Chapter 2
Review of Literature
It's a stunning, subversive image: on the face of it, the white man was still in the sedan chair, playing his customary autocratic role, yet in pursuing a set of hidden truths he had become the tribals' servant." (Leslie, 2005; Page 53)

[This scenario is a satirical comment on some social activists opposing large scale developmental interventions in Narmada. There was a review of the Sardar Sarovar dam on Narmada by an independent team consisting of a Republican Congressman Bradford Morse, a Canadian jurist Thomas Berger, an anthropologist Hugh Brody, and a hydrologist Donald Gamble. On the negative report of the team about the construction of dam and strong opposition by local people, the World Bank withdrew in 1993. In a field visit to tribal villages, Morse suffered from emphysema, which made hiking difficult, and on two occasions he reluctantly agreed to sit on a charpoy while tribal carried him from riverbank to village.]

2.1 Psychosocial aspects of development

Psychosocial changes, occurring due to fast-moving developmental scenario in the Third World countries, have remained largely unknown. There are some studies by psychologists, which primarily include changes in socio-psychological contextual factors (Sinha, 1986; 1988a), such as: a. Breakdown of age-old traditions that had regulated individuals and institutions; b. Transformations in the family, religion, caste, and other social institutions; c. Migration and uprooting of the population from its natural habitat; d. A new life style that is not in consonance with the traditional
life style; e. Changes in attitudes and in basic values and belief systems; f. Changes in individual's loyalties, identification and patterns of intergroup relationships; and, g. General condition of uncertainty and instability.

According to Sinha, most of these conditions are psychologically stressful for the individual and therefore related to mental health. Two socio-ecologists drew a similar conclusion, for them the process of development process in Third World countries like India has created situations of inequality and exploitation that lead to frustration and rebellion among people (Gadgil & Guha, 1995). However, the process of development has various aspects that can be evaluated in the context of the well-being of people. It is true that the dream of Nehru remains largely unaccomplished (Sen, 1997). If we see the constitutive elements of well-being rather than the utilitarian elements. They signify a 'mental state' view and the 'desire-fulfillment' respectively (Sen, 1999). Speaking of the more holistic or comprehensive cognition of those at the receiving end of the present world system, Nandy (1998) cautions against new forms of violence and injustice hidden in concepts such as development, growth, history, science and technology. Our own people may use them as tools of oppression within the same region. The two studies of the natives of the Garhwal Himalaya (Bora, 1996; Hoon, 1996), where two large dams are coming up, points out the hollowness of the policies of the development.

There is a misconception in the minds of materialists that the social relations follow the same laws as the particles of the matter. But the nature of social realm is entirely different from the physical realm (Misra, 1990). The social problems are intractable and therefore subject to perceptual, theoretical and methodological preferences of the investigators. Partly the fault lies with the social scientists, in order to make their discipline a science, they borrowed the materialist principles and
methods (Bandyopadhay, 2001). It is also true that the physical scientists and the technocrats, being individuals living in the society, develop a false confidence that they can understand the social phenomena. They dilute the very nature of social concept (Sen, 1995).

The behavioral scientists have to make the physical scientists realize that displacement and rehabilitation involve social and psychological factors. It would be an absurdity to suggest technical solutions to these socio-psychological issues (Hardin, 1968). It has been realized now that there is an intimate relationship between development, environmental and health (Chatterji, 1998). The word environment refers to physical as well as economic, social, political and psychological aspects. The relationship between development, environment and health encompasses issues such as lack of opportunities, high un-employment, distribution of income and discrimination based on race, color and caste. These issues are further related to individual's health and health care facilities.

People may physically adapt to the changes in external situations but behaviorally they face problems (Cairns, 1979; Harlow & Mears, 1979). Perhaps this is true in case displaced people who are apparently normal but have strong feelings of disgruntlement to the whole system. Ecological psychologists consider 'behavior settings' as primary determinants of behavior (Barker, 1968; Wicker, 1979). Many factors today force a fairly large number of citizens towards behavior settings that are insecure. For example, the 1984 Bhopal disaster due to gas release from the Union Carbide Factory affected more than 500,000 residents. In addition to acute health effects, a large number of people lost their jobs due to closure of factory. Even ten years after the tragedy 60% of the victims were disabled and many of them had various kinds of psychological problems (Callender, 1998).
Psychologists are now including ecological framework in their psychological analysis. One such beginning was made by Sinha (1982) to understand the phenomenon of deprivation, which implies a felt loss due to dispossession of objects. He suggested that ecology provides a useful framework for understanding psychological processes related to deprivation. The ecological paradigm has become common in the area of mental health and is termed as eco-behavioral analysis (Schroeder, 1990). In this paradigm there is emphasis on detailed applied behavior analysis, which follows a conceptual basis borrowed from ecological psychology. Eco-behavioral analysis constitutes people, the stimuli with which they interact along with their historical contexts, medium of contact, and current context. In this way it provides a holistic analysis of behavioral problems and interventions.

