Chapter II
REVIEW OF LITERATURE

In this chapter, review of some relevant studies done in this area are presented. Review of pertinent literature not only helps to determine the shortcomings of earlier investigations but also provides knowledge of relevant variables for the present research work.

Pertinent literatures in the field of distributive justice have shown that several demographic variables such as cognitive-moral developmental stages (generally indicated by the individual’s age), gender, socio-economic status and socio-cultural variable such as perception of parenting style and certain personality traits e.g. altruistic behaviour and trait anger may influence the development of distributive justice. In this context, it is to be mentioned that studies on cognitive-moral developmental stages (generally indicated by the individual’s age) may be categorized under two heads namely, (a) longitudinal studies on cognitive-moral developmental stages and distributive justice and (b) cross-sectional studies on cognitive-moral developmental stages and distributive justice. We have sorted out important studies in the field of distributive justice with respect to the above mentioned variables and are presented in the following section:

2.1. Cognitive-moral developmental stages and distributive justice:

Most of the researches in the field of distributive justice have shown that cognitive-moral developmental stages (generally indicated by the individual’s age) would be the major determinant of moral concepts, and thereby, distributive justice. In the following section two longitudinal studies and several cross-sectional studies are presented:

2.1.1. Longitudinal studies on cognitive-moral developmental stages and distributive justice: The developmental properties of distributive justice have been explored in two longitudinal studies. In one study, Damon (1977) interviewed children between the ages of 4 and 9 years on their conception of positive justice and then re-interviewed them after 1 year. Children who showed change over one year tended to move to the next highest stage. The results showed that a large number of children showed no change at all from one year to next year and a small but noticeable number of children scored lower on the second testing than they did on the first. Thus, although the trend toward positive movement among children was confirmed significantly, there were a large number of children who showed no changes in addition to some actual reversals.
From the results, Damon came to the conclusion that 1-year interval was not long enough to gain a sufficient view regarding social-cognitive development in middle childhood. Perhaps testing children after a 2-year interval would provide more instances of upward stage movement. With this assumption, Damon planned to conduct his second longitudinal assessment in 1978, where he tested 51 boys and girls between the ages of 4 to 9 years. Children were from the middle and lower middle class in Worcester, Massachusetts. At the time of final testing (1980), the sample size reduced to 34 boys and girls evenly distributed across the six age levels (4-9 years). This longitudinal study had three major purposes. First, the study intended to determine more accurate patterns of social-cognitive development with an interval of 2 years. Second purpose of the study was to explore a new look at the entire range of subject's reasoning in any given year and the extent of their movement in the following year. Finally, the study intended to look at the individual differences between subjects who showed different rates of progress (lack of progress) in the course of the study. The results of this longitudinal study confirmed the progressive, stepwise nature of children's social cognitive development. This study also showed that nearly 86% of children showed progressive development over the 2-year interval. It was also found that children who showed an initial downward reversal after 1 year corrected themselves by the second year. From results of this study it was concluded that a 2-year interval is more effective to capture the social-cognitive development in middle childhood. This study also confirmed the progressive, stepwise and an ordered unidimensional nature of children's social-cognitive development.


Research by Handlon & Gross (1959) and Ugurel-Semin (1952) revealed that preschool and kindergarten age children tended to take most of the objects to be shared for themselves when asked to share, whereas older children tended to adhere more consistently to equality and equity norm in their sharing. Using task requiring to share an uneven number of objects where equal sharing was either impossible or at least difficult, both of these studies found that the major
transition from selfish to non-selfish sharing occurred between preschool children, children aged between 4-6 years and elementary school aged children.

Leventhal and Anderson (1970) studied reward distribution in pre-school children (mean chronological age =5.9 years) within the framework of equity theory. More specifically, they investigated the effects of sex and quantity of work performed by the child and a fictitious partner on reward allocation. Each subject was told that the quantity of work performed by his dyad would determine the number of prizes won by the team. After finishing, the children received the feedback regarding his contribution in the work completed by the dyad. The children were then given the prizes earned by the team and instructed to distribute prizes according to their wish. The results showed that regardless of sex or the amount of work the subject and his partner performed, the children tended to allocate rewards equally. Leventhal and Anderson interpreted these findings as providing support for the idea that the behaviour of 5-year-old children was influenced by the principle of equality rather than the principle of equity. Their interpretation was based largely on the behaviour of the children in two sets of conditions. In 50% of conditions, as equity theory predicts, the children distributed rewards equally. Moreover, boys in the 75% of conditions demonstrated self-interest by allocating significantly more than 50% of the total reward to themselves. Several findings in their research did not confirm the predictions of equity theory. Both boys and girls in the 25% of conditions divided rewards approximately equally, as did the girls in 75% of conditions.

