The present work is an attempt to explore delinquency in relation to learning disabilities, personality and family environment. The impetus to this study was given by the link between learning disabilities and delinquency. Though much research work has been conducted on personality and family environment of delinquents, few attempts have been made to study them in conjunction with LD. So the study has been designed to study the role of these variables individually as well as in conjunction with each other. This being the main objective of the present research, the available literature concerning these variables and their correlation with delinquency has been reviewed here. For convenience, these studies have been divided into following categories:

2.1 Delinquency and Learning Disabilities
2.2 Delinquency and Personality
2.3 Delinquency and Family Environment
2.4 Learning Disabilities and Personality
2.5 Learning Disabilities and Family Environment

2.1 DELINQUENCY AND LEARNING DISABILITIES

Learning Disabilities (LD) refer to a heterogeneous group of disorders manifested by significant difficulties in the acquisition and use of listening, speaking, reading, writing, reasoning or mathematical abilities. These disorders are intrinsic to the individual presumed to be due to central nervous system dysfunction and not due to mental retardation, sensory problem and emotional illness. (National Joint Committee on LD, 1981/1988). LD children manifest social, behavioural and emotional symptoms like low self-esteem and social withdrawal which may predispose them for later development of disruptive behaviour disorders like ADHD, oppositional defiant disorder or conduct disorder.

So much discussion has been generated by the idea that the presence of a learning disability increases child’s risk of becoming juvenile delinquent. Research has shown that a significant percentage of adjudicated youth are learning disabled. This has led many researchers to speculate that LD is a predisposing factor for
delinquency. Berman (1974) reported that more than 50% of juvenile offenders exhibit prior evidence of specific learning disabilities. He went so far as to say that LD in early childhood forms basis of an insidious type of life style that inexorably seems to lead towards delinquency. Larson (1988) proposed that youth with LD are adjudicated about twice as often as NLD youth and experience greater recidivism and parole failure.

The majority of studies suggest that learning disabilities occur with significant frequency in delinquent population. Siegal and Berman (1973) found that delinquents showed extreme impairment in verbal, perceptual and nonverbal conceptual spheres. While Wolff et al. (1982) reported that the delinquent group showed pervasive impairment on all language measures, relative to control group but didn’t differ from the latter on most neuropsychological measures that do not involve linguistic processing. Delinquents, in this study scored lower on non-verbal intelligence measure than the control group and also took more time to read 100 color words and to label 100 color hues than controls on Strop Color and Word Test. Moffitt (1993a, 1993b) stated that many offenders exhibit neurological problems during their childhoods such as difficult temperaments as infants, ADHD as children and learning disabilities during their later school years.

Zinkus et al. (1979) found that perceptual disorders can be significant cause of academic underachievement and poor social adaptation among young offenders. 55 male delinquents (157 yrs) were tested on WISC-R, Wide Range Achievement test and Bender-Gestalt test. Approximately 80% of Subjects exhibited some kind of perceptual disturbance, 73% were two or more grades below their expected achievement level in reading and 87% were below this level in spelling and arithmetic. Empirically derived prevalence rates, however, have varied widely, ranging from 30 to 50% (Broder, Dunivant, Smith and Sutton, 1981), to 73% (Swanstrom et al., 1977). In a carefully conducted controlled investigation, 36% of incarcerated juveniles were found to have a LD, and youngsters with LD, were found to be more than twice as likely to commit a delinquent offense than their non-learning disabled counterparts (Dunivant, 1982).

Despite disparity in prevalence rates, incidence of LD in delinquent population is much higher than in general population. Sikorski (1991) stated that adolescents with learning disabilities appear to be a high risk group for delinquency. A study of
1943 urban male adolescents revealed that 18.9% of the subjects in the officially nondelinquent group met criterion for classification as learning disabled, as compared with 36.5% of the officially adjudicated delinquent boys. Between 28 and 43% of incarcerated juveniles had special education needs. Many of them had learning disabilities. (Fink, 1991; Dowling, 1991) In an extensive review, Murray (1976) cautioned that it is not intuitively obvious that a learning disability will cause delinquency. A causal chain is implied that LD produces effects which in turn produce other effects which ultimately produce delinquency.

Among the causal chain theories that emerged from research are three models that attempt to explain this link: the school failure hypothesis, the susceptibility hypothesis and the differential treatment hypothesis. The school failure hypothesis holds that LD produce academic failure leading to a negative self image which in turn results in school dropout and delinquent behaviour. The opportunity for delinquency is increased if the youth with LD associates with delinquency prone peer groups to satisfy increased needs for recognition and success to compensate for school failure.

Research has shown that there is correlation between delinquent behaviour and low academic achievement (Grande, 1988). In fact, academic difficulties have been singled out as possible precursors of delinquency (Meltzer et al., 1986). Kilitz and Dunivant (1986) found that improvement in academic skills through remedial instruction did reduce the delinquency of youth with LD who had been officially adjudicated.

Wright and Stimmel (1984) found that university students diagnosed as learning disabled in childhood reported more delinquent acts and viewed themselves and their parents more negatively than control groups. Pickar and Tori (1986) found that subjects with LD were unable to develop a sense of industry and competence due to years of failing at school tasks. McKay and Brumback (1980) reported that children with LD were labeled by teachers and peers as different, which may have alienated them from normal society.

The school failure hypothesis argues that social rejection following poor academic achievement breaks down self confidence to the point that if given proper psychological and environmental incentives, a child may engage in delinquent behaviour (Smith, 1998). Suspension and dropout status, which may result from poor
performance associated with learning disabilities, increase the opportunity for learning disabled youth to engage in delinquent behaviour (Larson, 1988). Other supportive arguments for the school failure hypothesis come from clinical observations, tests of academic skills, and school records. Studies consistently report that school failure and dropping out are strong and persistent correlates of self-reported school misbehaviour and official delinquency (Jarjoura, 1993), and it has been shown that learning disabled youth have higher rates of dropping out of school than their non-learning disabled counterparts (Levin et al., 1985). Finally, academic difficulties in general have been shown to precede delinquency (Meltzer et al., 1986).

