SOCIAL PROBLEM-SOLVING SKILLS OF 6 TO 8 YEARS OLD CHILDREN IN RELATION TO INTELLIGENCE QUOTIENT

By

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CERTIFICATE – I

This is to certify that this thesis entitled, **"Social Problem-Solving Skills of 6 to 8 Years Old Children in Relation to Intelligence Quotient",** submitted for the degree of **Master of Science,** in the subject of **Human Development and Family Studies** to the CCS Haryana Agricultural University, is a bonafide research work carried out by **Anita** under my supervision and that no part of this dissertation has been submitted for any other degree.

The assistance and help received during the course of investigation have been fully acknowledged.

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CERTIFICATE – II

This is to certify that this thesis entitled**,** ñ**Social Problem-Solving Skills of 6 to 8 Years Old Children in Relation to Intelligence Quotient"**, submitted by **Anita** to the CCS Haryana Agricultural University in partial fulfillment of the requirements for the degree of **Master of Science,** in the subject of **Human Development and Family Studies,** has been approved by the Studentôs Advisory Committee after an oral examination on the same.

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CHAPTER-I

INTRODUCTION

Children come across with a wide variety of challenges as they attempt to develop interpersonal social relations. During childhood years, importance is given to promoting childrenôs social development. Social competence refers to a personôs ability to get along with other people. Childrenôs social competence is affected by how they communicate with other children and adults. A childôs self concept in relation to his/ her family, peers and the wider world also affects his/her social competence. Social problem-solving is an important component of social competence. Interpersonal social problem-solving is the ability to achieve personal goals in social interaction while simultaneously maintaining positive relationships with others over time and across situations. Children who are good in social problem-solving are able to achieve their social goals effectively.

Social competence is a complex and multidimensional concept which reflect the extent to which children demonstrate that they have developed the behaviors considered appropriate and effective in social encounters. Social Competence is influenced by developmental and experimental factors and is acquired overtime. A young childôs ability to get along with other children contributes much to all aspects of his development. How well a child gets along with others may be the single best childhood predictor of adult adaptation, according to Hartup, for example, children who are generally disliked, who are aggressive and disruptive, who are unable to sustain close relationships with other children and who canôt establish a place for themselves in the peer culture are seriously at risk (Hartup, 1992).

According to Rubin and Krasnor (1986), the study of social problem-solving and social competence involves examining the strategies children use to attain their social goals. Social problem-solving is examined most commonly through the use of hypothetical-reflective reasoning. Hypothetical procedures have been used to study the social goals of object acquisition (e.g., Chen and Rubin, 1992; Spivack and Shure, 1974), friendship initiation (Renshaw and Asher, 1983; Rubin and Krasnor, 1986), help seeking (Nelson-LeGall, 1981) and avoiding anger (Spivack and Shure, 1974). The responses provided from hypothetical dilemmas provide knowledge of how children think about solving their interpersonal problems in daily life (Rubin and Krasnor, 1986).

The long range risks for a child who cannot interact well with other children may include poor mental health, low academic achievement and other school difficulties and poor employment history (Katz and Maclellan, 1991). A child is more likely to have better mental health, stronger relationships and more success in school and work if they have many chances to strengthen their social competence by playing, talking, working out disagreements and collaborating with peers and adults. Most childrenôs social skills increase rapidly during the

preschool years. It is important to keep in mind that children of the same age may not have the same levels of social competence. Children have distinct personalities and temperaments from birth. Some children may face special challenges when they interact with peers and adults.

Dodge (1985) regards social problem solving as a special, interpersonal form of more general problem-solving process. Social problem-solving has a profound impact on social competence. Well adjusted children who get along with peers interpret social cues accurately and have a repertoire of effective strategies that they apply adaptively. When social problem solving skills improve, both children and adolescents show gains in academic, emotional and social adjustment (Dubow *et al.* 1991; Elias *et al*. 1986). The ability to generate a variety of solutions to social conflicts increases over the preschool and early school years (Dubow and Tisak, 1989, Rubin and Krasnor, 1985). Besides quantity of strategies, the quality of strategies generated by children improves with age. Younger children as well as children with especially poor peer relations, describe strategies that impulsively meet their needs such as grabbing, hitting or ordering another child to obey.

Children whose behavior is characterized by impulsivity and impatience are frequently poor problem solvers, those who consistently shy away and withdrawn and inhibited children often show even greater deficiency in thinking skills. Such withdrawn and inhibited children often stand around and watch other children at play, perhaps fantasying a desire to join in or to escape the situation. In either case it is evident that their thoughts do not include ideas about problem solutions or their consequences. Lack of interpersonal problem-solving thinking skills effects the way children handle problems that come up with adults as well as with other children. Teachers could improve the behavior of children by teaching them how to generate solutions to problems and how to anticipate the potential consequences of what they might do (Shure and Spivack, 1973; Spivack and Shure, 1974; Shure and Spivack, 1975; Punia, 2002).

Intelligence is the capacity to learn or to understand, capacity to acquire knowledge or understanding and to use it in novel situations. Charlesworth (1987) considered intelligence, in the broadest sense, the ability to benefit from experiences, that is, the extent to which a person is able to make use of his or her capacities and opportunities for advancement in life.

Intelligence is known to incorporate a range of abilities. Wechsler (1974) conceptualized intelligence as a very complex and multifaceted phenomenon. Most intelligence scales, including that of Binet and Wechsler, yield a single IQ score. Intelligence is measured through tests of intelligence. Intelligence test gives a score called Intelligence Quotient (IQ) which represents the performance of the individual as compared to his age mates. Results of intelligence tests are often interpreted as being indicators of potential but actually they are measures of performance. A distinction between a childôs actual

developmental level, that is, his complete development as might be measured on a standardized test and his level of potential development.

Research shows that the general intelligence plays an important role in many valued life outcomes. In addition to academic success, IQ correlates to some degree with job performance, socioeconomic advancement (for example delinquency, adult criminality, unemployment, dependence on welfare, children out side of marriage). Intelligence correlates highly with school performance and job performance moderately with income and with income and with law abiding behavior (Arthur, 1998).

In relation to intelligence, children with low IQ have an inability to generate different solutions that could potentially be put into action to solve a problem. When poor problem solvers do grab a toy or hit the child, they do so not out of mere frustrations. Children who behave like this are generally unable to see consequences of what they do. Relative to good problem solver, poor problem solver are less likely not only to consider alternative solutions and consequences but to be sensitive to interpersonal cause and effect, in fact, they may not even know that problem exists (Shure and Spivack, 1978).

Limited work has been done on social problem-solving skills in relation to IQ. Keeping in view, the importance of social problem-solving skills in relation to IQ, the present study has been conducted with the following objectives:-

- To identify low, average and high IQ children in the group of 6 to 8 years.
- To assess social problem-solving skills of low, average and high IQ children.
- To compare social problem-solving skills of low, average and high IQ children.
- To delineate the factors related to social problem-solving skills of children.

In the following chapter literature in the light of above mentioned objectives has been reviewed.

CHAPTER-II

REVIEW OF LITERATURE

This chapter is devoted to review of literature relevant to the present study. Keeping in view the objectives of the study, the review has been presented under the following sub-heads:

2.1 Studies on social problem-solving skills.

2.2 Studies on intelligence and social problem-solving skills.

2.3 Studies on factors associated with social problem-solving skills.

2.3.1 Individual variations in social problem-solving skills.

2.3.2 Socio-economic variables and social problem-solving skill.

2.3.3 Social behaviour and social problem-solving skills.

2.1 Studies on Social Problem-Solving Skills

Social problem-solving skills are the cognitive strategies that children adopt to deal with interpersonal situations in order to achieve their social goals. Hypothetical scenarios have been used to examine how children achieve a number of socials goals. For children social problems encountered with peers are social conflicts, such as, when one child opposes another child's actions there is a state of social conflict. Social conflict is dyadic in nature and children are capable of using a variety of prosocial and antisocial strategies to achieve their goals (Chen and Rubin, 1992).

Shure (1993) reported that children who are good at social problem-solving are able to achieve their social goals effectively. Poor interpersonal problem-solving skills affect the way children deal with their social problems encountered with peers and adults.

Zahn-Waxler *et al*., (1994) reported that children have a range of strategies in their repertoire, both positive and negative strategies.

Balda (1997) conducted a study on socialization experiences and preschool aged childrenôs social problem-solving skills in Australia and India. Significant differences were found between social problem-solving skills of Australian and Indian children. Australian children suggested greater number of strategies and greater number of different strategies as compared to Indian children. Also, Australian children suggested more relevant and flexible strategies in comparison to Indian children. The author reported that most frequently used strategies in both the cultural groups were óprosocialô and the second most frequently used strategies were óforcefulô in nature.

Punia (2002) found that most frequently used strategies by rural and urban preschool children from all the three income groups were ñnon-forcefulò. From the ñnon-forcefulò strategies, highest proportions were for ñprosocialò strategies from high, middle and low

income groups. Results also indicated that in all the three income groups, the second most frequently used strategies were forceful in nature.

2.2 Studies on Intelligence and Social Problem-Solving Skills

Review on intelligence and social problem-solving skills is very limited. It is often asserted that there is a correlation between intelligence and social deficiency, though the source of this connection is controversial. While actual mental deficiency quite clearly interferes with social function, and there is little debate on how that comes about. In this section, an attempt has been made to discuss the linkage between intelligence and social competence and social problem-solving skills.

Goleman (1995) described emotional intelligence, measured by EQ, as an additional dimension of "intelligence" in which individuals' empathy and social skills are personal traits comparable to "intelligence". Whether it is possible for a person to possess intelligence of all sorts (intellectual, interpersonal, intrapersonal, kinesthetic, etc.) remains an open question, some pose that there are inherent trade-offs between the different manifestations of intelligence. Howard Gardenerôs multiple intelligence deals with the relationships between these different forms of intelligence.

Research shows that general intelligence plays an important role in many valued life outcomes. In addition to academic success, IQ correlates to some degree with job performance, socioeconomic advancement (e.g., level of education, occupation, and income), and "social pathology" (e.g., delinquency, adult criminality, unemployment, dependence on welfare, children outside of marriage). Research has demonstrated links between general intelligence and health, longevity, and functional literacy. Correlations between general intelligence and life outcomes are pervasive. IQ and general intelligence correlate highly with school performance and job performance, moderately with income, and with law-abiding behaviour (Arthur, 1998).

Smith and Pellegrini (2000) reported that IQ is predictor of wide variety of behaviours provided these variables are influenced by the factors that influence the IQ. The IQ and social competence are influenced by some of the same variables.

It is difficult to measure and test relationship between intelligence and social ability; it is generally believed that modestly above-average intelligence (1 to 2 standard deviations above the mean) correlates positively with social ability. In high schools, for example, highly active and intelligent students have been shown to be quite popular in most cases (Anonymous, 2010).

Chancellor (2010) reported that emotional intelligence is more important than IQ. Although, the major characteristics of success are our social and emotional intelligence, yet there is very little emphasis put on emotional intelligence. Individualôs emotional skills have a direct and important bearing on his/her relationships with others. They need to understand

their feelings, where they come from and how to properly express them. People will not maintain healthy relationships unless they can control their emotions, communicate their feelings in a constructive manner and understand the feelings of others. There is a direct connection between poor emotional skills and the rising crime rate. Children who have poor emotional skills become social outcast at a very young age. They might be the class bully because of a hot temper. They have learned to react with their fist rather than reason. Poor social and emotional skills contribute to poor attention in class and feelings of frustration. They rapidly fall behind and make friends with others in the same boat. There is a direct path to crime that starts early in life. While there is no doubt that family and environment are great contributors, the common thread is poor emotional and social skills.

2.3 Studies on Factors Associated with Social Problem-Solving Skills

In the following section relevant review of literature has been presented on factors associated with social problem-solving skills. The first section describes individual variations in social problem-solving skills. It includes review with reference to age, gender of child and social problem-solving skills. Then, studies on socio-economic variables and social problem-solving skills are presented. Finally, research studies conducted on social behaviour and sociometric status in relation to social problem solving skills are discussed.

2.3.1 Individual Variations in Social Problem Solving Skills

Individual variations in social problem-solving skills have been examined by research workers in relation to age and gender of the child.

2.3.1.1 Children's age and social problem-solving skills

Spivack and Shure (1974) focused on strategy generation by children and they asked young children to think of as many ways as they could to deal with hypothetical conflicts, such as wanting to play with a toy someone else has. Their findings and as well as the results of other studies, show that the ability to generate a variety of solutions to social conflicts increases over the preschool and early school years (Dubow and Tisak, 1989; Rubin and Krasnor, 1985).

Renshaw and Asher (1982) examined social goals (for example, to maintain positive relationship) and strategies (for example, to be cooperative) in hypothetical social situations with two groups of children: older (grade 5 and 6) and younger (grade 3 and 4). They found that older children were more likely to suggest positive goals whereas younger children suggested aggressive goals. In accordance with Selmanôs model, older children were more concerned about the interpersonal social relationship while younger children ignored the social relationship and tended to focus on their personal interests.

Renshaw and Asher (1983), in another study, found that older children generated more indirect, pleasant and polite strategies, while younger children were more likely to use a direct approach to joining a peer group.

In an Australian study, Irving (1994) found that preschool children were more likely to use higher proportions of agonistic strategies than older children (grades 1 and 2) and suggested that there were developmental changes from preschool to the early primary years in children's cognitive repertoire of strategies.

In recognizing the importance of interactions with children similar in age, Shaffer (1994)) reported that when children are interacting with someone who is similar in age they are neither given directions nor criticized. Children are free to try out their own ideas and behaviours. They learn to understand and appreciate the .perspectives of other children who are ñ*equal-status"* and fosters the development of social competence that may be difficult to acquire with non-age-mates. Peer interaction provide children opportunities to learn successful strategies form other children. They also learn from their own mistakes. When they know the strategy they used in peer interaction was unsuccessful, children would try other strategy that could be successful.

2.3.1.2 Gender of Child and Social Problem-Solving Skills

Individual and sex differences are also evident from a study conducted by Fabes and Eisenberg (1992) in relation to preschool childrenôs coping with interpersonal anger. The most common cause of anger was associated with conflicts over possessions. This was followed by physical assault. Childrenôs coping strategies for interpersonal anger were also related to the cause of anger. To resolve material possession conflicts, children were more likely to use ñactive resistanceò in a non-aggressive way. Overall, children were more likely to use non-aggressive strategies to cope with anger-related conflicts; however, boys expressed anger in a more direct manner than did girls. Girls more often used strategies that could result in social harmony. Popular and socially competent children were less likely to be involved in anger conflicts. These children were more likely to deal with anger conflicts in non-aggressive ways that could minimize further conflict and promote social relationships. These children were more likely to use their popularity to deal with anger conflicts (for example, they may refuse to play with the child who makes them angry). In contrast, less competent children were more likely to be use aggressive and adult-intervention strategies to cope with anger.