When people come in contact of dominant culture, the acculturation starts. They have to acquire new patterns of behavior to cope up with the situation, which requires drastic changes in language, tradition, customs and institutions. As a result, some individuals develop 'acculturative stress' that is psychopathological (Mishra, Sinha & Berry, 1996). The migrants, for various reasons, are prone to such stresses and strains. The recent document of World Health Organization on Mental Health (WHO, 2001a) has recommended that these populations need special mental health care. Sometimes the mental health care facilities are required immediately at a very large scale, for example, during earthquakes, floods and cyclones. But it is also true that the affected population needs a continuous care, since the social and psychological problems due to separation and loss may have long-term effects. Various developmental activities as well as destruction of natural habitats displace people from their native places and make them vulnerable to psychological stress. In India, there are at least 20 million oustees of big dams and irrigation projects (Roy,
1999). These populations, displaced from their native villages, are largely thrown in areas where they have to spent their entire life and even generations as minority communities. They are prone to acculturative stress.

Social psychiatrists have been concerned with the inter-relationship between the socio-cultural environment and individuals’ mental health. In this context, it has been noted that there are psychologically vulnerable minority groups even in developed countries (Kiev, 1977). Loss of traditional culture and identity are not the only factors affecting them, they also develop dependency fostered by reservation life. Health problems are prevailing all over the world, but it is rapid social change resulting from economic development, industrialization and urbanization that has correlations with positive or negative social well-being. Psychologists have noted that in many cases these changes have eroded the traditional psychological support systems, and thus reduced the capacity of individuals, families and communities to cope with distress, disease and disability (Holtzman, Ivans, Kennedy & Iscoe, 1987).

Furthermore, these investigators have found that the problem was more complicated in the developing countries. These countries lacked in professional manpower as well as financial resources. It is also important to note that the developing countries are undergoing enormous environmental changes, which includes physical, social as well as psychological aspects. An important characteristic of modern development is alienation of communities from their native habitats. There is a sense of belongingness among individuals and communities to their habitats, which becomes a part of their personality and culture. Severing these relationships results in various kinds of psychopathological expressions (Draguns, 1988).
Psychologists in India have paid little attention into these environmental changes. Although they accept that development is more than economic growth, in-depth studies of its positive and negative effects were wanting (Sharma, 1994). There is rather indifference to issues related to management of overall environment such as conflicts arising due to depletion of resources, enhancing general awareness and indigenous consciousness for sustainable development and assessment of threats to the ecosystem. An important task in the area of health/well-being should be to identify segments of populations vulnerable to such changes.

Psychoanalyst’s exploration in the area of religious or majority-minority conflicts also suggest the role of various kinds of environmental factors in the increased violence observed in different parts of India (Kakar, 1995). These studies explored the latent identities, person’s feelings and attitudes of self, as a member of ethnic, religious and cultural collectivities. Those latent group identities when evoked by respective religious communities lead to violence (Figure 2.1). The process hypothesized by

![Diagram](Figure 2.1 A causal chain leading to violence (Source: Kakar, 1995).)
Kakar, embedded in psychoanalytic theory, was used to explain various kinds of religious conflicts taking place in contemporary India. He further argued that most of the populations participating in these conflicts were the victims of modernization: migration, displacement, globalization and poor urban conditions. When people in those minority communities feel threatened, they try to take shelter in dominant religious groups by taking their membership. In this way, they re-construct their self-identity. However, the dominant group may use these vulnerable populations for their own sake, provoking them to assert their respective religious identities, which ultimately lead to religious conflicts.

The Third World populations are in the process of transition whereas these changes have already taken place in the developed countries. In other words, the western society has embraced the ideology of individualism (Kagitcibasi, 1988). This ideology is characterized by emphasis on individual autonomy and separation of self from others. The family is also separated from kin including the older parents and the community. These characteristics are considered as important cultural adaptations to the process of industrialization, the dominant process of development (Kim, 1997). According to this viewpoint the displacement of groups and populations is likely to take place during the process of development. This argument emphasizes competition in order to survive under urban conditions; but one has to leave its traditional past.

We may consider developmental interventions as having both loss as well as gain. Kagitcibasi (1988) has framed this argument in terms of individualism-collectivism dimension. She is of the opinion that a socialization process that emphasizes cooperation and close familial interpersonal ties may have more gains than losses. On the other hand, a socialization process that encourages competition and
separation may have more losses than gains. As far as the issue of autonomy or independence is involved, the autonomy can go along well with interdependence. Furthermore, it is important to take into consideration the contextual factors.

In contrast to the preceding viewpoint, which is worth exploring, some psychologists consider achievement motivation as an important factor in development, since it has been an important characteristic of Americans and other Western societies that constitute the developed world. McClelland's need for achievement (n_Ach) became an important measure to differentiate 'rich' (Western) and 'poor' (Indian) populations. 'Poor' people were low on need for achievement and therefore slow in development (Pareek, 2002). In almost similar way Sinha (1988b) also characterized Indians as fatalists, dependent, insecure, submissive and passive. However all these conceptualizations about 'poor' Indians were being challenged by the fellow psychologists (Misra, 2003; Tripathi, 2003) as they were based on sweeping generalizations and adoption of an etic (culture-general) approach to understand the behavior and mental processes of Indians. Above all, no attention was paid to the dominant political, social, economic and environmental forces that had been continuously crippling the rural pockets of Indian population.

**Summary:** In the above section it has been argued that a flawed development argued that faulty development paradigms (see also Misra & Jain, 1999), based on an incorrect understanding that social relations are physical relations, coupled with insecure behavior settings, the acculturative stress, and breakdown of the social support system negatively affect well-being of people. Studies by the social psychologists have reiterated that feelings of being cared for and the affectionate ties with other people positively change the health and well-being (Cohen & Syme, 1985; Sarason & Sarason, 1998). The breakdown of social support system and the
separation from loved objects occur simultaneously during the process of
displacement. These two factors, though separate from each other are assumed to
negatively affect the mental health of displaced persons. It is important to explore
this relationship to understand the etiological factors of mental health.

