Chapter 3

The present study
In this chapter there are five sections. Four of them deal with social change and mental health, displacement and unsafe environment, inequality among women and men, and resilience and vulnerability in face of adverse event. The last section explains the objectives of the study.

3.1 Social change and mental health

“For internally displaced groups and refugees, policies must deal with housing, employment, shelter, clothing and food, as well as the psychological and emotional effects of experiencing war, dislocation and loss of loved ones.”

(WHO, 2001a; Page 82)

Long ago, Comte has sought an integration of three approaches, which in modern terms signify biological, social and psychological points of view to understand the individual and his social relations (Allport, 1969/1975). In this integration, Comte visualized the foundations of a new science *la morale* considered equivalent to social psychology. However, he had a strong belief that human nature is basically biological but at the same time the behavior takes place in social and cultural context.

For social psychologists, largely, the objective is to understand and explain how the thought, feeling, and behavior of individuals are influenced by the actual, imagined, or implied presence of others. During the evolution of social psychology in the 19th century there was a division between American social psychology and European
social psychology. The former was oriented towards psychology, emphasis was on
the individual, and, other persons and social situations acted as stimuli. But the
European school was oriented toward sociology, for them social behavior was rooted
in long history and cultural heritage, but at the same time social events were
embedded in contemporary social situation.

In this review of the discipline of social psychology, Allport pointed out two things.
First, the burning issues of war and peace, education for life in a world community,
population control, and effective democracy, all urgently called for assistance from
social psychology. He felt that such assistance needed field studies, not experiment
with low generality. Second, there was need for integrative theories of social
behavior.

A significant area, where this integration was of immediate and immense concern,
was the mental health. In the fifth volume of The Handbook of Social Psychology,
Freeman and Giovannoni (1969/1975) have noted that mental health involved three
overlapping and merging positions—a medical, a psychological or a social, but
unfortunately without any integration. The need was to define parameters of mental
health and understand community programs of rehabilitation of affected population
and the prevention of mental disorders.

In this review, a special section on ecological research was focused upon urban-rural
differences. The aim of these studies was to understand the spatial distribution of
mental disorders and factors associated with it. Many studies pointed out the
prevalence of mental disorders with urbanization, the highest incidence of mental
illness was in the heart of city. Social isolation and other factors were associated with
schizophrenia. Besides this, studies indicated that social changes were related to suicide, particularly the refugees had higher incidence of mental disease.

Reviewing the growth of social psychology in India, Dalal and Misra (2002) concluded, that it was preoccupied with Western conceptual categories and remained unconcerned with the cultural roots of the discipline. More important, however, is the dilemma between indigenization versus relevance. For some, being indigenous refers to place something in the context. But it may not be true. The real issue is to involve grassroots people in psychosocial change (Mehta, 2002). Mass movements are vehicles for social mobilization and public activism; they play significant role in raising social consciousness of people particularly the minorities and other affected populations. The participation in the developmental process enhances their sense of self-efficacy, increases self-esteem and brings a qualitative change in their lives. The recent reviews in health psychology (Dalal, 2001) and clinical psychology (Kapur, 2001) have entirely neglected the effect of large-scale developmental interventions on individuals and populations.

A major paradigm shift has, however, been envisioned by the World Health Report on mental health (WHO, 2001a). The report provides current evidence on the physical, social and mental aspects of mental health and suggests ways for the integration of these three components. Current studies from various disciplines of medical sciences support the mutuality of body and mind where social environment plays important role. Moreover, the report emphasizes the community approach to mental health. It highlights the need to look after large populations of displaced persons in various parts of the World. Globally, there are around 50 million refugees affected by mental distress.
Although these populations suffer greater apathy and neglect mainly in developing countries, the researchers in these countries have not paid attention to the problems faced by these populations (Figure 3.1). Even in the past, whereas World War-II stimulated a lot of research in social psychology and medical sciences in Europe and United States, the partition of the country did not stimulate the Indian psychologists.

Instead, every year since the independence of India, there is increase in the population of displaced persons. In this way enormous increase is taking place in the number of forcibly displaced people, and they are largely dissatisfied by the social change in the country. The study of these displaced populations has theoretical as well as applied significance. For example, the studies on separation of infants from their families during World War-II stimulated a new area of research in human and animal behavior (Kandel, 1999). Socio-psychological aspects of displacement and rehabilitation of an enormous population is a neglected area in India, the number of

![Figure 3.1 The vicious cycle of impoverishment and mental disorder (Source: Patel, 2001; WHO, 2001a)]
these disgruntled people is continuously increasing and for them development has become a curse.

The problem of displacement is largely related to usurpation of villagers from large segments of their native areas with which they have strong attachment since generations. Besides this, these rural or urban populations get alienated from the social support network of kin and non-kin in the surrounding area. There is now large amount of evidence from scientists working in medical sciences, psychiatry, personality, and social psychology suggesting loss of attachment (interpersonal relationships) during adulthood also follow similar patterns of behavior as observed during loss of attachment from a caregiver in early age. Scientists working in these diverse fields have extended Bowlby’s theory of attachment to understand the consequences of loss of attachment during adulthood.