In another study Zahn-Waxler *et al.* (1994) examined social problem-solving in preschool children and found that children have a range of strategies in their repertoire and used both positive and negative strategies in resolving social conflicts. Children tended to use prosocial strategies more often. Gender differences indicated that girls were friendlier and boys were more aggressive.

Punia (2002) studied the interpersonal problem solving skills of preschool-aged urban and rural children and found that girls suggested significantly greater proportions of ónon-forcefulô strategies, whereas, boys suggested significantly greater proportions of óforcefulô strategies.

2.3.2 Socio-Economic Variables and Social Problem-Solving Skill

There is some evidence that the relationship between aggression and social problem-solving is influenced by socioeconomic status although the results are less than clear cut. In a study by Ramsey (1986), the social strategies, sociometric patterns, and teacher ratings of social competency were compared across middle and low-SES preschool children. The SES groupings were based on the educational level and occupation of the children's parents. Children form middle and low-SES responded to hypothetical problems and peer ratings in a similar manner. In response to hypothetical social problem tasks, children from low-SES group more likely to suggest aggressive strategies compared to children from middle-class families. Children from middle-SES groups were more likely to use sharing and reassurance strategies. Aggression was related with rejection in the middle-SES group only. It seems in low-SES families aggression is an accepted form of social behaviour. Children from low-SES group were more often rated as socially incompetent by teachers.

Punia (2002) conducted a study on social problem-solving skills of pre-school children from three income groups. Results indicated that children from high income group suggested greater number of ñnon-forcefulò and a less number of ñforcefulò strategies as compared to middle and low income group children. There were also significant differences in social problem-solving skills of middle and low income group children.

Punia (2002) also found that there were significant differences in quantitative scores of high, middle and low income group pre-school children. High income group children suggested greater number of categories and their strategies encompassed greater variety of strategies. Also these children suggested greater number of relevant strategies and they were more flexible in strategy selection.

2.3.3 Social Behaviour and Social Problem-Solving Skills

Mize and Ladd (1990) investigated that peer rejection during the early years may be difficult to overcome and may lead to the inability to acquire important social skills in subsequent years. Rejection by peers has been identified as a strong predictor of subsequent adjustment difficulties in adolescence and adulthood.

Social skills deficits have been identified as an important factor in the developmental pathway towards childhood aggression (Patterson *et al.*, 1991). Maladjusted children have been found to show social skill deficits in atleast three domains. One domain is deficits in interpersonal behaviours that result in poor peer acceptance. For instance, maladjusted children show higher rates of aggression in their play (e.g. yelling, hitting kicking), have difficulty initiating, sustaining and adjusting their play interactions to fit the activities of the group. A second domain is deficits in social problem-solving Aggressive rejected children tend to over interpret hostility in other childrenôs behaviors and generate fewer solutions to

hypothetical problem situations than non-aggressive children. The solutions these children do pose are more apt to contain themes of violence and anger.

Regarding peer-nominated aggressive children, Rubin and Mills (1991) in a study with Grades 1 and 2 children found that aggressive children were more likely to suggest bribery strategies to object acquisition dilemmas and abnormal solutions to friendship initiation hypothetical tasks (e.g. "*I would buy him a new toy*").

Vitaro and Pelletier (1991) studied that well adjusted children who get along with peers interpret social cue accurately and have a repertoire of effective strategies that they apply adaptively. In contrast, maladjusted children who are disliked by peers, either because they are highly aggressive or because they are anxious and withdrawn have great difficulty in solving problems. In another study, when social problem-solving skills improve, both children and adolescents show gains in academic, emotional and social adjustment (Dubow *et al*., 1991).

Healey and Masterpasqua (1992) investigated wheather measures of interpersonal cognitive problem solving skills could distinguish adjusted from non-adjusted classroom behavior among 73 children (aged 6-14 years) with mild mental retardation. Irrespective of age and IQ, adjusted samples had a large number of relevant solutions to common problems as well as a higher ratio of forceful solutions than non-adjusted samples. Findings suggest that cognitive interpersonal skills may be as important for this population as for youngsters without mental retardation.

Rubin and Rose-Krasnor (1992) found that teacher rated aggressive preschoolers were similar to other children in suggesting relevant solutions to hypothetical problems. However, the aggressive children were more likely to suggest agonistic (e.g. *I would push him off the swing*) or bribe strategies (e.g. *I would give him a candy*) and were less likely to offer prosocial strategies (e.g., *Please can I have the swing*) to hypothetical reflective reasoning.

In relation to interpersonal problem-solving of Grades 2 to 6 children, (Rubin and Rose-Krasnor, 1992) found that teacher rated aggressive children were as good as other children in producing number of relevant solutions in hypothetical situations involving object acquisition, friendship initiation and peer provocation. It was, however, the quality of strategies they suggested was deviated from the norm in hypothetical dilemmas. Across all problems, aggressive boys suggested aggressive solutions as a first response. For friendship initiation tasks aggressive boys suggested adult intervention strategies. These children also suggested aggressive strategies in response to peer provocation.

Rubin *et al.* (1993) compared the psychological characteristics of withdrawn, aggressive, and average children. Compared to average children both the withdrawn and aggressive children were unpopular among peers, however, the aggressive children were more disliked than withdrawn children. Teachers more often mentioned that aggressive children

were more hostile and were less likely to tolerate frustration and also had more learning problems than the average group. Withdrawn children demonstrated shy, sad, and solitary behaviour. These children were also unpopular among peers. They were less social and showed few leadership qualities as viewed by peers. Teachers rated withdrawn children as more-anxious and socially incompetent.

Shure (1993) reported that impulsive and inhibited children are less flexible in suggesting alternative strategies compared to other children. Impulsive children find it hard to wait for something they need and are unable to take turns and share things. They keep on demanding what they need and due to their inability to wait they may grab things from other children. Impulsive children get frustrated easily and this frustration leads to aggression. Impulsive children express dominating and aggressive behaviours in peers interactions. Impulsive children may use agonistic strategies as they know ñ*ask*ò is often refused. Inhibited children on the other hand, have experienced failure so often that they prefer to withdraw from the problems they cannot solve.

Volling *et al.* (1993) examined sociometric status differences in childrenôs social competence in a sample of elementary school children using teacher ratings and peer nominations. Rejected children evinced significantly fewer competencies than popular, average or neglected children but differed from controversial children only with respect to their inability to meet established social norms for co-operative behaviour.

Black and Logan (1995) reported that popular children were more likely to take alternate turns, provide explanation to peers and participate in episodes of cohesive discourse. Rejected children demonstrated turn-taking styles that included irrelevant turns, interruption, simultaneous talking and non-contingent responding.

Balda *et al.* (2000) studied the relationship between temperament and social competence of pre-school aged children. Results indicated that there were relations between temperament dimensions and social competence. Highly active and distractible children were more likely to suggest less number of strategies. They were less flexible in providing alternate solutions and suggested irrelevant solutions in hypothetical problem-solving tasks.

Bernard-Opitz, *et al.* (2001) found that children with autism have difficulty in solving social problems and in generating multiple solutions to problems. Children with autism produced significantly fewer alternative solutions compared to their normal peers.

Balda (2001) also found that peer accepted children were more likely to suggest prosocial and less likely to suggest agonistic strategies. For friendship initiation, they were more likely to suggest prosocial and conversation opening strategies and less likely to initiate friendship indirectly.

Balda (2002) and Balda and Negi (2001) studied relations between peer acceptance and rejection and interpersonal social problem-solving skills. Positively rated children suggested more number of relevant and alternative strategies than their less accepted counter

parts. Also positively rated children were more likely to suggest prosocial strategies for obtaining access to an object in another childôs possession and for initiating friendship with an unfamiliar child while reverse was true for negatively rated children.

Research indicated that children rejected by their peers are behaviourally more deviant in comparison to accepted children. In a study with rural preschool children, Balda *et al*. (2002) found that peer acceptance was positively correlated with teacher rated popularity among classmate and outgoing social behaviour. Children rated positively were more likely to use positive and less likely to use negative strategies to resolve conflicts with peers.

Balda *et al.* (2002) examined sociometric status and social interaction of children. Results of the study revealed that the positive rating score was positively and significantly correlated with total number of strategies suggested, total relevancy and within story flexibility scores, whereas, significant negative correlations were obtained between neutral rating score and the number of strategies suggested, relevancy and flexibility scores. Negative and significant correlations were also obtained between negative rating score and the number of different strategies suggested, relevancy and flexibility scores.

In another study, Balda and Irving (2004) investigated the predictors of sociometric status in preschool children. Two hundred 4 to 6 year old children were assessed for sociometric status and social problem-solving skills. Peer acceptance was found to be positively correlated with teacher rated successful peer group entry, popularity among classmates, outgoing social behaviour and negatively with conflict initiation. Peer accepted children were more likely to use positive and less likely to use negative conflict resolution strategies whereas opposite was true for rejected children. Results of study clearly predicted association between sociometric status and quantitative and qualitative features of social problem-solving skills. Peer accepted children suggested more number of relevant and alternative strategies than their counterparts who were less accepted.

Negi *et al.* (2004) studied social behaviour and sociometric status of 6-8 yrs old girls and found that girls who were assessed by class teachers successful in peer group entry, popular among classmates, socially outgoing and being using positive conflict resolution strategies were socially accepted and preferred by their peers.

It can be concluded that children encounter with extensive interpersonal problems while interacting with their peers. There is wide range of strategies in childrenôs cognitive repertoire and children are more likely to use prosocial strategies. Older children and girls seem to be more prosocial as compared to younger children and boys. Intelligence, particularly social and emotional intelligence plays important role in maintaining relationships with others. Literature reviewed shows relationship between socio-economic and behavioural variables with social problem-solving skills.

In the following chapter methodological procedure adopted for the present study has been described.

CHAPTER-III

METHODOLOGY

In this chapter sampling procedure adopted for the present study, operational definitions of variables, variables and their measurement and analyses undertaken to draw the interpretation from data have been described. These have been presented under the following headings.

3.1 Sample Selection and Characteristics

3.2 Operationalization of Variables

3.3 Variables and their Measurement

3.4 Procedure for Data Collection

3.5 Data Analyses Techniques and Reporting

3.1 Sample Selection and Characteristics

3.1.1 Locale of the Study

The present study was conducted in rural Hisar. From Hisar district, Hisar Block-1 was selected at random. From Hisar Block-1, Kaimri village was selected at random. In Kaimri, there were two government schools, one for boys and one for girls; hence both the schools were selected. Permission to conduct research with 6 to 8 years old children was sought from the principals of these schools.

3.1.2 Sample Selection

Separate lists of boys and girls in the age range of 6-8 years were prepared from both the schools. There were 94 boys and 85 girls in this age group. All these children were assessed for their IQ with the help of Stanford-Binet Intelligence Scale (1973). Children were divided into low, average and high IQ categories as described by Stanford-Binet Intelligence Scale.

Table 3.1: Classification of children on the basis of IQ (n=90)

Categories of IQ	Boys (n=94)	Girls (n=85)	Total (n=179)
Low (Below 90)	19 (20.2%)	16 (18.8%)	35 (19.6%)
Average (90-109)	59 (62.8%)	54 (63.5%)	113 (63.1%)
High (Above 110)	16 (17.0%)	15 (17.7%)	31 (17.3%)

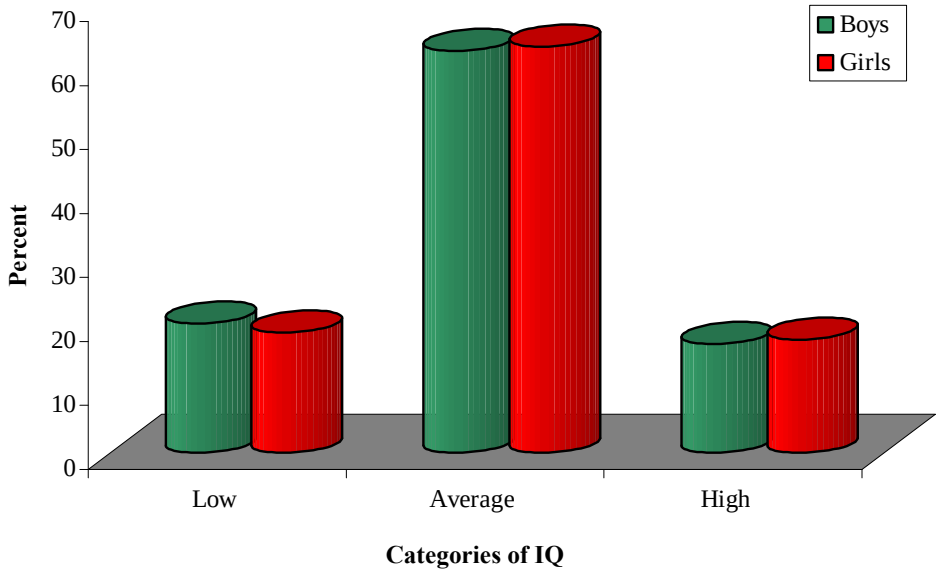

Fig. 3.1 : Classification of children on the Basis of IQ

As depicted in Table 3.1, majority of boys (62.8%) and girls (63.5%) were in average category of IQ, 20.2 per cent boys and 18.8 per cent girls fell in low category of IQ; and 17 per cent boys and 17.7 per cent girls belonged to high category of IQ. Since there were 15 girls in high category of IQ, hence all these girls were selected and from this category 15 boys were selected at random. From the other two categories of IQ (average and low), 15 boys and 15 girls each were randomly selected. Total sample constituted of 90 children, including 45 boys and 45 girls.

The mean age of boys was 83.49 months and the mean age of girls was 84.87 months. Children were divided in two age groups ï 6 to 7 years and above 7 years.

3.2 Operationalization of Variables

For any research work, it is important to indicate variables, define them operationally, and their measurement procedure. For the present study, the variables have been grouped as dependent and independent variables. The independent variables are the presumed causes, dependent variables are the consequences. Independent variables can be controlled and manipulated to ascertain their impact on observed phenomenon. Dependent variables change with a change in the independent variables.

3.2.1 Independent Variables

The independent variables are classified into three categories :

- Personal variables: age and gender of the child.
- Socio-economic variables: family type, family size, parental occupation and education.

- Social behaviour: teachers' assessed social behaviour.
- Intelligence quotient: IQ is a quantitative measure of intelligence.

Personal Variables:

Age: Age was operationalized as the number of full months completed by the child at the time of interview.