The reward allocation behaviour of preschool children (i.e. children aged between 4 to 5 years) was also studied by Lane and Coon (1972) within the framework of equity theory (Adams, 1965; Homans, 1961). This investigation was designed to determine the principles of distributive justice used by preschool children when they were given the opportunity to distribute the rewards. The subjects were 80 (40 boys and 40 girls) white middle class children. Equal number of four-year-old (mean age 4.57 years with standard deviation 0.20 years) and five-year-old (mean age 5.47 years with standard deviation 0.28 years) children were selected for the study. Children worked on a task with a fictitious partner whose performance was either superior or equal or inferior to their own. The children were then given rewards that their team had earned and told to divide rewards between themselves and their partner. The results indicated that 4 and 5-year-old children allocated rewards differently. Four-year-old children tended to distribute rewards self-interestedly by taking significantly more than half of the rewards for themselves whereas 5-year-old children tended to allocate approximately half of the total rewards to
themselves. Therefore, 5-year-old children employed the norm of equality when distributing rewards. No evidence was found to indicate that the behaviour of preschool children was influenced by equity, which required complex cognitive skill and the ability to deal with the quantitative relations among different objects in their sharing.

Peterson, Peterson and McDonald (1975) presented stories about unequal work performance to 3 and 4 years old children who had to allocate either 10 or 4 pieces of candy to the performers. In both cases, equal division of rewards was more common than equitable divisions. Researchers made an attempt to reconcile the results with earlier studies of reward allocation by preschoolers.

Hook and Cook (1979) studied the development of reward distribution using equity theory, as their basic framework was to extract the main developmental trends of distributive justice. They suggested that younger children (under 6 years of age) generally think about allocations “unidimensionally”, ignoring the amount of work. At this level children’s reward distributions generally reflect either self-interest or strict equality. Next, children (approximately 6-12 years) adopted an “ordinal equity” approach to allocation (i.e. more work implies more reward), but without the ability to allocate rewards in numerical proportion to the amount of work. Finally children (13 years onwards) followed “proportional equity” approach to allocation (i.e. allocating rewards in proportion to the contribution). These results suggested the evidence of a developmental sequence from self-interest and equality to ordinal equity followed by proportional equity.

Simons and Klaassen (1979) examined the relations and differences in age between hypothetical and real-life arguments and between real-life divisions and hypothetical arguments. Students from preschool and elementary school (N=84) were chosen as participants of the study. The age range of students was from 4-11 years. All children were interviewed individually about their conception of fair divisions by presenting them with hypothetical dilemmas and asking questions about their solutions to these dilemmas. All children also participated in a real-life division task. Half of the participants first participated in the real-life task and were interviewed one or two weeks later, for the other participants this order was reverse. The results of this study indicated that youngest children (4-5 years) argued and divided in a self-serving way, while the divisions and arguments of somewhat older children (6-7 years) were dominated by equality considerations. The study revealed the relations between hypothetical arguments, real-life arguments and real-life division behavior. High relations
between age trends in the three measures were found. The relation between reward division trends and arguments trends in 7 to 11 year-old children was also found.

In a developmental study of resource allocation in social interaction by Keil (1986), second and sixth grade boys and girls ($N = 80$) participated in a simulated interaction requiring to take turns with a fictitious co-worker distributing earnings over a series of 10 trials. Co-worker's distributions were consistently selfish, generous, equitable, or equalitarian across trials. Results indicated a strong influence of co-workers' prior distributions that increased across trials for both the groups. The rules of equity and equality were considered as fair by the students of sixth grade. Second graders understood the equality norm although they tended to act selfishly and considered both equality and selfishness as fair, despite having less contribution to work than their co-workers. They also displayed little understanding of the equity and generosity norm.

Thorkildsen (1989) found similar age related changes described by Damon in children’s judgements of the fairness in classroom practices. In one study she asked children to judge the fairness of different behaviours of students who finished their works before others. For example, students who finished could go on to other learning tasks or could help the children who had not yet finished their work. In line with the study of sharing, the younger children focused on equality in their answers while older children focused on equity. Within the younger group, the youngest children judged a situation to be fair, if it produced an equality of rewards, whereas slightly older children judged a situation as fair if it produced equality of completion of school work. This is followed by an emphasis on learning as the relevant good, where practices that foster equality in learning are judged as fair. Finally, the oldest children considered that classroom practices were fair if they enabled students to learn as much as they could i.e. more able students would learn more than less able.