The basic assumption of this hypothesis is that any relationship in which proximity to the other affects felt security is an attachment relationship. According to Bowlby’s theory the secure attachment is associated with the internal working model, which develops in the individual over a period of time. The internal working model of self about interpersonal relationships results in a resilient view of oneself where one has positive expectations from others. On the other hand, individuals may develop internal working models of vulnerability of self where they do not expect help or support from others. The former attachment style is known as secure attachment whereas the latter attachment style leads to insecure attachment. The insecure attachment styles can be of three kinds: pre-occupied, dismissing, and fearful.

Recently, Maunder and Hunter (2001) have hypothesized a set of mechanisms which relate attachment insecurity to various kinds of mental and physical problems
(Figure 3.2). According to these psychiatrists attachment insecurity should be understood as an emotional state or as a personality trait. An attachment type is the result of an internal working model that guides and affects behavior when a threat is perceived. However, the emergence of attachment behavior is largely context dependent, a state phenomenon. They have reviewed current evidence to suggest psychosomatic mechanisms to account for a correlation of insecure attachment and disease. The model depicts three main paths of this relationship between insecure attachment and physical or mental disorders. Path 1 proposes that insecure...
attachment may affect stress regulation in three ways. First, attachment insecurity may increase perceived stress; second, the attachment insecurity may affect the intensity and duration of the physiological stress response; and third, attachment insecurity may affect through felt insecurity of social support. The Path 2 is altered use of external regulators of affect by persons having insecure attachment. This may include substance use, eating habits, and sexual behavior. The Path 3 involves altered use of protective factors by people with insecure attachment. This may include excess of health risk behaviors in treatment adherence and symptom reporting. Maunder and Hunter emphasize that attachment insecurity is likely to make people vulnerable to various kinds of mental and physical problems. The present study is exploring these relationships in Bhakra Dam oustees.

3.2 Displacement and unsafe environment

Resolution of conflicts involve changes at the individual and group level according to a context where socio-cultural factors are also important. It was noted in the previous sections that the people in the Himalayan region, while resolving social conflicts engaged in a non-violent struggle, the war of dharma, to save their forests, rivers and the culture. The movement became known as the Chipko, hug-to-the-tree, which later transformed into a broad based Himalaya Bachao Andolan (the Save Himalaya Movement). There are excellent alternate sources, which give general information and provide extensive analyses of this pioneer social movement of India. One must, however, be careful about biases of those analysts regarding the social issues taken up by the movement and the actors involved in it. They are confined to the early phase of the movement. Some of the basic issues taken up by the movement have escaped the scrutiny of psychologists, however Pirta (2003b) has articulated them in a cognitive model (Figure 3.3) that has deeper socio-
**Figure 3.3** Native cognition and mental health (Source: Pirta *in press*)
psychological ramifications. Although some issues formed part of some earlier inquiries, social psychologists would find the following more challenging.

The Gandhians working in the Himalaya have believed in the resilience of the local people as a peculiar biological and cultural adaptation to the mountains of the Uttarakhand region. They however recognized that various large-scale interventions increased the vulnerability of people in the mountain ecosystem. This vulnerability varied in different sections of society and along the dimension of gender (Bahuguna, 1968; 1973; Bhatt, 1992; Kunwar, 1982; Mira Behn, 1993; Sarala Devi, 1978; 1980). Psychiatrists and psychologists associate resilience-vulnerability approach to the mental health of people as affected by environmental conditions. The conceptualizations of native cognitive model have similarity to the resilience-vulnerability approach. The physiological mechanisms that mediate between the measures of resilience and vulnerability (positive mental health or negative mental health) and the psychosocial and physical environment have been borrowed from current literature from psychiatrists (McEven, 1998; Porges, 2003; Segerstrom & Miller, 2004). The lower part of the Figure 3.3 integrates these concepts to understand the consequences of certain environments for mental health of people.

One consequence of developmental changes in the Himalaya is probably associated with the psychological dimension of the allostatic systems of those people who have been displaced due to large-scale interventions in their native habitat. A psychologist would like to integrate the vulnerability and resiliency approach of psychology (Charney, 2004; Ray, 2004) with the cognitive viewpoint of native people to understand the mental health of such displaced populations. Migration is a global problem. The World Health Report 2001 on mental health mentioned a huge accumulation of the displaced persons particularly from their native areas. Whereas,
on one hand, displaced populations face problems that are highly specific, on the other hand, there are certain common behavioral issues faced by migrants. It is possible that a particular environment where the displaced population is resettled (e.g., the desert of Rajasthan for the people of Himalaya) may be perceived unsafe or life threatening by the affected people, but for the host population it is safe environment. Thus there is high probability that the host population and the displaced population would differ in the perception of the same environment and its consequences are likely to affect the two in different ways.