Gender of child: It refers to whether the child is male or female. Scores allotted were:

Male = 1

Female = 2

Socio-Economic Variables:

Family Type : It refers to whether family is nuclear or joint. A nuclear family is unit of members of only one person and includes minors and independents. A joint family is that which is constituted by children, parents and grand-parents. The scores allotted were:

Nuclear = 1

Joint = 2

Family Size: It refers of number of members in a family. Different categories made were:

Small family (up to 4 family members) = 1

Medium size family (5 to 6 family members) = 2

Large family (more than 6 family members) = 3

Parental Occupation: The occupation refers to the kind of work performed by the parents. The codes given to various occupations were:

Occupation of father

Labour = 1

Farming = 2

Service = 3

Occupation of mother

Labour = 1

Housewife = 2

Education of Parents: Education of parents was total number of years of formal education attended by the mother and father of the target child. Different categories made were:

Illiterate = 1

Primary to Middle = 2

High to S. Secondary School = 3

Graduate and above = 4

Family Income: It refers to the monthly income of a family from all the sources. It was divided in three categories as given below:

Up to Rs. 3000/-	=	1
Rs. 3001 to Rs. 6000/-	=	2
Above Rs. 6000/-	=	3

Intelligence Quotient: IQ is a quantitative measure of intelligence. Different categories were:

Low IQ	=	IQ below 90
Average IQ	=	IQ between 90 to 109
High IQ	=	IQ 110 and above

3.2.2 Psychological Variable

Social behaviour of children was taken as psychological variable. Class teachers assessed the social behaviour of children in the school context. It refers to overt behaviour of the child in the classroom. Total scores were obtained for aggressive, emotional and impulsive behaviour.

3.2.3 Dependent Variables

In the present study Social Problem-Solving Skills (SPSS) were the dependent variables. Social problem-solving is the ability to achieve personal goals in social interaction while simultaneously maintaining positive relationships with others over time and across situations.

3.3 Variables and their Measurements

A variable is a set of value that forms a classification. A value is anything which can be predicted. There are two types of variables in the study ï the dependent variables and the independent variables. Table 3.1 depicts variables and tools for their measurement.

Table 3.2: Variables and their Measurement

Variables	**Tools used**
Independent Variables	
Personal variables • Age • Gender	Schedule developed
Socio-economic variables • Family type • Family Size • Parental occupation • Parental education • Family income	Schedule developed
Other variables • Overall behaviour adjustment	• Inventory developed by Punia (2002)
Intelligence Quotient of children	• Stanford-Binet Intelligence Scale for Children ï Revised (1973)
Dependent variable	
• Social Problem-Solving Skills	• The Social Problem-Solving Test (Rubin, 1988)

3.3.1 Parental Measures

A questionnaire was compiled to obtain demographic information from the parents. It included questions regarding type and size of family; parental education and parental occupation; and family income (see Appendix 1). Parents were personally interviewed by the researcher.

3.3.2 Teachers' Measure

Overall Behaviour Adjustment Inventory. An inventory developed by Punia (2002) was used to assess the overt classroom behaviour of children. Inventory consisted of 15 behavioural items on a Likert-type scale. For each behaviour item, the teacher was requested to give a score of 1 through 5 (see Appendix 2).

3.3.3 Children's Measures

3.3.3.1 Social Problem-Solving Skills

To assess the children's social problem-solving skills, five peer problem stories were selected from the Social Problem-Solving Test-Revised developed by Rubin (1988). These five stories were concerned with object acquisition in hypothetical situations with their peers. The characters in the stories wish to gain access to a toy or material in another child's possession. The stories aim to assess children's cognitive repertoire of strategies for obtaining access to an object (see Appendix 3). Picture cards were used to depict the stories.

3.3.3.2 Intelligence Quotient (IQ) of Children

To measure IQ of children Stanford-Binet Intelligence Test-Revised by Binet (1973) was used. It has two sub-scales, i.e. verbal and performance.

3.4 Procedure for Data Collection

The procedure followed for data collection from parents, teachers, and children has been described in this section.

3.4.1 Administration of Parental Measures

Families were personally visited and parents were interviewed to obtain demographic information.

3.4.2 Administration of Teachers' Measures

The class teachers were requested to observe the behaviour children for a period of one week before filling in the inventory. The classroom teacher was asked to think of the average 6-8 year old child. For each behaviour item, the teacher was requested to give a score of 1 through 5. Total scores were obtained for aggressive, emotional and impulsive behaviour. Higher score indicated more aggression, highly emotional and impulsive behaviour.

3.4.3 Pilot-Testing of Children's Measures

The Social Problem-Solving Test stories were pilot-tested on rural children. Five children were interviewed and their responses were recorded verbatim on response sheets and coded. Their understanding of the tasks was considered to be appropriate.

Pilot-testing of Stanford-Binet Intelligence Test-Revised by Binet (1973) was also done on five children.

3.4.4 Administration of Children's Measures

3.4.4.1 Social Problem-Solving Skills

Children were individually interviewed on the social problem-solving tasks. Before conducting interviews, the investigator visited schools, where she was introduced to the children by class teacher. Children were told that she would visit the school for a few days to tell them stories. The investigator built rapport with each child, before administration of the measure, by brief conversations with the child about things they enjoyed doing at home and in the school.

The names given to children in the stories and the appearance of the children in the story illustrations were altered to match the Indian cultural context. The hypothetical situations chosen appeared relevant to the daily experiences of rural children. The similar procedure has been used by Balda (1997), Punia (2002) and Malik (2004).

According to Rubin's (1988) format, the story situations were introduced as follows:

I want to know how children think about things. I've got some pictures and I'm going to tell you some stories about them. The stories are not quite finished and I'd like you to help me finish them. I want you to tell me what the child could do or say in each story. O.K. Now, listen and watch carefully.

The child was shown a picture card and a story was read. The child being interviewed was asked what the story character could do or say in each situation to accomplish the desired goal and then prompted to give a second response. The gender of the children in the stories was same as that of the child being interviewed. In each story the characters were given different names to maintain interest and variety. Care was taken that a story character's name was not the same as that of the child being interviewed. Girls' names were used for girl subjects and boys' names were used for boy subjects.

Example of the stories of social problem-solving tasks

This girl's name is Sonal and this is Cheshta. Both are seven years old. Cheshta has been on the swing for a long, long time. Sonal would really like to play on the swing.

What do you think Sonal could say or do so that she could have the swing?

(If no response, the question was repeated.)

First Response: .....

If *that didn't work*, what else could Sonal do or say so that she could play on the swing?

Second Response: .....

What do you think **YOU** would do or say if you wanted to play on the swing?

Child's Response: .....

All interviews with children were conducted in a quiet area of their school. Responses were recorded as verbatim on interview sheets. Each interview lasted for 10 to 15 minutes and followed the standard protocol set by Rubin (1988). If children did not respond, a maximum of two verbal probes were used.

Scoring for Children's Social Problem-Solving Tasks

Responses given by the children were coded into specific categories. Within any response, children could identify more than one strategy and these were all categorised. The strategies were categorised according to the system used by Rubin (1988).

Prosocial- Strategies within this category included: asking, using polite phrases, waiting, sharing or turn-taking and lending or borrowing. For example: *Can I have the swing please?* Polite forms of address (*Didi* or *Bhaiya*) were also coded as prosocial strategies.

Agonistic- Strategies within this category included: direct imperatives, taking by force, attacking other child physically and damaging property. For example: *I would push him off the swing*.

Authority-aid- Strategies within this category included: appeal to another person, both appeal to the authority-aid and the suggestion of what the authority could then do. For example: *Tell the teacher to make him share*.

Trade-bribe- This category included strategies such as the offering or withholding of a desired object as a consequence for either obtaining the toy or if the other child refused to share. For example: *I'll let you have my favourite book*.

Manipulative- This category included any responses involving an emotion, designed to hurt the feelings of the child who had the toy or who refused to share the toy. For example: *I won't like you if you don't give this book to me.*

All the 90 protocols for the rural children were scored by two raters. Inter-rater reliability, computed as the percentage of agreements on the strategies given by these children was 94% for all the five stories.

Scores Obtained from the Categorised Responses of Social Problem-Solving Tasks

From the categories of responses, scores were developed for each child for relevancy of strategies, within-story flexibility in use of strategies, total scores across stories for strategy use, and proportional use of strategies within a task area.

Relevancy of Strategies. Children's responses were scored for relevancy according to the protocol proposed by Rubin (1988). A relevancy score was given when a child's response could solve the problem as presented in the story. In all the five stories, both the first and second responses were coded for relevancy. Childôs response was also coded for relevancy. A score of 1 was given for a relevant solution (those responses which could be coded into the category system). A score of 0 was given for an irrelevant response where the response did not suggest a solution to the problem as stated. There were three types of irrelevant responses:

- No answer, for example: *I don't know* or *I have no idea*.
- Exact repetition of the first response for the second response. For example:
  - ⇒ Response 1: Can I have the swing (score 1)
  - ⇒ Response 2: Can I have the swing (repetition- score 0)
- The solution did not solve the problem or did not give enough information to allow coding.

Total relevancy score for five peer problem stories was computed. A child could score a minimum of 0 and a maximum of 15 for relevancy. On the basis of relevancy scores, children could be categorised into three categories:

Below average	Ò	5
Average	=	6 to 10
Above average	Ó	11

Within-story Flexibility. Children's response flexibility was determined by comparing the categories of their first and second responses to the dilemmas posed in any given story. Flexibility was computed by giving a score of 0 if the child failed to offer a further response to the interviewer's probe following the initial response, or when an irrelevant answer was given for either Response 1 or 2 or both, or when Response 2 was coded as a direct repeat of Response 1 (for example, R1: *Please can I have it.* R2: *Can I have it.*). A score of 1 was given if the second response contained the same strategy as in the first response (for example, R1: *I'll give you a book*. R2: *I'll give you a candy.*); a score of 2 was given when there were modifications of the first response, that is, one or more new strategy from another category was added in Response 2 (for example, R1: *Can I have it?* R2: *Please, can I have it?*); and a score of 3 was given for a completely novel response where no categories found in Response 1 were repeated in Response 2 (for example, R1: *Can I have it?* R2: *We can play together?*).

The within-story flexibility scores for peer problem stories were combined. A child could score a minimum of 0 and a maximum of 15 for within-story flexibility. On the basis of flexibility scores, children could be categorised into three categories:

Below average	Ò	5
Average	=	6 to 10
Above average	Ó	11

Scoring of Strategies. Scores were also computed for the total number of social problem-solving strategies identified by each child in all the five stories. Following Rubin's (1988) procedure, scores were computed for:

Number of categories. The total number of categories found across the five stories was calculated. The number of prosocial, agonistic, authority, trade-bribe and manipulative categories found in the five peer problem stories were combined.

Number of different categories. The total number of different categories found in all the five stories was computed.

Use of Strategies. Social problem-solving strategies used by a child in the peer problem-solving tasks were calculated into percentages for the first objective. This was done in order to compare the relative use of a particular strategy by a child. Different categories of responses were grouped into ñforcefulò and ñnon-forcefulò strategies. Responses categorised under ñagonisticò category were considered as ñforcefulò strategies. Responses categorised under categories other than agonistic were considered as ñnon-forcefulò. Prosocial, authority-aid, trade-bribe and manipulative categories were grouped under ñnon-forcefulò strategies.

3.4.4.2 Intelligence Quotient (IQ) of Children

To measure IQ of children, Stanford-Binet Intelligence Scale (1973) was used. Test is divided into verbal scale and performance scale.

A. Verbal Scale

It consists of following subtests:

Vocabulary-I:

A series of increasingly difficult words were presented and child was asked what each word means, for example, what do you understand by orange? Each item was scored according to their performance. The activity was discontinued after six consecutive failures.

Score: 6 plus

Vocabulary-II:

Procedure same as for Vocabulary-I

Score: 8 plus

Differences:

Name two things were told and the child was asked to tell how they were different.

a) A dog and a bird
b) A slipper and a boot
c) Wood and a glass

Score: 2 plus

Mutilated Pictures:

Cards with mutilated pictures were shown and pointing to each in turn, ñwhat is missing in this Picture?ò

a) Wagon
b) Shoe
c) Teapot
d) Rabbit
e) Glove

Score: 4 plus

Opposite Analogies II:

Children were asked

a) ñA table is made up of wood and a window is made up of é é é ..ò
b) ñA bird flies and a fishé .ò
c) ñThe point of walking-stick is blunt and the point of pin is é é é .ò
d) ñAn inch is short and a mile is é é .ò

Score: 3 plus

Opposite Analogies III:

Children were asked

a) ñThe rabbitôs ears are long and the ratôs ears areé é .ò
b) ñSnow is white and coal isé é ..ò
c) ñThe dog has hair and the bird hasé é ..ò
d) ñWolves are wild and dogs areé é é ò

Score: 2 plus

Picture Absurdities-I:

Pictures were shown:

a) Man with umbrella
b) Man with saw
c) Dog and rabbit
d) Man and woman sitting in the rain
e) Cat and mice

In the order indicated above children were asked for each in turn,ò What is funny (foolish) about that picture?ò

Score: 4 plus

Similarities:

The child was asked to tell in what way a series of paired words were alike, for example, in what way are an apple and an orange alike? Similar method was used for

a) Ship and car
b) Iron and silver
c) Wood and coal

Score: 2 plus

Comprehension IV:

Child was asked to explain why certain practices were desirable or what course of action is preferred under certain circumstances, for example:

a) ñWhat should you do if you found on the streets of a city a three year old baby that was lost from its parents?ò
b) ñWhat the thing for you to do when you have broken something that belong to someone else?ò

c) ñWhat the thing for you to do when you are on your way to school and see that you are in danger of late?ò

d) ñWhat makes a sail boat move?ò

e) ñWhat the thing for you to do if another child hits you without meaning to do it?ò

f) ñWhat should you say when you are in a strange city and someone asks you how to find a certain address?ò

Score: 3 plus

Digit Span:

A series of increasing length were presented orally and the child was asked to repeat them in the same order or in a reverse order, for example: repeat 3-1-8-5-9

Score: 1 plus

Memory Stories:

Children were told a story and asked the questions from that

Story title: ñThe Wet Fallò

ñOnce there was a little girl named Pooja. She lived on a farm with her brother Rahul. One day their father gave them a pony. They had lots of fun with it. One day when Dick was riding on it, the pony became frightened and ran away. Poor Dick fell into a ditch. Now Betty laughed when she saw him : He was covered with mud from head to foot.ò

a) What is the name of this story?

b) What was Poojaôs brother name?

c) Where did they live?

d) Who gave the pony to them?

e) What did the pony do?

f) What happened?

Score: 5 out of 6

Verbal Absurdities:

Some statements were read to children give below. Read each statement and after each one, ask, ñwhat foolish about that?ò The response is frequently ambiguous without further explanation.

a) A man had flu (influenza) twice. The first time it killed him, but the second time he got well quickly.

b) Rajesh now has to write with his left both his arms in an accident.

c) A man said, ñI know a road from my house to the city and downhill all the way back home.

d) An old gentleman complained that he cold no longer walk around the park as he used to; he said, he could now go only halfway around and back again.