The reward allocation behaviour of 150 children from four to eight years old was studied by Watanabe (1990). In that study children worked on a task with a fictitious partner whose performance, they were told, was superior, equal or inferior to their own. They were then given rewards and were told to divide rewards between themselves and their partners. Results indicated that the children’s allocation behaviours changed with age. Younger children tended to distribute rewards by following self-interest principle without considering their own performance and children between five and seven preferred to divide equally rather than to follow an equity norm, whereas equity preference was seen in eight-year-old children.
Sigelman and Waitzman (1991) also investigated whether children of different age groups use different allocation principles in different situations. In their study, 90 children (44 boys and 46 girls) ranging in age from 5 to 15 years were drawn from three grades: 16 boys and 14 girls from kindergarten (mean age=5.3 years), 15 boys and 15 girls from fourth grade (mean age= 9.4 years) and 13 boys and 17 girls from eighth grade (mean age= 13.1 years). Investigators used multi-method approach to assess children’s preferences for alternative justice rules in different social contexts. Participants were first asked to allocate goods to recipients in three different contexts. They were asked to rate the fairness of alternative allocations that represented applications of the norms of equality, equity, need and entitlement based on age in the same three contexts. As predicted, older children displayed more flexibility in their distributive justice decisions than young children did, modifying both their own allocations and their judgements of the fairness of alternative allocations to fit the demands of the situations. Kindergartener proved to be insensitive to contextual information, simply preferring an equal distribution of resources regardless of the circumstances, whereas older children tailored their decision appropriate to the situations. These findings implied that the development of distributive justice decisions may have both generalized and context-specific components. General growth in information processing abilities may permit older children to process and interpret situational cues and modify their decisions to those cues more capably than younger children do across a wide range of situations.

McGillicuddy-De Lisi, Watkins, and Vinchur (1994) interviewed a group of 96 children from kindergarten, third-grade and sixth-grade by presenting two stories about a group of children who made artwork that was subsequently sold at a craft fair. The characters in one story were described as friends, while the characters in the other story were described as strangers (relationship condition). One character in each story was presented as the oldest in the group, one as the most productive, and one as the poorest. Children were asked to allocate 9 dollars to the 3 characters under each relationship condition, provide rationales for those allocations, and rate the fairness of 4 different patterns of allocation. Findings of age differences in distributive justice reasoning were consistent with prior descriptions of a stage-like sequence in the understanding and use of principles of distributive justice (Damon, 1980; Enright et al., 1980a). Kindergarten children viewed allocations based on age entitlement as fairer than older children did. Rationales for allocation revealed that considerations of equal treatment occurred most often and the equality distribution pattern received the highest fairness ratings by this age group of children.
The oldest children were more likely than younger children to support reasoning that took both productivity and need into account. The comparison of children’s distributive justice reasoning across the relationship condition in the present study suggested that the nature of social relationship is an important factor that gradually comes to affect children’s reasoning about positive justice. Kindergartners' allocations, rationales and fairness ratings did not vary with relationship. Third graders' allocations also did not vary with respect to the amount allocated to productive and needy characters when they were presented as friends versus strangers. The oldest children treated needy and productive characters differently, and these differences were tied to the nature of the social relationship among the recipients. This group of students allocated more money to needy friends than to needy strangers and more to productive strangers than to productive friends. Rationales for allocation judgments suggested that equality was the most salient principle for decisions at all ages, but the older children provided rationales based on benevolence more often than younger children when characters were presented as friends.

Developmental analysis by Thorkildsen and Schmall (1997) revealed a basic pattern in which children’s conceptions of fairness involve a progressive working through the notion of equality followed by the introduction of the notion of equity, and eventually a coordination of both equality and equity.

Sales (2000) examined the development of principles of distributive justice with the participation of children and teenagers in a hypothetical situation of reward distribution and compared the evolution of the concept of justice to the principles of right and wrong transmitted by the same participants about questions concerning school social rules. The answers given by 90 children from third (N=30), fifth (N=30), and seventh grades (N=30), of which half of the participants were male. The average age of the participants was found to be 9.4 years, 11.10 years and 14.2 years for 3rd, 5th and 7th grade children, respectively. Students answered to questions and stories about school social rules and the concept of distributive justice. Findings showed that children first answered the questions guided by the apparent results of acts or by accepting the rules and eventually proceeded to analyze intentions. A progressive development of self-autonomy in passing from the equality to the equity principle was observed.

Dell'Aglio and Hutz (2001) investigated developmental patterns in the use of distributive justice principles by children and adolescents in hypothetical situations that required distribution of rewards. The participants were 680 children and adolescents of both genders, 240 of 5-6 years old, 220 of 9-10 years old, and 220 of 13-14 years old. The interview used four short stories and
drawings which depicted different situations of performance. The results showed three stages characterized by the use of rules of authority, equality, and equity. As expected, young children employed rules of authority and equality, 9-10 year olds used mostly rules of equality, whereas the adolescents preferred equity. The sequence of developmental levels of distributive justice principles was coherent with Piaget's model.

