Chapter–IV
Methodology
The objective of the present study is to find out the difference between displaced and non-displaced scheduled caste and non-scheduled caste people of Kangra districts of Himachal Pradesh in terms of cognitive behavioral aspects and dimensions of Quality of life. Further the aim is to find out the relationship of psychological variables to the dimensions of quality of life in terms of magnitude and direction of correlation. Finally the study intends to see the impact of psychological variables on the dimensions of quality of life. For attaining the goal the study has been conducted on the Pong dam oustees of Himachal Pradesh in India. According to Mark Twain India seems to be the cradle of human race, the birthplace of human speech, the mother of history, the grandmother of legend, and the great grandmother of tradition. It is the second most populated country of the world in terms of population that is approximately 1.22 billion therefore is 7th largest country in the world.

![Map of India](image.png)

**Fig. 4.1: Map of India**

It has 28 states, 7 union territories and 22 official languages recognized by the constitution and 1600 minor language and dialects. Although Hindi is the official national language, only 20% of India’s population is able speaks it fluently as mother tongue. A massive number of religion are represented among India’s population, e.g.
81.3% of the population is Hindu, 12% Muslim, 2.3% Christian, 1.9% Sikh, 0.4% Jain, 0.01% Zoroastrians or Parsees, and very few Jews can be found in this country. There exists unity in the diversities of the culture. Like India, Himachal Pradesh lies in North of India. *Hima* means snow in Sanskrit and *achal* means anchal or lap of mountain. Therefore, the literal meaning of the state’s name is lap of Himalayas that is spread over 55,670 km², and surrounded by Jammu and Kashmir on the North; Punjab on the West and South-West, Haryana and Uttarakhand on the on the South-East and by the Tibet autonomous region on the East.

**Fig. 4.2: Map of Himachal Pradesh**

Himachal Pradesh is famous for its abundant natural beauty. After the Anglo-Gorkha War between Nepal and Britain, the British colonial government came into power. In 1950 Himachal was declared as a union territory but after the state of Himachal Pradesh Act 1971, Himachal emerged as the 18th State of Republic of India. The economy of the Himachal Pradesh is currently the third fastest growing economy in India Himachal Pradesh has been ranked as fourth in the highest per capita income of Indian states. Due to the abundance of perennial rivers, Himachal exports hydro-electricity to other States such as Delhi, Punjab and Rajasthan. Thus the economy of the state is highly dependent on three sources: hydro-electrical power, tourism and
agriculture. Despite unprecedented growth made by the state, it has its socio-psychological consequences. For knowing these consequences, the study has been conducted in Pong Dam oustees of district Kangra.

4.1 Study Area

The study has been conducted in Kangra District of Himachal Pradesh that was formed in 1849 during British regime with 5,739 Km constitutes 10.31% area of the State. This district is surrounded by Chamba to the North, Lahul and Spiti to the North-East, Kullu to the East, Mandi to the South-East, and Hamirpur and Una to the South. The headquarter of Kangra district is in Dharamshala, that is also the headquarter of Tibetan Government-in exile. It recorded highest rainfall in Himachal Pradesh. According to 2011 census Kangra district has 1,507,223 populations, and 263 inhabitants per square kilometer. The native people’s language is Kangri. The majority of the people are Hindu Gujar, Rajputs and although many Tibetans are settled here. Kangra district has eight sub divisions named as, Kangra, Dharmshala, Nurpur, Dehra Gopipur, Bajjnath, Jwali, Palampur and Jaisinghpur. Its Tehsils are, Indora, Jwali, Kangra, Palampur, Nurpur, Badoh, Dehra Gopipur, Bajjnath, Fatehpur, Dhaaramshala, Jaswan, Jaisinghpur, Khundiyan, Shahpur and Kasba Kotla. Sub-Tehsila of Kangra are, Harchakkian, Dhira, Rakkad, Thural and Meertha.

