Chapter III

REVIEW OF RELATED LITERATURE

3.1 Introduction

3.2 Studies Related to Education of Hearing Impaired

3.3 Studies Related to Psychosocial Adjustment of Hearing Impaired

3.4 Studies Related to Vocational Aspirations with Special Reference to Hearing Impaired

3.5 Conclusion
3.1 Introduction

One of the most important steps in a research project is reviewing the related studies. According to Cooper (1988) “a literature review uses as its database reports of primary or original scholarship, and does not report new primary scholarship itself. The primary reports used in the literature may be verbal, but in the vast majority of cases reports are written documents. The types of scholarship may be empirical, theoretical, critical/analytic, or methodological in nature. Second a literature review seeks to describe, summarise, evaluate, clarify and/or integrate the content of primary reports.”

Literature review is an evaluative report of information found in the literature related to the selected area of study. It provides a theoretical basis for the research and helps to determine the nature of research. In writing the literature review, the purpose is to convey to the reader what knowledge and ideas have been established on the topic under study, and what their strengths and weaknesses are.

In this section, the investigator made an attempt to review the research findings which have direct bearing on the present study. Since the present study analyses the psychosocial adjustment of hearing impaired school students, their vocational aspirations and academic achievement, emphasis has been given to the studies pertaining to these
areas are included in this chapter. The studies are presented under following heads.

1. Studies related to education of hearing impaired
2. Studies related to psychosocial adjustment of hearing impaired
3. Studies related to vocational aspirations with special reference to hearing impaired

3.2 Studies Related to Education of Hearing Impaired

Jayawant and Phatak (1995) conducted an exploratory study of deaf children in integrated units of normal schools and found that the deaf children from integrated units of the normal school under study were emotionally adjusted to the school work supporting their educational integration.

Allen (1998) revealed that bilingual education challenges the traditional approaches in educating deaf children and foster young deaf and hard of hearing children’s language, literacy and cultural development.

Bebko, et al. (1998) revealed that automation language skills are an important and necessary contribution to the relation between language proficiency and rehearsal use in children who are deaf.

Bird (1998) found that orally raised deaf hearing twin pairs are uniquely different linguistic expression than typical home signers and their siblings.
Calderon (1998) indicated that deaf children whose father is present have significantly better academic and language outcomes than those without father.

Caprice, et al. (1998) suggested that learning a sign language may improve attention abilities, visual discrimination and spatial memory in hearing children than deaf.

Carol, et al. (1998) revealed that adolescents with severe and profound hearing losses showed generally low levels of performance in written language skills.

D’Avanzo and Sarah (1998) indicated that accurate perception of final consonant voicing was not impaired by changes in the temporal structure of speech that accompanied the inexperienced signers’ simultaneous communication.


Hickok, et al. (1998) reported that the right hemisphere plays a role in processing sign language and the use of functional magnetic resonance imaging revealed that both right and left hemispheres showed activation in deaf signers where as in hearing signers, only the left hemisphere was activated.

Igi, et al. (1998) described a preliminary dialogue system that supports communication between people with hearing impairments and
people with normal hearing. The system converts sign language to voice and voice to sign language.

Kelly (1998) tested whether the instructional strategy by using silent motion pictures can foster the comprehension of relative clause and passive voice sentence during reading in deaf and revealed that syntactic structures are chronically difficult for some deaf readers.

Koester (1998) indicated that deaf mothers depended upon visual strategies to regain their infant attention and hearing mothers depended on vocalizations.

Kuntz (1998) reported that American Sign Language may be valuable for quality communication and interaction between the adult and the child.

Lang, et al. (1998) suggested that the collaborative, dependant, participative learning style is desirable for deaf college students.

Lasasso, et al. (1998) reported that Manually Coded English System and cued speech are very effective for conveying English and developing deaf children’s reading abilities.

Lederberg, et al. (1998) suggested that intervention efforts should be focused on increasing the quantity of perceived linguistic input by deaf children because the deaf children were severely language delayed than hearing children.
Leutke, et al. (1998) reported the improved reading comprehension when the components of text structure are realized by students who are deaf and hard of hearing.

Leybaert (1998) investigated phonological and morphophonological abilities of profoundly deaf children early exposed to cued speech. This study concluded with some speculations about the effect of early exposure to cued speech on the development of language specific processes housed on the left hemisphere.


Lillo (1998) found that Universal Grammar involved in the acquisition of AS L and English by deaf people.