Academic remediation reports in some studies do not support a direct causal relationship between academic achievement and delinquency in learning disabled youth (Keilitz and Dunivant, 1986; Larson, 1988). Studies show however, that changes in delinquent behaviours are accounted for by the positive relationship and rapport between tutor and delinquent. Murray and Greenberg (2001) found that affiliations with teachers contributed to children’s (those with and without learning disabilities) self reported delinquency, and that children with learning disabilities who reported greater dissatisfaction with teachers also had friends that reported higher levels of delinquency.

School bonding, in general, helps prevent delinquency and reflects ideas about social control and conformity highlighted by social control theorists, which state specifically that the lack of attachment to teachers and weak commitment to education can lead to school failure and subsequently to delinquency (Hirschi, 1969; Rosenbaum and Lasley, 1990).

Another key factor to consider regarding the school failure rationale is causal order. The notion that school failure causes delinquency has been refuted in several studies; some research suggests that the opposite is true. Delinquents usually show conduct problems especially aggressive tendencies, starting at about age three (Richman et al., 1982). Subsequently 5% of preschool boys have been found by parents to be “very difficult to manage” (McGee et al., 1988). So the child possesses a characteristic i.e. aggression which predisposes him to delinquency even before entering school. These educational failures and conduct disorders are manifested by personalities characterized by active, aggressive and oppositional traits (Quay, 1987;
Wilson and Herrnstein, 1985). These traits coupled with the learning disability may enhance the likelihood of a delinquent outcome.

Several studies have shown that crime and education are inextricably tied together and that factors like level of achievement in school, student grade retention, school attendance and graduation rates are related to criminal activity. When students fail to succeed in the school environment, they might choose to search for some other area in which to excel. Incarcerated adolescents who attend school, typically experience chronic academic and behavioural difficulties, truancy, grade retention and suspension. In addition, their formal ties to schooling are typically disrupted by their dropping out, being expelled, or pushed out (Vacca, 2008).

According to Susceptibility theory, children with LD possess certain personality characteristics that make them susceptible to delinquency. Such characteristics include lack of impulse control, inability to anticipate consequences of actions, irritability, suggestibility and tendency to act out. It is suggested (Murray, 1976) that these traits directly contribute to the development of delinquency. Pihl and Mclarnon (1984) investigated delinquency prone adolescents who had been diagnosed as learning disabled during childhood. They found that youth with LD were less self-satisfied and less flexible and were lower in social skills and sociability. The authors reported that the problems of children with LD persist into adolescence and that the problems of LD children do not fall solely in academic areas.

McConaughy and Ritter (1986) also found that boys with LD showed fewer social contacts with friends and organisations and scored higher on measures of hyperactivity, aggressiveness, and delinquency than NLD boys. Prout (1981) stated that learning disabled delinquents are consistently found to be less skillful in a variety of social cognitive problem solving skills when compared to non-delinquents. Poor perspective taking (Chandler 1973; Little, 1979), poor impulse control and inability to generate multiple and effective solutions (Larson 1985; Freedman et al., 1978) are three specific difficulties historically demonstrated in delinquent populations.

Examining the susceptibility theory, Waldie and Spreen (1993) reported that the child with LD suffers from impulsivity and poor perception of social cues which could lead to choices to engage in delinquent acts that NLD youth may not make. They concluded that LD may be linked to certain underdeveloped personality skills,
such as general impulsiveness and poor judgement. A deficiency in these skills may lead to increased susceptibility to delinquent behaviour through unwise social choices.

On the other hand, Broder et al. (1981) found that LD youth were adjudicated at about twice the rate as NLD peers while both groups reported similar delinquent behaviour. Consequently, the researchers postulated differential treatment hypothesis to account for the higher incidence of adjudication in LD youth. Keilitz and Dunivant (1987); Lane (1980) suggested that systems such as schools, juvenile justice, and corrections respond differently and more punitively towards disabled youth and so learning disabled individuals are arrested or brought before juvenile judges more frequently than their non-learning disabled peers.

Two explanations have been proposed for why learning disabled youth and non-learning disabled youth are treated differently in the system. Learning disabled youth and adolescents may lack the necessary strategies to avoid detection or apprehension when encountering the law, and may also fail to understand legal proceedings (Dunivant, 1982; Pearl and Bryan, 1994). Youth with language based learning disabilities have been shown to lack sophistication in knowing when, how, and with whom to talk (Dudley-Marling, 1985).

Other explanations that exist regarding the differential treatment theory focus on the lack of social skills or appropriateness that learning disabled youth may present when encountering legal officials and other personnel. Research based on self reports indicate that individuals with LD lack necessary skills to respond and act appropriately to situations which are negative (Brier, 1989; Pihl and McLarnon, 1984). This increased vulnerability reflects their poor expressive capabilities, ineptness at presenting oneself in a positive manner, and inability to anticipate the consequences of their behaviour. It also reflects the innate weaknesses in the judicial system itself, including the fact that the judicial system’s procedures are highly cognitive, have multiple verbal interactions and that judges have very paternalistic attitudes (Smith, 1998).

It is important how one reacts to the law when encountering law enforcement officials. The LD youth may be more abrasive in dealing with authority figures, thus
eliciting harsher treatment (Dunivant, 1982); consequently, they may be more prone to try to avoid or escape situations rather than admitting they were wrong.

Review of Literature makes it clear that there is a link between delinquency and learning disabilities; whatever the cause explained by these hypotheses. Clegg et al. (1999) showed that one third of children with developmental language disabilities developed mental health problems with resulting criminal involvement in some cases. High levels of speech and language difficulties within the population of young offenders have been reported. Some of the young offenders with difficulties reported using violence when they had difficulty in making their needs known or in response to teasing from other prisoners about their speech. Similarly Knox and Conti-Ramsden, (2003) suggested that children with language impairment may exhibit antisocial behaviour for a number of reasons including frustration at ineffective sociocognitive skills.

Moffitt and Silva (1988) found that self reported delinquency was related to verbal memory, visual motor integration deficits, independently of low social class and family adversity. Munoz et al. (2008) found that impaired verbal abilities coupled with psychopathic traits are one of the most consistent risk factors for serious antisocial and delinquent behaviour. Testing Moffitt’s hypothesis, Piquero and White (2003) found that cognitive abilities relate to criminal activity differently throughout the population of offenders, mattering more for life-course persistent than adolescent-limited offenders.