Although current emphasis of psychologists in India to adopt an indigenous approach
is admirable (Misra & Mohanty, 2002), there is almost an insignificant contribution to
understand the miseries of suffering millions. For example, the orientation towards
social constructionism is confined to methodological issues (Asthana, 2002; Varma,
2002) and not to real problems of minorities or other affected populations. Though a
number of volumes highlight psychological issues in the area of environment and
development (Agarwal & Saxena, 2003; Dash & Jain, 1999) they however need
deep exploration.

2.2 Three paradigms of psychosocial change in India

The scarcest of resources for people oriented development is not rupee finance or
foreign exchange or scientific manpower but consciousness-raisers and organizers for
working among the deprived masses (Raghavan, 1999). In the following sections
three models of psychosocial change are discussed which would help us to
understand the problem of displacement of people particularly in the western
Himalaya where significant number of natives have undergone the trauma of
separation due to construction of large dams.

2.2.1 Social psychological model

Uniqueness of the social psychological approach is conceptualization of psychological
processes in cultural and genetic co-evolution. This approach has been applied in
understanding the social organization of people of Ladakh (Crook & Osmaston, 1994)
and psychological teachings of the Buddhist yogins of the Himalaya (Crook & Low, 1997). The salient features of the social psychological model (Crook, 1995) are as follows.

Crook pioneered the social psychological processes involved in cultural and genetic co-evolution. Although co-evolutionary models of human adaptation and change have been there since long, the socio-psychological mechanisms that bring about this adaptation were largely unknown. These socio-psychological mechanisms relate personal identity to social approach as a result of which individuals can adopt or are coerced to adopt values and behaviors that do not support their fitness. Mostly such kind of anti-survival and anti-natal preferences are based on imposed religions or ideological beliefs. Usually, the process of cultural evolution is analogous to the process of biological evolution or genetic evolution. It is assumed that individuals in a culture secures a close fit between needs and resources through the adoption of social strategies appropriate to their environment.

There is strong evidence to suggest that the nature of these social strategies requires in-depth psychological understanding of the motivation of individual that cause alteration in collective behavior. The complexities of these psychological factors cannot be explained through behavioristic rooted interpretation, nor genetically determinism provides adequate explanation. During such changes, perhaps the personal unit (the mind) undergoes through structural changes in the ideas. The person is aware of some of these ideational changes but many of them operate at unconscious level. In this way, the socio-ecological adaptations of a population are determined to a great extent through ideological structures.
In order to understand psychological mechanisms underlying those changes, Crook has developed psychological mechanisms underlying those changes, Crook has developed the social psychological model of cultural preference. Its basic assumptions are given here (Figure 2.2).

First, this model starts with the evolution of mind and self. This according to him was essential to understand the cultural side of the biological and cultural co-evolution. In social groups, the need for self-reference in social encounters might have been responsible for an awareness of one’s own awareness (metacognition).
Second, once this process started working self-evaluations followed, and attributions of high esteem to one’s own self led to experiences of the ‘flow’ (joy and satisfaction). The positive self-esteem is supposed to enhance the biological fitness of the individual (inclusive fitness).

Third, however, it would be determined by the ecological conditions and societal norms and values; the more they are tied to the subsistence base, the more likely is to be the fit between the individual and his biological adaptation and greater would be the experience of the flow (higher inclusive fitness).

Fourth, on the other hand social disapproval and poor match of the societal norms with the ecological conditions would lead to poor well-being (lower inclusive fitness).

Fifth, the situation becomes complex; where the social cultural changes are initiated group selection processes start acting. A minority group may perceive itself deprived; such processes may lead to social breakdown and conflicts. Individuals may experience low self-esteem and loss of identity.

Sixth, Crook has emphasized the socioeconomic contexts of belief and the role of religious institutions in it. This has importance for the concept of ‘niche construction’, which is a cultural adaptation. The concept of niche is widely used in ecology, but Crook defines ‘niche size’ as the extent to which a religion captures the personal world of individuals. Other contextual variables are also important.

Seventh, the model has been tested in analyzing the cultural adaptations of the Buddhist people living in the Himalaya including Ladakh.

The above model convincingly shows that in the estate owning families in Zangskar polyandry (many males live with one female together) with monasticism reduces birthrate. The analysis suggests that any loss of fitness for individual male under polyandry compared with mono marital monogamy was less than might be supposed (Crook, 1995). In this way, inclusive fitness theory of evolution and the ecological
constraints among with the social institutions provide a convincing explanation of polyandry practiced by Buddhist population in western Himalaya. Furthermore, Crook's social psychological mechanisms, including niche construction at mental level, are supported by detailed descriptive account of the cultural adaptations in Buddhist Himalaya. These studies demonstrate that the behavioural preferences of individuals enhance their inclusive fitness. In addition, the imposed religious beliefs, such as monk hood, which is anti-survival, helps in increasing inclusive fitness.

However, it is yet to see how new economic opportunities, which are not dependent upon the ecological dependence of the traditional way of life are going to affect the life of people in this region. People perceive that the new economy has increased the carrying capacity of the region, for example by tourism. These resources are easily available and potentially converted into reproductive success. In addition, educated Ladakhi have become a politically active minority, who still identify socially with Buddhism while the majority in Jammu and Kashmir is Muslim. This minority is now actively seeking social change and maximization of their wealth and population. The important problem, according to the above social psychological model of Crook is the opposition of subsistence and cultural needs of a community and following an economy beyond the grasp of their leaders.