Children's distributional justice was investigated in two experiments by Fraser, Kemp and Keenan (2007). In Experiment 1, pairs of children played a game where they had to guess which card the experimenter would turn up next. The effect of age (5, 7 and 9 years old), gender, country (Indonesia or New Zealand), and instructional set on how the children distributed the sweets at the conclusion of the game was examined in the study. The findings showed that children usually distributed equally, but five-year-olds often distributed according to neither equity nor equality. Moreover, the study revealed that 7- and 9-year-olds applied the same distribution principle over two rounds of the game. In Experiment 2, many of the same children made an allocation preference in response to a hypothetical scenario. Older children, in particular, often showed differences between their allocation behaviours in Experiment 1 and in Experiment 2. Overall findings of the study suggested that Damon's (1975) account of children's ideas of distributional justice held up well as a description of the children's actual behaviour.

Sampaio, Camino, and Roazzi (2007) investigated the types of principles of distributive justice on a sample of 120 children of three different age groups namely, (i) 5-6 years, (ii) 7-8 years and (iii) 9-10 years of age. Their conceptions about distributive justice were evaluated through a dilemma constituted by four stories, in which two children had to decide whether or not to give more toy blocks to another child who arrived late at school. The results showed that (a) a tendency to absolute equality characterized children of 5 to 6 years old; (b) the use of equity judgments increased with age; (c) the judgments that considered the importance of cooperation and mutual respect were present even in children of 5 to 6 years old.

McGillicuddy-De Lisi, De Lisi, and Gulik (2008) examined ninth and twelfth grade students' (N=640) distributive justice reasoning. Participants read stories presenting characters that varied in personal characteristics (popularity, productivity, need, and appearance), family type (biologically related/stepsiblings), and context (work/education). Adolescents allocated rewards to story characters, provided rationales for allocations, and judged the fairness of allocation patterns representing different justice principles. Older adolescents were more likely to favor equity and benevolence principles than younger adolescents on all three measures. Older
adolescents, especially female students, also took kinship and contextual factors into account more often than younger adolescents. Male students tended to favour equity across conditions; female students' views of fairness showed greater nuance, varying to a greater degree with relationship and contextual factors. Findings also suggested that distributive justice reasoning continues to develop through late adolescence, probably due to age-related cognitive and socialization factors and experiences.

Study conducted by McCrink, Bloom, and Santos (2009) explored the criteria used by children and adults when evaluating the niceness of a character who is distributing resources. 16 four-year-olds (5 boys and 11 girls), 16 five-year-olds (9 boys and 7 girls) and 16 undergraduate and graduate (6 boys and 10 girls) students were selected from Southern Connecticut. Four and five-year-olds played the ‘Giving Game’, in which two puppets with different amounts of ‘animal chips’ gave some portion of ‘animal chips’ to the children. The children were then told that they should get as many of these ‘animal chips’ so that later they could go shopping and get a toy with the chips at the animal store. Adults played an analogous task that mimicked the situations presented to children in the ‘Giving Game’. For all groups of participants, researchers manipulated the absolute amount and proportion of chips given away. Results indicated that four-year-olds focused exclusively on absolute amount, five-year-olds showed some sensitivity to proportion and adult focused exclusively on proportion. This study provided an evidence for a developmental transition in which children move from using self centered approach to other centered approach while making social evaluations of two participants who distribute resources.

Rochat, Dias, Liping, Broesch, Passos-Ferreira, Winning, and Berg (2009) investigated 3- and 5-year-olds' fairness judgement in distributing small collections of candies, either with an adult experimenter or between two dolls. The authors compared more than 200 children from around the world, growing up in seven highly contrasted cultural and economic contexts, from rich and poor urban areas, to small-scale traditional and rural communities. Across cultures, younger children did not show self-sacrifice or generosity and tended to optimize their own gain. The magnitude of young children's self interest varied across cultures. More fairness (less self-interest) in distributive justice was evident in children growing up in small-scale urban and traditional societies which seem to promote more collective values. Already by 3 years of age, self-optimizing in distributive justice was based on perspective taking. Overall 5 years children tended to show more fairness in sharing.
Some studies have shown departures from the trends suggested by the developmental theories, and this can be attributed to situational variables.

Leventhal, Popp, and Sawyer (1973) conducted two studies in order to determine whether preschool children prefer equality and equity norm at the time of allocating rewards to other persons. The participants of study I were 47 girls and 53 boys drawn from kindergarten classes in two schools located in Raleigh, North Carolina. The students were mostly from middle class homes. Mean age for girls was 5.30 years (standard deviation=0.76 years) and 5.60 years for boys (standard deviation=0.57 years). Each participant first played a game in which he/she put pegs in a pegboard as rapidly as possible. After that they received rewards for their performance. After receiving rewards, they were asked to divide some picture seals between two fictitious children who differed with respect to their performance in a similar kind of task on the preceding day. For some participants the difference between performances of the two fictitious children was small, 8 versus 12 pegs, and for some participants the difference in performance was large, 5 versus 15 pegs. The participants allocated 20 picture seals between two fictitious children. The results demonstrated clearly that preschool children sometimes followed equity norm when allocating resources. The larger the difference between the performance of the better and worse performers, the greater the amount of reward given to the better performer. The study II was conducted on 82 boys and 65 girls drawn from first and second grade students from Roman Catholic elementary school of Detroit, Michigan. The mean age for girls was 7.87 years (standard deviation=0.63 years) and 7.78 years (standard deviation=0.69 years) for boys. The aims of the study II were to explore the difference between slightly older boys and girls with respect to their allocation response and to determine the possible influence on the child’s allocation response of anticipated evaluation by a significant adult. The subjects were 82 boys and 65 girls drawn from first and second grade classes in a Roman Catholic elementary school in Detroit, Michigan. Mean age for girls was 7.87 years (standard deviation=0.63 years) and 7.78 years for boys (standard deviation=0.69 years). The subjects were asked to distribute 10 gummed picture seals between better and poorer performers (fictitious). Some subjects were told to divide seals as they thought best. Others were told that their teachers would evaluate their decisions and were advised to divide the seals as he/she would think best. The findings showed that children followed an equity norm rather than an equality norm when distributing reward to other children.