Moreover, the problem of displacement has several theoretically important issues for the psychologists in the areas of affect and memory. For example, in the present study the investigator uses Bowlby's attachment theory (Ciechanowski, Walker, Katon & Russo, 2002; Stroebe, Gergen & Gergen, 1992) to understand psychological vulnerability of the displaced people. In addition to attachment theory, there are two significant and related viewpoints developed by psychiatrists. One issue involves the concept of allostatic load and the other is related to the polyvagal theory that emphasizes adaptations to environments perceived as safe, unsafe or life threatening. The concept of allostatic load has been discussed earlier and the polyvagal theory that distinguishes the behavioral strategies to various environmental conditions is briefly given in the following paragraphs. In this way, the present investigator considers attachment theory, allostasis and polyvagal theory important to understand the mental health of displaced people whereas the native cognitive model helps to understand the specific context. The latter provides insight regarding the perception of environment as safe, unsafe or life threatening by the displaced population.
Although human groups adapt to diverse habitats, different situations call for
different behavioral strategies of survival in a particular habitat. Some of these
responses involve enormous energy mobilization, which may not be possible at
individual level. In such cases individuals would elicit social support. For the
elicitation of social support he/she needs some basic social system from reliable
caregivers. In case such caregivers are perceived as unreliable or unapproachable, a
group would perceive such environment as unsafe or life threatening. The polyvagal
theory provides a new insight to probe this issue. Human beings have evolved a
functional neural organization for regulating visceral states that support such social
behavior. A neurobiological model, the polyvagal theory, provides a new way of
thinking that physiological state limits the range of behavior and psychological
experience with regard to behavioral strategies to deal with different environmental
situations (Porges, 2001; 2003). It goes beyond the arousal theory of emotional
reactions to stress, which is dominant in psychology, psychiatry and physiology, in
suggesting that during evolution autonomic nervous system (ANS) has come under
the control of other neural structures and the ANS in turn regulates some important
aspects of social behavior involved for survival in safe, unsafe, and threatening
environment.

The polyvagal theory is particularly important to understand stress related responses
in three distinct environmental situations (Figure 3.4). It proposes
neurophysiological and neuroanatomical distinction between two branches of the
tenth cranial nerve (the vagus). Each branch is associated with a different behavioral
strategy and in association with the sympathetic nervous system (SNS) it is also
linked with a third strategy. These strategies are summarized as follows:
1. The ventral vagal complex (VVC): a mammalian signaling system for motion,
emotion, and communication.
Figure 3.4 Perception of environment and associated physiological mechanisms leading to appropriate social behavior (Source: Porges, 2001; 2003).
2. The sympathetic nervous system (SYS): an adaptive mobilization system supporting fight or flight behaviors.

3. The dorsal vagal complex (DVC): a vestigial immobilization system.

When a person perceives that environment is safe, the tone of the VVC is high, there is ability to communicate via facial expressions, vocalizations, and gestures. If the person perceives that the environment is unsafe, the tone of the VVC comes down. The sympathetic nervous system becomes active to support mobilization that involves fight or flight behaviors. However, if the situation becomes life threatening, the DVC's tone is very high and there is an immobilization response. The person resorts to passive avoidance, death feigning or dissociative states. Although there are some basic common neuroanatomical structures and neural pathways that support each behavioral strategy, they also involve specific oxytocin/vasopressin pathways. These two neuropeptides differ in their central and systemic (peripheral) effects. Oxytocin is involved in the perception of environment as safe and promotes positive social responses to resist any stress. However, vasopressin has two kinds of effects; the central vasopressin leads to mobilization response if the environment worsens and is perceived unsafe. A further increase in threat to survival or a life threatening situation leads to inhibition of sympathetic activity and increase in levels of systemic (peripheral) vasopressin that leads to immobilisation response.

In this way the vagal component manifested through DVC plays important role in the perception of environment as well as in the adoption of specific behavioral strategies appropriate to a situation. For a population that has been ousted from its safe environment might perceive the new environment as unsafe or life threatening and resort to mobilization or immobilization behavioral strategies causing serious mental health problems. Another significant aspect of the polyvagal theory is the
conceptualization of social engagement system supported by the VVC. This system consists primarily of behavioral social signals for the identification and formation of attachment bonds with other persons. If the environment is perceived as unsafe or life threatening, the social engagement system remains suppressed. In other words, the displaced people may find it difficult to form new social bonds where they are rehabilitated.

In a recent meta-analytic review of psychological stress, Segerstrom and Miller (2004) have used a classification of stressors consisting of five classes: acute time-limited, brief naturalistic, event sequence, chronic, and distant. They are briefly described here. Acute time-limited stressors involve laboratory challenges such as public speaking or mental arithmetic. Brief naturalistic stressors involve real-life short-term challenges such as academic examinations. The stressful event sequences include a focal event, such as the loss of spouse or a major natural disaster. And the affected individuals do not know when these challenges will subside. Unlike the preceding classes, the chronic stressors pervade a person's life, forcing him or her identity or social roles. The person does not know when it will end. Examples are physical disability, providing care to family member with dementia, or being a refugee forced out of one's native country. Lastly, distant stressors are traumatic experiences that occurred in the distant past, e.g., being a prisoner of war, or sexually assaulted as a child. In the review it was noted that stressors are circumstances that most people find stressful. But it is difficult to define what is stress. It depends upon the appraisal of the situation, and associated cognitive and emotional responses that a circumstance is perceived as a stressor.