2.2.2 Eco-cultural model

The eco-cultural model incorporates contextual variables, social and political, which dynamically interact with ecological variables and lead to biological and cultural adaptation in population of human beings (Mishra, Sinha & Berry, 1996; Segall, Dasen, Berry & Poortinga, 1999). The 'adaptation selection' hypothesis of the model assumes that as cultures evolve over time from nomadic to sedentary mode of life, the demands of closer and larger group living emphasize greater social conformity
and sensitivity at the cost of individual independence. The sedentary society permits greater role diversity in the community at large and greater role specialization among individuals. The concept of cognitive style originated from these researches carried out in various part of the world.

The eco-cultural model (Figure 2.3) contains various elements arranged in two levels: the upper level deals with traditional features of a society; the lower one deals with the feature of culture change. At the left side are input variables, ecological and socio-political whereas on the right side are psychological outcomes for individuals. In between them are population level adaptive phenomena.

*Figure 2.3* The eco-cultural model (Source: Mishra, Sinha & Berry, 1996).
(biological, cultural and acculturation) and influence processes from the population to
individual (via genetic and cultural transmission).

An important aspect of the model for us is the process of acculturation. It is defined
as culture change from continuous, first hand contact between two distinct cultural
groups. It can be studied at two levels: population level and individual level. The
population level changes include social and economic structure, social stratification,
family and institutions. Whereas individual level changes include behavior, trait,
identity, values and attitudes. Although acculturation is a worldwide phenomenon, its
impact may vary according to social, political and economic institutions. For long,
investigators have suggested a relationship between acculturation and mental
health. Berry and Kim (1988) have reviewed the evidence related to this
relationship. There occur four kinds of changes due to acculturation: pre-contact,
contact, conflict and adaptation. The implication of this phase analysis is important
for mental health. They also postulate four modes of acculturation: integration,
assimilation, separation and marginalization. Lastly, there are various processes
leading to problem of acculturation that involve immigrants, refugees, native people
and ethnic groups. Besides changing the social structure and power structure,
acculturation induces stress in various ways. A study by Mishra, Sinha and Berry
(1996) on the adivasis of Bihar documents the effects of acculturative stress on their
mental health. In general, it has been found that migrants report psychiatric and
psychosomatic ailments more frequently than the host population.

Considerable evidence has gathered following the eco-cultural model, which strongly
supports certain relationships between ecology and behaviour (Segall, Dasen, Berry
& Poortinga, 1999). Two examples are here: the link of eco-cultural context to
cognitive style and cognitive development is very clear; and, socialization practices
mediate the influence of group-level variables on individual functioning. Interaction of tribal groups with groups belonging to dominant culture lead to acculturation and may cause stress (Mishra, 1998). The eco-culture model is popular among cross-cultural psychologists and has been employed in large number of studies under various environmental conditions. In the present study the conceptualization of acculturation will help us to study the consequences of displacement due to construction of large dam as these populations are resettled in alien areas.

2.2.3 Native Cognitive Model

While the present study has followed a social perspective, especially the social constructionist viewpoint, which has been discussed in the introduction, there is deviation to incorporate ecological and evolutionary (biological) viewpoints. This is particularly important for understanding the structure of interdependence that forms the basis of native cognitive model. The environmental problems generally involve conflicts between individual and collective preferences. Some of these conflicts have their origins in our cultural past. This is evidenced in the work of Madhav Gadgil. He has used this approach to understand the organization and change in India society (Gadgil, 1991; Gadgil & Guha, 1993), and then transcends to learn from tradition of India and contemporary grassroots movements (Gadgil & Guha, 1995) for the preservation of environment (Gadgil, 2001; Gadgil & Rao, 1998; Pirta, Gadgil & Kharshikar, 1997). This work provides important biological and cultural orientation for the native cognitive model.

A community based holistic approach involves the study of group dynamics in theory and in real life situations. The essential feature of group is cooperative interdependence of its members; it is the basic characteristic of the group and is denoted by cohesiveness among the members of group. There is evidence for this
conceptualization of group dynamics from field studies on groups of primates (Pirta, 1990; 2002). On the basis of this research on mechanisms of group cohesiveness, Pirta has arrived at the structure of interdependence for a primate group. He has studied the nature of interdependence in a primate group by testing three social psychological hypotheses (Deutsch, 1973): substitutability, positive catfixis and positive inducibility. These hypotheses, respectively, predict that in a more cooperative group there would be more division of labor, greater friendliness, and more attentiveness to one another.

The preceding conceptual background has been used a basis by Pirta to articulate the struggle of the people of western Himlaya in a native cognitive model of development (Pirta, 2003a; 2003b). It deals with the problem of sustainable development as well as well-being of local communities. The aim is to find out non-coercive solutions to environmental problems and search ways, where short-term individual interests are sacrificed in favor of long-term common interests. The example was the native peoples’ struggle to save their forests of Himalaya from large scale logging operations managed by private contractors. The natives of Garhwal Himalaya followed a non-violent method of resistance to government’s policies that flouted basic principles of their cognized model of development. It has similarity with the social constructionist orientation.