Learning disabilities have been linked largely with the development of both mental health problems and involvement in criminal activities, although this link remains a contentious area for research. Kimber et al., (1999) examined longitudinal data from a 7 year prospective study and the results of this study did not confirm the presence of a direct relationship between LD and delinquency and suggested that the finding of a direct relationship in other studies may have been due to confounding of the LD status with age, ethnicity, or socio economic status. Similarly Murphy et al. (1995) suggested that there are a significant number of offenders with communication difficulties which are primarily associated with cognitive or psychologically difficulties despite them not being technically classified as LD.
Further Stephen and Stephen (1991) stated that the link between learning disabilities and juvenile delinquency is mythical and not a causal, empirically based phenomenon. Cornwell and Bawden (1992) examined the relationship between specific reading disability and aggressive behaviour. There was not enough evidence to conclude that reading disability causes aggressive or delinquent behaviour; although limited evidence suggested that reading disability may worsen pre-existing aggressive behaviour.

However several researchers suggest that learning disabilities may not be the direct cause of delinquency. But it could be an influence of many interacting factors. Moffitt (1993) in his Interactional Hypothesis propagated that the combined effect of low verbal IQ and family adversity increases the odds of early onset of offending. Miller (1958) and Spergal (1961) put forward that the interaction of learning disabilities and lack of family support during the early school years renders the youth highly vulnerable to chronic school failure, exclusion from school, and perhaps initiation into “subculture of delinquency.”

The behaviours that predispose learning disabled youth to delinquency are: poor academic performance, social and emotional problems identified by parents as resulting from the learning disability, and associations with delinquent peers. (Marmo and Charles, 1997). Similarly Morrison et al. (1997) states that the presence of a learning disability is viewed as a risk factor that, in and of itself, does not predict positive or negative outcomes. Rather, other risk and protective factors interact with the presence of LD to facilitate or impede adjustment. These risk and protective factors may be internal characteristics of the individual or external characteristics of the family, school and community environments. Karanth and Rozario (2003) stated that in addition to biological factors, several environmental factors are associated with LD. These include poverty, parental illiteracy, lack of exposure to literacy skills in the home environment coupled with lack of access to pre-school instruction, overcrowded classrooms and peer instruction. Similar results have been reported by McNamara et al. (2008).

Harwood and Ann (2003) studied that the authoritarian parenting is a significant predictor of aggressive traits in children with LD or ADHD. Figueria-McDonough (1986) noted that in an environment where academic success is defined as an exclusive goal, learning disabled students will more acutely feel their lack of
success and therefore search for alternative careers.” Often this career may be in the area of criminal activity. Similary Cawley, Kahn and Tedesco (1989) stated the LD students usually experience problems both inside and outside the school environment. They have to face considerable pain and social stigma because they are often harassed and denigrated by non-learning disabled peers. This negative environment can discourage many LD students from attending school and it may also explain their subsequent involvement in juvenile delinquency. Koskentausta et al. (2007) also studied that the risk of psychopathology in children with LD is increased by factors related to family characteristics and child development.

Therefore, although no causal relationship has been found between LD and delinquency, researchers have found a link between LD and adjudicated adolescents (Perlmutter, 1987). Rutter et al. (1976) found that one quarter of the children with specific reading retardation showed antisocial behaviour at a rate several times more than that in the population at large. Bale (1981) in a cross-sectional study of backward readers confirmed that there was excess of behavioural disturbances, predominantly of antisocial nature, when the children were rated independently by teachers and by parents. The more serious the associated perceptual motor difficulties, the higher was the rate of antisocial disorder.

Sturge (1982) found high rates of reading retardation and antisocial behaviour in 10 year old boys and the results showed a strong association between the two problems. Maugham et al. (1985) noted that boys with specific reading retardation had higher rates of delinquency compared with boys who could read normally. Kazdin (1987) stated that learning disabilities play an important role in delinquent behaviour.

McGee et al. (1988) put forward that by age 13, reading disability in boys and girls was associated with oppositional defiant and inattentive behaviours. It is possible that association of reading disability with other behaviour problems at age three might lead to later delinquent behaviour. While Williams and McGee (1994) found that reading disability at nine years of age, predicted conduct disorder at age fifteen in boys, but not in girls. Shalev et al. (1995) pointed out that children with dyscalculia demonstrated more behavioural problems than normal children. When associated with dyslexia, these children had more attention problems and delinquency.
Fegurson and Lynskey (1997) examined that children with early reading difficulties had increased rates of conduct problems up to the age of sixteen years, which was more evident for boys. Significant association has been obtained consistently between learning disabilities and externalizing behaviour problems and various studies have supported the view (Wilcutt & Pennington, 2000 and Grigorenko, 2001). Antisocial behaviour and conduct disorder are higher with male gender in learning disabled individuals (Emerson, 2003). Similarly O’Brien et al. (2007) examined that 34% of the adjudicated youth had reading problems while only 9% of the boys had self-reported attentional deficits. An additional 10% of the youth reported both reading problems and attentional deficits.

In Indian context, due to scarcity of research on delinquency and LD, there are very few studies hinting at the link between two. Khurana (1980) in a study on 100 learning disabled children, reported behaviour problems in 89% cases. Vengopal and Raju (1988) in their study described learning disabled children to be over reacting. Shenoy and Kapur (1996) noted that 21 out of 88 children with learning disability had co-morbid psychological diagnosis. Kishore et al (2000) reported that 21 out of 56 children with specific developmental disorder of scholastic skills had a co-morbid psychological disorder (ADHD), Oppositional defiant disorder and conduct disorder. Similar results have been reported by Johnson (2002).

Overall these findings exemplify the need for both educational and psychological interventions for youth entering the juvenile justice system. Rozalski et al. (2008) compared the prevalence of learning and behaviour disabilities among school aged children and those who were incarcerated. Finding a great proportion of LD among latter, they focused on the need of providing educational services for incarcerated juveniles.

The literature reviewed throws light into the significant association between delinquency and learning disabilities. Alongwith, it stresses on the need to do research on the link between the two variables with greater specificity i.e. by studying their interaction with other significant variables influencing the link. Moreover the paucity of research on the relation between delinquency and LD in Indian context hints at a dire need to conduct research on the association between the two variables in Indian sample.
2.2 DELINQUENCY AND PERSONALITY

Personality factors have for a long time occupied an important role in research on antisocial behaviour. This perspective posits that delinquency is the result of fixed and biologically determined personality factors. Most of the studies relating delinquency to personality have aimed at testing hypotheses derived from Eysenck's (1964) and then Gray's (1972, 1987) theories of personality and learning. These theories emphasize delinquents’ difficulty in inhibiting their behaviour and relate it to dimensions of personality which, in turn, are believed to reflect individual differences in the functioning of specific areas of the brain.

