CHAPTER 2

REVIEW OF LITERATURE

Since time immemorial, recreation has been an important part of human life. It has also been mentioned in the laws and policies for people with disabilities. One of the important agencies that contribute to the child’s development is school. The co-curricular programme and school recreation in special schools and its contribution can enhance our understanding about not only the school recreation but also the challenges and strengths faced by the students with hearing impairment in special schools. The present chapter summarizes the information collated from the studies conducted on five major domains:

- Strengths and challenges faced by the children with hearing impairment;
- Special schools and curriculum;
- School engagement;
- Recreation and child development; and
- School Recreation in a Special School for the Children with Hearing Impairment

Linkages between the strengths and challenges faced by the children with hearing impairment, their school and recreation are also discussed as they emerge from the collation and synthesis of the findings from different studies. Lastly, gaps in the literature and research studies are identified with an explanation as to what extent and how the current study addresses these gaps.

Children with Hearing Impairment: Challenges and Strengths

Hearing impairment has long been associated with communication problems, low status and social isolation. With regard to older children and adolescents, Harvey (1989) found that hearing loss is often associated with feelings of helplessness and incompetence, or a lack of self-efficacy. Studies have shown that children with hearing impairment find it difficult to develop appropriate social skills and social relationships due to communication difficulties (Antia, 2011; Nunes and Pretzl, 2001). Studies (Stinson & Kluwin, 1996; Tvingstedt, 1993 cited in Wilkens & Hehir, 2008) have found that hearing loss is not the overriding factor in the isolation of children as even the children who are cochlear implant users feel segregated. Lack of conscious and deliberate planning for social interaction was cited as the major barrier to social capital formation – resource of network of relationships – among these children (ibid).
Oralism, social attitudes and resulting communication problems are found to have negative effect on the mental health of children with hearing impairment (Van Eldik et al., 2004; Sinkkonen, 1994; Kraijer & Plas, 1998). Communication skills and intelligence are found to be associated with emotional problems among children with hearing impairment (Kraijer & Plas, 1998).

In a study conducted by Li and Prevatt (2010) in China, the deaf children and adolescents reported high levels of anxiety and fear. In the same study, girls reported more fears including fear of failure and criticism than boys. Scarcity of trained teachers, overemphasis on oral education in schools, negative stereotypes and parental over-protectiveness puts these children at risk of high stress and confusion according to these researchers.

A study conducted on 238 Dutch deaf children in the age group of 4-18 years validated the proposition that mental health problems such as anxiety and depression are faced more by children with hearing impairment than hearing children. In the study, a forty one percent prevalence of emotional/behavioral problems was found among the deaf children. It was also found that the transition from childhood to adolescence – age period from 12 years to 18 years is more stressful for children with hearing impairment, as during this time their contact with the external hearing world increases (Van Eldik et al.; 2004).

A child with a low score on an intelligence test had more attention-retention problems that the child with an average or high score (Kraijer & Plas, 1998). Communication seems to be major contributing factor towards emotional health, as children with low communicative competence had more problems than children with good communication skills. Other personal factors such as sex, education and age were not as strongly associated with the presence of emotional problems among children with hearing impairment (Sinkkonen, 1994).

More than individual factors, environmental factors such as parental acceptance of child’s deafness, communication between the child and the parents and family stress contribute to the emotional problems of a child with hearing impairment (Van Eldik et. al.; 2004), highlighting the value of a nurturing environment.

The researchers highlighted the need for deaf role models, providing opportunities for positive interactions between the child and the family and guidance on communication strategies with a deaf child to the parents (ibid). There have also been studies that have indicated the role played by the influential
others – peers and teachers – in providing buffer to the child against the emotional stresses while growing up (Bury & Wilson 2007; Jung & Short, 2002). Success in sport or an activity is also a facilitating factor of mental health through increase in confidence, positive social identity and self esteem (Stewart & Ellis, 1999).