Natives of the Garhwal Himalaya perceived development from a holistic point of view (Figure 2.4). In such a paradigm, the development of both the individual as well as the community are important. For the normal functioning of the individual head (knowledge), heart (compassion) and hands (actions) must function in harmony with one another during the mundane day-to-day activities and to achieve self-enlightenment, the ultimate goal of life. At the community level, ‘humanitarian’
A HARMONIOUS RELATIONSHIP
OF

Atma Gyan
(Self-enlightenment)

Gyan
(Knowledge)

Bhakti
(Devotion)

Karma
(Action)

HEAD

Humanitarian
Scientists

Compassionate
Writers & Poets

Dedicated
Social Workers

Social
Structure

GROUP

YAJNA
(A noble cause)
TO REVIVE OUR DYING
PLANET

VIKRTI
(Destruction)
Big Head, No
Heart, Feeble
Hands

PRAKRITI
(Nature)
ECOLOGY
(Air, Water, Soil)
BASIS OF LIFE

sanskriti
(Culture)
Peace,
Happiness,
Fulfillment

Figure 2.4 The native cognitive model (Source: Pirta, 2003).
scientists, compassionate poets and writers, and social workers should work towards the attainment of welfare of all living and non-living. The social workers, who participated in the struggle known as the Chipko Movement, followed a holistic development approach and paid special attention to the cause of poor section of the society (Alter, 2002). In this native approach, there is an awareness of the sustainability of life that encompasses the physical, social, psychological and spiritual aspects.

The model provides an indigenous approach to understand the process of development in India and how it is affecting the life of people. It has special relevance for the present study since it is based on peoples’ successful struggle (the minority struggle) against the dominant model of development. During the early phase the natives’ struggle, the Chipko Movement, was confined to save the forests of Himalaya. But in the later years this struggle became the Save Himalaya Movement, and became directed against the large-scale developmental interventions taking place in the Himalaya. For example, the construction of large dams, which was causing displacement of local populations from their native areas (Pirta, 2005). Thus it has special relevance to the present study.

**Summary:** The salient features of the three models described above are given in Table 2.1. All these models of psychological change have been applied in Indian context; two of them—social psychological model and native cognitive model—have been developed and applied in western Himalaya itself and are therefore important to conceptualize the consequences of displacement due to large scale interventions in this region. Of particular significance is the native cognitive model that has emerged from the non-violent resistance of peasants and social workers against
**Table 2.1**

*Comparison of Three Paradigms of Psychosocial Change in India*

<table>
<thead>
<tr>
<th>Social Psychological Model</th>
<th>Eco-cultural Model</th>
<th>Native Cognitive Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>Developed by Crook and evaluated on Himalayan population.</td>
<td>Based on Berry's work in various parts of world along with some psychologists in India.</td>
<td>Mainly based on Himalayan peoples' experiences and articulated by Pirta.</td>
</tr>
<tr>
<td>Based on co-evolutionary approach.</td>
<td>Poor in evolutionary approach; not clear about adaptive process.</td>
<td>Refers to co-evolutionary approach of Gadgil.</td>
</tr>
<tr>
<td>Explicit assumption of mind and follows experience approach.</td>
<td>No reference to mind; experience not considered.</td>
<td>Assumption of mind; experiences of people important.</td>
</tr>
<tr>
<td>Involvement in social issues at institutional level.</td>
<td>No explicit social orientation.</td>
<td>Grassroots orientation to social problems, evidenced by Bahuguna's work (Gandhian ideology).</td>
</tr>
</tbody>
</table>
large scale forest denudation, silencing the natural flow of rivers, and displacing local people from their places (Pirta, 2003a; 2005).

The present investigator has explored the psychosocial aspects of a population displaced as a result of the implementation of the largest developmental project, the Bhakra Dam, after the independence of India. It is tragic that whereas a secondary objective of this gigantic developmental intervention, the Bhakra Dam, was to alleviate the suffering of the refugees (Raj, 1960) of the partition of India that took place in 1947, this 'modern temple' of India (Roy, 1999), made an equally large population of Himachal Pradesh refugee in its own country. For more than 40 years, these displaced people have been looking for a humanistic approach to recognize their sacrifice for the common good and to make for their livelihood (Mamgain, 1975; Singh & Banerji, 2002).

2.3 Loss of home

“There is no greater sorrow on earth than the loss of one’s native land.”

(Euripides, 431 BC, in Tribe, 2002)

“Although the dam builders have not bothered to keep count, the number of people flooded off their lands by dams is certainly in the terms of millions—30 million would be a conservative estimate, 60 million more likely. The available evidence suggests that very few of these people ever recovered from the ordeal, either economically or psychologically.”

(Mc Cully, 1996; Page 8)

A conservative estimate of the World Health organization about five years ago is that there are about 50 million refugees or displaced persons, mostly living in low-income countries (WHO, 2001a). They are the most vulnerable groups that require
continuous mental health services. These uprooted populations live in diverse habitats on the mercy of hosts. They suffer from sense of loss, loss of home, separation from community, loss of livelihood and position in the society, loss of identity, loss of social support network, and uncertainty. As a result of which these uprooted populations become vulnerable to physical and mental stressors. Although during the course of evolution human beings have developed immense brain plasticity for learning and cultural innovations to enhance their resilience, numerous technological innovations has threatened the survival of individuals or groups. This is particularly the case of the displaced persons of large dams who are thrown out of their homes and have to encounter human apathy while coping up with the hostile environment at a resettlement site.