Currently, scientists are investigating the relationship between stress and immune system. The pathway linking stress and immune system is through behavior. These
responses to stressors are mediated by the immune system and they enhance organism's fight or flight responses for survival. In other words the stress-immune system relation assumes that stress enters into the body via immune system and the changes in the immune system affects the behavior. But it is behaviors and mental processes that link stressors with immune system. A biphasic model of stress assumes that acute stress enhances and chronic stress suppresses the immune response. Therefore it is important to find out whether people are adversely affected by stress-induced immune changes. Particularly important for us in the present study is the category of chronic stressors which results from circumstances such as displacement of people from their native area. In some cases the native areas get submerged in water due to construction of large dams. These displaced people resettle at some far away places where they have to restructure their social support network, social identities and social roles. Besides this, such populations face numerous other adjustment problems. Such chronic stressors, unlike acute stressors, have been found to have negative effects on almost all functional measures of the immune system as reported in the present review. But it is important to keep in mind that various organismic variables moderate vulnerability to stress. Perhaps gender moderates effect of stress on immunity through sex hormones. There are indications that men are biologically and psychologically more vulnerable to stress. Psychological processes such as optimism and coping moderated immunological responses to stress. In addition emotional arousal, motivational states or cognitive appraisal would provide critical psychological mechanisms linking stress and the immune system.

A significant question, however, is to find out the vulnerability to mental health problems in populations exposed to chronic stressors such as loss of home. These chronic stressors may increase the vulnerability of displaced population to various
mental health problems since there is evidence that such stressors decreases almost all functional immune systems (Segerstrom & Miller, 2004). These stressors are constantly present and there is less hope in future for its control. Social problems associated with these stressors make them even more significant. They may, for example, include acculturative stress at resettlement sites. There is loss of social identity, feeling of helplessness and exhaustion of social and economic resources. Their problems remain unresolved for a long period or almost for an entire lifetime. Thus chronic stressors contribute through its psychological as well as physiological effects. Although displacement of people have been considered harmful to mental health, the literature is confined to economic, social and political issues of this problem (Singh & Banerji, 2002).

3.3 Inequality among men and women and migration

"The distributive aspects of environmental plunder have a gender dimension, too. The well-being and freedom of many rural Indian women depend vitally on environmental resources, including convenient access to water, fodder, and fuel, and this connection is often far closer than those that link men to these environmental resources. As a result, women frequently suffer disproportionately from environmental degradation." (Dreze & Sen, 2002; Page 224)

Gender is an important social as well as biological factor and has been viewed from various perspectives. Its fundamental basis seems to be the specialization of roles among males and females during the course of evolution. Studies on the evolution of behavior provide important data on sex differences in lower animals and on the
gender role in human species. More important is the universal and culture-specific nature of gender roles (Chagnon & Irons, 1979). Sen (2001) has described seven kinds of gender inequality in terms of mortality, natality, basic facility, special opportunity, professional, ownership and household. He popularized the concept of ‘missing women’ that is enormous all over the world. The major phenomena related to this issue in South Asia are, undernourishment of girls over boys, high incidence of maternal undernourishment, prevalence of low birth weight, and high incidence of cardiovascular diseases. It may also have regional differences as has been reported in case of India, where different states vary on parameters of social inequality among males and females (Dreze & Sen, 2002). The important point to note is that the gender inequality is stark in poor countries and regions having other social inequalities.

Displacement is likely to deteriorate conditions that are necessary for fostering ‘positive deviance.’ The concept of ‘positive deviance,’ proposed by Ullman and Krasner (1975), takes a departure from the DSM criteria of defining normal and abnormal persons. From this alternative view point we can question the displacement of populations because it creates conditions that may not foster behaviors valued by a society. Rather individuals are put into conditions that take a whole generation or a couple of generations to compensate the loss. Arguing for a psychological approach to abnormal behavior, Ullman and Krasner suggested that women’s liberation movement was a creative deviance. Since for any movement there is recognition of problem. In this case it was awareness of forms of self-expression and self-esteem among women. But for certain populations it may become difficult for women to perform according to the norms of the society. In comparison to men, perhaps displacement increases the burden on women and also the uncertainty may be
greater for them. These factors would lead to more ‘negative deviance’ among women in comparison to men.

It has been observed during the liquor prohibition movement and Chipko Movement against the denudation of forests, women were the forerunners of these protests (Bahuguna, 1997). The reason being that the men were largely addicted to alcohol and the family burden fell upon women. The same was the case when denudation of forests started in the Himalaya, it were women who have to bring firewood and fodder from the forests which were likely to become scarcer after logging operations by the contractors.