Deaf and hard of hearing persons have all too often learnt from significant others a wide array of self-deprecatory beliefs, feelings, and images. Such individuals might benefit from cognitive strategies that help to dispel and replace their dysfunctional self-beliefs with more positive ones. Stronger positive beliefs, such as considering oneself worthwhile, will have a favorable effect on the deaf person's emotional status.

The survey conducted by Luckner and Muir (2001, 2002 cited in Thagard, Hilsmier and Easterbrooks, 2011) with 20 successful deaf and hard of hearing students who were ‘achievers’ in the mainstream schools, the factors that emerged as the ‘contributors to success’ were social skills, friendships, self-advocacy skills and communication. Higher quality of life for individuals with disabilities is found embedded in the social networks and supports that provide opportunities to develop friendships and recreational programmes that give the experience of social acceptance (Devine & Lashua, 2002; Antia et al., 2011). Extent of opportunities to build and maintain positive social relationships are often the determinant of the quality of recreational experience of the persons with disability (Samdahl & Jekubovich, 1997 cited in Devine & Lashua, 2002) and social success (Antia et al., 2011).

One empowering concept that has emerged in this decade is that of Deaf Culture. Some of the key elements of Deaf culture are use of sign language not only for interactions but also for art forms like poetry and drama; highly visual artistic expressions; organizations like Deaf club; and a sense of past experiences, a concept of Deaf history shared by Deaf people (Klerk cited in Weisel, 1998). A positive impact of the Deaf culture is the affirmative and dynamic group identity of persons with hearing impairment based on the positive experiences – personal and social. As this study uses strengths and empowerment perspectives, the preferred term to refer to people with hearing impairment would have been Deaf, if the Deaf Culture was more prevalent in India. However, the decision was taken to use the term ‘child / student / people with hearing impairment’ because majority of people with hearing impairment in India do not relate to the Deaf culture and do not identify themselves as linguistic minority. In majority of the schools, oralism is adopted with very little or no use of sign language (National Association of Deaf, 2011).
Studies have found that persons with hearing impairment achieve stronger self identity through mechanisms such as devaluing majority attributes (e.g., speech) and beliefs (e.g., stigmatization of deaf people), and valuing minority attributes (e.g., signing) and values (Bat-Chava, 1993, 1994, 2000). Stronger self identity leads to positive self esteem (ibid) The analysis of Flemish deaf narratives lead De Clerck to the conclusion that visits to barrier-free deaf environments are transformative for deaf people (De Clerck, 2007).

Just as positive experiences lead to positive identity, negative experiences affect a person’s identity, negatively (Israelite, Ower, & Goldstein, 2002, cited in Nikolaraizi & Makri, 2004). It was found in a study that barriers do exist for persons with hearing impairment to achieve optimum and pursue a goal due to underestimation of their own capabilities, not only by others but by themselves, too (Nikolaraizi & Makri, 2004).

The degree of interaction and time spent with the other children with hearing impairment at home and school affects the identity the child will develop as an adult (Bat-Chava, 2000) highlighting the importance of opportunities for positive interactions and accomplishments not only at home but at the school the child attends.

**Special Schools and School Curriculum**

The socialization agency and context for children with hearing impairment historically, and even today, has been mainly the school, including preschool (Ramsey, 1997 cited in Wilkens & Hehir, 2008). Therefore, the determinants as well as outcomes of the socialization of children with special schools makes conceptual sense and provides a base for understanding how different components of curriculum contribute to the same (Wilkens & Hehir, 2008).

An opinion poll conducted in July 1998 by Peter D. Hart Research Associates identified two values that majority of the respondents felt should be the top two goals of any school – values such as respect and honesty and teaching students how to reason and think well (NFHS, 2003). Surprisingly academic excellence was not the only or even main yardstick by which a school was judged. Importance was given to the environment in a school (ibid).