In the following part of the section, an important question is what is the nature of relationship between displacement and mental health. It is possible that displaced populations are exposed to environmental situations where they learn how to cope with life circumstances; an alternative hypothesis may be that displacement further deteriorates people's living conditions and consequently their coping ability also become weak. Besides these situational factors, various psychological processes may also mediate between displacement and mental health. There are various approaches to understand this relationship between displacement and mental health, some of them are as follows.

2.3.1 Socio-ecological approach

It is significant to note that some of the early sociological explorations of mental disorders were through ecological investigations (Freeman & Giovannoni, 1969). Many of these studies looked into rural-urban differences, isolation and migration as main factors leading to mental problems. However, the important matter is lack of a
sound ecological approach. There is considerable published work in this area by the social scientists, but the psychologists have not done much on this problem. While presenting a broad overview on environmental movements in India, Gadgil and Guha (1993; 1995) divided Indian society into three categories: the ecosystem people, primarily dependent on natural resource survival base; the omnivorous, with privileged access to resources; and ecological refugees who have been rendered destitute because of denial of traditional access to natural resources.

The two criteria of development openness and embeddedness (Tripathi, 2002), have been advocated by various grassroots movements in India. On the other hand, the imposition of a model of development, without aligning it to the religious and moral symbols was likely to generate dissensions in the minds of people. Mehta (2002) has considered various mass movements in contemporary India as an important strategy for behavior modification of people. In this strategy there was hope for empowerment of weaker sections and a way to achieve social control. Some investigators have noted that in many cases internally displaced people are more vulnerable than the refugees, since there are discrepancies about the human rights of these populations and they undergo extreme violence (Tribe, 2002).

In the native cognitive model, besides ideas, peoples are major focus of concern and the model emphasizes cooperative action where social context has an important role. The model may have application in understanding the mental health problems of rural populations who are forced to leave their homeland. This model becomes more relevant since it uses community-based approach, which is considered important in the emergency situations (Brundtland, 2000). The native cognitive model is holistic in nature and encompasses biological, social and mental dimensions. This enhances the suitability of this model in disaster management. The psychiatrists working in
this area consider holistic approach highly relevant (Shalev, 2000).

Although epidemiological studies in mental health look into environmental variables, the relationship of ecology to an individual’s mental well-being is a neglected area in psychology. Some attention is being directed towards the etiological and preventive measures of mental disorders as well as to understand the normal development of individual. The socio-ecological approach has also been introduced in abnormal psychology (Korchin, 1986). Moreover, the study of development of individual where the concern is on unfolding of various abilities and behaviors in the individual, investigators assume the embeddedness of an organism in its ecosystem (Geert, 2003). An important line of research from India is on the prolonged deprivation (Misra, 2001). Another series of studies has followed the eco-cultural model (Mishra, Sinha & Berry, 1996). However, these two approaches largely follow micro-system rather than macro-system approach to study the ecosystem relationship. They have taken a universal approach, and not a problem focused approach. But the processes involved in displacement and resettlement are likely to differ tremendously due to situational physical, social and psychological factors.

2.3.2 Socio-cultural approach

Since long, investigators have been advocating for inclusion of cultural and social factors in understanding development of individual. One particular approach deals with this issue is the role of social-historical process in individual development (Youniss, 1983). During the summit in Copenhagen on social development, for the first time in the history, United Nations invited heads of States and governments to recognize the significance of social development in human well-being (Rao, 1998). The aim was that social development must receive highest priority in near future. It
was acknowledged that societies must respond more effectively to the material and psychological needs of individuals, their families and the communities. While recognizing populations vulnerable to stress and deprivation, it was noticed that there are millions of refugees or internally displaced persons throughout the world. Therefore, the important challenge was to respond to the immediate needs of these suffering populations.

It is not uncommon among academicians to find that those who talk about the survival needs of these distressed populations are categorized as following a ‘socialist’ or ‘non-development’ approach. There are however social scientists, studying the problem of urbanization and industrialization in India, who have noticed a phenomenon known as eating of one community by another. In other words urban centers are acting as pull factors for rural population who live under inhumane conditions in the cities (Lipton, 1995).

A link between cultural and ecological processes has been advanced by social ecology approach (Bookchin, 1996). According to Bookchin, the power of social ecology lies in establishing the relationship between nature and society or between the biological and the cultural. Their main emphasis is on the mediation of human mind, society, and culture in natural evolution. This approach is mainly idealistic, a pragmatic that emphasizes the naturalistic relationship of social systems and eco-systems has been provided by Marten (2001), which is summarized here.

The main points of human ecology approach by Marten are as follows.

A. Human ecology studies the relationship between people and their environment, where human beings constitute the social system whereas the environment is
perceived as the ecosystem. The central concept in human ecology is the social system having demographic, social and psychological properties.

B. The ecosystem and social system function and interact as self-organizing, complex adaptive systems. They promote survival in a dynamic environment. The concept of emergent property is introduced to understand human-environment interactions at various levels.

C. Although population growth beyond carrying capacity is a major problem, the enormous consumption by wealthy nations also exhausts the resources. Attempts are needed to discover social mechanisms of population regulation. The role of traditional wisdom, territoriality, and humanistic ways is considered essential for controlling population.

D. From co-adaptation between social system and ecosystem, there is gradual co-evolution of the two. For example, at the subsistence level farmers co-adapt with the natural system and there is very less modification of the latter one. However, after the technological revolution the human impact has been tremendous, in fact, today the social systems and ecosystems are evolving under the human control.