Score: 3 plus

Similarities and Differences:

The child was asked to tell in what way a series of paired words were alike and how were they different? For example, in what way are an orange and a ball alike and different? Similar method was used for used for

a) Ocean and river

b) Aeroplane and kite

c) Rupees and Paisa

Score: 3 plus

Naming the days of week:

Children were asked, ñName the days of the week for meò. If students fail to comprehend the task and being to name the various holidays or the like, It was said, ñNo, that is not what I mean. I want you to name the days of the weekò. If the students name them all in correct order, give three checks of asking, what day comes before

a) Thursday

b) Tuesday

c) Friday

Score: 2 out of 3

B. Performance Scale:

It consists of following sub-tests:

Number Concepts:

Some blocks were put on the table and the child was asked, ñGive me three blocks or put them on the tableò. Similar formula was used for 10,6,9,7.

Score: 4 plus

Copying a Diamond:

The child was given a pencil and was asked, ñMake a diamond.ò

Score: 1 plus

Mazes:

A maze was given to child in which he/she was expected trace the correct route from a starting point to home. Full credit was given for different mazes if they were solved with in the time limit without making any errors. Partial credit was given if the child solved the maze within the time limit but made errors along the way. No credit was given if the child exceeded the maximum number of errors allowed or if he/she failed to reach the goal within the time limit.

Score: 2 plus

Categories of Children's Intelligence Quotient (IQ)

Childrenôs scores obtained on verbal and performance scales were computed to get a score termed as IQ. Children were divided into three groups on the basis of their IQ. These were low, average and high IQ.

3.5 Data Analyses Techniques and Reporting

Quantitative data obtained from the measures were analysed using the Statistical Package for the Social Sciences (SPSS for Windows). Prior to analyses, quantitative data were screened for accuracy of data entry and missing values.

3.5.1 Frequency Distribution and Percentages

Frequency distribution and percentages were used for personal profile of respondents, classification of children on the basis of relevancy and flexibility scores, and for classification of children into behavioural categories.

3.5.2 Analysis of Varience

Effects of independent variables were examined using one-way analysis of variance (ANOVA). Post-hoc comparisons between more than two groups were made with Duncan multiple-range tests.

3.5.3 Correlation Analyses

Pearson correlation coefficients were computed to examine relationship between behavioural variables and social problem-solving scores and strategies.

$$r = \frac{\text{Cov } X\ Y}{\sqrt{\text{Var } (X)\ \text{Var } (Y)}}$$

Where,

r : Coefficient of correlation between x and y variables

Cov XY : Covariance between X and Y variables

V (X) : Variance of X variable

V (Y) : Variance of Y variable

The r calculated values were compared with r tabulated values at 5 % level of significance with n-1 degrees of freedom.

3.5.4 Chi-Square

Chi-square tests were computed first to examine the association between IQ of children and categories of relevancy and flexibility scores; and between gender of the child and categories of relevancy and flexibility scores.

$$\chi^2 = \sum \frac{(O-E)^2}{E}$$

Where,

O = Observed frequencies

E = Expected frequencies

An alpha level of. 0.5 was used as the level for significance in all the statistical tests. The next chapter describes the results of the study in light with the planned objectives.

CHAPTER-IV

RESULTS

In this chapter, the results are organized as follows: First identification of low, average and high IQ children is described followed by personal and social profile of children. Then, results of social problem-solving skills of low, average and high IQ children are presented and compared. Finally, factors related to social problem-solving skills of children are described.

4.1 Identification of low, average and high IQ children

4.2 Personal and social profile of selected children

4.3 Social problem-solving skills of low, average and high IQ children

4.4 Comparison of social problem-solving skills of low, average and high IQ children

4.5 Factors associated with social problem-solving skills of children

4.1 Identification of Low, Average and High IQ Children

The first objective of the present study was to identify low, average and high IQ children. In the primary government school selected for this study, there were 94 boys and 85 girls in the age group of 6-8 years. All these children were assessed for their IQ with the help of Stanford-Binet Intelligence Scale (1973). Children were divided into low, average and high IQ categories as described in Stanford-Binet Intelligence Scale. Frequency distribution of children in different categories of IQ is presented in Table 4.1 and Fig. 4.1.

Table 4.1: Classification of 6 to 8 year old children on the basis of IQ (n=90)

Gender of child	Categories of IQ		
	Low (Below 90)	Average (90-109)	High (110-Above)
Boys (n=94)	19 (20.2%)	59 (62.8%)	16 (17.0%)
Girls (n=85)	16 (18.8%)	54 (63.5%)	15 (17.7%)
Total (n=179)	35 (19.6%)	113 (63.1%)	31 (17.3%)

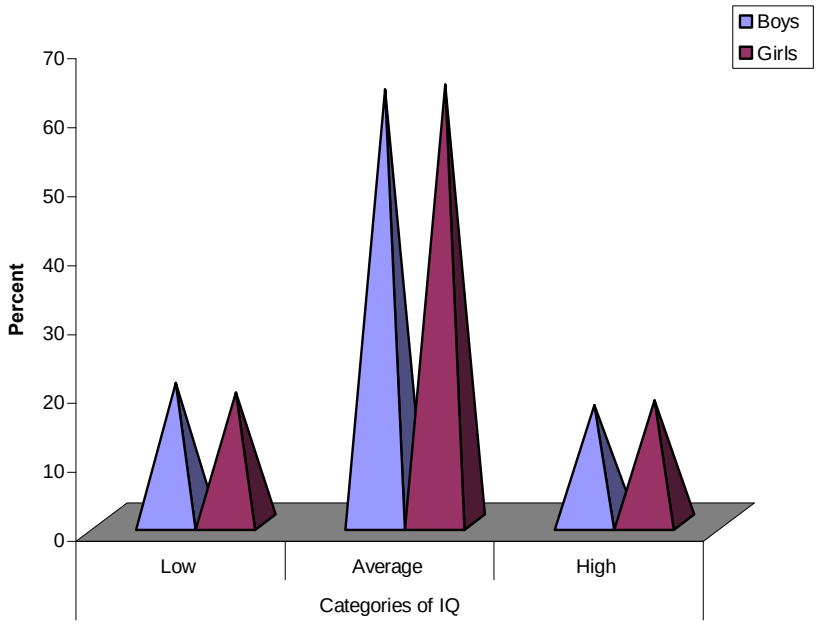

Fig. 4.1 : **Classification of 6 to 8 year old children on the basis of IQ**

As depicted in Table 4.1, majority of boys (62.8%) and girls (63.5%) were in average category of IQ, 20.2 per cent per cent boys and 18.8 per cent girls fell in low category of IQ; and 17 per cent boys and 17.7 per cent girls belonged to high category of IQ. Since there were 15 girls in high category of IQ, hence all these girls were selected and from this category and 15 boys were selected at random. From the other two categories of IQ (average and low), 15 boys and 15 girls each were randomly selected. Total sample constituted of 90 children, including 45 boys and 45 girls.

4.2 Personal and Social Profile of Children

Personal and social profile of selected children is presented in Table 4.2 and Fig. 4.2. Thirty seven children were in the age group of 6-7 years and 53 children were in the age group of above 7 years. Half of the children were boys and the other half girls. Majority of children were from nuclear families (78.9%). Also majority of children belonged to small size families (64.4%), followed by medium (20.0%) and large size families (15.6%).

Fathersô of 35.6 children were educated from primary to middle level, 34.4 per cent from high school to senior secondary level. About one fourth of the fathers (24.4%) were illiterate. Fathers of only five children (5.6%) were educated up to graduation. Mothers of majority of children (57.8%) were illiterate, 28.9 percent were educated from primary to middle level, 11.1 percent were from high school to senior secondary level. Mothers of only two children were educated up to graduation level.

Table 4.2 : Personal and social profile of selected children

Variables	Frequency	Percentage
Age of child		
Less than 7 years	37	41.1
7 years and above	53	58.9
Gender of child		
Boys	45	50.0
Girls	45	50.0
Family Type		
Nuclear	71	78.9
Joint	19	21.1
Family Size		
Small (up to 4 members)	58	64.4
Medium (5 to 7 members)	18	20.0
Large (more than 7 members)	14	15.6
Father Education		
Illiterate	22	24.4
Upto Middle	32	35.6
High School or Senior Secondary	31	34.4
Graduate and above	5	05.6
Mother Education		
Illiterate	52	57.8
Upto Middle	26	28.9
High School or Senior Secondary	10	11.1
Graduate and above	2	02.2
Father Occupation		
Labour	81	90.0
Farming	6	06.7
Service	3	03.3
Mother Occupation		
Labour	10	11.1
Home Manager	80	88.9
Family Income		
Up to Rs. 3000	47	52.2
Rs. 3001 to Rs. 6000	28	31.1
Above Rs. 6000	15	16.7

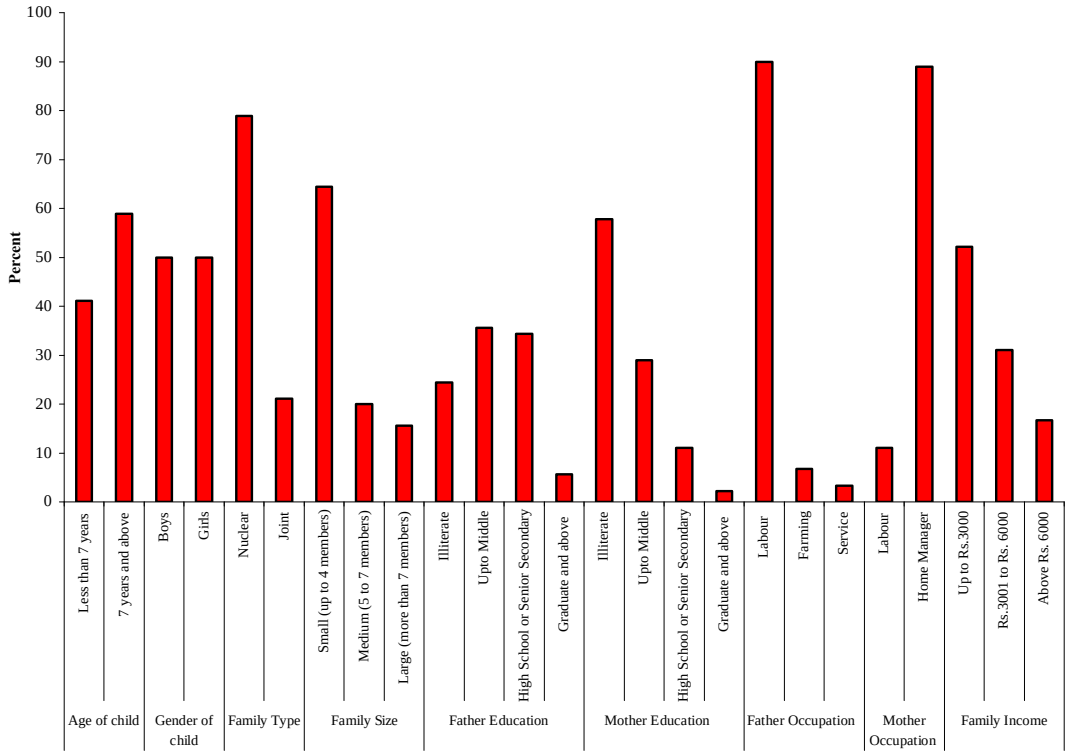

Fig. 4.2 : Personal and social profile of children

Fathers of majority of children (90.0%) were daily paid labours, 6.7 percent were involved in farming and 3.3 percent were in service. Mothers of majority of children (88.9%) were house wives and 11.1 percent were daily paid labours. Income of majority of children (52.2%) was Rs. 3000/- or less per month, monthly income of 31.1 per cent families was between Rs. 3001/- to Rs. 6000/- and 16.7 per cent families earned more than Rs. 6000/- per month (Table 4.2 and Fig. 2).

4.3 Social Problem-Solving Skills of Low, Average and High IQ Children

Responses of the children were examined quantitatively and qualitatively. Quantitative scores were calculated for total number of categories, number of different categories, relevancy and flexibility. Quality of responses included strategies suggested by children to solve problems in hypothetical situations with their peers. Social problem-solving strategies suggested by children were grouped in two categories ï ñforcefulò and ñnon-forcefulò. ñForcefulò strategies included ñagonisticò category of strategies. ñNon-forcefulò strategies included ñprosocialò, ñadult-interventionò, ñtrade-bribeò and ñmanipulativeò categories of strategies.

As shown in Table 4.3 and Fig. 4.3 mean number of categories suggested by low, average and high IQ children was 11.33, 15.23, 18.30 respectively; and mean number of different strategies was 3.60, 4.67 and 6.23 respectively. Relevancy and flexibility scores of low IQ children were 7.63 and 2.37 respectively; for average IQ children were 9.17 and 4.37 respectively; and for high IQ children were 10.87 and 6.70 respectively.

Table 4.3: Quantitative scores and strategies used by low, average and high IQ children (n = 90)

	Low (n = 30)	**Average (n = 30)**	**High (n = 30)**	**Total (n = 90)**
Quantitative scores	**Mean quantitative scores**			
Number of Categories	11.33	15.23	18.30	14.96
Number of Different Categories	3.60	4.67	6.23	4.83
Relevancy Score	7.63	9.17	10.87	9.22
Flexibility Score	2.37	4.37	6.70	4.48
Strategies	**Mean use of strategies**			
Forceful	5.37	6.70	7.33	6.47
Non-forceful	5.97	8.53	10.97	8.49
Strategies	**Percentage use of strategies**			
Forceful	48.96	45.84	40.86	45.22
Non-forceful	51.04	54.16	59.14	54.78