According to Eysenck's theory, Extraversion (E), Neuroticism (N) and Psychoticism (P) are crucial in predicting delinquency and criminality. Those high on E are said to be cortically under aroused and are therefore more likely to engage in thrill and sensation seeking behaviours. While it is suggested that N is linked to anxiety which acts as a drive ensuring that delinquent behaviours are amplified, high P scorers have been described as antisocial, cold, aggressive and unempathic (Claridge, 1981; Eysenck and Eysenck, 1976).

Results from studies testing these hypotheses have been inconsistent with regard to extraversion and neuroticism. However, support has been found for the hypothesis of a relationship between psychoticism and Juvenile delinquency (Gudjonsson, 1997; Heaven, 1996). Similarly Heaven & Virgen (2001) studied that neither N nor E were found to have significant direct effects on delinquency whereas the analysis of data confirmed the importance of P as a predictor of males’ self reported delinquency. Furnham and Thompson's (1991) study on how personality correlates with crime indicated that there is relationship between delinquency and psychoticism. They found a lack of consistency with respect to extraversion and neuroticism.

Eysenck's P factor can be seen as a combination of low agreeableness and low conscientiousness, which, together with extraversion, neuroticism and openness to experience are known as the Big five personality factors (Costa & McCrae, 1992; Hendriks, 1997). Heaven (1996) investigated the relationship between the Big five and delinquency and found that neuroticism and conscientiousness were significantly
associated with the level of delinquency in high school students, while extraversion and openness were not. John et al. (1994) found that a high level of delinquency was accompanied by low levels of agreeableness and conscientiousness. A high level of delinquency was also related to a high level of sensation seeking facet of extraversion, while neuroticism and delinquency were not related. Wit and Van Aken (1998) reported that incarcerated adolescent boys scored higher on conscientiousness and neuroticism, and lower on agreeableness, than did a non-delinquent control group. Whereas Van Dam et al. (2005) studied that PEN's Extraversion appeared to be higher in officially recorded recidivists compared to non-recidivists. PEN's Psychoticism, Big five's Neuroticism and Agreeableness differentiated self-reported recidivists from non-recidivists. Only PEN's Psychoticism predicted severity of self-reported recidivism.

On the other hand De Bruyn et al. (2007) studied a group of young male offenders to test Eysenck's hypothesis, which was partially confirmed. From a cluster analysis it appeared that only a small group of offenders had high scores on all three PEN dimensions. Finally, it was concluded that the PEN profiles were not able to differentiate between recidivists and non-recidivists. Similarly Farrington et al. (1982) stated that Eysenck's hypotheses have been extensively tested in many studies on crime and delinquency, often leading to opposite conclusions. On the other hand, hypotheses derived from Gray's theory have been tested by several authors interested in the study of psychopathy and impulsivity, generally with encouraging results (Newman, 1987).

Gray (1970) identified two main systems of learning: the behavioural inhibition system (BIS) and the behavioural approach system (BAS). The BIS is thought to inhibit behaviour in response to cues of punishment while BAS activates behaviour in response to cues of reward. Furthermore, Gray (1981) postulated that in normal individuals, the two systems are balanced while impulsive people and psychopaths would have less sensitive BIS coupled with a hyper-responsive BAS as the latter are generally motivated by potential rewards in their environment. These ideas were subsequently developed by other researchers (Newman 1987, Quay, 1988) and applied to the empirical study of different forms of antisocial behaviours.

Newman et al. (1987) found that disinhibited individuals (psychopathic delinquents, impulsive and extraverted individuals) were more responsive than their controls to signals of reward than to the signals of punishment even when the
probability of the latter was higher than that of the former. Similar results have been reported in studies with juvenile delinquents (Scerbo et al., 1990) and with conduct disordered pupils (Daugherty & Quay, 1991). On the whole, it would seem that predictions derived from Gray's theory have received more consistent empirical support than those put forward by Eysenck. In a way, Gray's idea of less sensitive BIS (decreased attention to cues of punishment) and hyperactive BAS (increased sensitivity to rewards) in delinquents points out that delinquents are characterized by high Psychoticism and Extraversion but low Neuroticism. Similar results have been reported by Romero et al. (2001).

Testing Gray's principles, Hasking (2007) examined the relationship between reinforcement sensitivity and delinquent behaviour in a sample of 259 adolescents, and examined the role that coping strategies play in this relationship. Hierarchical regression analysis revealed that use of problem solving mediated the relationship between reward sensitivity and delinquent behaviour while use of non-productive coping strategies moderated the relation between BAS drive and delinquency. Consequently, it was suggested that coping skills training could be an effective early intervention for delinquent behaviour.

Besides, researchers have discovered discernible differences in impulsiveness, social skills, and feelings for others between young children who ultimately become serious delinquents and those who do not. Conger and Miller (1996) reported that in general, the delinquents are egocentric, inconsiderate, demanding, anxious, uncooperative and disrespectful. Ahlstrom and Havighurst (1971) reported similar findings that delinquents generally are more likely, than matched groups of non-delinquents, to be socially assertive, defiant, ambivalent to authority, resentful, hostile, suspicious, destructive, impulsive and lacking in self control. While Garrido and Rivas (1984) reported that the personality characteristic that most differentiated the convicted delinquents from the other youth, was aggressiveness. Coie et al. (1991) also contend that aggressiveness is the single most important reason for a child to be rejected by peers and to be delinquent. Similarly, Dodge and Pettit (2003) studied that even around age 5, aggressive, belligerent children are unpopular and are excluded from peer groups.

Further, Kimonis et al. (2007) found that youth high on callous-unemotional (CU) traits along with emotional deficits to distressing stimuli showed the highest
levels of aggression and violent delinquency. Frick et al (2005) also studied that children with conduct problems who also showed CU traits exhibited the higher rates of self reported delinquency and police contacts across the four years of study than the children with conduct problems who did not show CU traits. Similar results were reported by Maitra (1985) who showed that out of seven Rorschach signs of aggression, sadism and hostility, five were found to differentiate between the delinquent and non-delinquent groups. Chabrol et al. (2009) found that psychopathic and sadistic traits were independent predictors of delinquent behaviours in boys only. Similar results were reported by Vaughn et al. (2008).