The issue of positive and negative deviance can also be viewed in the form of resiliency and vulnerability, respectively. Sarason and Sarason (1998) suggest that maladaptive behavior can be looked in terms of personal vulnerabilities and resiliency. The six major theoretical perspectives of abnormal behavior—biological, psychoanalytic, behavioral, cognitive, humanistic-existential and community-cultural—deal with issues related to vulnerability and resilience. Vulnerability refers to how likely one responds ineffectively to situations whereas resiliency is the ability to function effectively in the face of diversity. Sarason and Sarason’s integrative approach to abnormal psychology has important implication in understanding the role of contextual factors and events that has occurred in the person’s life.

For example, gender, social support and life events are important risk factors in depression. In this context, Bowlby’s attachment theory (see Kandel, 1999) provides strong evidence that childhood experiences of separation from mother or care-giver affects later development. There is now enormous literature to support the thesis that traumatic experience in early life lead to depression and anxiety in later life. It
would be appropriate here to consider a remarkable observation on the motherless monkeys studied by psychologists at Wisconsin. The long-term studies on these monkeys indicate that it is not simply the environmental conditions; the animal's own reactions also matter (Jolly, 1985). These observations suggested that female monkeys who reacted to short-term separations by depressive behavior as adolescents were far more likely to become abusive mothers than females who underwent the same separations, but seemed more resilient at that time.

In a later study, Suomi (1999) observed that the development of serious science of fearfulness and anxiety depends upon parenting experiences. The infants raised by anxious mothers, who are inhibited and inappropriately responsive to their infants, are prone to develop anxiety disorders but on the other hand infants developed by calm, responsive mothers are not likely to develop anxiety problems later in life. In this way biological contribution to separation anxiety may be enhanced or reduced as a result of parental experiences. We assume that parental experiences of displaced populations are likely to be disturbed in nature.

In an exhaustive review on gender differentiation, Bussey and Bandura (1999) provides a penetrating socio-cognitive analysis of gender role development and functioning. He also provides a critical understanding of gender differences from psychological, psychoanalytic, social and evolutionary perspectives. He finally concludes that gender conceptions and roles are the product of a broad network of social influences operating interdependently in a variety of societal subsystems.

As far as gender differences in the area of mental health are concerned, it has been challenging to assess the differential sex prevalence of mental disorders (Hartung & Widiger, 1998). For example, females are at greater risk than males for developing
the depressive disorders due to early loss of attachment relationships. However, there is little consensus concerning mechanisms by which being female confers risk (Roberts & Gotlib, 1997). Researches also indicate that the effects of parental deprivation (or loss of attachment) are more deleterious effects on the psychological systems of individuals than those of sensory deprivation (Mukhopadhyay, De, Chattopadhyay & Biswas, 1996). In a study on hardiness on aged men and women, the latter were found poor in overall life satisfaction (Nathawat & Rathore, 1996). Most of these studies conceptualize hardiness (more or less similar to psychological resilience) as a personality trait (Singh, Srivastava & Bhardwaj, 2005; Srivastava & Sinha, 2005), however, in the present study psychological resilience has been used as a system involving number of underlying subsystems enhancing survival of the individual. On the other side are subsystems that constitute vulnerability, which is detrimental for his or her survival.

In a recent edited volume, Davar (2001) has compiled studies that discuss psychological, social and political forces which impact on women's health. These studies also note that gender perspective was lacking on mental health in India. However, the references to mental health of displaced women were missing in these studies. But a sociological study by Cranny (2001) provides important insights to women's daily lives in the rural areas of Himachal Pradesh. It shows the ways in which the depletion and degradation of ecosystem in hill regions was leading to an increased workload for poor women. In an entirely different context, Atreyee Sen (2006) highlights the spurts of violence among women who had undergone emotional and geographical displacement in slums of Bombay.

The individual differences in vulnerability and resilience may become more salient in human beings where cognitions play dominant role. However, It does not deny the
fact that various kinds of environmental factors are likely to increase vulnerability among people. But the truly humanistic approach would be to identify such vulnerable groups and help them by reducing their vulnerability and side by side increasing their resilience to adverse situations. The economic package may not compensate the psychological and social package that is needed to cope up with the hostile environment to which some populations are pushed into. These forced migrations are painful and traumatic experiences.

3.4 Resilience and vulnerability in face of adverse events

"Although it may seem obvious that displacement and impoverishment it invariably entails would have severe consequences for a community's cultural and social well-being, this aspect of resettlement is rarely recognized in resettlement literature or resettlement plans, which normally deal only with the strictly economic consequences of displacement."

(Mc Cully, 1996; Page 81)

Psychologists have been testing an integrative model of the associations between personal and social resources, life stressors, coping strategies and psychological adjustment (Holahan, Moos & Bonin, 1997; Figure 3.5). This indicates a shift in emphasis, from focusing on people's deficits and vulnerabilities, investigators are now looking for individuals' adaptive strengths and capacities for resilience, constructive action, and personal growth in face of challenge. Personal resources include self-confidence, self-esteem and control. Social support is also an important factor. These investigators concluded that "resources model illustrate the individual's
potential for resilience and personal growth in face of challenge. Yet, the model also recognizes that, in major part, the individual’s capacity to thrive in face of adversity is less a solitary effort than an expression of the shared strengths that constitute the human community.” (Page 182) In a way, there is an important suggestion that displaced persons may not be able to cope up in hostile environment with social support.