Coon, Lane, and Lichtman (1974) employed a group administration procedure in their supervisor paradigm on four different groups of children namely, kindergarten, second grade,
fourth grade and sixth grade. Children were shown a videotape of two male graduate students playing a game. The game consisted of throwing balls into a box and the one throwing the highest number of balls into the box was the winner. After the game was over, the subjects were asked to divide the dollar bills given as reward between the two players on the videotape. A significant portion of subjects in each of four grade levels allocated more rewards to the winner. The researcher concluded that the norm of equity, irrespective of age, is the most important determinant of reward allocation.

Lerner (1974) conducted three experiments examining children’s use of equity and parity forms of justice in determining the allocation of rewards. First experiment was conducted with 30 boys and 30 girls selected from kindergarten classes in two public schools. The results indicated that the kindergarten children when defined as a team exhibited little evidence of the operation of self-interest and closely followed the rule of parity in distributing the rewards. In the second experiment, 45 boys and 45 girls from fifth-grade classes in two public schools were selected as subjects. The results of this study clearly revealed that children’s distribution of rewards was influenced by their relative performance. The equity principle was highly followed by fifth-grade children. In the third experiment, 40 boys and 40 girls from the first grade of two public schools participated. These children were tested more directly the importance of being defined as co-worker or team members as a determinant of the equity and parity forms of justice. The results suggested that children were highly motivated to follow rules of justice, for example, kindergarten children follow equality, but also follow equity only when told that they were "co-workers" rather than working as a team.

Streater and Chertkoff (1976) carried out a study on 270 children (135 boys and 135 girls) in order to determine the developmental trends in the conception of fairness among three different age groups of children namely, (i) 6-7 years, (ii) 8-9 years and (iii) 12-13 years by following three basic paradigms such as participant, supervisor and negotiation paradigm. In participant paradigm, subject has to divide reward between himself/herself and a fictitious partner who work on an identical task. The subject is told that his/her performance is either superior, equal or inferior in performance to that of his/her partner and is asked to distribute rewards they earned. In supervisor paradigm, subject is given rewards for the completion of a task and is then asked to allocate rewards earned by others. This design eliminates the possibility of being guided by self-interest principle, because the subject does not get any share in the reward. The third paradigm (negotiation paradigm) differs from the others by using subjects in a
dyadic situation which involves negotiation. In this paradigm, the subject is asked to distribute reward that is acceptable to both members of the dyad. Students of first, third and seventh grade (90 students from each grade) were selected from three public elementary schools and one public junior high school in Bluffton, Indiana. This study revealed that children in the 6-7 age group preferred equity, while children in other two age groups preferred equality. The possible reason behind this finding is that with maturity, children become more concerned with maintaining group cohesiveness and are more likely to prefer equality, which produce more harmony than the equity principle. Equality dominated among participants studied under participant and negotiation paradigm while equity dominated with participants in supervisor paradigm. Being in a supervisor role, a participant may think of maximizing productivity while being in a participant role may direct thinking in terms of maximizing good personal relationship. Negotiation almost in all the cases led to an equality preference because of high preference for friendship.

Nelson & Dweck (1977) found that contrary to the predictions based on developmental stages, even 4-year olds were found to follow equity principles when given appropriate instructions. They explained the findings in terms of motivational and competence related factors. They also emphasized the relation between the productivity difference and how the rewards led to an increase of equity response. It was suggested that these deviations from proposed developmental sequence of distributive justice do not necessarily go against the distributive justice theories.

In a series of three experiments Anderson and Butzin (1978) examined information integration in judgements of deservingness and fair sharing and asked 76 children of 4 to 8 years of age to distribute rewards based on information, need, work, and both need and work of pairs of story characters. Their results revealed that the majority of 4-year-olds had a well-developed sense of equity and no age trends were found.