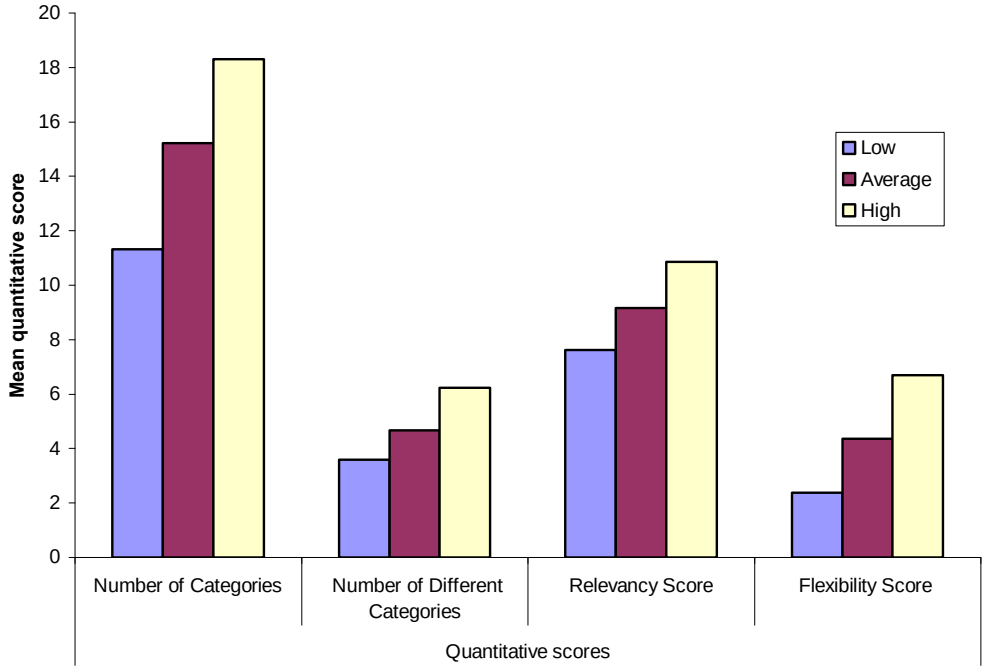

Fig. 4.3 : Quantitative mean scores used by low, average and high IQ children

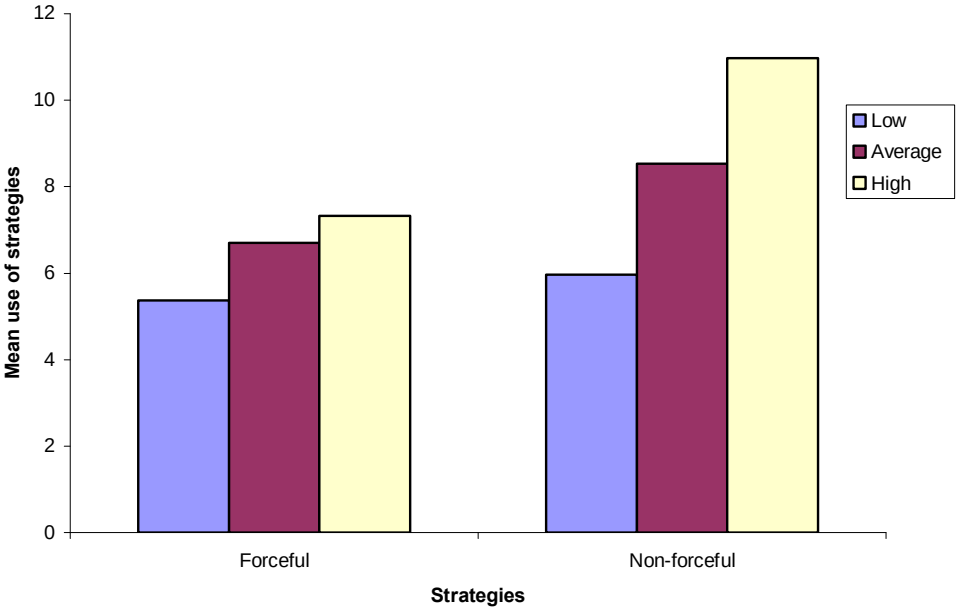

Fig. 4.4 : Strategies mean used by low, average and high IQ children

As depicted in Table 4.3 and Fig. 4.4, mean use of ñnon-forcefulò strategies suggested by low, average and high IQ children and for total sample was 5.37, 6.70, 7.33 and 6.47 respectively. Mean use of ñforcefulò strategies suggested by low, average and high IQ children and for total sample was 5.97, 8.53, 10.97 and 8.49 respectively. These results indicate that in all the three groups children suggested greater number of ñnon-forcefulò strategies as compared to ñforcefulò strategies.

Percentage use of ñnon-forcefulò and ñforcefulò strategies was also calculated and presented in Table 4.3. In all the three IQ categories most frequently used strategies were ñnon-forcefulò in nature (51.04%, 54.16%, 59.14% respectively). The second most frequently used strategies were ñforcefulò by all children (45.22%) as well as children in three IQ categories (48.96%, 45.84% and 40.86% respectively).

4.4 Comparison of Social Problem-Solving Skills of Low, Average and High IQ Children

In this section, first comparative results of social problem-solving scores and strategies of low, average and high IQ children are presented. Then, distribution of children in three categories on the basis of relevancy and flexibility scores is described.

4.4.1 Comparison of social problem-solving scores and strategies of low, average and high IQ children

Social problem-solving scores of low, average and high IQ children were compared using one-way ANOVA. IQ of children was taken as independent variable and social problem-solving scores as dependent variables. Mean scores of low, average and high IQ children are presented in Table 4.4. Main effect of IQ was significant for number of categories, $F(2,88) = 24.36$; number of different categories, $F(2,88) = 13.99$, relevancy score, $F(2,88) = 11.92$ and flexibility scores, $F(2,88)=10.04$, *ps*<0.05.

Table 4.4 : Social problem solving scores and strategies of low, average and high IQ children (n=90)

	Low (Mean ± SD)	Average (Mean ± SD)	High (Mean ± SD)	F-values
Social Problem Solving Scores				
Number of Categories	11.33^{a} ±3.95	15.23^{b} ± 4.31	18.30^{c} ± 3.29	24.36*
Number of different Categories	3.60^{a} ± 1.85^{a}	4.67^{b} ± 1.95	6.23^{c} ± 2.01	13.99*
Relevancy Score	7.63^{a} ± 2.50	9.17^{b} ± 3.16	10.87^{c} ± 1.87	11.92*
Flexibility Score	2.37^{a} ± 2.77	4.37^{b} ± 4.08	6.70^{c} ± 4.22	10.04*
Social Problem Solving Strategies				
Forceful	5.37^{a} ± 2.13	6.70^{b} ± 1.97	7.33^{b} ±1.94	7.47*
Non-forceful	5.97^{a} ± 3.19	8.53^{b} ± 3.78	10.97^{c} ± 3.36	15.76*

Note: Significant at * $p < 0.05$. Means with different superscripts in the same row differ significantly.

Duncun multiple range test was used to see the differences in social problem-solving of three IQ groups. Results showed that high IQ children suggested significantly greater number of categories (M=18.30) as compared to average IQ (M=15.23) and low IQ (M=11.33) children. As presented in Tale 4.4 mean score of high IQ children for number of different categories (M=6.23) was greater than average (M=4.67) and low IQ children (M=3.60). Children with average IQ suggested significantly greater number and different categories as compared to children with low IQ. It was also found that high IQ children suggested greater number of relevant strategies (M=10.87) as compared to average (M=9.17) and low IQ children (M=7.63). Average IQ children suggested significantly greater number of relevant strategies than those of low IQ children. In the present study, flexibility scores indicated alternative thinking of children. Flexibility score of high IQ children (M=6.70) was significantly greater than average IQ children (M=4.37) and low IQ children (M=2.37). Flexibility score of low IQ children was significantly lower than average IQ children.

Social problem-solving strategies of low, average and high IQ children were compared using one-way ANOVA. IQ of children was taken as independent variable and social problem- solving strategies as dependent variables. Mean and SDs of children from three IQ groups are presented in Table 4.4. Main effect of IQ was significant for ñforcefulò strategies, F(2,88)=7.47 and ñnon-forcefulò strategies, F(2,88)=15.76, *ps*<0.05.

Duncum multiple range test was used to see the differences in social problem-solving strategies of children from three IQ groups. Result showed that, as presented in Table 4.4, high IQ children suggested greater number of ñforcefulò strategies (M=7.33) as compared to average IQ children (M=6.70) and low IQ children (M=5.37). Low IQ children suggested significantly less number of ñforcefulò strategies as compared to average IQ children.

As presented in Table 4.4, mean scores of high IQ group children for ñnon-forcefulò strategies (M=10.97) were also significantly greater than the average (M= 8.53) and low IQ children (M= 5.97). Children with low IQ suggested significantly less number of ñforcefulò and ñnon-forcefulò strategies as compared to children with average IQ.

4.4.2 Classification of low, average and high IQ children on the basis of relevancy and flexibility scores

Children were classified in above average, average and below average categories on the basis of obtainable relevancy and with-in-story flexibility scores, because these were the two scores where children could score a minimum of 0 and a maximum of 15 for all the total five stories.

For relevancy scores, as depicted in Table 4.5, majority of children from low IQ (70.0%) and average IQ (53.33%) were in the average category. Table clearly depicts that more than half of children from high IQ (53.33%) belonged to above average category and 43.33 percent children to average category. Only one child from the high IQ category was

below average as compared to average IQ children (16.67%) and low IQ children (20.0%). Chi-square was computed to examine association between IQ of children and their performance on the basis of relevancy scores and significant association was found, χ^2 =14.53, p<0.05.The present findings clearly shows that there is association between IQ of children and their performance on Social Problem-Solving Tasks.

Table 4.5 : Classification of low, average and high IQ children on the basis of relevancy and flexibility scores (n=90)

	Low (n=30) f (%)	Average (n=30) f (%)	High (n=30) f (%)
Relevancy Scores			
Below average	6 (20.00)	5 (16.67)	1 (3.33)
Average	21 (70.00)	16 (53.33)	13 (43.33)
Above average	3 (10.00)	9 (30.00)	16 (53.33)
χ^2 = 14.53, p<0.05			
Flexibility Scores			
Below average	26 (86.67)	18 (60.00)	16 (53.33)
Average	4 (13.33)	11 (36.67)	8 (26.67)
Above average	-	1 (3.33)	6 (20.00)
χ^2 = 14.88, p<0.05			

Note: Figures in parentheses indicate percentages.

For flexibility scores, as presented in Table 4.5, majority of children from low IQ (86.87%) and average IQ (60.00%) fell in below average category. Approximately fifty percent from high IQ category (53.33) also fell in below average category. As compared to low and average IQ children, 20 percent children from high IQ category performed better in alternate thinking, that is, their responses were more flexible. Chi-square was computed to examine association between IQ of children and their performance on the basis of flexibility scores and significant association was found, χ^2 =14.86, p<0.05. Thus, indicating association between IQ of children and alternate thinking in Social Problem Solving Tasks.

4.5 Factors Associated with Social Problem-Solving Skills of Children

In the present study the factors, other than IQ, examined in relation to social problem-solving skills were ï age and gender of child, type of family, size of family, family income, education and occupation of parents and behavioural variables.

4.5.1 Children's age, gender of child and social problem-solving skills

4.5.1.1 Age of the child and social problem-solving skills

Children were divided into two age-groups, younger (6-7 years) and older (above 7 years). Social problem-solving scores and strategies of these two groups were compared using

one-way ANOVA. Age of the child was taken as independent variable and social problem solving scores as dependent variable. Mean scores and SDs of two age groups are presented in Table 4.6. Main effect of age of the child was found significant for number of categories, F(1,89)=15.08, number of different categories, F(1,89)=10.85, relevancy score, F(1,89)=9.19 and flexibility score, F(1,89)=8.71, *ps*<0.05. These results indicate that there were significant differences in social problem-solving scores of younger and older age groups.

Table 4.6 : Means and SDs of social problem-solving scores and strategies of children on the basis of age of children (n=90)

	6 to 7 Years (Mean ± SD)	**Above 7 Years (Mean ± SD)**	**F-values**
Social Problem Solving Scores			
Number of Categories	13.43± 4.41	17.14 ± 4.50	15.08*
Number of Different Categories	4.23 ± 2.06	5.70 ± 2.13	10.85*
Relevancy Score	8.49 ± 2.89	10.27 ± 2.51	9.19*
Flexibility Score	3.45 ± 3.39	5.95 ± 4.08	8.71*
Social Problem Solving Strategies			
Forceful	7.05 ± 2.28	6.06 ± 2.16	4.88*
Non-forceful	7.38 ± 3.33	10.08 ± 3.98	11.20*

Note: *Significant at *p*<.05.

Results showed that children above 7 years of age suggested significantly greater number of categories (M=17.14) as compared to children in the age group of 6 to 7 years (M=13.43). Children above 7 years of age suggested significantly greater number of different categories (M=5.70) as compared to children in the age group of 6 to 7 years (M=4.23). It was also found that older children (above 7 years) suggested greater number of relevant (M=10.27) and flexible strategies (M=5.95) as compared to younger children (M=8.49 and 3.45 respectively).

Social problem-solving strategies of younger and older children were also compared using one-way ANOVA. Age of children was taken as independent variable and social problem-solving strategies as dependent variables. Mean and SDs of younger and older children are presented in Table 4.6. Main effect of age of child was significant for ñforcefulò F(2,89)=4.88 and ñnon-forcefulò strategies, F(2,89)=11.20, *ps*<0.05.

As presented in Table 4.6, younger children suggested greater number of ñforcefulò strategies (M=7.05) as compared to older children (M=6.06). On the other hand, older

children suggested greater number of ñnon-forcefulò strategies (M=10.08) as compared to younger children (M=7.38).

4.5.1.2 Gender of child and social problem-solving skills

One-way ANOVA was used to compare social problem-solving scores and strategies of boys and girls. Gender of child was taken as independent variable and social-problem solving scores and strategies as dependent variables. Separate analyses were run for quantitative scores and strategies. Mean scores of boys and girls are presented in Table 4.7.

Main effect of gender of child was not significant for number of categories, F(1,89)=0.22, number of different categories, F(1,89)=0.18, relevancy score, F(1,89)=0.01 and flexibility score, F(1,89)=0.01; *ps*<0.05. This indicates that there were no significant differences in social problem solving scores of boys and girls.

Table 4.7 : Social problem-solving scores and strategies of boys and girls (n=90)

	Boys (n=45) (Mean ± SD)	**Girls (n=45) (Mean ± SD)**	**F-values**
Social Problem Solving Scores			
Number of Categories	14.76 ± 4.65	15.16 ± 4.961	0.16 (NS)
Number of Different Categories	4.93 ± 2.25	4.73 ± 2.18	0.18 (NS)
Relevancy Score	9.20± 2.99	9.24 ± 2.76	0.01 (NS)
Flexibility Score	4.51± 4.04	4.44 ± 4.22	0.01 (NS)
Social Problem Solving Strategies			
Forceful	6.93 ± 2.09	6.00 ± 2.13	4.39*
Non-forceful	7.82 ± 3.68	9.16 ± 4.19	4.57*

Note: Significant at * $p < 0.05$; NS = Non significant

Main effect of gender of child was found significant for ñforcefulò strategies, F(1,89)=4.39, *ps*<0.05. As presented in Table 4.7, boys suggested significantly greater number of ñforcefulò strategies (M=6.93) as compared to girls (M=6.00). Effect of gender of child was also significant for ñnon-forcefulò strategies F(1,89)=4.57, $p<.05$. Girls suggested grater number of ñnon-forcefulò strategies (M=9.16) as compared to boys (M=7.82). This indicates that girls suggested ñnon-forcefulò strategies more often than boys while boys suggested ñforcefulò strategies more often than girls.

Classification of boys and girls in different categories on the basis of relevancy and flexibility scores

Table 4.8 shows that 60 percent of girls and 51.11 percent of boys were in average category on the basis of relevancy scores. In above average category, there were 35.60 percent boys and 26.70 percent girls. Equal number of boys (13.33%) and girls (13.33%) were in below average category.

It was also found that 64.44 percent boys and 68.89 percent girls belonged to below average category on the basis of flexibility scores. In average category, there were 28.89 percent boys and 22.22 percent girls. Very few children, 6.67 percent boys and 8.89 percent girls fell in above average category.