*Figure 3.5* An integrative model of the associations between personal and social resources, life stressors, coping strategies and psychological adjustment (Source: Holahan, Moos & Bonin, 1997).

Lifespan developmental psychologists are now looking into an important question how various life challenges influence psychological well-being and health (Ryff, Singer & Seltzer, 2002). The concept of challenge includes normative and non-
normative life experiences. Normative experiences are typical, anticipated and planned. Non-normative experiences are atypical, unexpected or traumatic. The well-being dimensions include various psychological processes such as self-acceptance, mastery, purpose and quality ties to others. These investigators have also looked into various kinds of relationship pathways and physiological aspects of well-being measured through allostatic load (see Psychobiological Approach described earlier). The experiences of parents due to relocation and other challenges may affect care giving behavior. The important question is how well-being is affected by challenges of life. They have suggested that there are two pathways, the positive relationship pathway and the low physiological wear and tear (allostatic load). The psychological well-being is associated with the positive relationship pathway which also increases the resilience of the individual.

Although migration is global phenomenon and has been prevalent in one and the other form, it may not be inadequate to hypothesize a relationship between forced migration and mental illness (Bhugra & Jones, 2001). This relationship assumes that migrant populations become vulnerable to some psychiatric conditions. Number of surveys indicate high incidence of schizophrenia among the migrant groups. But the prevalence of common mental disorders is not different between migrant and ethnic populations. The migrants, depending upon sex and age, show high rates of anxiety, depression, suicidal thoughts, eating disorders and post-traumatic stress disorder. Lastly, the fears of globalization, where migration is the key factor, may not be untrue in the area of mental illness (Bhugra & Mastrogianni, 2004). The loss of identity, separation from place, inequality of resources and gender bias accompany migrants wherever they may go and is likely to affect their mental health.
In a recent review and meta-analytic study Cantor-Grae and Selten (2005) concluded that a personal or family history of migration is an important factor in schizophrenia. Although various aspects of the environment contributing to this risk were not clear, perceptions of social inequality were however important. This perhaps was related to long-term experience of social defeat and ethnic disadvantages.

In recent years, social and personality psychologists, have become interested in positive psychology approach, to understand factors that allow individuals and groups to adapt to environment. They conceptualize various inner resources, which make individuals resilient or hardy; lack of such inner resources make people vulnerable or they are unable to face challenges in life. In addition, individuals or groups may have such predispositions in greater or smaller level. However, a more optimistic view is, in order to adapt to challenges of life (or life threatening situations) individuals and groups acquire experiences whenever they encounter such situations. But it is possible that lack of social support and necessary things needed to meet such challenges would decrease their resilience.

Some investigators have been looking the role of positive emotions in coping process (Tugade & Fredrickson, 2004). Although positive and negative emotions have complementary adaptive functions, negative emotions narrow down one's momentary set of thought-action repertoire. On the other hand, positive emotions broaden the thought-action repertoire. These broadened mindsets, in turn, build an individual's physical, intellectual, and social resources. Further, it is assumed that certain individuals have greater tendency to draw on positive emotions in times of stress, and thus make them psychologically resilient. They have shown that trait-like
positive emotionality contributed to resilient people's abilities to rebound physiologically from negative emotional events.

Keeping in view the positive psychology approach, Srivastava and Sinha (2005) explored the relationship of resilience, happiness, and self-esteem with well-being. It was found that resilience and happiness were positively related to well-being, but self-esteem had a negative relationship with well-being. The experiential learning in a T-group type intervention seemed to cause an increase in all core variables except self-esteem. For these investigators, resilience was not a trait; it involved behaviors, thoughts, and actions that can be learned.

Another series of studies question the traditional view that loss of a care-giver leads to separation anxiety, they observe that large number of bereaved individuals show resilience to loss of beloved one (Bonanno, Wortman, Lehman, Tweed, Haring, Sonnega, Carr & Nesse, 2002). They developed a hypothesis that as compared with resilient individuals, chronic grievers would have (a) a poor relationship with spouse; (b) fewer coping resources (lower self-perceived coping efficacy; lower religiosity); (c) a more vulnerable world-view (less acceptance of death; belief that world is unjust and uncontrollable); and (d) a less favorable pre-loss context (less perceived social support; fewer instrumental supports). Chronic grief was associated with pre-loss dependency (thus supporting traditional theory of loss of attachment) and resilience was associated with pre-loss acceptance of death and belief in just world. In a later study these investigators have found strong evidence that the resilience trajectory following interpersonal loss is a significant way of coping. Such individuals do not need any clinical intervention (Bonanno, Moskowitz, Papa & Folkman, 2005). They also report that the high-exposure survivors of the September 11th terrorist attack on World Trade Center in New York City also show resilience, though it was
associated with self-enhancement. Thus some individuals show high resilience in face of potentially devastating events (Bonanno, Rennicke & Dekel, 2005).