Lupton (1998) investigated the perception of fluency of deaf signers in American Sign Language and found that rate of signing was not found to be a crucial criterion for fluency.

Marschark, et al. (1998) reported that either spoken language or sign language can serve as a natural mode of communication for young deaf children, leading to normal language, social and cognitive development.
Masataka (1998) reported that hearing impaired infants showed greater attention and affective responsiveness to infant directed signing than to adult-directed signing.

Mauk and Mauk (1998) found that a significant portion of the school age population of children and adolescents who are deaf and hard of hearing have concomitant learning disability.

Mayer (1998) concluded that deaf signing participants were using both speech and sign based codes for processing information and the strategy used depended on task requirements.

McKenzie (1998) reported that the level of education attained by adults who are deaf was correlated with their performance on the Going Along, Taking Charge and Being cautious Scales.

Meier, et al. (1998) investigated how language modality may influence acquisition in deaf children by considering two factors 1) Fine motor control over small muscles lags behind gross motor control over large muscle groups, and 2) Development of motor control generally proceeds from proximal articulators to distal ones and revealed that they strongly favoured proximal articulators over distal ones.

Mousley, et al. (1998) showed that instructional strategies using analytical process can enhance the problem solving performance of deaf and hard of hearing college students.
Nelson (1998) proved that American Sign Language (ASL) bilingual approaches are shown to support substantial progress by deaf children in English text skills.

Neville, et al. (1998) suggested that the early acquisition of a native language is important in the processing of ASL by the left hemisphere to mediate language, independently of the form of the language in deaf children.

Nover, et al. (1998) suggested a framework for the development of professional sign language pathologists, while differentiating between disorders related to sign language acquisition and bilingual language pedagogy for learners who are deaf.


Pagliaro (1998) reported that problem solving skills and use of concrete materials have been incorporated into the deaf education mathematics curriculum along with traditional methods.

Patricia (1998) found that the deaf community has little accurate knowledge of the structure of American Sign Language and believed that ASL was inferior to English.

Powers, et al. (1998) reported that parents of deaf children observed their children in the classroom more than parents of hearing
children; Parents of hearing children volunteered in their child’s classroom more than parents of deaf children.

Ramsey, et al. (1998) found that students more experienced with English and ASL were relatively more capable of integrating the two in literacy acquisition.

Ronnberg (1998) revealed that training efficacy of deaf is directly dependent on the cognitive prerequisites of the individual speech reader.

Sarvada, et al. (1998) proposed that a gesture recognition algorithm based on motion primitives and hand figure primitives extracted from acceleration sensors, position sensors and data gloves is applied to a sign language recognition system for the realization of a new human machine interface through gestures.

Scott, et al. (1998) reported that sign language discourse consists of grammatically structured arrangements of signs and meaningful gestures.

West (1998) revealed that language may not be a crucial factor in the onset of autobiographical memory in deaf.

Barnett (1999) introduced the socio-cultural experiences of deafness and language proficiency and the prediction of spontaneous rehearsal in deaf children.

Leigh, et al. (1999) studied the relationship between inclusive education and personal development and reported that development of self confidence and comfort with identity may be enhanced through
opportunities for contact with deaf adults and positive relationship with both deaf and hearing peers.

Barnett and Franks (1999) investigated that pre-lingually deafened adults were less apt than members of the general population to own a telephone, whereas those who lost their hearing after age three were as likely as members of the general population to own a telephone.

Bosworth and Dobkins (1999) suggested that perceptual processes required for the acquisition and comprehension of language and motion processing in the case of ASL is captured by the left, language dominant hemisphere.

Foster (1999) indicated that deaf students viewed classroom communication and engagements in a similar manner as their hearing peers.

Parvaz (1999) demonstrated that there is a genuine, historical, linguistic and strong correlation between monastic sign systems and sign languages used by the deaf.


Berent, et al. (2000) revealed that a typical English-language behaviour is a potential diagnostic marker for learning disability in deaf individuals.
Moeller (2000) suggested that success in language development is achieved when early identification is paired with early interventions that actively involve families.

Briscoe, et al. (2001) suggested major problems in non-word repetition and phonological impairment in children with mild to moderate sensori-neural hearing loss occurred without clinically significant deficits in wider language and literacy abilities.

Pivic, Maccomas and Laflamme (2002) identified four types of barriers to inclusive education such as environmental barriers, intentional attitudinal barriers, unintentional attitudinal barriers, and limitations inherent to the physical disability.