Table 4.8: Classification of children in different categories on the basis of relevancy and flexibility scores (n=90)

	Boys (n=45) f (%)	**Girls (n=45) f (%)**
Relevancy Scores		
Below average	6 (13.33)	6 (13.33)
Average	23 (51.10)	27 (60.00)
Above average	16 (35.60)	12 (26.70)
$\chi^2 = 0.89$, NS		
Flexibility Scores		
Below average	29 (64.44)	31 (68.89)
Average	13 (28.89)	10 (22.22)
Above average	3 (6.67)	4 (8.89)
$\chi^2 = 0.60$, NS		

Note: Figures in parentheses indicate percentages.

There was no significant association between gender of child and their performance on relevancy and flexibility score, $\chi^2 = 0.89$ and $\chi^2 = 0.60$ respectively, *ps*>0.05.

4.5.1.3 Family type and social problem-solving skills of children

Social problem-solving scores and strategies were compared on the basis of family type using one-way ANOVA.

Family type was taken as independent variable and social problem-solving scores as dependent variable. Mean scores of children on the basis of family type are presented in Table 4.9. Main effect of type of families was not significant for number of categories, F(1,89)=3.19, number of different categories, F(1,89)=0.46, relevancy score, F(1,89)=0.22 and flexibility score, F(1,89)=0.01, *ps*>0.05. It can be interpreted that children from nuclear and joint families did not differ in social problem-solving skills.

Results further revealed that main effect of type of family was not significant for ñforcefulò, F(1,89)=1.13 and ñnon-forcefulò strategies, F(1,89)=2.40, *ps*>0.05. It means that social problem-solving strategies of children from nuclear and joint families did not differ significantly. Mean scores of children from nuclear and joint families are presented in Table 4.9.

Table 4.9: Social problem solving scores and strategies of children on the basis of family type (n=90)

	(Nuclear Mean ± SD)	Joint (Mean ± SD)	F-values
Social Problem Solving Scores			
Number of Categories	15.42 ± 4.58	13.21 ± 5.08	3.19(NS)
Number of Different Categories	4.92 ± 2.16	4.53 ± 2.39	0.46(NS)
Relevancy Score	9.30 ± 2.74	8.95 ± 3.34	0.22(NS)
Flexibility Score	4.51 ± 3.98	4.37 ± 4.69	0.01(NS)
Social Problem Solving Strategies			
Forceful	6.59 ± 2.08	6.00 ± 2.40	1.13(NS)
Non-forceful	8.83 ± 3.88	7.21 ± 4.04	2.40(NS)

Note: NS = Non significant

4.5.1.3 Family size and social problem-solving skills of children

Children were divided into three groups on the basis of family size, i.e., small, medium and large families. Social problem-solving scores of children were compared on the basis of family size using one-way analysis of variance. Main effect of size of family was significant for flexibility score, $F(2,87)= 4.56$, $p<.05$. Duncun multiple test revealed that children from large (M=5.57) and medium (M=6.56) sized families obtained greater scores for alternative thinking, that is, their mean score for flexibility was significantly greater than children who belonged to small families. Means and SDs of children from small, medium and large families are presented in Table 4.10.

Table 4.10: Social problem solving scores and strategies of children on the basis of family size (n=90)

	Small (n=) (Mean ± SD)	Medium (n=) (Mean± SD)	Large (n=) (Mean ± SD)	F-values
Social Problem Solving Scores				
Number of Categories	14.64 ± 2.96	16.11 ± 5.91	14.79 ± 2.78	0.66
Number of Different Categories	4.50 ± 1.58	5.72 ± 2.32	5.07 ± 2.50	2.27
Relevancy Score	8.79 ± 2.53	10.17 ± 3.18	9.79 ± 2.42	1.94
Flexibility Score	3.57^{a} ± 2.17	6.56^{b} ± 3.26	5.57^{b} ± 3.89	4.56*
Social Problem Solving Strategies				
Forceful	6.45 ± 2.08	6.89 ±2.32	6.00 ± 2.81	0.67
Non-forceful	8.19 ± 2.24	9.22 ± 4.12	8.79 ± 2.49	0.50

Note: Significant at * $p< 0.05$. Means with different superscripts in the same row differ significantly.

Main effect of size of family was not significant number of categories, F(2,87)=0.66; number of different categories, F(2,87)=2.27 and relevancy score, F(2.87)=1.94, *p*s<0.05.

Results further revealed that impact of family size was not significant for ñforcefulò and ñnon-forcefulò strategies, Fs(2,87)=0.67 and 0.50 respectively, *p*s>0.05. It can be interpreted that there was no impact of size of family on quality of strategies used by children.

4.5.1.4 Family income and social problem-solving skills of children

Social problem-solving scores and strategies of children were compared on the basis of family income. Income category was taken as independent variable and social problem-solving scores and strategies as dependent variables. Separate analyses were run for quantitative scores and strategies. Means quantitative scores and strategies of children from three income groups are presented in Table 4.11. Children were divided in three groups on the basis of family income. Families with monthly income equal to and less than Rs. 3000/- belonged to Group I. Families with monthly income between Rs. 3001/- to Rs. 6000/- to Group II; and above Rs. Rs. 6000/- to Group III.

Main effect of family income was significant for number of categories, F(2,87)=15.59; number of different categories, F(2,87)=19.12; relevancy score, F(2,87)=14.56 and flexibility score, F(2,87)=31.56, *ps*<0.05. Duncun multiple range test was used to see the differences in social problem-solving scores of children from three income groups.

As presented in Table 4.11, mean score of children from income Group-III (M=20.33) was significantly greater than children from income Group-II (M=14.57) and income Group-I (M=13.47) for number of categories. Children from income Group-III suggested greater number of different categories (M=7.53) as compared to children from income Group-II (M=4.43) and children from income Group-I (M=4.21). It was also found that children from income Group-III (M=12.40) suggested greater number of relevant strategies as compared to children from income Group-II (M=8.75) and children from income Group-I (M=8.49).

In the present study, flexibility score indicated alternative thinking of children. Flexibility score of children from income Group-III (M=10.33) was significantly greater than children from income Group-II (M=3.89) and income Group-I (M=2.96). There were no significant differences in the mean scores of children from income Group-I and income Group-II for number of categories, number of different categories and relevancy and flexibility scores.

Social problem-solving strategies of children were also compared on the basis of family income. Main effect of family income was significant for ñforcefulò, F(2,87)=3.94 and ñnon-forcefulò strategies, F(2,87)=16.64, *ps*<0.05.

Table 4.11: Social problem-solving scores and strategies of children on the basis of family income (n=90)

	Group-I (n=) (Mean ± SD)	Group-II (n=) (Mean± SD)	Group-III (n=) (Mean ± SD)	F-values
Social Problem Solving Scores				
Number of Categories	13.47^{a} ± 3.96	14.57^{a} ± 4.90	20.33^{b} ± 2.71	15.59*
Number of Different Categories	4.21^{a} ± 1.59	4.43^{a} ± 2.30	7.53^{b} ± 1.73	19.12*
Relevancy Score	8.49^{a} ± 2.14	8.75^{a} ± 3.19	12.40^{b} ± 2.10	14.56*
Flexibility Score	2.96^{a} ± 2.77	3.89^{a} ± 3.36	10.33^{b} ± 3.90	31.56*
Social Problem Solving Strategies				
Forceful	6.53^{a} ± 2.14	5.79^{a} ±2.17	7.53^{b} ± 1.81	3.94*
Non-forceful	6.94^{a} ± 3.24	8.79^{a} ± 4.03	12.80^{b} ± 2.43	16.64*

Note: Significant at * $p < 0.05$. Means with different superscripts in the same row differ significantly. Income of Group-I= ≤Rs. 3000/-, Group-II= Rs. 3001/- to Rs. 6000/-, Group-III= Above Rs. 6000/- per month.

As presented in Table 4.11, Duncun multiple range test revealed that for ñforceful strategiesò, mean score of children from income Group-III (M=7.53) was significantly greater than children from income Group-II (M=5.79) and Group-I (M=6.53). Children from income Group-III suggested greater number of ñnon-forcefulò strategies (M=12.80) as compared to children from income Group-II (M=8.79) and income Group-I (M=6.94).

4.5.1.5 Education of fathers and social problem-solving skills of children

Impact of fathersô education on social problem-solving scores and strategies was seen using one-way ANOVA. Separate analyses were run for quantitative scores and strategies. Fathersô education education wase taken as independent variable and social problem-solving scores and strategies as dependent variables. Means and SDs of children from different groups of fathersô education are presented in Table 4.12.

Main effect of fathersô education was significant for number of categories, F(2,87)=6.86; number of different categories, F(2,87)=6.75; relevancy score, F(2,87)=5.02 and flexibility score, F(2,87)=7.64, *ps*<0.05. Duncun multiple range test was used to see the differences in social problem-solving scores of children from three groups on the basis of fathersô education.

As presented in Table 4.12, for number of categories, mean score of children whose fathers were educated up to graduate level (M=17.40) was significantly greater than children whose fathers were educated from high to secondary level (M=16.90); from primary to middle level (M=15.00) and those whose fathers were illiterate (M=11.59). For number of different categories also, mean score of children whose fathers were educated up to graduate

level (M=6.20) was significantly greater than children whose fathers were educated from high to secondary level (M=5.61); from primary to middle level (M=4.94) and those who had illiterate fathers (M=3.27).

Table 4.12: Social problem solving scores and strategies of children on the basis of fathers' education (n=90)

	Illiterate (Mean± SD)	Primary to Middle (Mean± SD)	High to S. Secondary (Mean± SD)	Graduate and above (Mean± SD)	F-values
Social Problem Solving Scores					
Number of Categories	$11.59^{a} \pm 4.10$	$15.00^{b} \pm 4.09$	$16.90^{b} \pm 4.46$	$17.40^{b} \pm 5.94$	6.86*
Number of Different Categories	$3.27^{a} \pm 1.32$	$4.94^{b} \pm 1.72^{b}$	5.61 ± 2.53^{b}	$6.20^{b} \pm 2.77$	6.75*
Relevancy Score	$7.41^{a} \pm 2.36$	$9.34^{ab} \pm 2.56$	$10.23^{b} \pm 3.06$	$10.20^{b} \pm 2.17$	5.02*
Flexibility Score	$1.59^{a} \pm 2.02$	$4.31^{b} \pm 3.22$	$6.45^{b} \pm 4.78$	$6.00^{b} \pm 4.90$	7.64*
Social Problem Solving Strategies					
Forceful Strategies	$6.73^{a} \pm 2.5^{a}$	$6.22^{a} \pm 1.98$	$6.45^{a} \pm 2.01$	$7.00^{a} \pm 2.83$	0.34(NS)
Non-forceful Strategies	$4.86^{a} \pm 2.33^{a}$	$8.78^{b} \pm 3.07$	$10.45^{b} \pm 4.05$	$10.40^{b} \pm 4.16$	12.42*

Note: Significant at * $p < 0.05$; NS = Non significant. Means with different superscripts in the same row differ significantly.

Relevancy scores of children whose fathers were educated up to graduation level (M=10.20) and from high to senior secondary level (M=10.23) were significantly greater than other two groups, whose fathers were educated from primary to middle or were illiterate (Ms= 9.34 and7.41 respectively).

Similarly for flexibility, mean scores of children whose fathers were educated up to graduation level (M=6.00) and from high to senior secondary level (M=6.45) were significantly greater than other two groups whose fathers were educated from primary to middle (M=4.31) or were illiterate (M= 1.59). Mean score of all these three groups were greater than children whose fathers were illiterate (M=1.59).

Main effect of education of fathers was also significant for ñnon-forcefulò strategies, $F(2,87)=12.42$, *ps*<0.05. As presented in Table 4.12, children of illiterate fathers suggested significantly less number of ñnon-forcefulò strategies (M=4.86) as compared to children whose fathers were educated from primary to middle level (M=8.78) or from high to senior secondary level (M=10.45) or up to graduation level (M=10.40).

4.5.1.6 Education of mothers and social problem-solving skills of children

One-way ANOVAs were computed to examine impact of maternal education on social problem-solving scores and strategies of children. Separate analyses were run for quantitative and qualitative features of problem-solving. Impact of maternal education was not found significant for quantitative scores and strategies suggested by children. Means and SDs are presented in Table 4.13.

Table 4.13: Social problem solving scores and strategies of children on the basis of mothers' education (n=90)

	Illiterate (Mean± SD)	Primary to Middle (Mean± SD)	High and S. Secondary (Mean± SD)	Graduate and above (Mean± SD)	F-values
Social Problem Solving Scores					
Number of Categories	14.02 ± 4.88	16.27 ± 3.98	16.70 ± 5.38	13.50 ± 2.12	1.88(NS)
Number of Different Categories	4.31 ± 2.17	5.31 ± 2.05	6.30 ± 2.26	5.00 ± 0.00	3.07(NS)
Relevancy Score	8.67 ± 3.03	10.00 ± 2.71	9.90 ± 2.13	10.00 ± 0.00	1.54(NS)
Flexibility Score	3.62 ± 3.86	5.46 ± 3.93	6.50 ± 5.32	4.00 ± 0.00	2.16(NS)
Social Problem Solving Strategies					
Forceful	6.38 ± 2.17	6.85 ± 1.99	6.40 ± 2.50	4.00 ± 0.00	1.18(NS)
Non-Forceful	7.63 ± 4.11	9.42 ± 3.41	10.30 ± 3.92	9.50 ± 2.12	2.08(NS)

Note: NS = Non significant.

45.1.7 Occupation of fathers and social problem-solving skills of children

Social problem-solving scores and strategies of children were also compared on the basis of fathersô occupation. Occupation of fathers was taken as independent variable and social problem-solving scores and strategies as dependent variables. Means of children from three occupational groups of fathers are presented in Table 4.14. Main effect of fathersô occupation was significant for number of categories, F (2, 87) =9.73; number of different categories, F(2.87)=8.11 and flexibility score, F(2.87)=7.67, *p*s<0.05.

As presented in Table 4.14, Duncun multiple range test revealed that mean score of children whose fathers were involved in service (M=23.67) was significantly greater than children whose fathers were involved in farming (M=19.17) and labour work (M=14.32). Children whose fathers were involved in farming suggested significantly greater number of categories as compared to children whose fathers were working as labours. For number of different categories, children of service class fathers suggested greater number (M=9.00) than other two groups of children (Ms=6.17 and 4.58 respectively).

Similarly children of service class fathers suggested greater number of relevant strategies (M=11.67) as compared to children whose fathers were involved in farming (M=10.67) and labour work (M=9.30). Children of service class fathers also suggested greater number of flexible or alternative strategies (M=12.33) as compared to children whose fathers were involved in farming (M=6.50) and labour work (M=4.04).