Other personality characteristics that have been associated with delinquency are high level of impulsiveness (Wilson and Herrnstein, 1985), low self-esteem (Kaplan, 1980), greater need for stimulation (Farley and Sewell, 1976) and hyperactivity (Loeber et al, 1991). Farrington (1991), in his well regarded research, also found that violent offenders often have a history of hyperactivity, impulsivity, and attention deficit problems. The relationship between ADHD and delinquency is an important area to be researched upon. Experts agree that the most common problems associated with ADHD are delinquency and substance abuse (Beauchaine et al, 2001). The data strongly suggests that youth with symptoms of both ADHD and delinquent behaviour are at very high risk for developing lengthy and serious criminal careers (Mannuzza et al., 1998).

The major theme is that ADHD children are perceived as annoying and aversive to those round them. ADHD children are continually seeking and prolonging interpersonal contacts and eventually manage to irritate and frustrate those people with whom they interact (Henker & Whalen, 1989). Because of these annoying and socially inappropriate behaviours, they are often rejected by peers, especially if they are perceived as aggressive (Henker & Whalen, 1989). Retz et al. (2004) found high ADHD prevalence in prison inmates and suggested a significant increase of emotional and internalizing problems in the delinquents with ADHD compared to delinquents without ADHD. ADHD delinquents scored higher on the personality dimension of neuroticism, and showed lower scores on the dimensions of agreeableness and conscientiousness. Matsuura et al. (2009) found that the attention deficit score was significantly associated with self-esteem in the delinquents. The ADHD score in the
high self-esteem group of delinquents was lower than that in the low self-esteem group.

Besides in a comprehensive study on the relationships between delinquency and several personality factors, Garaigordobil et al. (2004) found that participants with high antisocial delinquent behaviour showed: few social behaviours of consideration for others, self control, pro-sociality and assertiveness, many social behaviours of withdrawal, passivity and aggressiveness, and few assertive cognitive strategies of social interaction. Furthermore, these participants were rarely identified as pro-social classmates, and had low positive self-concept, high negative self concept, low capacity for empathy, high emotional instability and low verbal associative thinking ability. Sevecke et al. (2005) found impulsivity, lack of empathy and social adjustment disorder among delinquents.

On the basis of studies conducted by several researchers, it has been seen that the other personality variables playing an important role in the genesis of delinquency are poor social cognitive skills (Ross & Fabiano, 1985), poor social information processing skills (Eron et al. 2002), low self-esteem and impulsivity (Waldie & Spreen, 1993). Lejuez et al. (2007) also suggested a significant relation of sensation seeking and impulsivity with substance use, sexual behaviour and delinquency. Similarly Dolan and Rennie (2007) showed positive correlations between aggression, delinquency and impulsivity by administering the Youth Psychopathic Traits Inventory (YPI) on conduct disordered boys.

Junmie (2005) conducted a research to identify the differences of personality traits by Cattell's Sixteen Personality Factor test. The results indicated that eight personality traits (C,F, G, H, L, Q1, Q2, Q3) i.e. Ego strength, soberiety, superego, shyness, trust, conservatism, group adherence and self concept had significant differences between young criminals and young students. It also showed that young criminals’ personality traits were different from young students which is of great value in the prevention and correction of young people's crime.

Though the above review of literature claims a significant relation between personality traits and delinquency, several researchers have emphasized the interactionistic approach to study delinquency. Most notably Reppucci and Clingempeel (1978) have suggested that a focus only on personality measures in our
attempts to understand, identify, and treat delinquents is quite myopic. There is strong need to consider interaction of person variables with those of an environmental nature. Personality doesn't effect delinquency directly. Delinquent behaviour is seen as a function of the complex interaction of personal, social, historical and situational variables (Jones & Heskin, 1988). Rigby et al. (1989) too viewed the results with an interactionist perspective and stated the need to take into account both individual and environmental factors.

Lewis (1990) reviewed literature on the interaction between intrinsic vulnerabilities and experiential factors in the genesis of antisocial juvenile behaviour. It was concluded that subjects with evidence of serious neuropsychiatric impairment and a history of growing up in violent, abusive families tend to become violent criminals. Eme & Kavanaugh (1995) studied that when neuropsychological deficits interact cumulatively with criminogenic environment across development, chronic antisocial behaviour is probable. Similar results have been reported by Etheridge (2005). Whereas Eaton et al. (2009) found that adolescents’ personalities largely account for the “parental monitoring” – delinquency association.

Conclusively it can be stated that two types of variables define personality: variables of temperament (genetically transmitted and biologically controlled) and variables of character (learned part of personality reflecting the degree of adaptation and maturity, varying with environment through development). And the strengthening of juvenile misconduct is determined by their interaction but despite the importance of social, cultural, situational factors in determining the incidence of delinquency, the significance of individual characteristics cannot be refuted. Farrington (1998) states that when faced with an opportunity to commit crime, whether people actually commit crime depends on their individual cognitive framework.

2.3 DELINQUENCY AND FAMILY ENVIRONMENT

Family is an important agent exerting a great impact on the child’s behaviour and on whether he becomes normal or delinquent. In general, family environment stands out as the most important factor in the development of the child. The family is the most effective socializing agency for developing the child’s potentialities in all
aspects. Even the aspect of other socializing agencies i.e. peer group and school is controlled by family environment. Zamorano (1961) stated that well organised family life is of great importance for the prevention of delinquency while Abrahamsen (1960) has written “a common factor in all delinquency studies is dissatisfaction with the parents.”

In particular, two specific aspects of the family environment seem to recur in the literature on delinquency. These may be best characterized as family status and family type. Family status refers simply to the composition of the family (intact vs disrupted family, parental criminality, size of family etc). Family type refers to the way family members interact with each other, that is, levels of adaptability, cohesiveness, and communication demonstrated by the family unit.

“Without concentration on improvement of family environment and guidance of parents, money spent on housing projects, massive welfare services, recreational activities, and other well intentioned services, though contributing to the solution of other societal problems, will however not play a definitive role in sweeping back the mounting tide of youthful maladjustment and delinquency.” (Glueck and Glueck, 1968).