Huntsman (1984) showed that even though preschoolers might use more level 0 (self-interest) reasons for justifying their allocation behavior, nevertheless even the youngest children could flexibly apply different justice principles (i.e. equality, equity, need) in accordance with the situational demands. Moreover, in Huntsman’s (1984) study, equality also seemed to have a strong influence on older children’s allocation decisions.

Thompson and Jones (2005) studied the reward allocation patterns, reasoning, and fairness judgments of 112 participants at four different grades: kindergarten, 3rd grade, 9th grade, and college. Three story characters (an oldest, the most productive, and the physically
disadvantaged) were depicted as siblings of the same gender, either sisters or brothers, who poured lemonade at a school picnic. Kindergartners' pattern of reward allocations indicated the use of an equality and productivity-based equity rule, whereas most of the older participants integrated considerations of both productivity and physical disadvantage in their allocations. Reasoning data were generally consistent with the allocation patterns. Reward allocations and fairness ratings differed significantly by the gender of the characters, and the gender of the participants. It was concluded that coordination and consideration of more than one claim to the reward allocation increases with age.

The study conducted by Thompson (2007) was aimed to examine the fairness judgements and reasoning offered by children and adolescents in the context of the division of household labour among siblings. The data were examined for grade level differences in the endorsement of three distributive justice principles (equality, equity and need). Boys and girls from third, sixth and ninth grade read six stories, each describing four siblings engaged in household chores. Participants indicated how fair they thought the division of chores by using a 5-point Likert scale, and then provided a rationale for each fairness rating. Findings indicated the endorsement of equality principle by the majority of participants, regardless of grade level. Analyses also revealed that the sixth graders were least likely to view as fair a division of labour based on need. Overall, the study's findings supported the notion that the endorsement of the principles of justice depends on the circumstances.

Above discussions suggest that some studies on cognitive moral developmental stage (generally indicated by individual’s age) and the pattern of distributive justice show developmental trend suggested by the developmental theorists while others reveal the departures from the trend suggested by the developmental theorists. More studies on age and distributive justice are needed as the results are inconclusive in nature.

Moore, Hembree and Enright (1993) pointed out that developmental changes in distributive justice can take place in multidimensional way, not in a unidimensional way. Some other demographic variables such as gender, socio-economic status, parental educational background and socio-cultural factors may influence the development and pattern of distributive justice (Jain, 1991; Miller, 1991; Miller & Bersoff, 1992; Miller, Bersoff & Harwood, 1990; Miller & Luthar, 1989; Mishra, 1991; Shweder, Mahapatra & Miller, 1987).
2.2. Gender and distributive justice:

People apply different modes of distributive justice in sufficiently flexible ways by considering situational demands into account while making decisions. Intuitively, one might expect gender differences in preferring different modes of distributive justice. Most of the empirical researches in this context indicated that men are more likely than women to distribute outcomes to individuals in direct proportions to their inputs (Kahn, 1972; Lane & Messe, 1971; Leventhal & Lane, 1970). Indeed the trend has been that men use the equity norm and women use the equality norm (Vanikar, 2006). Studies provided various explanations of these gender differences such as men and women differ in their interaction goals, women striving for interpersonal or social success, and men strive for exploitative and competitive success (Kahn, O'Leary, Krulewitz, & Lamm, 1980). Furthermore, men tend to identify effort and skill as relevant input, women tend to identify participation as more relevant (Walster & Walster, 1975). Some studies have also suggested that in some situations, men may even apply considerations regarding social networks and interdependence more than women, for example, situations in which men wish to maintain the existing network of unequal relationships and role obligations, whereas in some situations women may apply justice considerations more than men, for example, situations in which women are more sensitive to the injustices of the existing inequalities, networks of role obligations, and interdependence (Abu-Lughod, 1993; Turiel & Wainryb, 1998; Wainryb & Turiel, 1994).

In the following section some empirical researches on gender and distributive justice are outlined in detail:

A study carried out by Leventhal and Anderson (1970) on 144 subjects of 5 years of age were told that their performance on task (pasting gummed stars on worksheet) was either superior, equal or inferior to that of fictitious same-sex partner. Subjects were then rewarded with colourful picture seals that they were requested to divide between themselves and their partners. Subjects were asked to recall their own performance and their partners' performance scores. Results indicated that in superior condition boys took larger number of seals for themselves than girls did. No sex difference was found in equal or inferior condition.

Leventhal and Lane (1970) conducted a study in which subjects (N=61) aged between 18-21 years worked with fictitious same-sex partners on multiplication problems for which the pair received money. Subjects were told that their performances were either superior or inferior to that of their partners. The performance measure was subjects' allocation of group rewards.
Results indicated that males allocated rewards equitably i.e. based on the performance. Females in superior performance condition took approximately half of the rewards and those with inferior performance took much less than half.