Table 4.14: Social problem solving scores and strategies of children on the basis of fathers' occupation (n=90)

	Labour (Mean ± SD)	Farming (Mean± SD)	Service (Mean± SD)	F-values
Social Problem Solving Scores				
Number of Categories	14.32^{a} ± 4.42	19.17^{b} ± 3.37	23.67^{c} ± 2.62	9.73*
Number of different Categories	4.58^{a} ± 2.04	6.17^{ab} ± 2.48	9.00^{b} ± 1.00	8.11*
Relevancy Score	9.30^{a} ± 2.84	10.67^{a} ± 3.14	11.67^{b} ± 0.58	2.10(NS)
Flexibility Score	4.04^{a} ± 3.75	6.50^{a} ± 5.32	12.33^{b} ± 2.52	7.67*
Social Problem Solving Strategies				
Forceful	6.27^{a} ± 2.11	8.00^{b} ± 2.10	8.67^{b} ± 1.15	3.62*
Non-forceful	8.06^{a} ± 3.70	11.17^{b} ± 4.54	15.00^{b} ± 1.73	6.70*

Note: Significant at * p< 0.05; NS = Non significant. Means with different superscripts in the same row differ significantly.

Main effect of ocuupation of fathers was also significant for ñforcefulò and ñnon-forcefulò strategies, Fs(2,87)=3.62 and 6.70 respectively, *ps*<0.05. As presented in Table 4.14, children of labour class fathers suggested significantly less number of ñforcefulò (M=6.27) and ñnon-forcefulò strategies (M=8.06) as compared to children whose fathers were involved in farming (Ms= 8.00 and 11.17 respectively) and service (Ms= 8.67 and 15.00 respectively).

4.5.1.8 Occupation of mothers and social problem-solving skills of children

Social problem solving scores and strategies of children were also compared on the basis of maternal occupation using one-way ANOVA. Main effect of maternal occupation was not significant for number of categories, F (2, 89) =3.03; relevancy and flexibility scores, Fs(2.89)=2.51 and 1.17, *p*s>0.05. This means that children of mothers who were labours and hose wives did not differ in suggesting number of categories and relevant and flexible alternatives.

Main effect of maternal occupation was significant for number of different categories, F(2.89)=6.85, p<0.05. Results indicated that children whose mothers were labours suggested greater number of different strategies (M=6.50) as compared to children whose mothers were house wives (M=4.63). Means and SDs are presented in Table 4.15.

Table 4.15: Social problem solving scores and strategies of children on the basis of mothers' occupation (n=90)

	Labour (Mean ± SD)	House wives (Mean ± SD)	F-values
Social Problem Solving Scores			
Number of Categories	17.40 ± 3.37	14.65 ± 4.81	3.03(NS)
Number of different Categories	6.50 ± 1.51	4.63 ± 2.20	6.85*
Relevancy Score	10.80 ± 2.15	9.03 ± 2.89	2.51(NS)
Flexibility Score	5.80 ± 4.39	4.31 ± 4.07	1.17(NS)
Social Problem Solving Strategies			
Forceful	7.10 ± 2.18	6.39 ± 2.15	0.97(NS)
Non-forceful	10.30 ± 3.33	8.26 ± 3.98	2.38(NS)

Note: * Significant at $p<.05$; NS = Non significant.

As shown in Table 4.15, results further revealed that there were no significant differences in number of ñforcefulò and ñnon-forcefulò strategies suggested by children of labour class mothers (Ms=7.10 and 10.30 respectively) and children of mothers who were house wives (Ms=6.39 and 8.26 respectively).

4.5.1.9 Social behaviour and social problem-solving skills of children

Pearson correlations were computed between social problem-solving scores (number of categories, number of different categories, relevancy scores and flexibility scores) and behavioural components (aggression, emotionality and impatience). Correlation coefficients are presented in Table 4.16. As shown in Table 4.16, aggression was negatively significantly correlated with number of categories (r = -0.38*), number of different categories (r = -0.34*), relevancy score (r = -0.43*) and flexibility score (r = -0.46*). Similarly, emotionality was negatively significantly correlated with number of categories (r = -0.35*), number of different categories (r = -0.29*), relevancy score (r = -0.45*) and flexibility score (r = -0.32*). As shown in table, impatience was negatively significantly correlated with number of categories (r = -0.33*), number of different categories (r = -0.26*), relevancy score (r = -0.37*) and flexibility score (r = -0.61*).

Correlations were also computed between strategies suggested by children and aggression, emotionality and impatience components. Negative and significant correlations existed between ñnon-forcefulò strategies and aggression (r = -0.31*), emotionality (r = -0.30*) and impatience (r = -0.26*) aspects of behaviour. Forceful strategies were positively significantly correlated with all these aspects of behaviour (rs = -0.36*, 0.35* and 0.29* respectively).

These findings suggest that aggressive, emotional and impatient children are less likely to suggest greater number and different categories in social problem-solving tasks. Also these children are less likely to suggest relevant and flexible alternatives in hypothetical

problems with their peers. Finally, these children are more likely to suggest ñforcefulò and less likely to suggest ñnon-forcefulò strategies.

Table 4.16 : Correlations between behavioral variables and social problem solving skills of children

	Aggression	Emotionality	Impatience
Social Problem Solving Scores			
Number of Categories	-0.38*	-0.35*	-0.33*
Number of Different Categories	-0.34*	-0.29*	-0.26*
Relevancy Score	-0.43*	-0.45*	-0.37*
Flexibility Score	-0.46*	-0.32*	-0.61*
Social Problem Solving Strategies			
Forceful	0.36*	0.35*	0.29*
Non-forceful	-0.31*	-0.30*	-0.26*

Note: Significant at * $p < 0.05$

In the end of this chapter, it can be concluded that majority of children belong to average category of IQ and IQ has significant impact on social problem-solving skills of children. Other factors related to social problem-solving skills of children are age and gender of child; paternal education and occupation and family income. Behavioural aspects, aggression, emotionality and impatience have relationship with social problem-solving skills.

In the next chapter, these results are described in the eight of relevant literature.

CHAPTER-V

DISCUSSION

Results of the present study are discussed in light of the objectives framed for this study.

The first objective was to identify low, average and high IQ children in the age group of 6 to 8 years.

Results of the present study revealed that majority of children belonged to average category of IQ. This was followed by low and high IQ. It can be interpreted from these results that there was normal distribution of children in IQ categories. The results get support from the previous findings of Poonam (1999). She has reported that majority of children belonged to average category of IQ in her study.

The second objective was to assess social problem-solving skills of low, average and high IQ children.

The most frequently suggested strategies by children from all the three IQ categories were ñnon-forcefulò strategies. These findings suggest that most often children use ñnon-forcefulò means to gain access to objects in another child's possession. These findings are highly similar to those found in previous research (e.g., Balda, 1997; Irving, 1994; Malik, 2004; Punia, 2002; Rubin and Krasnor, 1983) which indicated that ñnon-forcefulò, particularly ñprosocialò strategies were the most frequently used strategies in object acquisition dilemmas. Rubin and Krasnor (1983) observed that prosocial strategies are common instructions given by adults, "*Say please*", "*if you want something, you should ask for it, not grab*". Balda (1997) in her study found that parents mentioned suggesting these strategies to their children in social interactions with other children (for example, take turns, ask politely). Children learn these socially acceptable strategies from the instructions given by adults, particularly parents. They may also learn these strategies through observing adults engaged in prosocial behaviour. In observational studies (Krasnor and Rubin, 1983), preschool children have also been found to use prosocial strategies more often in object acquisition indicating there is a link between reported strategy and actual strategy in this age group.

The second most commonly used strategies in object acquisition dilemmas were ñforcefulò strategies. These findings are also consistent with previous research (Balda, 1997; Irving, 1994; Malik, 2004; Punia, 2002; Rubin and Krasnor, 1983) which has shown that children are likely to use ñagonisticò, that is, ñforcefulò strategies frequently.

Children were less likely to use ñauthority-aidò, ñtrade-bribeò and ñmanipulativeò strategies. Hence these were grouped under ñnon-forcefulò category. These results are in accordance with previous research (Balda, 1997; Irving, 1994; Malik, 2004; Punia, 2002;

Rubin and Krasnor, 1983). Children are less likely to suggest ñtrade-bribeò strategies perhaps because, as demonstrated by Rubin and Krasnor (1983), these behaviours require a higher level of social-cognitive skills than prosocial responses. Irving (1994) also reported that ñmanipulativeò and ñtrade-bribeò strategies were more likely to be used by older children than preschool children suggesting that these behaviours require advanced social-cognitive skills.

The third objective was to compare social problem-solving skills of low, average and high IQ children.

In this study it was found that high IQ children suggested greater number of categories and different categories of strategies as compared to average and low IQ children. Also these children suggested more relevant and flexible alternatives in hypothetical peer problem-solving skills. Results further revealed that children with average IQ obtained greater scores on social problem-solving tasks as compared to low IQ children. One of the reasons could be as reported by Smith and Pellegrini (2000) that IQ is predictor of wide variety of behaviours provided these variables are influenced by the factors that influence the IQ. The IQ and social competence are influenced by some of the same variables. Hence, IQ might be directly or indirectly influencing social problem-solving skills.

Although it is difficult to measure and test relationship between intelligence and social ability; it is generally believed that modestly above-average intelligence (1 to 2 standard deviations above the mean) correlates positively with social ability (Anonymous, 2010).

Another reason could be that high IQ children in the present study might have possessed high emotional and social intelligence. There are different manifestations of intelligence; one of the important aspects is emotional intelligence. Goleman (1995) described emotional intelligence, measured by EQ, as an additional dimension of "intelligence" in which individuals' empathy and social skills are personal traits comparable to "intelligence". Chancellor (2010) reported that the major characteristics of success are our social and emotional intelligence. Individualôs emotional skills have a direct and important bearing on his/her relationships with others. They need to understand their feelings, where they come from and how to properly express them. Children will not maintain healthy relationships unless they can control their emotions, communicate their feelings in a constructive manner and understand the feelings of others. Hence, high IQ children performed better than average and low IQ children; and average IQ children performed better than low IQ children.

Present study further revealed that high IQ children suggested greater number of ñnon-forcefulò strategies as compared to children with low IQ. One of the reasons could be that, as explained earlier, social and emotional intelligence are two important aspects of multiple intelligence and high IQ children might be more socially and emotionally intelligent than average and low IQ children; and average IQ children than their low IQ counterparts. As

reported by Chancellor (2010) social and emotional intelligence play important role in maintaining relationships with others. Children good in these aspects are better able to understand feelings of others and express them properly. Hence these children might understand that ñnon-forcefulò strategies are more effective in peer problem-solving tasks. Another reason could be that most frequently used strategies by children are ñnon-forcefulò in nature (Balda, 1997; Irving, 1994; Malik, 2004; Punia, 2002; Rubin and Krasnor, 1983).

The results also revealed that high and average IQ children suggested greater number of ñforcefulò strategies in comparison to children with low IQ. One of the reasons could be that intelligent people are more likely to exhibit nonconformist or even anti-conformist attitudes, and are also less likely to avoid conflict. It seems that intelligent children have a greater range of strategies in their repertoire; and use both positive and negative strategies in resolving social conflicts. While these traits often make people highly respected, they do not represent good social skills. Intelligent people may be more likely to be arrogant because of their abilities. Another reason could be that since these children suggested greater number and wide range of strategies hence included both ñnon-forcefulò and ñforcefulò strategies. Previous research has also shown that second most frequently used strategies by children are ñforcefulò in nature (Balda, 1997; Irving, 1994; Malik, 2004; Punia, 2002; Rubin and Krasnor, 1983).

Significant association was found between IQ of children and relevancy and flexibility scores. In comparison to average and low IQ children, percentages of high IQ children were greater in above average category of relevancy and flexibility scores. It can be interpreted from these results that high IQ children suggested more relevant and flexible alternatives in problem-solving tasks. These children were more able to suggest alternative strategies when first strategy did not work or solve the problem. The reason could be as explained earlier that high IQ children might have more number of strategies in their cognitive repertoire.

The fourth objective was to delineate the factors related to social problem-solving skills of children.

In the present study the factors, other than IQ, examined in relation to social problem-solving skills were ï age and gender of child, type of family, size of family, family income, education and occupation of parents and behavioural variables.

Children's age, gender of child and social problem-solving skills

Results of the present study revealed that older children suggested greater number and different categories of strategies as compared to younger children. Also older children suggested more relevant strategies and were more likely to suggest greater number of alternative strategies. One of the reasons could be that as children grow older many new

words are added in their vocabulary; hence these children have a wide range of strategies in their cognitive repertoire. In an Australian study, Irving (1994) also obtained similar results.

It was found that older children suggested significantly greater number of ñnon-forcefulò strategies, while younger children suggested significantly greater number of ñforcefulò strategies. One of the explanations might be that there are developmental changes in children's cognitive repertoire of strategies as they grow older. Older children are better able to understand the consequences of their acts, hence might use ñnon-forcefulò strategies to maintain positive relationships with their peers. Another reason could be that with developmental changes older children might learn more ñnon-forcefulò ways to resolve interpersonal conflicts. Similar findings have been documented by Irving (1994).

In this study, there was no association between gender of child and social problem-solving skills of children. Also no gender differences appeared with respect to the quantitative scores (number of categories, number of different categories, relevancy and flexibility scores) of the social problem-solving tasks and ñnon-forcefulò strategies. These results get support from the literature surveyed for this study (Balda, 1997; Irving, 1994; Punia, 2002; Malik, 2004). Boys in the present study suggested significantly greater number of ñforcefulò strategies as compared to girls. Irving (1994), Punia (2002) and Malik (2004) also found that girls tend to be more prosocial than boys. Fabes and Eisenberg (1992) also reported that girls more often used strategies that could result in social harmony and boys expressed anger in a more direct manner than did girls. In another study Zahn-Waxler *et al*. (1994) found that girls were friendlier and boys were more aggressive. As suggested by Punia (2004), girls might not be using forceful strategies with peers taking into consideration the consequences of forceful methods which could result in further conflicts.

Socio-economic variables and social problem-solving skills

Type of family, size of family, family income, education and occupation of parents are indicators of socio-economic status of family. In this section social problem-solving of children are explained in relation to these variables.

Results revealed that there were no differences in social problem-solving scores and strategies of children from nuclear and joint families. It can be interpreted that children from nuclear and joint families solved their interpersonal problems in similar manner.

On the basis of family size, there were no differences between number of categories, number of different categories and relevancy scores of children from small, medium and large sized families. But children from large and medium sized families obtained greater flexibility score. One of the possible explanations might be that when there are more number of persons in a family to interact, there are greater chances that children learn more different ways to solve their problems. Results further revealed that there were no significant differences in strategies suggested by children from small, medium and large families. Thus, indicating that

children from different sized families use similar strategies to solve their interpersonal problems with their peers.

In relation to income of the family, it was found that there were significant differences in social problem-solving scores and strategies of three income groups. Children from higher income families suggested greater number of categories and different categories of strategies; and their responses were more relevant and flexible as compared to children from lower income families. One of the reasons might be as suggested by Punia *et al.*(2004) that upper classes parents use reasoning with their children that enhances role-taking opportunities, which in turn improves problem-solving skills. Whereas, in low classes parents more often use inhibitions and are over controlling.