Evans and Lunt (2002) suggested that there are considerable obstacles in the way of inclusive education and is difficult to meet the wide range of individual needs.

Porter (2002) found that children with greater incidence of Otitis Media Effusion (OME) and hearing loss during the first four years of life scored lower in verbal math problems between kindergarten and second grade, even after partialing out important background factors. But there was no evidence of a significant relationship between OME or hearing loss and children’s academic skills in reading or word recognition during the early elementary school years.
Geers, et al. (2003) reported that the use of cochlear implantation has had a dramatic impact on the linguistic competence of profoundly hearing impaired children.

Bryan (2004) concluded that high levels of speech, language and communication difficulties are found among the young deaf offender population.

Wake, et al. (2004) reported that language and vocabulary scores of hearing impaired children worsened with increasing severity of hearing loss, but adaptive functioning, health-related quality of life, academic skills and behaviour did not.

Biswas and Panda (2004) investigated the attitudinal barriers to Inclusive Education and found that there are numerous barriers such as lack of physical and information resources, volume of demands, and inappropriate management to the approach and we must build competence to overcome them gradually but systematically step by step.

### 3.3 Studies Related to Psychosocial Adjustment of Hearing Impaired

Linkowski and Dunn (1974) and Heinemann and Shontz (1982) documented a positive relationship between self-esteem and adjustment to disability.

Knutson and Charissa (1990) investigated Communication strategies, accommodations to deafness, and perceptions of the
communication environment by profoundly deaf subjects were correlated with indices of psychosocial adjustment to determine whether accommodations to deafness could play a role in the presence of psychological difficulties among deaf persons. Result revealed that inadequate communication strategies and poor accommodations to deafness were associated with depression, social introversion, loneliness, and social anxiety. Limited communication performance at home and with friends was related to both social introversion and the experience of loneliness; perceived attitudes and behaviors of others correlated with depression as well as loneliness.

Koester (1990) revealed that denial of a hearing loss and the designation of a handicap may lead to problems in under or over-involvement of parents and peers that have implications for the emotional and social functioning of the deaf child.

Turner and Beiser (1990) found in the United States that the risk for clinically significant emotional distress was two to four times higher among persons with chronic diseases or disabilities than among persons with no disability.

Belgrave (1991) reported that perception of severity of disability, self-esteem, and social support were statistically significant predictors of adjustment to disability. Higher levels of self-esteem and social support were correlated with a favorable adjustment to disability.
Sahoo (1991) found that the normal children showed much better behavioural functioning as compared to the blind, the deaf and the dumb.

Luey, Glass, and Elliot (1995) found that those who lost their hearing at three years of age or more may experience a more reduced quality of life than those who have had hearing loss since the early months of life. They suggest that the former group may feel a sorrow that follows the loss of hearing the spoken language.

Jyothi and Reddy (1996) compared the adjustment and self-concept of hearing impaired and normal children and found that hearing impaired and normal children differed significantly in three areas, viz. health, emotionality and masculinity-femininity, where hearing impaired children exhibited a better quality of adjustment than the normal children. Hearing impaired children had low self-concept compared to normal children.

Pathak (1996) studied the mental ability of deaf children and their educational problems and reported that normal subjects scored higher on mental ability test than the deaf subjects.

Jarvelin, et al. (1997) concluded that a hearing loss appears to affect both the outcome of education and employment status.

Alston (1998) discovered that there is a need for training within the correctional system to provide services to deaf and hard of hearing individual because they experience communication and emotional
difficulties from the arresting process to their release to the parol of probation agent.

Annie, et al. (1998) revealed that mistrust, communication difficulty, profound concern with communication in therapy and widespread ignorance about how to obtain services, are the barriers to mental health service to deaf.

Bess, et al. (1998) revealed that there is significant association between minimal sensory-neural hearing loss and school behaviour and performance. The children with minimal sensory-neural hearing loss experienced more difficulty than normally hearing children on a series of educational and functional test measures.

Burk and Karon (1998) suggested that intervention and prevention efforts for children with hearing impairment should focus on increasing their functional independence, problem-focused coping abilities and psychosocial resources, and attention should be devoted to multiple predictors in order to have a clinically significant impact on the children’s functioning.