Svartholm’s (2007, cited in Wilkens & Hehir, 2008) study of Swedish schools for the children with hearing impairment demonstrated variety of communication and interaction domains – simple as well as complex – within schools that can facilitate success of students with and without cochlear implants.
An educational climate in which a child feels at ease positively influences both – child’s academic excellence as well as his / her emotional health (De Clerck & Goedele, 2007). As per the development theories, the age group spanning 8 years to 12 years is in exploratory stage and experiences during this time either makes the child confident or diffident about himself/herself. As the school is perhaps the most important social agency at this age, the learning, socialisation and communication that take place in the school have an important role to play in the later development of the child with hearing impairment (Klerk cited in Weisel, 1998).

Review of literature reveals that planning curriculum of all that goes in the school – academic as well as non-academic activities - around the concept of developmental tasks yields positive results. Sudzina and Gay (1993) in their study found following benefits of identifying and assisting schoolchildren with their developmental tasks: (1) improvement in the teacher’s assessment and recording skills; (2) decrease in the tendency of labeling a child negatively; (3) increased ability to identify and assist schoolchildren with developmental tasks, (4) knowledge and appreciation of what children are up against as they work out their developmental tasks, (5) better teamwork to support the child achieve his/her developmental tasks, and (6) better ability to detect the challenges the child is facing in learning and help him / her in dealing with those.

A study of special schools reveals that at the secondary level, social and behavioral expectations at school become more demanding for all students. There is an expectation that students would assume more responsibility and give better behavioural and academic performance (Isakson & Jarvis, 1999 cited in Lane, Pierson & Givner, 2004). From middle school on, students are expected to assume increased responsibility for regulating their behavioral and academic performances (*ibid*).

What is taught at the schools is determined by the perspective adopted on hearing impairment. At present, the prominent perspective demands that, to the greatest extent possible, the curriculum for students who are deaf or hard of hearing should be the same as that of hearing students (Moores, 2001). There are two types of adaptations: One is accommodations in which the instructional level, content or performance criteria are not changed significantly. Changes are made in the process to give a student with equal access to learning and results. Second type is modification in which there are substantial changes in what students are expected to learn and demonstrate. Modifications are made in the course objectives, assessment content, as well as the grading process (Luckner, J. & Rudolf, S. 2009).
There have been many studies on education for the children with hearing impairment. Most of these studies focus on the inclusive education (Thumann-Prezioso, 2005; Angelides, & Aravi, 2006, Pugach & Warger, 2001), teaching methods (Lasasso, 1999; Woolsey, Harrison & Gardner, 2004) and linguistic competencies (Thagard, Hilsmier & Easterbrooks, 2011; Cerra et. a., 1997) of the students. There have been studies on the curriculum of the academic subjects taught in special schools (Lytle & Rovins, 1997), but very few studies have focused on the co-curricular programme (Darling, Caldwell & Smith, 2005).

A study was conducted by Kurkova, Scheetz and Stelzer (2010) which compared the residential and non-residential special schools in Czech Republic and United States. The study found certain advantages of both – residential as well as nonresidential schools. One of the areas that the study pointed out as needing more attention in a non-residential school setting was co-curricular or school recreation activities for the students. The researchers found that the residential schools have a strong curriculum that offers multitude opportunities of school recreation, whereas the non-residential schools do not give these activities enough time within its curriculum (Kurkova, Scheetz and Stelzer, 2010).

**School engagement**

There have been studies that have looked into the effects or association between school engagement and factors such as academic grades, peer relations, students’ coping with schooling in middle school and behavioural problems (Erb, 2006; Woolley & Bowen, 2007). Students who are involved in the school activities and enjoy them are more likely to experience educational success (Newman, Davies & Marder, 2003).

A study conducted in the schools in 193 rural communities in USA found a strong negative relationship between school bonding and substance use (Shearts, Edwards & Stanley, 2006). There have also been studies (Rice et. al., 2008) that showed positive relationship between school engagement and psychosocial quality of life of students.