Results further revealed that children from higher income families suggested greater number of ñnon-forcefulò as well as ñforcefulò strategies as compared to children from lower income families. Parents from high income families were more educated than parents from low income families. Educated parents might be using themselves and teaching their children to solve conflicts with non-forceful methods. These could be some of the factors that helped children learn to solve their conflicts with prosocial strategies. Similar results have been obtained by Punia *et al*. (2004).

With regard to education and occupation of fathers, it was found that there were significant differences in social problem-solving scores and strategies of children in relation to different categories of paternal education and occupation. Children who had more educated fathers and their fathers were either in service or involved in farming, suggested greater number and different categories of strategies; and their responses were more relevant and flexible as compared to children from families with less educated fathers who were working on daily wages. Results further revealed that children whose fathers were educated up to graduation level and were either in service or involved in farming, they suggested greater number of ñnon-forcefulò, particularly ñnon-forceful prosocialò strategies as compared to children who had illiterate fathers working as labours.

As discussed earlier, education and occupation of fathers are indicative of socio-economic status of a family. Educated fathers involved in service or farming might be teaching their children learn to solve conflicts with ñnon-forcefulò means and helped their children develop more number of strategies in their cognitive repertoire.

It was found that there was no impact and relationship of maternal education and occupation with social problem-solving skills of children. Although mothers play a crucial role in childrenôs development, but, during elementary school years when children enter school fathers might be playing more important role. Another explanation could be that education and occupation of fathers are indicative of socio-economic status of a family. As

discussed earlier, children from better economic background perform better on social problem-solving tasks.

Social behaviour and social problem-solving skills

The present research showed that quantitative scores (number of categories, number of different categories, relevancy and flexibility scores) were significantly negatively correlated with aggression, emotionality and impatience aspects of behaviour. It can be interpreted that aggressive, highly emotional and impatient children are poor problem solvers. Results of the present study further revealed that these children suggested greater number of ñforcefulò and lesser number of ñnon-forcefulò strategies.

That aggressive, highly emotional and impulsive children were poor problem solvers, get support from the previous literature. Shure and Spivack (1978) also found significant differences in problem-solving abilities of aberrant and average children. Rubin and Sloman (1984) also reported that withdrawn children produced fewer relevant and flexible strategies in hypothetical problem-solving tasks. Socially withdrawn children may become anxious in conflict situations, which then, inhibit the production of relevant and successful strategies that are known to be in their repertoire. The results of the present also get support from the findings of Punia (2002) who conducted research with preschool aged rural and urban children; and from the findings of Malik (2004) who conducted research with 6 to 8 year old poor social problem solvers. These authors also found that aggressive, emotional and impatient behavior of children was positively correlated with use of aggressive strategies and negatively with prosaical strategies.

It can be concluded that children have a wide range of strategies in their cognitive repertoire. Most frequently used strategies by children was ñnon-forcefulô in nature and second most frequently used strategy was ñforcefulô in nature IQ of children had impact on quantity and quality of strategies suggested by children. High IQ children obtained greater quantitative scores and suggested more ñnon-forcefulò strategies. Girl suggested more ñnon-forcefulò strategies and boys suggested more ñforcefulò strategies as compared to girls socio-economic and behavioral variables had impact on social problem solving skills of children.

CHAPTER-VI

SUMMARY AND CONCLUSIONS

During childhood years children face a range of conflicts and dilemmas while interacting with their peers. Socially competent children are good problem-solvers and these children can achieve their social goals effectively. Poor interpersonal problem-solving skills affect the way children deal with their social problems encountered with peers which can lead to poor social adjustment and difficulties in later life.

During elementary school years, when children enter schools for formal education, they are required to develop healthy social relationships with peers and adults. Therefore, it becomes very important for them to learn to cope with the problems and demands of social interactions.

The present study was conducted in rural Hisar. From Hisar district, Hisar Block 1 was selected at random. From Hisar Block 1, Kaimri village was selected at random. There were two government schools in Kaimri, one for girls and one for boys. There were 94 boys and 85 girls in the age group of 6-8 years in both these schools. All these children were assessed for their IQ. On the basis of IQ, 30 children from each low average and high IQ were selected at random. This included 15 girls and 15 boys from each IQ group. Total sample included 45 boys and 45 girls.

The results of the present research are summarized according to the specific objectives explored in the present study.

The first objective was to identify low, average and high IQ children in the age group of 6-8 years.

Results of the present study revealed that majority of children belonged to average (63.1%) category of IQ. This was followed by low and high IQ.

The second objective was to assess social problem-solving skills of low, average and high IQ children.

In social problem-solving tasks, social problem-solving skills assessed were quantitative scores for number of categories suggested, number of different categories suggested, relevancy of strategies and with-in-story flexibility. Beside this, qualitative features of responses were also examined. This included ñforcefulò and ñnon-forcefulò qualities of the strategies.

- The most frequently suggested strategies by children from all the three IQ categories were ñnon-forcefulò strategies. ñProsocialò, ñauthority-aidò, ñtrade-bribeò and ñmanipulativeò strategies were grouped under ñnon-forcefulò strategies. These finding suggest that most often children use ñnon-forcefulò means to gain access to objects in another child's possession.

- The second most commonly used strategies in object acquisition dilemmas were ñforcefulò strategies.

The third objective was to compare social problem-solving skills of low, average and high IQ children.

- In this study it was found that high IQ children suggested greater number of categories and different categories of strategies as compared to average and low IQ children. Also these children suggested more relevant and flexible alternatives in hypothetical peer problem-solving skills.
- Results further revealed that children with average IQ obtained greater scores on social problem-solving tasks as compared to low IQ children.
- High IQ children suggested greater number of ñnon-forcefulò strategies, as compared to children with low IQ. Also high and average IQ children suggested greater number of ñforcefulò strategies in comparison to children with low IQ.
- Significant association was found between IQ of children and relevancy and flexibility scores. In comparison to average and low IQ children, percentages of high IQ children were greater in above average category of relevancy (%) and flexibility scores (%).

The fourth objective was to delineate the factors related to social problem-solving skills of children.

- Results of the present study revealed that older children suggested greater number and different categories of strategies as compared to younger children. Also older children suggested more relevant strategies and were more likely to suggest greater number of alternative strategies i.e., their response were move flexible.
- Older children suggested significantly greater number of ñnon-forcefulò strategies, while younger children suggested significantly greater number of ñforcefulò strategies.
- There was no association between gender of child and social problem-solving skills of children. Also no gender differences appeared with respect to the quantitative scores (number of categories, number of different categories, relevancy and flexibility scores) of the social problem-solving tasks and ñnon-forcefulò strategies.
- Boys in the present study suggested significantly greater number of ñforcefulò strategies as compared to girls.
- There were no differences in social problem-solving scores and strategies of children from nuclear and joint families. On the basis of family size, there were no differences between number of categories, number of different categories and relevancy scores of children from small, medium and large sized families. But children from large and medium sized families obtained greater flexibility score.

- In relation to income of the family, children from higher income families suggested greater number of categories and different categories of strategies; and their responses were more relevant and flexible as compared to children from lower income families.
- Results further revealed that children from higher income families suggested greater number of ñnon-forcefulò as well as ñforcefulò strategies as compared to children from lower income families.
- With regard to education and occupation of fathers, it was found that there were significant differences in social problem-solving scores and strategies of children in relation to different categories of paternal education and occupation. Children who had more educated fathers and whose fathers were either in service or involved in farming, suggested greater number and different categories of strategies; and their responses were more relevant and flexible as compared to children from families with less educated fathers who were working on daily wages.
- Results further revealed that children whose fathers were educated up to graduation level and were either in service or involved in farming, they suggested greater number of ñnon-forcefulò, strategies as compared to children who had illiterate fathers working as labours.
- There was no impact and relationship of maternal education and occupation with social problem-solving skills of children.
- Results indicated that children who were perceived as impatient, emotional, and aggressive by their teachers were likely to suggest lesser number of strategies and lesser number of different strategies. These children were less likely to obtain greater relevancy and flexibility scores.
- Finally, impatience, emotionality, and aggression components of behaviour were correlated negatively with "non-forceful" strategies and positively with "forceful" strategies.

Conclusion

This research has made a contribution to increased understanding of 6-8 years old children's social problem-solving skills in relation to their IQs. It can be concluded from the results that IQ of children has great impact on social problem-solving skills of children. Children with low IQ lag behind in these skills as compared to average and high IQ children. The findings reported in this thesis also suggest that, there exist differences in social problem-solving skills of children with regard to age, gender of child, education and occupation of fathers and family income. Aggression, emotionality and impatience aspects of behaviour have relationship with social problem-solving skills of children.

Suggestions

The present research has clearly shown that IQ has strong impact on social problem-solving skills of children.

Hence, it is important that children with low IQ be identified at an early age. Though heredity plays significant role in intelligence of children; but, the role of environment can not be ignored. Children may not be able to express the acquired potential due to certain limitations or disadvantaged conditions of the family.

Teachers and parents need to work together and provide wide range of developmentally appropriate learning experiences so that IQ can be improved maximum to the childôs potential.

Parents and teachers can also be trained in social problem-solving programme so that they can help children to think for themselves and to solve their day to day real life problems by themselves. Teacher and parental problem-solving approach will not only help the children to improve their social problem-solving skills but, also it will help them improve their social behaviour with peers and adults.

Aggressive children who usually get involved in hot discussions resulting in conflicts can be helped to overcome their aggression by improving their social skills through information processing. Social behaviour of inhibited and withdrawn children can also be improved by providing intervention programme.

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APPENDIX-I

Family Background Information

1. Name of Child :
2. Age of child : _____ Year _____ Months
   (Date of Birth)
3. Sex of child : _____ Male _____ Female
4. Which description fits your family ?
   Nuclear _____ Joint _____
5. How many member are there in your family ?
6. Occupation of parents

Occupation	Mother	Father
Labour		
Business		
Service		
Home manager		

7. Please tick the level of education

	Mother	Father
Illiterate		
Primary		
Middle		
Matric, 10+2		
Undergraduate		
Post-graduate		

APPENDIX-II

INVENTORY FOR SOCIAL BEHAVIOUR OF CHILD

Name of the Child : ……..

Class : ……..

School : ……..

Date of Birth : ……..

Please indicate to what extend child uses these strategies.

	Never		**Sometime**		**Always**
	(1)	**(2)**	**(3)**	**(4)**	**(5)**
1. Fight with other children					
2. Bosses (Threatening) other children.					
3. Become verbally aggressive.					
4. Become physically aggressive.					
5. Become destructive.					
6. Upset/cries when tensed by peers.					
7. Upset/cries when things donôt go his/her way.					
8. Immediately reacts it someone interferes with his/her play.					
9. Become unhappy.					
10. Become worries.					
11. Insists in a demanding tone.					
12. Unable to wait.					
13. Unable to share / compromise.					
14. Unable to take turns.					
15. Grabs the things from peers.					

APPENDIX-III

OBJECT ACQUISITION TASKS

Story 1.	This girlôs name is Anu and this is Mona. Both are seven years old. Mona has been on the swing for a long, lone time. Anu would really like to play on swing. What do you think Anu could say or do so that she could play on the swing ? (If no response) Repeat the question First response : If that did not work, what else could Anu do or say so that she could play on the swing ? Second response :
Story 2.	This boyôs name is Rahul and this is Amit. Both are seven years old. Rahul has been reading a story book for a long, long time. Amit would really like to read the book. What do you think amit could any or do so that he could get the story book ? (if no response) Repeat the question First response : If that did not work, what else could Amit do or say so that he could get the story book ? Second response :
Story 3.	This boyôs name is Rohit and this is Aman. Both are seven years old. Rohit has been dayins on the cycle for a long, long time. Aman would really like to play on cycle. What do you think Aman could say or do so that he could play on the cycle ? (If no response) Question was repeated. First response : If that did not work, what else could Aman do or say so that he could play on the cycle ? Second response :
Story 4.	This is Meena and this is Savita. Both are seven years old. Meena has been playing with ball for a long, long time. Savita would really like to play with ball. What do you think Savita could say or do so that she could play with ball ? (If no response) Repeat the question. First response : If that did not work, what else could Savita do or say so that she could play with ball ? Second response :
Story 5.	This boyôs name is Deepu and this is Monu. Both are seven years old. Deepu has been playing with lattoo for a long, long time. Monu would really like to play with lattoo. What do you think Monu could say or do so that he could play with lattoo ? (If no response -Question was repeated). First response : If that did not work, what else could Monu do or say so that he could play with lattoo? Second response : If tht did not work, what else could Monu do or say so that he could get to know Ramit ? Play with lattoo. Second response :

ABSTRACT

1.	Title of thesis	:	Social Problem-Solving Skills of 6 to 8 Years Old Children in Relation to Intelligence Quotient
2.	Full name of degree holder	:	**ANITA**
3.	Admission No.	:	2007HS206M
4.	Title of degree	:	Master of Science
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7.	Year of award of degree	:	2010
8.	Major subject	:	Human Development and Family Studies
9.	Total No. of pages in thesis	:	55+iii+III
10.	No. of words in the abstract	:	Approx. 300

Key words : Social problem solving skills, IQ of children

The present study was conducted in Kaimri village of Hisar Block 1 of Hisar district. There were two government schools in Kaimri village, one for boys and one for girls. From these two schools, 94 boys and 85 girls in the age range of 6-8 years were assessed for their IQ with the help of Stanford-Binet Intelligence Scale (1973). Children were divided into low, average and high IQ categories. Ninety children including 45 boys and 45 girls, 15 boys and 15 girls from each IQ group were selected. The objectives of the study were - first, to identify low, average and high IQ children in the age group of 6 to 8 years; second, to assess social-problem solving skills of low, average and high IQ children; third, to compare social-problem solving skills of low, average and high IQ children and fourth, to delineate the factors related to social-problem solving skills of children.

Social problem-solving skills of selected children were assessed with the help of Social Problem-Solving Test (Rubin, 1988). Responses of the children were examined quantitatively and qualitatively. Quantitative scores were calculated for total number of categories, number of different categories, relevancy and flexibility. Quality of responses included strategies suggested by children to solve problems in hypothetical situations with their peers. Results revealed that majority of children belonged to average category of IQ. IQ had significant impact on social problem-solving skills of children. Other factors related to social problem-solving skills of children were age and gender of child; paternal education and occupation and family income. Behavioural aspects, aggression, emotionality and impatience had significant relationship with social problem-solving skills. Research further revealed that, most frequently used strategies by children were ñnon-forcefulò in nature. Gender differences indicated that girls suggested greater number of ñnon-forcefulò strategies than boys who suggested greater number of ñforcefulò strategies.

MAJOR ADVISOR **DEGREE HOLDER**

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