The resilience-vulnerability in face of challenge, as discussed above is likely to be affected by access to resources as well as position in social hierarchy. Both of these factors are related to socio-economic status (SES). In this way, SES may have powerful influence on individual's health, low SES environments fostering greater exposure to stress, which in turn elicits more negative and less positive emotions. In addition low SES environments may lead to depletion of psychosocial resources (Gallo, Bogart, Vranceanu & Matthews, 2005). These investigators have developed a reserve capacity model to understand the relationships between SES, stress, resources, and emotions. They have related it to development of resiliency and vulnerability. Resiliency is the ability to recover quickly after stress. Whereas the resources broadly refer to conditions as well as financial, social and personal assets. These resources play important role in meeting external challenges, for example, the loss of home in the present study. Furthermore, these investigators have found that women with lower SES may have fewer stress-resilient resources, suggesting that, in comparison to men, women suffer from additional disadvantages.

These studies indicate that there are chances of individual differences among the populations facing traumatic events, such as loss of home due to construction of large dams. Perhaps the contextual factors, especially in the developing countries where institutional apathy and lack of instrumental support are conspicuous, may further make these populations vulnerable. However, one may start with positive as well as negative approaches to explore the long-term consequences of displacement on the mental health of people.
3.5 Objectives of the study

"The 1947 partition ... permanently altered the demographic, socioeconomic and cultural landscapes of such major cities as Karachi, Lahore, Delhi and Calcutta. ... The continuing effects of partition at political, cultural and psychological levels extend far beyond the focus on Kashmir which has sometimes been dubbed 'the unfinished business' of partition. (Talbot, 2001; Page 1)

Considering the serious socio-psychological implications of the displacement all over the world, the World Health Organization has made an appeal to all governments to identify such populations and look into their mental health at a priority level (WHO, 2001a). Not only that, the WHO requisitioned the services of experts to develop tools for the rapid assessment of the conditions of refugees and internally displaced populations (WHO, 2001b) and also recommended psychological instruments for the assessment of their mental health (Meltzer, 2003). The World Commission on Dams has expressed similar concerns regarding the displaced populations of large dams (WCD, 2000). Moreover, findings of the Millennium Ecosystem Assessment also suggest that impact of nig dams may affect human well-being through degradation of natural ecosystems (Aylward et al. 2005). These considerations were important for conceiving the present study.

In recent years the construction of large dams has attracted severe public criticism mainly due to unsatisfactory rehabilitation of the displaced populations (Leslie, 2005; Mc Cully, 1996; Mehta, 2001; Pirta, 2005; Roy, 1999). Scientific community is largely divided on the issue. The main issue is not the benefits of these gigantic
projects, but questions are being raised about the ecological and social costs of these interventions of very great magnitude. Some scientists have made a cautionary note that the large dams not only disrupts the local environment and ecological systems and the habitat and culture of uprooted communities, the magnitude of a new source of threat to the downstream population needs a consideration from planners, politicians and general public (Gaur, 1993). However, an important drawback of the controversy around large dams has been the lack of research on the short-term and long-term consequences of displacement due to loss of home (Pirta, 2003a; 2003b; Singh & Banerji, 2002).

The present study was planned to look into the long-term consequences of the loss of home due to construction of Bhakra Dam. The Bhakra Dam was an ambitious project of the country implemented in the 1960s in the rugged terrain of the erstwhile Bilaspur principality, that later formed a district in the tiny hill state, the Himachal Pradesh. For about three hundred years (1663 to 1953) the town of Bilaspur has a dominant minority (the Raja) that governed the surrounding majority (the Praja). For the latter, even the independence of the country was fraught with a nightmare. Very soon the town of Bilaspur along with the most prosperous villages and land were buried in the deep waters of a man made lake to make way for a gigantic temple of modern India. This was the construction of the Bhakra Dam, the work started in 1948 and was complete by 1963.

Kahlurians, the people of Bilaspur, lost their capital and about 256 villages with most fertile land on the left and right banks of the Sutlej river. Besides this great loss, which in the history of several centuries even the most fiery adversary could not inflict upon them, the people displaced as well as non-displaced lost the control over a precious resource in their territory, the water of river Sutlej. This trauma was
perhaps too strong for people to overcome in near future, as found in some preliminary studies conducted on the urban displaced people resettled in the modern town of Bialspur (Chandel, 2003; Sharma, 2005).