The studies have found that the school disengagement has negative impact on the health and wellbeing of children (Pellerin, 2005; Harcourt & Keen, 2012). It leads to academic failure and school drop-out *(ibid)*. These negative effects seem to occur irrespective of differences in the gender, race/ethnicity or socio-economic status of the students (Finn, 1993, Pellerin, 2005).

Attitudes and behaviours of teachers and parents as well as school policy and practice influence the student engagement with the school Libbey, 2004. These factors coupled with parental apathy and health challenges seem to put students with disabilities more at risk for disengagement from school than the non-
disabled students (Newman, Davies & Marder, 2003). However, this does not mean that students with disability are uninterested in schooling. The researchers found that 80% of the students with disability feel that school is the best place to learn and 91% of the students believed that schooling will help them to have a better future (ibid).

If the factors influencing students’ level of engagement are external such as teachers’ behaviours, school climate and attitudes of parents and peers, it follows that they can be modified (Finn, 1993; Newman, Davies & Marder, 2003). Opportunities to engage in and excel at different activities and a feeling of being welcome at school increase the students’ engagement with the school, irrespective of their academic grades (Newman, Davies & Marder, 2003).

A paper by Catalano et. al. (2004) summarised results of two longitudinal studies – the Seattle Social Development Project and Raising Healthy Children. Their analysis showed that development of the skills of the socializing agents in the school – teachers and peers – enhanced the social environment of the school which results in more bonding to school leading to better academic performance and reduced problem behaviour. The study also highlighted importance of reviewing and developing curriculum components that would give opportunity for social involvement of the students. Specifically, the study found that a focus on academic competence alone is less likely to achieve the goal of helping a child to maximize his/her potentials (Catalano et. al., 2004).

Lower rates of absenteeism among students of disability are found to be associated with belonging to school groups (Brown & Evans, 2002). Group participation is empowering especially when the students can choose to participate in the school groups or co-curricular activities in the group (Newman, Davies & Marder, 2003). Participation in extra-curricular activities is also found to lead to increased school engagement (Brown & Evans, 2002; Jordan, 1999).

There have also been studies that look at the effect of school engagement on the co-curricular participation of the students. Two studies conducted with secondary school students (Ntoumanis, 2001 and Standage, Duda & Ntoumanis, 2003; cited in Allen and Petrie, 2005) showed that school engagement leads to students participating more in physical education and understanding the importance of being physically active even in future.

Another study assessed the motivational responses of 328 school students to their physical education classes (Allen & Petrie, 2005). A scale was used to assess the perceptions of relatedness, i.e. the extent to which they felt valued and supported. Perceptions of competence, autonomy, motivation, and intentions for participation in leisure-time physical activity were also evaluated. It was found that the more is
student’s feeling of connectedness with the school, more is he/she motivated to engage in physical activities (ibid).

A study in a British primary school (MacPhail, Kirk, & Kinchin, 2004, cited in Allen & Petrie, 2005) found that students valued affiliation to a sports team very much in the school. They mentioned that the value lied in feeling of belongingness to a group, connectedness to peers rather than the success of the team.

Another study conducted in United States examined the factors associated with school connectedness like characteristics of students, schools and school neighbourhoods (Thompson et al., 2006). In this study, a cross-sectional, school based sample of students in grades 6-10 along with the data of the earlier ‘Health Behaviour in School-Aged Children’ study were the primary data sources. A multistage stratified sampling strategy was developed to meet precision requirements. Though the evidence was not conclusive, the study pointed out the possibility that students who often engage in extra-curricular activities exhibit higher school connectedness. The researchers recommended more research on this topic (ibid).

**Recreation and child development**

It has been found that it is worthwhile combining the knowledge of developmental tasks that the students are expected to perform, the factors that facilitate their carrying out these developmental tasks and interweaving it into the school curriculum (Gay et. al. 1997). Along with developmental tasks, another theory that is used to understand human development is ‘life course’ or ‘life span’.