Benton (1971) tested sex differences of 96 (9-12 year old) boys and girls with respect to the division of rewards following differential productivity. In this study, same sex pairs of subjects were given a reading test which made toys available for play. In each case only one passed the test. Results indicated that (a) when paired with friends and non-friends, boys who passed the test found allocations favouring themselves more acceptable than equality allocations; (b) boys paired with neutrals choose allocations favouring themselves regardless of their test performance; (c) passing or failing girls paired with friends or neutrals accepted equality allocations. Benton concluded that boys preferred equity norm while girls preferred equality. But girls adopted equity norm where equal division was impossible.

Leventhal, Popp, and Sawyer (1973) carried out a study in which participants were asked to put pegs in a pegboard as quickly as possible. After completion of the task participants received rewards for their performance. Then they were asked to allocate picture seals between two fictitious children who differed with respect to their performance in a similar kind of task. For some participants the difference between performances of two fictitious children was small (8 versus 12 pegs) and for some participants the difference in performance was large (5 versus 15 pegs). Results indicated that when the difference in performance was large, both boys and girls deviated significantly from an equal distribution of reward and gave higher reward to the better performer. No significant sex difference was found on the number of picture seals given to the better performer. The sex difference was present when the subjects in large difference condition distributed the first seal. In this case, girls gave the first picture seal to the worse performer, and boys showed a tendency in the opposite direction. In study II, the subjects were asked to distribute 10 gummed picture seals between better and poorer performers (fictitious). Some subjects were told to divide seals as they thought best. Others were told their teachers would evaluate their decisions and were advised to divide the seals as she would think best. The result of this study established more firmly the existence of sex differences in situations in which the child did not share the reward. A clear sex difference was probably obtained because the subjects’ task of allocating rewards was simpler and subjects were older in Study II than in Study I. Another intriguing but ambiguous finding of this study was that boys’ tendency to give high reward to the better performer was reduced when evaluation was expected.
In a study conducted by Bemett and Andrews (1977) 136 students of 5th and 6th grades were selected as participants. Results revealed that boys gave fewer rewards to a hypothetical competitor presented as being more productive than themselves, than they gave to themselves when they were described as the more productive opponent. No sex differences in allocation behavior were found under conditions of cooperation. It was concluded that gender differences in judgments of fair distribution of rewards established by age 11 yrs, even under hypothetical conditions.

Research conducted by Kahn, O'Leary, Krulewitz, and Lamm (1980) examined how males and females differed in their strategies for reward allocation in the face of distributive problems. On the assumption that equitable allocations reinforce competitive (agentic) success and equal allocations reinforce social (communal) success, the research examining reward allocation was assessed within each of the four paradigms commonly employed. Sex differences were predicted and obtained in two of these paradigms: When the allocation situations contained interpersonal elements, females allocated less to themselves than did males and less than predicted by equity theory when asked to distribute rewards to self and others, and all female groups made more equal group allocation decisions than did all male groups when the interaction was competitive.

Major and Deaux (1982) reviewed the literature on the role of sex differences in allocation norms and found that sex differences were not significant when the allocator was not a co-recipient. When the allocator was a co-recipient of the allocation, women followed the equality norm and this effect was more significant when women’s inputs were greater than her partner’s inputs. The study concluded that in general, men preferred equity principle and women tended to rely on equality principle.

Olejnik, Tompkins, and Heinbuck (1982) conducted a study on 52 male and 52 female undergraduates which asked them to allocate rewards to pairs of children for their performances in team and competitive situations. Males allocated rewards more equitably, especially when allocating to boys in competition, while females allocated rewards more equally. Boys, but not girls, who did more work, received more rewards than their partner and children with greater work inputs under competitive conditions received more rewards than children in team conditions.

Lyons (1983) conducted a longitudinal study on both males and females using real life dilemmas. Responses were coded as either “rights” (justice) oriented or “response” (care).
oriented. Researcher found that in constructing, resolving, and evaluating their own real-life dilemmas, majority of women (75%) focused on "response" orientation, whereas only 14% of male respondents displayed this orientation. On the other hand, 79% of male respondents displayed the "rights" orientation, whereas only 25% of female respondents displayed this orientation.

Terry Lee and Sheldon (1984) exposed male and female students (129 male and 191 female) to three distributive fairness conditions to examine the role of sex in fairness interactions. Each subject was randomly assigned to one of three levels of distributive fairness: over reward (more than deserved), just reward (equity) and under reward (less than deserved). Subjects read a story dealing with the grade received by a student in a college course and responded to a questionnaire about the student and his situation. Subjects were asked about their own perceptions and feelings regarding the grade received by another student and the situation in which he received it and what the feelings the other students might have. Results showed the significant 'sex X distributive fairness' interactions indicating that women responded more positively than men to over reward and more negatively than men to under reward.