![Map of Kangra District](https://example.com/map.png)

Fig. 4.3: Map of Kangra District
It is surrounded by Dhauladhar range and a beautiful Masroor temple known as the Ajanta Ellora and Jwala ji temple that has features of holy flames that rum from natural gas; Brajeshwari Devi temple, Chamunda Devi temple, Chintpurni temple, Bhagsunag temple and Baijnath temple etc. Beside this snow laden mountain and lush green forest, perennial rivers, diverse soils and cropping systems. Beas is one of the largest river of the district, which contribute the fertility of the land. It rises from the Pir Panjal range near Rohtang Pass at the height of over 3,978 meters from the mean sea level, and the Pong dam is built on this river. The reservoir of the said dam is known with the name of Maharana Pratap Sagar lake, that was established in 1975 is the highest earth fill dam in India on the Beas River. The total area of the lake is 12,561 km2 and the reservoir stretch is 42 km long with maximum width of 19 km with the mean depth of 35.7 m. The height of the dam is 132.66 meter or (435 ft) and 1950 m (6400 ft) long. The power plant has an installed capacity of 360 MW (six units of 60 MW) each. From the establishment of this reservoir approximately 30,000 families were displaced and resettled in Dehra, Haripur, Jawalaji, Jwali, Kangra, Shahpur, Nurpur, Badi, Fatehpur, Raja ka Talab and Nagrotasuriyan areas of Kangra district and Rajasthan state but are not getting their due right to till date.

Fig: 4.4: Map of Pong Wetland Covering Major Nallas or Khuds
The Pong Dam was constructed by the Beas Construction Board in district Kangra of Himachal Pradesh in 1974. Approximately 75,268 acres of land was acquired during the years 1962 to 64 for the said dam. It is the joint venture of the states of Punjab, Haryana, Rajasthan and Himachal Pradesh. About 339 villages (Tikkas) in district Kangra (H.P) were from this project. More appropriately, 279 villages from Dehra tehsil and 60 villages from Nurpur Tehsil were affected from the construction of said project. In this dam both cultivated and non cultivated land was acquired those under Land Acquisition Act, 1894 and paid compensation that in fact was very less thereof could not cater the demand of the affected people.

The water of the said reservoir goes to Rajasthan through Canal named as Indira Gandhi Priyojna Stage-1 in Sri Ganganagar and Bikaner Districts. The Rajasthan State in turn promised to allot 15,625 acres (one murraba of land) to the dam oustees but could not fulfill the demands of the all oustees. As per Rajasthan Colonization Rules, 1972 for allotment, 16352 oustee’s families were identified for allotment of land in Rajasthan and 12,142 oustees were considered eligible out of which only 9196 applications were accepted whereas 2946 cases till today are kept pending that is aggravating socio-psychological problem of the pong dam oustees of H.P.

Fig 4.5: View of rock filled Pong Dam of District Kangra in H.P.
The Pong dam oustees since the inception of dam could not catch the eye of the administrations of Himachal Pradesh and Rajasthan in general and Govt. of India in particular. It can be verified from the notification of BBMB (enclosed in appendix) wherein the administration acquired the land in the rate ranging from Rs. 130/- per kanal to a maximum or Rs. 650/- at that time, that clearly shows decrepit attitude of the administration toward the illiterate and socially disadvantaged displaced people of Kangra district of Himachal Pradesh. Less compensation could not fulfill their demand and the oustees today felt cheated. Therefore, the present study has been conducted on the Pong dam oustees of Kangra District. The description of sample is as follows:-

4.2: Sample

The study has been conducted on a sample of N = 280 subjects with age ranging from 50 years onwards on the people of Dehra, Haripur, Jawalaji, Jwali, Dharamshala, Kangra, Shahpur, Nurpur, Baadi, Fatehpur, Raja ka Talab and Nagrota areas of Kangra district. Initially pilot study was conducted by the researcher so as to identify the said villages. These subjects were divided into two categories based on Displacement that comprises N = 140 subjects in Displaced group and another N=140 in Non-displaced one.