Life course study has the principle of interdependent lives at its core. Human lives cannot be understood without understanding the extent to which and the ways in which social regulation and support influence quality of life of a person (Elder Jr. 1998). Friendships and activities conducted with friends are one source of happiness in a child’s life. These two gain even more importance during middle childhood.

In a research study conducted with the 131 teachers in public high schools in Portland, all the respondents, except two, agreed that participation in co-curricular activities is important for student development (Durlack & Weissberg, 2007; cited in Red and Blue Foundation, 2010).

Several studies support the contention that a student's psychosocial development is directly impacted by the interaction a student has with co-curricular programs and services (Wachs & Cooper, 2002).
Mactavish and Iwasaki (2005) synthesized the results of their study and found that two very strong and positive protective factors in the times of stress for persons with disability are socialisation and recreational activities. Exercise and recreational activities were found to have stress-busting and self-efficacy benefits. The study of Bawa and Debnath (1993, cited in Jha et. al. 2004) has shown that regular participation in co-curricular activities of the school reduces anxiety level among students.

One of the ways school recreation facilitates development of students is the socialization it offers. Activities are scarcely organised and conducted by a lone person, it is a group effort. Such interpersonal connections, social support and secure environment for interactions lead to psychological wellbeing (Toth & Cicchetti, 1996; Lynch & Cicchetti, 1992), social competence and healthy adjustments in adult life (Rowe & Kahn, 1998).

Recreation has been studied in association with coping with stress (Putnam et al., 2003; Zautra, Reich & Guarnaccia, 1990; Ward, 2003 cited in Mactavish & Iwasaki, 2005) and has been an important part of many rehabilitation programmes and services (Mactavish & Iwasaki, 2005). According to Putnam and colleagues (2003) social support, socializing with friends and family, staying active, learning how to adjust to disability, maintaining a positive attitude and attending to spiritual life are important aspects of stress-coping of persons with disability. Physical activities, opportunities for personal development and relaxation were identified as health facilitators and helpers while coping with stress (ibid). Mactavish and Iwasaki (2005) also found similar results in their study using focus group discussions. Recreational activities were mentioned as rejuvenating by the participants of the study. Activities such as table tennis, bicycling, gardening, crafts and hobbies were few of the ‘good stress relievers’ mentioned by the research participants.

Zautra, Reich and Guarnaccia (1990) demonstrated that positive life events offset negative impacts of stress by injecting positive affect and lowering distress of an individual with disability. Leisure settings and recreational opportunity offer the environment for such positive events to take place and therefore, have a role to play in the stress-coping (ibid). In a mixed-method study of persons with physical disabilities at the day activity centres in Ireland, Ward (2003, cited in Mactavish & Iwasaki, 2005) found that social and recreational activities were effective means for enhancing wellbeing and reducing the detrimental effects of financial strain of people with disabilities.

Though the nature of challenges might be different, like adults, even the children with disability have mentioned positive effects of recreation. Students with hearing impairment who have access to recreation that gives them feeling of social acceptance and fosters friendship perceive their quality of life as good
(Rowe & Kahn, 1998) and have a sense of positive social identity or belongingness (Schleien & Heyne, 1997; Williams, 2004).

Harvey (1989) found that older children and adolescents with hearing impairment harbor feelings of helplessness and incompetence, or a lack of self-efficacy. These self-deprecatory beliefs are learnt many times, from significant others from very early in life. Therefore, opportunities that give them feelings of self worth and confidence need to be provided to children with hearing impairment by important socialization agencies in their life, including schools.