E. People make sense of complexity of their surroundings in terms of physical, social and self related perceptions. The information collected through these perceptions of ecosystems, is interpreted and modified in a social system.

F. Sustainable human-ecosystem interaction involves a combination of two strategies. We have to follow nature's way and not to damage ecosystems.

According to Marten an important characteristic of social system is its resilience and adaptive development. The resilience is the ability of social systems to continue functioning despite severe and unexpected changes. This would require new ways of conflict resolution where emphasis is on the cooperative use of resources. Some of
these social and cultural issues have been analyzed by a number of investigators from various disciplines (Ginkel, Barrett, Court & Velasquez, 2003; Saraswati, 1998).

Recent research by international agencies such as World Health Organization indicates that the magnitude of the problem developing due to conflicts and various developmental activities is tremendously increasing in the form of large population of displaced persons (Brundtland, 2000). Most of this population present mental health problems in the form of chronic mental disorders to trauma, distress and suffering. Mental health needs of these forcibly displaced people remain largely unknown due to lack of research particularly in the developing countries. Although it is true that all displaced persons are not equally affected, the psychological dysfunction depends on severity of event, socio-cultural factors and other environmental parameters. These factors will also determine the level of resilience among these populations.

Furthermore, investigators in the area of mental health have suggested a relationship between impoverished environment and mental illness. For example, economic factors such as material deprivation due to displacement lead to malnutrition, low income, indebtedness, inadequate health care and lack of social networks. These factors are in turn related to ill health (Patel, 2001). It has been suggested that deprived condition make people prone to depression. In a recent report, Holtzman (2003) noted that various kinds of social conflicts taking place all over the world have challenged the social and behavioral sciences.

2.3.3 Socio-cognitive approach

In Bandura's (1967, 2001, 2004) social cognitive theory human functioning is rooted in social systems. The personal agency operates within a broad network of socio-structural influences. There is a triadic reciprocal causal relationship between
imposed environment, selected environment and constructed environment. Cultural factors and the power structure plays important role in developing sense of self-efficacy and consequently resilience to stressors. There are various ways in which self-efficacy develops. The mastery experiences provide most important ways of developing self-efficacy. For example, a resilient sense of efficacy requires experiences in overcoming hindrances through perseverant efforts, whereas, failures lead to poor sense of efficacy as a result of which such individuals become vulnerable to aversive circumstances.

The social cognitive theory assumes that socio-structural factors operate through psychological mechanism of the self-system to produce behavioural effects. Therefore, it can be hypothesized that,

a. The populations displaced from their socio-cultural environment acquire new experiences in unpredictable situations and develop resilient sense of efficacy, which would be reflected in their better mental health.

b. The populations losing their home undergo repeated experiences of failures leading to poor sense of efficacy, which would be reflected in poor mental health.

Some psychologists have suggested the critical role of cognitions in facing the life events that threaten human well-being at individual or group level (Gillis, 1989). The pivotal role of these cognitions, attitudes and beliefs has been overshadowed by the materialistic orientation of scientists. There is evidence to suggest that when it is difficult to change the external environment, it may be easier to create change within the individual and perceive the external events in entirely different manner and avoid unnecessary distress.
In the contemporary literature in psychology and psychiatry, at least six models of mental health are prevalent (Vaillant, 2003). These models visualize mental health as: normality, positive psychology, maturity, social-emotional intelligence, subjective well-being, and resilience. In fact these are six conceptually distinct ways to assess mental health. In the present study the resilience model of mental health will be pursued to study a population of people who lost their homes some forty years ago. The physiological basis of resilience is given in the following section.

2.3.4 Psycho-biological approach

In recent years the concepts of adaptation and stress have been replaced by new concept of allostatic (Charney, 2004; Ray, 2004). Allostasis is a state of equilibrium produced by an intricate organizing system involving perception of situation (as threatening), the endocrine system (mainly the hypothalamus, pituitary and adrenaline system) from mobilizing the body for action. It also involves the immune system for body’s internal response. The action taken by the body (by the allostatic system) to meet the environmental demands is termed as allostatic response. However, there occurs damage to the body during the course of allostasis and allostatic response. It is psychological as well as physiological and is named as allostatic load (it is equivalent to the term stress). Investigators have developed cumulative measures of physiological response taking place during allostatic response. These cumulative measures indicate the amount of allostatic load borne by the individual and it is further used to characterize his resilience or vulnerability (Charney, 2004). In this way medical scientists have developed psychobiological measures of resilience and vulnerability.

These investigators have suggested that it may be possible to relate psychobiological allostatic load with vulnerability to extreme psychological trauma. Thus, it is possible
to distinguish between vulnerable and resilient individuals on the basis of profiles of several neurochemical changes accompanying stress situations. Furthermore, these investigators hypothesized that response to extreme psychological stress involves characteristic psychological responses, which should be observable in vulnerable individuals or populations. In contrast they also point out that in the face of adversity people may learn to develop resilience. Studies on children who grew in variety of settings, including war, family violence, poverty, and natural disaster make them resilient individuals, and they show psychological characteristics such as hopefulness, optimism and positive self-concept.