<table>
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<tr>
<th>Classification of Sample</th>
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<tbody>
<tr>
<td>Displacement</td>
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<td></td>
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<tr>
<td>Displaced</td>
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<tr>
<td>Non- displaced</td>
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Similarly, the formed groups were further divided into two comparable halves based on their Caste that comprises of N = 70 under Scheduled Caste category and another N=70 under Non Scheduled Caste categories. In this manner there were four groups, (Displaced SC; Displaced NSC; Non-displaced SC; Non displaced NSC) with N=70 in each that comprised aforesaid total sample those were assessed with the help of below mentioned measures.
4.3 Measures

In this study both quantitative and qualitative measures were used. The descriptions of both the measures are as follows:-

4.3.1: State-Trait Anxiety Inventory (STAI-HX-1) (Spielberger, Sharma & Singh, 1973).

In this study the State Anxiety Inventory developed by Spielberger, Sharma and Singh (1973) that consist of twenty items in Hindi language has been used. Each item measures a response of 4-point scale, wherein half of the item has been scored conventionally and another half items 1, 2, 5, 8, 10, 11, 15, 16, 19 and 20 in a reverse direction. The score ranges from a minimum of 20 to a maximum of 80. Higher score indicates greater anxiety. The reliability of this scale ranges from $r = 0.83$ to $r = 0.92$. It has been standardized on north Indian population and is simple to administer. The scale already has been used on displaced people in this department therefore has been opted for assessing pong Dam oustees of Kangra District.

4.3.2: Loneliness Scale (Upmanyu & Upmanyu, 1992)

This scale was developed in Hindi by S. Upmanyu and V. Upmanyu of Panjab University in 1992. It is a four point scale that consists of 40 items. The score ranges from minimum of 40 to maximum of 160. Its reliability and validity was established with split half method on one hundred aged persons that ranges from $r = 0.97$ to $r = 0.98$ respectively. Since the displaced people consider themselves highly loaded with loneliness and negativity, this scale has been used to measure the same.

4.3.3: Optimistic-Pessimistic Attitude Scale (Parashar, 1989)

This scale was developed by D.S Parashar in 1989, which consists of 40 items in which 20 items are related to optimistic attitude and remaining 20 items to the pessimistic attitude. Each statement has two alternatives for the response of the subject in the form “agree” and “disagree”. For the items related to optimistic attitude score 1 is given for “agree” and 0 for “disagree” whereas, for the items related pessimistic attitude, 0 score is given to “agree” and 1 score is given to “disagree”. The score ranges from minimum of 0 to maximum of 40. The high score indicates optimistic attitude and low score is indicative of pessimistic attitude. The test retest reliability coefficient of the test is $r = .74$ and according to K R formula it was found
to be .62. The validity coefficient of the optimistic attitude is $r = .72$ and for the pessimistic attitude is $r = .69$, face validity comes out to be $r = .77$. After acquisition of land most of the oustees felt pessimism. For knowing optimism and pessimism attitude this scale has been used.

4.3.4 PGI General Well-being Measure (Verma & Verma, 1989)

This measure has a clinical importance because general well-being shows positive correlation with quality of life and general satisfaction, and it is positive correlated with neuroticism, psychoticism and other such variables. Verma and Verma (1989) developed the PGI general well-being measure in Hindi language. It consists of 20 items and the score ranges from a minimum of 0 to a maximum of 20. More the score more will be the general well-being. This scale can be applied on every age level and its reliability ranges from $r = 0.86$. The measure has been standardized on north Indian population. This scale has vitally been applied on the displaced people by Department of psychology H.P.U; hence is opted for present study.

4.3.5 Quality of Life Scale (Moudgil, Verma & Kaur, 1998)

Moudgil, Verma and Kaur (1998) developed Hindi version of P.G.I quality of life scale. It comprises of 26 items wherein each statement has 5 alternatives ranging from low to high degree. The score ranges from minimum of 26 to maximum of 130. Test-retest reliability of the test is $r = .79$ and split-half reliability is $r = .81$. Divergent and convergent validity of the sale is well established. High score on the scale is indicative of high level of quality of life of an individual. So for obtaining qualitative information; the above said five measures have been used. Beside this in-depth information also has been collected through qualitative measure whose description is as follows.