Physical activity is found to have following benefits specifically for middle school students (Kurkova, Scheetz & Stelzer, 2010; Office of the Chief Commissioner for Persons with Disabilities, 2007):

- healthy bones, muscles, and joints;
- weight control, lean muscle, and fat reduction;
- prevention or delay of the development of high blood pressure and reduction of blood pressure in some adolescents with hypertension;
- reduction of depression and anxiety, enhancement of the ability to perform daily tasks throughout a lifetime;
- May contribute to a physically active lifestyle that may continue into adulthood.

Peers or friends are the best teachers of social competence skills for children (Richardson & Coombs, 2000). Friendships play an important role in children's social development and well-being (Calloway, 1999; Siperstein, Leffert & Wenz-Gross, 1997) whereas low acceptance by peers may lead to behaviour problems, stress and school dropout (Meadan & Monda-Amaya, 2008).

In one study, Silliker and Quirk (1997, cited in Jha et. al. 2004) examined the effects of co-curricular activity participation on the academic performance of high school students. One hundred and twenty three participants who took part in interscholastic soccer during the first quarter of the school year were not involved in any co-curricular activity during the second quarter. The results of the studies indicated that participants had higher grade point average in the first quarter (i.e., during soccer season) than in the second quarter (outside soccer season) and the student attendance was also found higher during the soccer season.
A national survey conducted in 1985 by the NFHS with high schools in 50 states in USA found that nearly all (99%) participants believed that participation in co-curricular activities promotes citizenship (NFHS, 2003). Ninety five percent of the students felt that these activities teach valuable lessons to students that cannot be learned in a regular class routine and they contribute to the development of ‘school spirit’ among the students. Majority of the respondents felt that these activities do not put excessive demands on students’ time (ibid).

Though these studies directly or indirectly suggest the beneficial effects of co-curricular activities or school recreation, not all schools give them importance at par with the academic subjects. A pilot survey was conducted by Ismat and Rakhsi (2008) in Peshawar, Pakistan to gauge the extent of co-curricular activities in both – public as well as private schools. Both types of schools were found lacking sufficient resource (including time) allocation for co-curricular activities. Most of the private schools did not conduct any out-door activities including sports. The focus of schooling in private schools was confined to the academic subjects of the curriculum (ibid).

The social activities of the students were considered waste of time by the school management and no time was kept for such activities in the time table. Of the two types, public schools had more positive attitude towards co-curricular activities than private schools though they also lacked the resources. Sixty percent of private schools and 40% of public schools were found lacking basic physical infrastructure essential for sports and physical activities (ibid).

The teachers in public schools were found to believe that co-curricular activities have certain benefits for the physical and mental growth. The study also discovered that most of the teachers (90%) encourage students to take part in inter-school competitions and win to ‘bring good name to the institution’ (ibid). Eighty two percent of the students believed that co-curricular activities facilitate their academic performance and opined that trained teachers are required to teach such activities (ibid).

Another comparative study conducted in Punjab in Pakistan compared co-curricular activities in community model schools and girls’ government primary schools (Habib, 2012). Results found community model schools were better in co-curricular activities and facilities than the government primary schools in terms of locating them within daily time table, sponsorships for such activities and variance of activities (ibid).

In the same study the teachers in the community model schools also mentioned the ways in which co-curricular activities help students’ academic performance – they helped build better relations with the teacher and teachers got more time to understand their students. Because of this, the teachers were able to
know the ways in which they can assist the students (ibid). The findings of this study supported an earlier finding (Kearney, 1994, cited in Habib, 2012) that there is more participation of students in co-curricular activities in small schools than large schools (Habib, 2012).

A person with disability is wrongly assumed to have a limited scope for any activities, including recreation (Lieberman, 1996). The barriers to recreation are found to be not within the person but external – time constraints, lack of appropriate equipment and blanket medical excuses (Lieberman and Houston-Wilson, 1999). Parents of the children with hearing impairment can be either support or barrier to the child’s recreation.