Hindley and Kroll (1998) analysed that attention deficit and hyperactivity disorders are higher in children with acquired deafness or additional impairments than in children with inherited deafness and share the features of attention deficit hyperactivity disorder seen in hearing children.
Hogan (1998) indicated that deafened people fall within normal limits on the depression scale and the proportion of respondents falling within the depressed range was lower than that in the broader community.

Linda, et al. (1998) indicated that the timing of developmental changes in visual selective attention was similar to hearing children, deaf children with cochlear implants and deaf children without implants.

Marschark (1998) suggested that Universal Screening be implemented for all infants within the first three months of life for the early identification of hearing loss.

Middleton, et al. (1998) assessed the attitude of deaf adult towards, testing in pregnancy for hereditary deafness and reported that deaf adults have a predominantly negative attitude towards genetics and its impact.

Nybo, et al. (1998) reported that grandparents were willing to provide diverse support services to their children and grandchildren to the extent permitted by their resources and nature of their existing relationship with the deaf child’s parent.

Prout (1998) revealed that deafness was a key aspect of self understanding during the adolescent years.

Koester, et al. (1998) reported that there are no differences in the amount of positive or negative vocalizations emitted by deaf infants and
hearing infants and their deaf or hearing mothers during normal face-to-face interactions when the infants were nine months old.

Barbara (1999) revealed that deaf adopted parents perceive much stronger social support from natural social networks within the deaf community than from formal service providers, primarily because of inaccessible communication and social workers lack of awareness of the needs of deaf clients.

Briffa (1999) found that deaf people experiencing psychosis may have auditory hallucinations, such as hearing voices. This is noted to be possible even if they have been deaf from birth. Research conducted in a mental health setting revealed that 59 percent of deaf patients were able to give accounts of verbal auditory hallucinations.

Leigh, et al. (1999) assessed the relationship between parent communication variables and the parent bonding factors of care and over protection, indicated that paternal care and over protection were negatively correlated, as were maternal care and over protection.

Mathur and Arora (1999) revealed that self-esteem, independence, achievement, and family environment are highly related to the psychological development of children.

Ronnberg, et al. (1999) revealed that speech reading expertise is associated with cognitive functions such as high working memory capacity and phonological skills.
Taylor (2000) reported that alienation is a useful construct for understanding the mechanisms associated with undesirable learner outcomes and in developing strategies to circumvent student academic failure.

Toth (2000) concluded that issues of frustration and shame that erupt when the child cannot receive or produce the language of the parent and the majority population but must communicate through a gestural or visual language, such as sign language, were perceived as obstacles to effective communication between parent and child.

Huffman (2001) stated that the causes of student alienation are multifaceted including curricular, institutional, and socio-cultural factors. Alienated students feel incongruent with curricula and devoid of opportunities to establish meaningful connections and such disconnections results in apathy in the learning process.

Biji (2002) concluded that the mental health status was poorer among hard of hearing and deaf individuals than in the general population.

Chritchfield (2002) revealed that deaf children and adolescents exhibit higher levels of behavioural and attention-deficit hyperactivity disorders than the general population.

Eide and Roysamb (2002) analyzed the interrelation between psychological problems, social activity, and social network on the one
hand and self-reported level of disability or activity limitations on the other. They concluded that an individual’s activity limitations are predictive of the level of psychosocial problems they experience.

Graaf and Biji (2002) concluded that mental health status differs between the hearing impaired and the general population. For both categories, the risk of mental distress was higher in those with more communication problems, lower levels of self-esteem, and poorer acceptance of the hearing loss.

Redden (2002) reported that alienation is a useful construct for understanding the mechanisms associated with undesirable learner outcomes and in developing strategies to circumvent student academic failure.

Tambs (2002) concluded that hearing loss is associated with substantially reduced mental health ratings among some young and middle aged persons, but usually does not affect mental health among older persons.

Henrick, et al. (2003) concluded that the handicap of the hearing impaired affects their lives and significantly reduces their opportunities for social integration.

Kramer, et al. (2003) revealed that hearing impaired elderly report significantly more depressive symptoms, lower self-efficacy and mastery,
more feelings of loneliness, and a smaller network than normally hearing peers.

Polat (2003) revealed that, parental-school and teacher related factors play relatively important roles in the psycho-social adjustment of deaf students, as do student-related factors.

Thorpe (2003) reported that alienation is a useful construct for understanding the mechanisms associated with undesirable learner outcomes and in developing strategies to circumvent student academic failure.