4.3.6 Field Observation

In this method the direct observation of the people were made and their physical, environmental, social, psychological and cultural information were gathered. Generally, the field observation is the collection of information outside the laboratory. It involves a range of well-defined variables, informal interviews, direct observation, collective discussion, self-analyses and life histories.
4.3.7 Interview

In this method face to face interaction and conversation was made with the oustees in order to obtain requisite information about their problem. By interview investigator get the information that helped in observing certain aspects of subject’s behaviour (way of speaking, self-confidence, and facial expressions, language etc.). Interview was also used to record the narratives of the subjects that dealt with client’s self-reflection, their core constructs, such as self-characterization, ways of construing self and others. It focused on the role of language in defining the reality and the problems of living after the formation of Pong Dam reservoir.

4.3.8 Fuzzy Cognitive Mapping

Generally, individuals store their own perception of the reality through mental maps (mental models). In cognitive maps, the stored concepts has been decoded, analyzed and clearly structured by establishing cause and effect relationships, and this is significantly useful both for individual aims (thorough understanding of complex issues) and in group situations. The cognitive map in study was recorded by nodes, which represents the concepts and was connected to each other by links (also called edges). The edges were directed to show the directions of the cause-effect relationships. The researcher used Fuzzy Cognitive Maps techniques developed initially by Kosko (1986), who viewed it as a pure qualitative technique. The use of Fuzzy Logic also introduces some quantification aspects. A successful application of the Fuzzy Cognitive Maps as Knowledge Mapping Systems is the study of Ozesmi (1999) that has been used in the present study. This technique is very useful for knowing the mental impact of the displaced people, thus used in the present study.

4.3.9 Case Study

It is an in-depth analysis of a single person. It is often used in clinical cases or in situations where lab research is not possible or practical. It involves collecting and reporting descriptive information about a particular person or specific environment, such as a school. In psychology, it is confined to the study of a particular individual. The information is mainly biographical and relates to events in the individual’s past as well as current events of his or her everyday life. In order to produce a fairly detailed and comprehensive profile of the person various types of accessible data, such as medical records, employer’s reports, school reports or psychological test results may
be used. The specific format for a case study can vary greatly but generally it includes identification of data, family history, personal history, social history, educational and vocational history, problem history and present problem. For knowing the individual problem of the displaced people this technique has been used.

4.3.10 Photography

The process of photography has also been used for the stable or permanent visible images either directly or indirectly by the action of light on sensitive surfaces i.e. through photography. More appropriately the photography has been used to record the events the researcher passed with the subjects during the research work.

4.4 Procedure

The objective of the present study is to identify the cognitive behavioral aspects and quality of life of pong dam oustees inherited at Kangra district H.P. In the beginning of the study the researcher made familiarity with the study area and the people where they were relocated after the displacement. With the help of the local people and officials researcher searched the place of displaced people. The villages were reachable by buses, boat, taxi and most of the times the researcher walked on foot to the homes of oustees. The researcher met Deputy Commissioner and other officials at Raja ka talab in rehabilitation and resettlement office. After that the researcher filed an application under RTI Act to get proper and written information regarding the displaced and rehabilitated people of Pong Dam. Beside this Panchayat Pradhan and villagers were also contacted to know the settlement of displaced people. The villagers were very cooperative when they were questioned about their experiences and suffering from the project during the displacement. Some of them became emotional while describing their displacement story, and reported deep pain. Every individual has a different pain story, because of the attachment of that place. It is ironical that even after so many years of displacement, oustees still feel cheated due to the injustice and indifference at the hand of the authorities. It was found by the researcher that every oustee have a feeling that government will definitely help them to get them full compensation. After the proper information the identification of the villages and rehabilitated sites of the oustees, the researcher started data collection. During this period the researcher used quantitative analysis for knowing psychological and behavioural aspects including quality of life information. The