A study conducted on the physical education for deaf students by Stewart and Ellis (1999) found that parental involvement is very crucial for child’s participation in recreational activities. The researchers also argued that children going to a special school such as the one in which they conducted the study, had ‘tailor-made’ recreation programme for the students which might have influenced their participation and performance in these activities (ibid). A study that used narrative analysis (Jankowski, 1997) highlighted the importance of taking steps to remove such barriers not only because they benefit specific areas but because they also lead to empowerment of the people with hearing impairment.

A study was conducted to assess the status of extra-curricular and co-curricular activities in the primary schools in Nepal was conducted by Dr. Jha and his team (Jha et. al., 2004). The data for the study were collected from the Headmasters, committee members, teachers, parents, students and other school related officials. Twelve schools from the three districts of Mustang, Kaski and Morang (Four schools from each district) representing three ecological belts of Nepal were selected randomly for the study. Separate questionnaires were used for different stakeholders and focus group discussions with the students were conducted. The study found various lacunae in the schools related to co-curricular programme.

The schools did not have official annual plan for the co-curricular programme or a provision of budget for such activities. Either the students or the teachers and school personnel had to spend money whenever such programmes were planned (Jha et. al., 2004). There was no clarity about the purpose and nature of co-curricular programme and no trained teachers for any of such activities. Extra expense, injuries, sickness, indiscipline and disturbance in the studies were cited as major problems caused by co-curricular activities by the parents (ibid). Geographical constraints (in Mustang), large number of students in a class and inadequate number of teachers were also cited as barriers to having co-curricular activities in these schools (ibid).
Difficulties in travelling or transport related problems and inability to stay after school act as dampener for participation in recreation activities organised by the school after school hours (Red and Blue Foundation, 2010). In such a situation, before-school recreation programme was suggested. Possibility of such scheduling allows access to recreation for students who would not be able to participate otherwise (ibid).

An internet web-site or social networking site for students and professional development opportunities for the teachers of co-curricular subjects were also identified as two needs to improve the quality of co-curricular programme and its accessibility to students (ibid). Another suggestion offered by the assessment team was encouraging participatory rather than competitive recreation at the middle school levels. This, according to the committee, is important because during middle childhood co-curricular and school recreational activities are vital for personality development and school engagement (ibid).

A descriptive study was conducted in the elementary schools of Jorhat district of Assam to look at the status of co-scholastic or co-curricular activities in these schools by Bhattacharjee and Sarma (2010). The study was conducted with 50 elementary schools from three educational blocks of the district. Sources of primary data were interviews with school functionaries, observations recorded in the investigator’s diary and focused group discussions with the teachers. Along with the primary data, the half-yearly evaluation sheets of the educational blocks was also studied. It was found that the schools do not give much consideration to the co-curricular activities. There were no trained teachers in these schools and they did not receive a mention even in the school curriculum.

DeKlyen and Odom (1989, cited in Odom et. al. 1999) found that for such activities to be facilitative of social interactions especially with peer, the nature of the activities and the way they are organised are also important considerations. Though the research on school recreation or co-curricular activities is not exhaustive, it has highlighted the need to seriously look into different aspects of school recreation and what it means for the school and children (Leung, 2011).

Though studies have been done on the benefits of recreation, there is a dearth of data on the negative effects of recreation. A study conducted by Taylor and Wilkinson (2003) looked at the negative sport behaviours of athletes and developed strategies to reduce them by applying Hellison’s Social Development Model (1985, cited in Taylor & Wilkinson, 2003). Data were collected by direct observation of the target athletes once weekly for 12 weeks during practice and games. The researchers found that during normal or baseline conditions athletes displayed higher rates of negative sport behaviour than positive sport behaviour. Hellison’s Social Development Model was applied to strategise
reduction in negative sports behaviour and increase in positive sport behaviour and was found to be effective \textit{(ibid)}. 