Wake and Poulakis, (2004) reported that children with minimal sensorineural hearing loss exhibited significantly greater dysfunction than children with normal hearing on self-reported variables such as behavior, energy, stress, social support, and self-esteem.

Michael, et al. (2005) described quantitative and qualitative data regarding the use of Vermont Interdependent Team Approach and its impact on the students with deaf-blindness.

Black and Glickman (2006) conducted a study in a specialty deaf inpatient psychiatric unit and found that 75 percent of deaf individuals were non-fluent in American Sign Language. This finding may result from the fact that 90 percent of deaf children are born to hearing parents and these children may not have received any usable language input during critical language acquisition periods of brain development.
The study of Kava and Loeb (2006) revealed that the deaf students show more symptoms of mental health problems than the hearing students. The results point to the need for focusing more attention on the mental health of deaf children.

Kushalnagar (2006) assessed whether adaptive behavior in deaf children was associated with nonverbal intelligence and parental depression and found that regardless of age or neurological status, the deaf child's adaptive behavior consistently showed a strong relationship with intelligence. Moderate correlation between parental depression and the child's adaptive behavior was observed only in the younger group. The relationship between parental depression and communication subscale was moderated by intelligence for deaf children without neurological complications.

Tobin, et al. (2006) found no differences between children with slight/mild sensorineural hearing loss compared with children with normal hearing, in terms of language, reading, behavior, and health-related quality of life variables.

Dammeyer (2007) evaluated the prevalence of psychosocial difficulties in a Danish population in relation to different explanatory variables and showed that the prevalence of psychosocial difficulties was 3.7 times greater compared with a group of hearing children. If sign language and/or oral language abilities are good, the children do not
have a substantially higher level of psychosocial difficulties than do hearing children. This study documents the importance of communication—no matter the modality or degree of hearing loss—for the psychosocial well-being of hearing-impaired children.

Dhingra (2007) indicated that impairment in hearing had little or no influence on developmental milestones during the early years of life.

Hintermair (2007) examined the interrelations between acculturations, psychological resources, and self-esteem as well as the satisfaction with life of deaf and hard-of-hearing people and found that bicultural acculturation seems to be a secure option for psychosocial well-being. The availability of psychological resources (optimism, self-efficacy) seems to be of special importance for the quality of self-esteem and satisfaction with life.

Lukomski (2007) examined differences between deaf and hearing students’ perceptions of their social emotional adjustment as they transition to college. The results showed that deaf students rated themselves as experiencing significantly higher home life difficulties than hearing students, and deaf students rated themselves as having fewer coping difficulties than hearing students. Results also revealed that deaf females rated themselves significantly higher on worry than deaf males, hearing females, and hearing males. These findings suggest that there are
differences between deaf and hearing students who are transitioning to college with regards to their social-emotional adjustment.

Brunnberg and Bostrom (2008) concluded that combination of a hearing loss and some other disability strongly increases the risk for mental symptoms, school problems, and substance use.

Hintermair (2008) examined the correlation between parental resources, socio-demographic variables, parental stress experience, and child socioemotional problems and found that high parental stress is associated with frequent socioemotional problems in the children, thus emphasizing the importance of a resource-oriented consulting and support strategy in early intervention, because parental access to personal and social resources is associated with significantly lower stress experience.

Satapathy (2008) investigated psychosocial and demographic correlates of academic performance of hearing-impaired adolescents and showed that stress had a significant inverse correlation with academic performance of non-impaired students, whereas the relationship was low positive in case of hearing-impaired students. While social-emotional adjustment enhanced academic performance of both groups, self-esteem did not relate significantly in either case. However, many socio-demographic variables like number of siblings, socio-economic status, and age were found to have significant correlation with academic
performance of hearing-impaired students. The differences were analyzed in relation to the impairment specific academic problems, educational system and the vital role played by the family.

Polat (2009) investigated student-related background and experiential characteristics, parent-related variables, school-related factors, and teacher-related variables on deaf students' psychosocial adjustment in Turkey and revealed that degree of hearing loss, additional handicap, and age at onset of deafness were negatively related to psychosocial adjustment of deaf students. However, there was a positive relationship between psychosocial variables and some of the independent variables, such as use of hearing aids, speech intelligibility, academic achievement, parental hearing status, and communication methods used at school. The findings of the study do not support a "pathological" view of deafness, suggesting that it was not deafness per se but that some environmental factors were also influential on the psychosocial adjustment of deaf students.

