 (100%) |
| 12. COM2                   | (BR) | 41 (10.73%)                                                                                                                                                | 99 (25.91%)  | 116 (30.36%) | 95 (24.86%)  | 31 (8.11%)   | 382 (100%) |
|                            | (AR) | 21 (5.49%)                                                                                                                                                 | 87 (22.77%)  | 105 (27.48%) | 113 (29.58%) | 56 (14.65%)  | 382 (100%) |
| 13. COM3                   | (BR) | 32 (8.37%)                                                                                                                                                 | 106 (27.74%) | 117 (30.62%) | 96 (25.13%)  | 31 (8.11%)   | 382 (100%) |
|                            | (AR) | 25 (6.54%)                                                                                                                                                 | 99 (25.91%)  | 97 (25.39%)  | 120 (31.41%) | 41 (10.73%)  | 382 (100%) |
| 14. COM4                   | (BR) | 43 (11.25%)                                                                                                                                                | 111 (29.05%) | 115 (30.10%) | 92 (24.08%)  | 21 (5.49%)   | 382 (100%) |
|                            | (AR) | 19 (4.97%)                                                                                                                                                 | 65 (17.01%)  | 117 (30.62%) | 139 (36.38%) | 42 (10.99%)  | 382 (100%) |
| 15. COM5                   | (BR) | 41 (10.73%)                                                                                                                                                | 94 (24.60%)  | 114 (29.84%) | 78 (20.41%)  | 55 (14.39%)  | 382 (100%) |
|                            | (AR) | 39 (10.20%)                                                                                                                                                | 85 (22.25%)  | 99 (25.91%)  | 102 (26.70%) | 57 (14.92%)  | 382 (100%) |
| 16. COM6                   | (BR) | 48 (12.56%)                                                                                                                                                | 89 (23.29%)  | 112 (29.31%) | 70 (18.32%)  | 63 (16.49%)  | 382 (100%) |
|                            | (AR) | 54 (14.13%)                                                                                                                                                | 792 (0.68%)  | 107 (28.01%) | 96 (25.13%)  | 46 (12.04%)  | 382 (100%) |
| 17. SS1                    | (BR) | 56 (14.65%)                                                                                                                                                | 109 (28.53%) | 108 (28.27%) | 87 (22.77%)  | 22 (5.75%)   | 382 (100%) |

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|           |      |             |              |              |              |             |            |
|-----------|------|-------------|--------------|--------------|--------------|-------------|------------|
|           | (AR) | 25 (6.54%)  | 78 (20.41%)  | 104 (27.22%) | 122 (31.93%) | 53 (13.87%) | 382 (100%) |
| 18. SS2   | (BR) | 54 (14.13%) | 103 (26.96%) | 110 (28.79%) | 79 (20.68%)  | 36 (9.42%)  | 382 (100%) |
|           | (AR) | 37 (9.68%)  | 82 (21.46%)  | 108 (28.27%) | 108 (28.27%) | 47 (12.30%) | 382 (100%) |
| 19. SS3   | (BR) | 45 (11.78%) | 67 (17.53%)  | 106 (27.74%) | 103 (26.96%) | 61 (15.96%) | 382 (100%) |
|           | (AR) | 73 (19.10%) | 118 (30.89%) | 100 (26.17%) | 61 (15.96%)  | 30 (7.85%)  | 382 (100%) |