Researchers and practitioners have assigned a critical role to the family in the development or prevention of delinquency. (Tolan, Cromwell and Brusswell, 1986). This perspective emphasizes the family’s role in helping children adjust to the demands and opportunities of their social environment. If inadequate socialization occurs within the family, delinquency may result (Quay, 1987). Spergel (1966) describes the root cause of delinquency as a weak ego arising from ineffective or destructive family relationships.

A dysfunctional family can be a center wherein delinquency grows, on the other hand, a strong family can nurture and protect when peers and school fail (Fleener and Fran, 1999). In an extensive review of the literative, Rutter and Giller (1984) found that family variables associated with juvenile delinquency included parental criminality, cruelty, passive or neglectful parenting, erratic or harsh discipline, marital conflict and poor parental supervision. Many studies have emphasized the strong relationship between delinquency and lack of cohesiveness in the family, erratic and inconsistent discipline, and erratic and inconsistent support.
Research confirms that the risk of engaging in the delinquent behaviour is increased when an adolescent’s relationship with family members is disrupted i.e., negative familial involvement is positively related to parental discipline practices (e.g. harsh parental discipline, abuse and conflict), whereas negative emotional attachment weakens the parent-adolescent bond and increases the risk of an adolescent engaging in delinquency (Gorman-Smith et al, 1998). Lack of familial involvement, such as lack of parental concern and neglect have consistently shown to be predictive of delinquent behaviour among adolescents (Synder and Patterson, 1987). The offenders reported extreme use of verbal abuse in their families that did not exist for the non-offenders (Grieco and Eileen, 2000).

Research has further suggested that adolescents who experience positive familial processes such as cohesiveness and support are less likely to be at risk for engaging in delinquent behaviour than those who do not experience such support. The former adolescents limit their involvement in engaging in negative activities and influence by negative peer associates (Gauze et al., 1996). Cashwell and Vacc (1996) found that a cohesive family environment reduces the chances of delinquent behaviour. Besides Pabon (1998) found a significant negative relationship between family involvement (i.e time spent with family in the afternoon, evening and weekends) and delinquency suggesting that the more the youth were preoccupied with activities with family members in the evening and weekends, the less was the opportunity for involvement in delinquency.

Similarly Singh and Singh (1990) maintained that the lack of proper recreational facilities for the children in their growing age was responsible to its own extent for the causation of delinquency among them. Knopp (1982) reported that the families of adolescent sex offenders were either very rigid and enmeshed, or very chaotic with a great deal of role confusion. While Smith and Monastersky (1987) found that the families of adolescent sex offenders were more likely than the general population to be characterised as rigid in response to changes (i.e., low adaptability) and emotionally disengaged (i.e. low cohesiveness). In their study, degree of violence of the offences was related to the family system; the more rigid and disengaged the family, the more violent the offense. These findings are consistent with correlations
which McGaha and Fournier (1988) found between level of rigidity and disengagement in the family system and seriousness of offense within the general delinquent population.

Comparing delinquent and non-delinquent adolescents, Leflore (1988) found that delinquents perceived their families as having less active recreational orientation, less cohesiveness, and less expressiveness than a matched group of non-delinquents. Similarly Bischof et al. (1995) found that each delinquent group considered their family to be considerably less cohesive, less expressive, having lower levels of independence, lower levels of active recreational orientation and higher levels of control than did the normal adolescent group. Bischof et al. (1995) discovered that differences between the juvenile delinquents and the normative sample were found on six of the ten subscales of the FES scale i.e., cohesion, expressiveness, independence, intellectual cultural orientation, active recreational orientation and control. No differences were found on four variables i.e., conflict, achievement orientation, moral religious emphasis and organisation.

The emotional environment of the home is also important in distinguishing delinquents from non-delinquents (Veneziano and Veneziano, 1992). Evidence indicates that harsh and conflictual families tend to produce delinquent and violent children (Farrington, 1998). In general, families of delinquents are more likely than the families of nondelinquents to express rejecting attitudes and to exhibit a lack of warmth and affection (Farrington, 1992). And the parents of delinquents are likely to be more punitive, to give more vague commands, and to be less effective in stopping children’s deviant behaviours (Patterson et al., 1989). Veneziano and Veneziano (1992) examined the family functioning of male juvenile delinquents using the FES. They found that the families of delinquents were not characterised by an absence of structure. In fact, these families established the rules and procedures, but they had a hard time implementing their rules due to inappropriate or ineffective monitoring and discipline. They also found that the subset of delinquents who lived in homes with a higher degree of conflict tended to exhibit more severe difficulties and the most children they tested grew up in households high in control. This also supports the research findings of Ge et al. (1996) and Heaven and Virgen (2001) who have shown that punitive discipline styles in parents are related to poor outcomes in children.
Whereas high levels of attachment (Laible et al., 2000), warmth (Greenberger et al. 2000), family bonding (Anderson and Henry, 1994) and Cohesion (Lucia and Breslau, 2006) are all related to lower levels of delinquency. Even Mucchielli (2001) showed that the family process variables, such as poor parental monitoring, family conflicts, weak attachments to parents or inconsistent parental discipline, are more important than structural variables in predicting juvenile delinquency. Similarly Reitz et al. (2006) put forward that lower levels of perceived parental involvement and higher levels of decisional autonomy granting significantly predicted an increase in delinquent behaviour. In the Indian context, researches by Jain (1929), Mishra and Jamur (1981), Deol (1990) and Mohan and Nalwa (1981) reported similar findings. Carson et al. (1999) indicated that families of antisocial adolescents had more conflict and enmeshment and were having external locus of control and were either permissive or authoritarian.

Researching on cultural differences, McCluskey et al. (2003) revealed that parent attachment, supervision and involvement predicted delinquency for whites. Supervision was the only significant family influence for Latinos, and attachment to parents was the only significant influence for African Americans. While Steinberg et al. (2006) stated that juvenile offenders who describe their parents as authoritative are more psychosocially mature, more academically competent, less prone to internalised distress, and less prone to externalising problems than their peers, whereas those who describe their parents as neglectful are less mature, less competent and more troubled. Similarly Hoeve et al. (2008) found that controlling for demographic characteristics and childhood delinquency, neglectful parenting was more frequent in serious persistent delinquents. Hollist et al. (2009) also revealed a significant association between parent-child problems, maltreatment in home and delinquency.