Leigh and Mc Caw (2009) assessed the effect of cochlear implants on the adolescents’ psychosocial functioning among a group of 57 deaf adolescents with and without CIs, using published and validated measures completed by the adolescents themselves, their parents, and teachers. Despite some differences in background characteristics between
the two groups, there were no differences between them on the psychosocial variables assessed in this study.

3.4 Studies Related to Vocational Aspirations with Special Reference to Hearing Impaired

Jayapoorani (1982) studied the vocational interest of higher secondary school students and found that majority of students preferred natural sciences, mathematics and English.

Bandura (1986) found that deaf/hard of hearing adolescents did not perceive highly prestigious occupations as suitable for deaf men and women, even when communication barriers were irrelevant, may indicate their lower career self-efficacy. Self-efficacy, comprising a belief in one's ability to perform specific tasks plays an important role in career development.

Arora (1988) studied the educational and vocational aspirations of students of class XII and found that the percentage of boys obtaining marks above 75 percent was greater than that of girls and vocational aspirations are found higher in boys.

Gautam (1988) investigated the educational and vocational interests of students at the delta stages- Classes VIII and X and reported that, a significant correlation was found in the preference orders of boys of classes VIII and X in both educational and vocational interest areas and no significant correlations was found in the preference orders of girls of
classes VIII and X in the educational interest areas, while in the vocational interest area, a significant correlation was noted.

Makhiza (1988) found that risk-taking and vocational interests were significantly related to each other but self-esteem was positively related to social jobs and negatively related to construction and agricultural jobs.

Robert (1988) investigated the socio-economic status and vocational aspirations of students and reported that the vocational choices of the higher secondary students were independent of their socio-economic status and vocational aspirations of their parents.

Sodhi (1988) made a study of the vocational interests and occupational choices of adolescent girls and found that the occupational choices and vocational interests were comparatively more congruent for girls of urban background and those belonging to the high income group as against their counterparts from the semi-urban areas and the low income group.

Srivastava (1988) found that vocational development was largely dependent upon education, which in turn depended upon social status.

Bhatnagar and Gulati (1989) proposed a framework for research related to the vocational behaviour of creative adolescents and they reported lack of sufficient empirical evidence to support the finding that creative students were vocationally more mature than less creative.
Muthiah (1989) found that the vocational training imparted was not in accordance with the interests and aspirations of the disabled students, rather it was in accordance with the needs and aspirations of the institutions.

Choudhary (1990) studied the vocational aspirations of IX Standard students of English Medium Schools in Pune City and found that forty percent of the sample students wanted to be either doctors or engineers, and no relationship was found between occupation of fathers and the occupational choices of the students.

Javed (1990) found that, students of science, arts and commerce faculties preferred white collar vocations and they showed low interest in vocations requiring physical labour.

Kaur (1990) studied the educational and vocational aspirations of students belonging to different socio-economic locales of Jammu division and found that both educational and vocational aspirations were influenced by sex, socio-economic status and locality.

Stauffer and Long (1990) found that deaf high school students held a more stereotypic and conservative approach toward men's and women's occupations than did hearing peers.

Super (1990) reported that factors outside school such as family and massmedia and factors inside school such as counselor, peer group, teacher and text book influences occupational information and play an
important role in encouraging girls to consider a wide variety of career options.

Gallinger, Sela and Weisel (1992) reported that examination of gender differences in deaf persons' occupational expectations and evaluations of occupational competence is especially important because of the difficult employment demographics for deaf women.

MacLeod-Gallinger (1992) compared the employment characteristics of 4,917 deaf high school graduates to national data in the United States. A higher rate of unemployment emerged for deaf women than for deaf men, especially in data that included adults without a college education. In addition, deaf employees frequently worked in lower paying occupations than those of hearing employees. Furthermore, differences in salary emerged between deaf and hearing workers, even in professional jobs. Deaf women in particular held positions at the lower end of the pay range, mainly due to the high rate of deaf women in administrative support (clerical) positions that were generally low-paying jobs. An interesting finding was that no difference emerged between deaf women and deaf men when overall socioeconomic status was examined. This perhaps stemmed from the relatively high socioeconomic status of teachers and counselors, occupations held by many deaf women, particularly serving the deaf population.
Prabhat Singh (1992) conducted that normal students of standards VIII and IX were better adjusted than the physically handicapped students of standards VIII and IX respectively.