| 20. EDAC1 | (BR) | 53 (13.87%) | 112 (29.31%) | 114 (29.84%) | 80 (20.94%)  | 23 (6.02%)  | 382 (100%) |
|           | (AR) | 21 (5.49%)  | 66 (17.27%)  | 10326.96 (%) | 146 (38.21%) | 46 (12.04%) | 382 (100%) |
| 21. EDAC2 | (BR) | 38 (9.94%)  | 119 (31.15%) | 116 (30.36%) | 83 (21.72%)  | 26 (6.80%)  | 382 (100%) |
|           | (AR) | 23 (6.02%)  | 67 (17.53%)  | 102 (26.70%) | 147 (38.48%) | 43 (11.25%) | 382 (100%) |
| 22. EDAC3 | (BR) | 40 (10.47%) | 110 (28.79%) | 105 (27.48%) | 97 (25.39%)  | 30 (7.85%)  | 382 (100%) |
|           | (AR) | 33 (8.63%)  | 77 (20.15%)  | 96 (25.13%)  | 126 (32.98%) | 50 (13.08%) | 382 (100%) |
| 23. EDAC4 | (BR) | 39 (10.20%) | 94 (24.60%)  | 119 (31.15%) | 99 (25.91%)  | 31 (8.11%)  | 382 (100%) |
|           | (AR) | 31 (8.11%)  | 92 (24.08%)  | 107 (28.01%) | 113 (29.58%) | 39 (10.20%) | 382 (100%) |
| 24. ENV1  | (BR) | 40 (10.47%) | 124 (32.46%) | 125 (32.72%) | 69 (18.06%)  | 24 (6.28%)  | 382 (100%) |
|           | (AR) | 27 (7.06%)  | 79 (20.68%)  | 106 (27.74%) | 120 (31.41%) | 50 (13.08%) | 382 (100%) |
| 25. ENV2  | (BR) | 41 (10.73%) | 113 (29.58%) | 115 (30.10%) | 87 (22.77%)  | 26 (6.80%)  | 382 (100%) |
|           | (AR) | 34 (8.90%)  | 81 (21.20%)  | 91 (23.82%)  | 139 (36.38%) | 37 (9.68%)  | 382 (100%) |
| 26. ENV3  | (BR) | 40 (10.47%) | 106 (27.74%) | 10427.22%    | 88 (23.03%)  | 44 (11.51%) | 382 (100%) |
|           | (AR) | 32 (8.37%)  | 75 (19.63%)  | 102 (26.70%) | 129 (33.76%) | 44 (11.51%) | 382 (100%) |
| 27. ENV4  | (BR) | 37 (9.68%)  | 89 (23.29%)  | 104 (27.22%) | 111 (29.05%) | 41 (10.73%) | 382 (100%) |
|           | (AR) | 32 (8.37%)  | 77 (20.15%)  | 96 (25.13%)  | 125 (32.72%) | 52 (13.61%) | 382 (100%) |
| 28. GOV1  | (BR) | 55 (14.39%) | 93 (24.34%)  | 99 (25.91%)  | 100 (26.17%) | 35 (9.16%)  | 382 (100%) |
|           | (AR) | 34 (8.90%)  | 77 (20.15%)  | 91 (23.82%)  | 119 (31.15%) | 61 (15.96%) | 382 (100%) |
| 29. GOV2  | (BR) | 33 (8.63%)  | 118 (30.89%) | 96 (25.13%)  | 96 (25.13%)  | 39 (10.20%) | 382 (100%) |
|           | (AR) | 49 (12.82%) | 110 (28.79%) | 104 (27.22%) | 92 (24.08%)  | 27 (7.06%)  | 382 (100%) |
| 30. GOV3  | (BR) | 35 (9.16%)  | 108 (28.27%) | 128 (33.50%) | 72 (18.84%)  | 39 (10.20%) | 382 (100%) |
|           | (AR) | 45 (11.78%) | 93 (24.34%)  | 118 (30.89%) | 98 (25.65%)  | 28 (7.32%)  | 382 (100%) |
| 31. GOV4  | (BR) | 39 (10.20%) | 110 (28.79%) | 119 (31.15%) | 79 (20.68%)  | 35 (9.16%)  | 382 (100%) |
|           | (AR) | 50 (13.08%) | 97 (25.39%)  | 121 (31.67%) | 88 (23.03%)  | 26 (6.80%)  | 382 (100%) |
| 32. SOL1  | (BR) | 51 (13.35%) | 108 (28.27%) | 117 (30.62%) | 81 (21.20%)  | 25 (6.54%)  | 382 (100%) |
|           | (AR) | 38 (9.94%)  | 74 (19.37%)  | 104 (27.22%) | 120 (31.41%) | 46 (12.04%) | 382 (100%) |
| 33. SOL2  | (BR) | 55 (14.39%) | 80 (20.94%)  | 103 (26.96%) | 92 (24.08%)  | 52 (13.61%) | 382 (100%) |
|           | (AR) | 63 (16.49%) | 94 (24.60%)  | 93 (24.34%)  | 87 (22.77%)  | 45 (11.78%) | 382 (100%) |
| 34. WO1   | (BR) | 35 (9.16%)  | 99 (25.91%)  | 124 (32.46%) | 105 (27.48%) | 19 (4.97%)  | 382 (100%) |
|           | (AR) | 21 (5.49%)  | 73 (19.10%)  | 116 (30.36%) | 134 (35.07%) | 38 (9.94%)  | 382 (100%) |
| 35. WO2   | (BR) | 35 (9.16%)  | 107 (28.01%) | 109 (28.53%) | 107 (28.01%) | 24 (6.28%)  | 382 (100%) |
|           | (AR) | 26 (6.80%)  | 74 (19.37%)  | 96 (25.13%)  | 149 (39.00%) | 37 (9.68%)  | 382 (100%) |
| 36. WO3   | (BR) | 29 (7.59%)  | 86 (22.51%)  | 122 (31.93%) | 111 (29.05%) | 34 (8.90%)  | 382 (100%) |
|           | (AR) | 25 (6.54%)  | 75 (19.63%)  | 111 (29.05%) | 121 (31.67%) | 50 (13.08%) | 382 (100%) |
| 37. WO4   | (BR) | 37 (9.68%)  | 106 (27.74%) | 112 (29.31%) | 96 (25.13%)  | 31 (8.11%)  | 382 (100%) |
|           | (AR) | 30 (7.85%)  | 77 (20.15%)  | 104 (27.22%) | 127 (33.24%) | 44 (11.51%) | 382 (100%) |