Further Hair et al. (2008) found that the influence of a positive residential parent-adolescent relationship on better mental well being and fewer delinquency rate was entirely mediated by family routines, parental monitoring and parental supportiveness. Hoge et al. (2008) put forward that juvenile delinquency can be reduced by targeting specific risk factors and strengthening young people’s personal, family and community resources.

Besides these family type variables, the topic of disrupted family structure as a central part of delinquency theory has a long research tradition (Wells and Rankin,
Studies have consistently demonstrated that children from single-parent and reconstituted families may be more susceptible to problems than are children from traditional families (Featherstone et al., 1993). In a detailed review, Prayor and Rodgers (2001) indicate that the risk of delinquency is more or less doubled for children from disrupted family structure compared to those from intact homes and that this result is remarkably stable over time and place. Similar results have been reported by Zimmermann (2006).

Whereas Dunifon and Kowaleski-Jones (2002) found that single parenthood is related to reduced well-being among European American children, but not African American children. And parenting did not mediate links between family structure and child’s outcomes. Demuth and Susan (2004) also studied that adolescents in single-parent families are significantly more delinquent than their counterparts residing with two biological, married parents. On the other hand, Juby and Farrington (2001) found that boys from disrupted families who continued living with their mothers had similar delinquency rates to boys from intact harmonious families, thus refuting the relation between family structure and delinquency.

Several other significant familial variables have also been studied in relation to delinquency like size of the family, parental criminality, alcoholic parents, parental education, birth order and socio-economic status. A typical delinquent hails from a rural and poor economic background, his family is large and his parents are divorced (Fleener and Fran, 1999). Similarly, Sharma and Singh (1982) showed that the parents of the delinquent youth were less educated and less affluent. Moreover the delinquents tended to be middle born. Similarly Klimova (2007) put forward that carrying out education reform at the expense of parents’ resources in a situation, where families have less ability to meet the material needs of their children, will bring about a jump in thefts, muggings, and robberies that are committed by underage citizens. On the contrary, Paranjape (2004) put forward that the delinquents do come from affluent, educated families but such cases are wiped away through the power of money.

Further Carson et al. (1991) found that education level of mothers and fathers was positively related to social competence and negatively to antisocial behaviour. And middle children in the family were lower in self perceptions of competence than oldest or youngest children. Similarly, a large number of studies have found that
family variables which contribute the most to delinquency include parental criminality, poor parental supervision, cruel or neglecting attitudes, erratic or harsh discipline, marital conflict, and large family size (Bahr, 1979; McCord and McCord, 1959; West and Farrington, 1973; Wilson, 1980). Farrington et al. (2001) investigated how far criminal relatives predict a boy’s delinquency. Results indicate that offenders were highly concentrated in families with the most important relative being the father. Whereas Harris et al. (2001) found that antisocial parenting is related to both neuro-developmental insults and psychopathy but has no direct relation to criminal violence. Therefore, it can be said that parental criminality exerts adverse influence on adolescent development, though directly or indirectly.

Moreover research indicates that at least half of the total number of juvenile delinquents have family members with excessive drinking problems and a correlation exists between child neglect, child abuse and alcohol abuse. Mutzell (1995) examined the lives of male alcoholic inpatients and their children and found that boys were more vulnerable than girls in alcoholic homes and these children also required greater social assistance. Similarly Mc Gaha and Leoni (1995) stated that individuals from substance abusing family environments have been found to suffer from low self-esteem, depression, anger and a variety of acting out behaviours. An investigation of the differences between incarcerated juveniles from substance-abusing families and those from non-substance abusing families indicates significant differences in family violence, abuse, runaway behaviour, and self reported substance abuse.

The above review of literature leads us to conclude that conducive and constructive family environment acts as a buffer against delinquent behaviour of children and adolescents. It can be seen as an umbrella under which a variety of related phenomenon might be grouped together, including responsiveness, warmth, acceptance, support and nurturance. On the contrary, the presence of an adverse family background factor doubles the risk of later juvenile conviction. Several longitudinal studies have demonstrated that parental coldness, passivity, neglect, lack of family cohesion and shared leisure time are associated with one-time and recidivist delinquency (McCord, 1979 and Pulkkinen, 1983). Empowering family environment has important implications for prevention of delinquency as indicated in a study conducted by Reinke et al. (2009).
2.4 LEARNING DISABILITIES AND PERSONALITY

Learning disabled children are said to possess certain personality characteristics which can be either neurological, intellectual, or both. One example of a neurological difficulty would be attention deficit hyperactivity disorder; symptoms of which include both impulsivity and inattention and these may equally lead to misbehaviour. The susceptibility hypothesis given by Murray (1976) also contends that learning disabilities are often accompanied by “a variety of troublesome personality characteristics” which directly contribute to the development of delinquency.

One interpretation of this perspective takes the position that social skills are an underlying personality trait, and that observable behaviour is a mere reflection of social skills mastery. Youth with disabilities are at risk because many have low mastery of social skills (Larson, 1988). The alternative interpretation is that negative personality characteristics are the specific qualities (hyperactivity, impulsive behaviours and poor reception to social skills) that increase the likelihood of delinquent behaviours. Studies suggest that many learning disabled children lack skills and these deficits cause them to engage in delinquent behaviour (Berman, 1974). In comparing delinquent to non-delinquent children, it was found that the learning skills and adaptive abilities of the delinquent children were much lower than those of the non-delinquent children.

Brier (1989) found out that there is a strong co-morbidity between learning disability and attention deficit hyperactive disorder (ADHD) among youth considered to be delinquent. Youth bearing the ADHD-learning disability condition usually show signs of aggressiveness (American Psychiatric Association, 2000), a component that is often associated with antisocial behaviour among youth in the juvenile justice system (Moffitt, 1990; Edens & Otto, 1997). Other research studies also show evidence of high correlation between ADHD, conduct behaviour, academic under achievement, and delinquency (Fergusson and Lynskey, 1993; Hinshaw, 1992 a). Therefore, the ADHD and conduct behaviour subgroup of youth with a learning disability are the most susceptible to involvement with the juvenile justice system (Rouse & Goldstein, 1999).