Saraswathi (1992) investigated the relationship between personality dimensions and vocational interests of pupils of standard X and reported that the personality dimensions and vocational interests were not related.

Schroedel (1992) compared deaf/hard of hearing and hearing youngsters’ aspirations for their own future educational pursuits and revealed that deaf/hard of hearing and hearing participants reported lower aspirations.

Sela and Weisel (1992) found a higher rate of employment among men (76.7%) than among women (45.9%) and higher occupational prestige for men than for women. On a scale from 1 to 100, 29.2% of the deaf women held jobs with an occupational prestige ranking above 40, compared with 42.3% of the men.

Sundararajan and Williams (1993) examined teachers attitude towards vocational education and found that there was significant difference between the teachers of the government, private and matriculation schools regarding attitude towards vocational education.

Panda (1994) studied the vocational interests and academic performance of 200 tribal adolescents and found that male adolescents
showed more inclination towards the vocations of executive or administrative, followed by social service, scientific, and were least interested in the vocations related to commerce.

Read (1994) reported that the level of education that youngsters aspire to achieve, the occupations they expect to hold, and the extent to which they believe they will be capable of succeeding in certain jobs, all appear to be powerful determinants of career choice and development of hearing impaired.

Ashton and Kimberly's (1995) investigation of 68 preschoolers' sex-typed occupational aspirations and found that both boys and girls preferred traditionally gender-appropriate occupations.

Bhargava and Sharma (1995) examined the relative status of career maturity among high and low achievers and found that high achievers’ group showed more favourable career competence as compared to low achievers group. But the low achievers revealed significantly better goal selection ability as compared to high achievers.

Lehtoranta (1995) studied the health status, early rehabilitation, developmental factors and vocational orientation of 9th grade hearing impaired students and reported that vocational interests of boys and girls differed each other. They wished to get more information about vocational possibilities, occupations in general and vocational education as well as guidance and discussions concerning their vocational choices.
Sheikh and Krishnan (1995) examined the relationship among vocational choice, socio-economic class and parental attitude in the changing Indian family and found that low income group children were found to choose vocations loosely over all the levels in a very non-focused way, while the middle income and high income groups chose very focused and specific vocations. It was found that parental attitude also reflected the adolescents’ vocational choice.

Parasnis, Samar and Mandke (1996) reported that hearing status do not have a significant effect on the Indian participants' evaluation of occupational competence.

Brett (1998) indicated that adolescents with hearing impairments were identified as having less career awareness and significant differences were identified between hearing impaired and hearing adolescents on a range of career awareness. Although the need for better-skilled workers has been signaled by the marketplace, people with hearing impairments generally are unemployed in unskilled or semiskilled jobs. Therefore heightened risk of unemployment and underemployment.

Furlonger (1998) reported that deaf/hard of hearing adolescents have less career awareness than their hearing counterparts.

Mohan (1998) reported that girl’s inclination towards a career is influenced heavily by the attitude of parents towards the role of women
in society, family structure, relationships and functions and background factors such as socio-economic status.

Powell and Luzzo (1998) reported that males between the age of 15 and 19 believed that they had more control over their career decision making than did females of comparable ages.

Dangi and Intodia (1999) studied the choice of tribal youth regarding different agricultural vocations and the topmost agri-based vocations for inclusion in the course curriculum suggested by the tribal respondents were crop production, dairying, seed production technology, plant production techniques, maintenance of agricultural machineries and establishment of agro-service centres.

Pressman (1999) demonstrated that deafness is not a barrier to career aspirations and suggested that deaf woman should be given special attention, and counselors should encourage deaf clients to continue their education beyond high school, and to work before launching their business.

Sharpe and Sonnert (1999), and Tilleczek and Lewko (2001) claimed that women lack strong expectations of their own personal efficacy in a number of occupational areas, particularly in natural sciences, engineering, and mathematics.

Lhungdim (2000) examined the kinds of aspirations of adolescents of Manipur and their importance as a tool for policy making in the field of
education. The results showed that most of the adolescents prefer to be professionals like doctors, engineers, teachers, army officers, etc, in the future.

De Caro and Dowaliby (2001) suggested that deafness may act as a cultural homogenizer with regard to attitudes toward careers. In other words, the effect of deafness on attitudes was similar in different cultures.

Havalappanavar (2001) studied the vocational interests of professional and non-professional students and the result showed that the professional college students differ significantly from non-professional college students in their vocational interest.