A study by Flowers and Brown (2002) found competitive performance anxiety among athletes involved in competitions. They studied 140 firstborn and later-born male and female college athletes competing in individual (1500 meter run) and team (4 x 100 relay). Cognitive as well as somatic anxiety levels were found among the athletes prior to their competitive event. The study also found that in team events, male athletes experience higher anxiety than female athletes \textit{(ibid)}. 

**School Recreation in a Special School for the Children with Hearing Impairment**

The finding that regular physical activity in a school had positive impact on the academic performance, physical and mental health and social skills of the students is also borne out by studies with special schools (Kathleen, 2001; Kurkova, Scheetz and Stelzer, 2010). The activities positive impact on the mental and social development of the students in special schools are also because of the secure environment created for such activities that enhance students’ capacity to work together (Kathleen, 2001). The special schools are also becoming increasingly aware of the role that can be played by school recreation or co-curricular activities \textit{(ibid)}. 

However, this finding is not universal. When compared with the people without hearing impairment, the children and adults with hearing impairment have less recreation participation as well as have less awareness about the facilities available for the sports and such activities (Habib et. al. 2011). A study conducted in public school programs found that the students with hearing impairment aged 6 – 11 years were less physically fit than the other students (Ellis, 2001). The studies conducted to determine the factors that influenced the physical fitness of deaf children (Dair, et. al., 2006; Ellis, 2001,) found that two primary determinants were physical activity participation and parental influence. It was also discovered that Deaf children with Deaf parents had greater encouragement and activity participation than Deaf children with hearing parents (Ellis, 2001) 

A study was conducted in Bahawalpur region in Pakistan with the adults and children with hearing impairment and recreational centers or clubs in this region to look into the perceptions of people with hearing impairment regarding the recreational opportunities available to them (Habib et. al. 2011). The researchers collected data through survey, desk research and meetings with the key informants in the district of Bahawalpur. The study highlighted the aspiration of the adults and the children with hearing impairment to participate in sports and activities \textit{(ibid)}. 
Some of the barriers found for the recreational opportunities were lack of awareness regarding provisions available, quality and scope of the existing provisions and lack of second line of able management in the organisations providing recreation. Most of the times, the study found that the recreational services are initiated and continued because of only one or two dedicated individuals; once they are no more managing the show, the provisions fizzle out (Habib et. al. 2011). In some of the schools, teachers just gave a ball to the students and told them to play on the ground. The same study also found, with the help of tests such as Fitnessgram, that the physical and health related fitness of the participants with hearing impairment was poor (ibid)

Though co-curricular activities are not same as vocational subjects, they share a lot of similarities in terms of talents harnessed and nature of content. A study in Pakistan interviewed 100 vocational teachers, 10 subject specialists in the field of vocational education and 60 students with hearing impairment to look at the curriculum and teaching of the vocational subjects in the schools (Farooq et. al., 2011). The study discovered that though the participants perceived vocational training to inculcate good citizenship in the students, the curriculum left much to desire for. The study found that the content of the vocational subjects was not according to the developmental stage of the students, nor were there any proper reference books for the subjects. It pointed out the need to upgrade the curriculum of these subjects to make them relevant and meaningful for the students’ future (ibid).

Unexplored Areas in the Studies Conducted on and with the Children with Hearing Impairment:

Though there are studies done on the school recreation or co-curricular activities in special schools, they are few and mainly focused on one or more specific areas (Kathleen, 2001). Not many studies have been conducted in India on the issues, concerns and strengths of the children with hearing impairment. Very few studies conducted on the issues and concerns of people with hearing impairment have included children with hearing impairment as the main participant group.

Most of the studies focus on education of the deaf and do not emphasize the non-academic component in the schools. There is a serious dearth of studies conducted in India that have looked at the four components of school recreation, curriculum, perceived benefits and school engagement, together.

A study that looks at school recreation as a right and locates it in the larger paradigm of quality of life and ‘active living’ would be valuable for determining the essential components of the content, conduct and resources for a consequential and applicable co-curricular or school recreation programme.