Larson (1988) and Brier (1989) state that learning disabilities are accompanied by personality attributes such as impulsivity, emotional lability, inability to
conceptualize causal relationships and poor reception of social cues that can increase the likelihood of delinquent behaviour. Ellis and Walsh (1997) argue that certain genetically based traits such as "pushiness" and 'deception are conducive to crime.

Waldie and Spreen (1993) reported that the child with learning disability suffers from impulsivity and poor perception of social cues which can lead to choices to engage in delinquent acts that non-learning disabled youth may not make. They concluded that LD may be linked to certain underdeveloped personally skills, such as general impulsiveness and poor judgement. Cleckley (1976) has described impulsivity as one of the pivotal traits of the psychopathic criminal personality. O’Brien et al. (2007) found that male offenders with reading deficits reported greater depression, reduced self-concept, and a more external locus of control than those without reading difficulties.

Similarly, many researchers studied that learning disabled individuals and juvenile delinquents possess many of the same characteristics. Lack of motivation, negative self concept, low frustration tolerance, poor academic problem solving and weak social skills are the characteristics associated with both LD and delinquency (Gallico et al., 1988; Smith, 1988; Winters 1977; White et al., 1990). Brook and Boaz (2005) interviewed sixty-six parents of learning disabled adolescents. According to their parents, the main characteristic of these adolescents was low self-image. Parents enumerated five negative characteristics: impulsiveness, nervousness, angered easily (short fused), aggressiveness with cursing and outbursts and impaired sociability with impoliteness. Brook and Boaz (2005) also studied that learning disabled students reported being severely stressed when going to school and sitting in class. Their complaints were: tiredness and excessive need to sleep, frequent quarrelling with close friends, feeling different from other classmates and having low self-esteem.

The above review of literature explaining the LD and personality link clarifies that the personality traits of LD children make them vulnerable to violent and delinquent behaviour. Whereas some theorists believe that learning disabled children also acquire certain personality traits through their interaction with the environment. There are sources other than learning disabilities which can produce negative social characteristics thus increasing the susceptibility to delinquency (Larson, 1988; Moffitt, 1933a). Academic underachievement in school and negative family interactions are the factors resulting in low self-esteem, diminished self confidence
and diffused self concept in the learning disabled children which further pave the way for delinquent outcome (Smith, 1988; Svetaz, 2000).

2.5 LEARNING DISABILITIES AND FAMILY ENVIRONMENT

The presence of learning disability in a child affects and interferes with all aspects of the child’s life. It is important to consider that perhaps the single most important and influential people in the child's life are his/her parents because the family or home environment has been shown to have a direct influence on enhancing cognitive, behavioural, and affective learning of the child.

Silver (1992) addresses the significance that a learning disabled child’s family plays in his/her lives. The significance of parents for learning disabled children is even greater than for non-learning disabled children. He emphasizes the necessity to understand the child in his total environment, especially in the case of learning disabled child, for it is necessary that the family develops skills to enhance the learning disabled child’s learning environment. This requires the family to know the strengths and weaknesses of their learning disabled child, as well as the type of education the child is receiving.

The family environment has also been shown to directly influence the student's achievement, self concept and motivation. Studies have shown that greater parental involvement leads to reduced absenteeism, more appropriate student behaviours and better communication with schools (Moles, 1982). Gable (1986); Lareau and Benson (1984); Svetaz et al., (2000) found that the connectedness between parents and learning disabled adolescents is most strongly associated with diminished emotional distress, violence involvement and suicide attempts. However, Miller (1958) and Spergal (1961) studied that the interaction of learning disabilities and lack of family support during the early school years renders the youth highly vulnerable to chronic school failure, exclusion from school and perhaps initiation into “subculture of delinquency.”

On the other hand, raising a learning disabled child may result in complicated family interactions and family roles. One role the learning disabled child may take on is of the scape goat. The scape goat role often gets all of the family's anger and
hostility (Osman, 1979). When this occurs the one, who is made the scape goat, often is made to believe that everything bad is his/her fault. This portrayal may chip away learning disabled child's self-esteem and sense of belonging in the family.

Whereas the interaction with the learning disabled child being taxing, increased stress is also guaranteed for the parents of learning disabled. (Dyson, 1996; Green, 1992). Baker and McCal (1995) found that the characteristics of a child with special needs account for the greatest amount of variance in parenting stress. The most severe and distressful characteristics are behavioural problems such as aggression, hyperactivity and impulsivity- all characteristics of attention deficit disorder now classified as a learning disability.

Parents may also feel powerless to help their children as the disability does not come with a special set of instructions on how to help. For this reason they may either give up and let the child have too much freedom or, paradoxically, become overly rigid or controlling (Margalit and Almougy, 1991; Michaels and Lewandowski, 1990). Consequently the parenting strategies may further exaggerate the severity of problems faced by the learning disabled children. Harwood and Ann (2003) studied that the authoritarian parenting is a significant predictor of aggressive traits in children with learning disability or ADHD.

Similarly Moffitt's arguments regarding the interaction between learning disabilities and family environment as a delinquency causing factor are significant. Moffitt (1997) states that young people who grow up with a cognitive disability happen to be in an environment that lacks family support and necessary supervision; thus making them susceptible to get into trouble as a child and to become offenders on growing up. Moffitt et al. (2001) further suggested that a child's risk of developing antisocial behaviour emerged from "acquired neuropsychological variation initially manifested as subtle cognitive deficits, difficult temperament or hyperactivity" but was exacerbated by high risk socio environmental conditions. Karanth and Rozario (2003) also stated that in addition to biological factors, several environmental factors are associated with learning disabilities. These include poverty, parental illiteracy, lack of exposure to literacy skills in the home environment coupled with lack of access of preschool instruction.
Brook and Boaz (2005) interviewed the learning disabled students in which they complained that their parents don’t understand them. Hogan et al. (2007) studied that children with disabilities experience similar learning environments as other children, but have somewhat weaker relationships with their parents. Further Koskentausta et al. (2007) studied that the risk of psychopathology in children with LD is increased by factors related to family characteristics and child development.

The above review suggests that a learning disabled child stands at a greater vulnerability of lapsing into problem behaviour if his family environment is adverse. On the contrary, a nurturing and protective environment catering to the special needs of that child can make him overcome his conditions and propensity for conduct problems as he grows up. Therefore, the family can play a vital role in buffering negative experiences, or helping the LD child gain successful experiences.