Singh (2001) investigated the rehabilitation expectations of handicapped children and found that hearing handicapped children expects their rehabilitation most in personal business and teaching.

Mennino and Brayfield (2002) reported that gender significantly influences attitudes toward persons with disabling conditions, occupational expectations, and evaluations of people's ability to perform satisfactorily in a particular occupation.

Weisel and Zandberg (2002) reported that the absence of deaf adults in prestigious occupations and the limited number of deaf teachers in the Israeli educational system may be one possible explanation for deaf youngsters' low career self-efficacy.
Heppner and Heppner (2003) emphasized the need to focus on exploring and expanding occupational options for deaf/hard of hearing persons and for deaf/hard of hearing women in particular. They reported that desirable change in the attitudes of hearing and deaf/hard of hearing adolescents about the successful employment of deaf persons can be achieved with appropriate efforts that include introducing live and simulated models.

Susan and Janet (2004) studied the role of mentoring relationships in the career development of successful deaf persons and found that having a mentor was a primary and persistent element in their career success. In the deaf individual's early years, generally it was a family member or teacher who conveyed a belief in that individual's abilities, encouraged effort, and helped instill self-esteem and confidence. Parents were often their strongest advocates, and teachers were their advisors and facilitators. In the work setting, a supervisor or coworker often served as a mentor by coaching, advising, and teaching the individual what they needed to know to succeed on the job. In many ways, these "informal" mentors provided the foundation that enabled the deaf individual to break through what are often barriers to career success despite their skills and abilities.

Peter, Renee, and Hyde (2005) investigated the career development of hard-of-hearing high school students attending regular classes with
itinerant teacher support. When compared 65 hard-of-hearing students with a matched group of normally hearing peers on measures of career maturity, career indecision, perceived career barriers, and three variables associated with social cognitive career theory career decision-making self-efficacy, outcome expectations, and goals. In addition, the predictors of career maturity and career indecision were tested in both groups. Results indicated that (a) the two groups did not differ on measures of career maturity, (b) the SCCT variables were less predictive of career behaviors for the hard-of-hearing students than for the normally hearing students, and (c) perceived career barriers related to hearing loss predicted lower scores on career maturity attitude for the hard-of-hearing students.

Weisel (2005) showed that occupations requiring intensive communication levels, regardless of their prestige, were evaluated as much less suitable for deaf individuals as were those requiring less communication. Higher educational aspirations among hearing adolescents, especially hearing males, correlated with a higher evaluations of occupational competence of deaf adults.

Punch, Hyde and Power (2007) reported on the experiences of a group of deaf and hard-of-hearing alumni of Griffith University in south-east Queensland, Australia. Participants completed a survey answering questions about their communication patterns and preferences, working lives, career barriers or difficulties anticipated and encountered, and
workplace accommodations used or sought. Results revealed a range of career barriers and workplace difficulties encountered by these participants, as well as solutions found and strategies used by them. Differences in employment sector, job-search activities, difficult workplace situations, and use of accommodations were noted between two groups: those who communicated primarily in Australian Sign Language and considered themselves to have a Deaf or bicultural identity and those who communicated primarily in spoken English and considered themselves to have a hearing identity.

Sharma and Sharma (2008) investigated the career preference of senior secondary students in relation to their intelligence and found that a significant relationship between the level of intelligence of science and commerce students at secondary level and their respective career preference.

Kumar (2008) investigated occupational interests in relation to adjustment and found that better adjusted adolescents of urban and rural settings had shown more attraction toward mechanical and scientific interests in comparison to their less-adjusted counterparts, who had shown more interest toward clerical, business, social, aesthetic and outdoor interests.

Santhosh (2009) investigated the relationship between Socioeconomic Status and Vocational Interests of Secondary School
Students and found that the vocational interests of the high and average socioeconomic status students do not differ significantly. On an average all the students were more interested in artistic and social areas of vocational interests while they were less interested in constructive and agricultural areas.

3.5 Conclusion

The survey of related studies and literature indicates the importance of psychosocial variables in determining the vocational aspirations of hearing impaired children. It is also found that there is a dearth of research studies which have direct bearing on the present investigation.

The review of literature provided information and ideas about the nature of research in the selected field of investigation. It helped the investigator to properly design the study - to select the appropriate methodology, to prepare the devices for data collection and to analyse the data meaningfully.