However, these characteristics develop or are promoted by a social environment that supports altruistic and helping behavior patterns. These findings are supported by studies on social behavior of rodents and non-human primates. In brief, it requires co-operative social situation. In contrast a social situation resulting from trauma, which lacks social support as well as opportunities to make bonds would probably lead to a profile of characteristics of vulnerable individual. Thus there is need to undertake epidemiological and phenomenological investigation on individuals, families and communities to explore their resilience and vulnerability in facing traumatic situations such as displacement due to large dams.

There is good amount of evidence from such kind of studies done in the past that negative social relationship has consequences for morbidity and mortality. For example, social isolation and lack of social support increase the risk of various diseases as well as reduces longevity (Seeman, Singer, Ryff, Love & Levy-Storms, 2002). They also found that positive social experiences were associated with lower allostatic load; if we take a viewpoint that exposure to traumatic situations such as loss of home due to displacement give people opportunity to learn from
environmental situations, it should be reflected in their better mental health. However, an important aspect of this viewpoint is how much supportive the situation is after such traumatic event.

**2.3.5 Attachment relations**

The attachment theory of Bowlby (1969, 1973) proposes that the behaviors exhibited separation are biologically adaptive for the infant and help in coping for the loss of attachment object. Although the work of Bowlby was influenced by psychodynamic thought yet his theory was largely influenced by ethology, the study of animal behavior (Workman & Reader, 2004). Bowlby argued that the strong attachment formed in early life with caregivers determine the nature of individual’s expectations from himself as well as from relationships.

The predictions of Bowlby's attachment theory received strong support from numerous studies (Ainsworth, Blehar, Waters & Wall, 1978; Cairns, 1979; Maunder & Hunter, 2001). There is also convincing evidence in psychology and geography on the affective *place attachment* and *place dependence* in human beings (Canter, 1977; Stokols & Shumaker, 1981; Tuan, 1974). These researches indicate that people who show rootedness to their places are negatively affected when forced to leave it. Therefore, it is possible that the usurped villagers experience a separation syndrome that may have deleterious consequences on their well-being.

In this area of research, the attachment of people to their native places, psychologists and geographers seem to arrive at common conclusions, though they differ in hypothesizing the basic function of attachment. While psychologists consider attachment an evolutionary mechanism essential for the survival of infant, geographers are not specific how attachment is formed to the place. However,
Investigators from both disciplines have reported the negative consequences of severed attachment (or the loss of love) on the social behavior.

Experiments and observations on the social life of common Indian monkeys consist of evidence related to the negative effects of displacement and have two broad underlying assumptions. The first assumption is that of the formation of attachment or love during development in a native area. Once these attachments are formed with the mother figure, they are generalized to other living and non-living objects to serve the primary function (evolutionary) of the survival of individual and its group. The effects of loss of love due to forced displacement have potentially deleterious effects on displaced persons. The second assumption is the generalization regarding the basic mechanisms of learning from monkeys to man. In human beings the culture may interact with the innate predisposition.

Laboratory studies on non-human primates show that separation from mother and peers is disastrous for an individual (see Harlow & Mears, 1979) and arouses defensive behaviors (Kalin, 1993). Field experiments in India support these findings (see Pirta, 2002). The home range has survival value for the individuals of a group and usurpation from the home range has deleterious consequences for the members of group. Young primates reared in isolation develop attachments with physical place and objects like its cage. Separation from its place of attachment lead to similar syndrome as exhibited by the infants when separated from their age mates or their mothers.

An important aspect of place attachment in human beings is the social representation of space (Jain & Singh, 2003). They have reviewed various studies related to social representation of place which also includes the cognitive, affective
and motivational aspects of individuals with their physico-social environment. The places are seen as physical and symbolic context for human action. They have properties of shaping behavior. This is also known as behavior setting approach. Individuals also form cognitive maps of their behavior settings with which they are emotionally and motivationally attached. More important are the shared meanings of places which leads to important place dependent concepts. They may include self-identity as well as social identity of individuals or groups. In other words, during development of an individual in a behavior setting there also occur cognitive construction and symbolic representation of social reality. This conceptualization is important for understanding the relationship between individual and its native place. Psychologists and planners have generally overlooked these aspects.

In recent years psychologists are following attachment relationship from early age to adulthood. These longitudinal studies follow attachment theory but there are some additional perspectives such as assessment of maternal sensitivity, attachment organization and quality of attachment relationship (Grossmann, Grossmann, Winter & Zimmerman, 2002).

**Summary:** In the present study we have followed the socio-ecological and attachment relations approach to look into the consequences of displacement of people from their native areas. Some investigators have argued that attachment theory had followed a familiar route in describing the deficits of a child such as affectionless psychopath due to maternal deprivation, however Stratton (2003) has proposed an alternative way of looking into these relationships within a family. He visualized the process of these relationships in terms of adaptation to various environments. Looking from this perspective the child is not intrinsically damaged by deprivation but may come to be disadvantaged if the adaptation excludes him from
making relationships later in life. For us, it is important to look into the development of these affectionate relationships in displaced and non-displaced families.

There is another important aspect of Bowlby's attachment theory, it is related with the concept of an internal working model developed by a child during the course of interaction between parents and child as well as other important care takers in the family. These internal working models based on early experiences are important for later health behavior. Evidence shows that psychological insecurity increases individual's vulnerability to adverse life events and situations (Bosma & Gerisma, 2003). They have suggested that the construction of internal working model is based on the nature of early life events and situation that may lead to secure or insecure attachment relations. These are further associated with individual's inner resources such as self-concept and self-esteem.