A search for studies on the large displaced rural population of Bilaspur proved futile but revealed some significant aspects of this traumatic event. Main issue was related to extreme apathetic attitude of administration towards these oustees. For example, as a perceptive administrator, Mamgain (1975) acknowledged the sacrifice of Bhakra Dam oustees, but he conveniently forgot to include the names of those two hundred fifty or so villages drowned in Gobind Sagar in the gazetteer of Bilaspur. There is, however, a description in this document about "displaced persons" who came from West Pakistan in 1947. One wonders why such omission occurred in case of those who lost their homes due to the construction of Bhakra Dam. People would like to know the number of those displaced persons, where they were resettled, and what did they receive as compensation for the loss of home. These data are expected in a state gazetteer and the omission compels the reader to draw an adverse conclusion that it may well be a continuation of conspiracy, to which the document itself mentions (see pp. 59-60), and a cruel joke with the people of Bilaspur.

The political conspiracy to which the gazetteer of Bilaspur refers has significance for the present study, as one would find from the qualitative observations presented in the Chapter 5. This has to do with appropriation of the control of the Bhakra Dam and Gobind Sagar and the benefits accrued from it. A hidden assumption is that the benefits derived from the water and electricity of Bhakra Dam project should have been either shared by Punjab with Himachal Pradesh or they had been entirely given to Himachal Pradesh in whose territory the dam is located. Moreover, it is the people of Himachal Pradesh that has been displaced and they also lost their rights to use the
water of a river flowing through its territory. As of now, the benefits of the project are largely in favor of Punjab and have contributed to the "green revolution" in the state.

There is an important study by an eminent economist Raj (1960) on the social costs, an important investment criterion, of the Bhakra Nangal Project. It was conducted during a period when the Bhakra Dam was heading for its completion. The investigator, after a thoroughgoing analysis, pointed out that there were technological alternatives keeping in view the social costs involved in the construction of such a gigantic structure. However, many social costs in this analysis have remained unforeseen at that moment. Ironically, these social and psychological costs, rather than the socio-economic costs with which the author was familiar, has today become the bone of contention between the pro-dam lobby and the defenders of humanistic values.

Over the last two decades, social activists have been raising them vociferously during the implementation of similar other projects (e.g. in case of the Tehri Dam and the Narmada Valley Development Projects). But at the same time, Raj had empathized with the "problem of resettling nearly 5 million displaced as a result of the partition," a consideration important for a major revision of Bhakra Dam plan. On the other hand, the study by Raj quietly ignores the social costs of the submergence of the granary of Bilaspur state and the displacement of thousands of people due to submergence of their homeland in Gobind Sagar. The purpose of the present study was to explore the mental health of these displaced people who remain forgotten since independence of India. Perhaps as subjects in the present study their contribution would go in the development of better rehabilitation strategies for the populations facing displacement in the future.
The investigator has followed an integrative approach to understand the mental health of Bhakra Dam oustees. The aim was to make an assessment of their resilience to the trauma of loss of home, an event that had happened more than forty years ago. The concepts of resilience and vulnerability have been discussed in detail in the Section 3.4. In the present study the psychological resilience has been assumed as a global concept indicated by improvement in general mental health whereas the indicators of poor mental health suggested psychological vulnerability among the subjects. The four measures to assess resilience were selected tentatively, depending upon the suitability of these measures to a largely illiterate, aged and Hindi/Urdu speaking rural population of peasants from Bilaspur district of Himachal Pradesh.

These measures are assumed to give a global idea of the psychological resilience of people after loss of home and included instruments for mental health (four instruments recommended by WHO), well-being, neuroticism, and state anxiety. In the present study, psychological resilience has been conceived as a system involving number of underlying subsystems enhancing the survival of the individual. On the other side are subsystems that constitute vulnerability, which are detrimental for his or her survival. A resilient person would have better mental health and higher well-being scores but at the same time showing lower scores on neuroticism and state anxiety. However, lower mental health and well-being scores along with higher neuroticism and state anxiety scores would indicate the vulnerability in a person.

This conception is based upon WHO’s Consultation that health is a state of complex physical, social and mental well-being and it is not merely the absence of disease or infirmity (WHO, 2001a). Keeping this in view, the investigator planned a field study on the resilience in a rural population of aged women and men that lost its home due
to submergence in the Gobind Sagar, an artificial lake formed after the construction of the Bhakra Dam. Such a study needed a lot of additional qualitative information about the socioecological conditions of the oustees, their feelings and perception of events when they were young, and history of events before and after the construction of Bhakra Dam.

A significant psychological issue was an objective assessment of the negative valence associated with the event loss of home in case of displaced and normal subjects. Besides that, the main question in this study was whether loss of home has affected the psychological resilience of people in the rural area of Bilaspur? In order to answer this question it was essential to take two populations, the displaced and non-displaced, living in the fringe of Gobind Sagar. Another issue was to compare women and men on various measures of psychological resilience. In this way there were two independent variables, the loss of home and the gender. Keeping in view the various indicators of psychological resilience, the investigator had outlined four major objectives in the present study. These four objectives were,

a. to study the effect of loss of home and gender on the four measures of mental health recommended by World health organization,
b. to study the effect of loss of home and gender on the general well-being,
c. to study the effect of loss of home and gender on the neuroticism, and
d. to study the effect of loss of home and gender on the state anxiety.