Rothbart, Hanley, and Albert (1986) tested Gilligan's hypothesis that men are more likely to consider moral dilemmas chiefly in terms of justice and individual rights, whereas women are more likely to be chiefly concerned with questions of care and relationships with others. This study also investigated the effects of dilemma content upon orientation of moral judgment. Protocols from interviews with 50 college students, half women and half men, to three moral dilemmas were coded according to moral orientation. Results indicated that moral orientations were widely used by both men and women, but women were more likely to employ predominantly care considerations. In a test of mean differences in proportion of justice responses, content of the specific moral dilemma showed a strong influence upon moral reasoning. Results suggested that both gender and situational factors need to be considered in our understanding of moral reasoning.

Boldizar, Perry, and Perry (1988) designed a study to test two competing explanations of gender differences in distributive justice: (a) the equity-equality hypothesis, which states that males endorse equitable distributions more than females and females endorse equal distributions more than males; and (b) the exploitation-accommodation hypothesis, which states that the sexes vary their norm endorsement according to self-favoring (males) or other-favoring (females) distribution outcomes. Preadolescent and college-aged subjects rated the fairness of reward
distributions of vignette characters who had contributed either more or less than a co-worker in a task, and had subsequently divided the rewards either equitably or equally. The data provided no support for the equity-equality hypothesis, but did support the exploitation-accommodation hypothesis. Specifically, females rated equitable distributions of inferior workers as more fair than males did. Thus, the popular conclusion that males have a stronger commitment to equity than females was rejected.

Gilligan and Attanucci (1988) looked at the distinction between care and justice perspectives with men and women, primarily adolescents and adults when faced with real-life dilemmas. Subjects were asked to consider a situation which involved a real life dilemma. The study showed that 65% of males used a 'justice only' orientation, 32% used a 'justice and care mixed' orientation, and none used a 'care only' orientation. In contrast, 35% of females used a 'care only' orientation, 35% used a 'justice and care mixed' orientation, and 29% used a 'justice only' orientation. Gilligan and Attanucci concluded that both men and women can use justice and care orientations, but men tend to gravitate towards a justice orientation, whereas women tend to gravitate towards a care orientation. They further concluded that women appear to be more willing (or able) to use a justice orientation than men are willing (or able) to use a care orientation.

Johnson (1988) found gender differences and context influence in the use of moral orientation. Her findings also revealed that males and females were knowledgeable of both justice and care orientations, but males first tried to solve problems by justice unless the possibility of continuing a relationship exists beyond the dilemma. Females used both justice and care modes but most of the times used care orientation first. The result also revealed that boys used moral orientation of care much less often than girls used the justice mode.

McIntire and Perry (1995) conducted a study on the modes of moral judgement among early adolescents. The survey was administered on a group of 179 students selected from 7th and 8th grade. The result reveled that adolescent females chose care mode more often than males. However, females also chose the justice mode quite often. The result also suggested that males were more often selfish or narrowly concerned in their moral/value responses than females.

Crandall, Tsang, Goldman, and Pennington (1999) used two standardized real-life or actual dilemmas in their study. One dilemma elicited primarily justice responses, whereas the other elicited care responses. Participants were 242 undergraduate students (100 males and 142 females) in an introductory psychology class at the University of Florida. The mean age was 18.0
years. In both dilemmas, women were comparatively more likely to endorse care reasoning and men to endorse justice reasoning and thus accepting Gilligan's (1982) prediction of gender differences in moral orientation. The study also showed that when men and women became mature and faced more complex moral dilemmas in the real world, their judgement was determined not only by gender and gender related life experiences but also by the nature of dilemma and the surrounding events.

Gump et al. (2000) attempted to corroborate Gilligan's prediction on the existence of distinct moral voice for women. Participants were asked to read hypothetical situation and afterwards they were made to respond to statements pertaining to the dilemma through their rating of the statement according to how important they perceived each idea to be in making a decision about the dilemma. Their results revealed that females scored higher on care orientation than males. Females did not, however, differ significantly from males on justice orientation. Findings gave partial support to Gilligan's theoretical claims.

In meta-analysis of 113 studies, Jaffee and Hyde (2000) found significant sex differences, both in care orientation favoring females (d = -.28) and in justice orientation favoring males (d = .19). Together, the moderator variables accounted for 16% of the variance in the effect sizes for care reasoning and 17% of the variance in the effect sizes for justice reasoning. These findings do not offer strong support for the claim that the care orientation is used predominantly by women and that the justice orientation is used predominantly by men. Researchers concluded that distinct moral orientation between male and female may exist but these orientations are not strongly associated with gender.

Skoe, Cumberland, Eisenberg, Hansen, and Perry (2002) carried out a study where 105 women and 104 men were selected as participants. The mean ages of men and women were 19.47 years and 21.33 years, respectively. Subjects were asked to rate 12 dilemmas (4 care dilemmas, 4 justice dilemmas, 3 mixed i.e. both care and justice and a real life dilemma) in terms of how difficult and how important they viewed each dilemma to be on two scales ranging from 1 (not at all difficult/important) to 10 (very difficult/important). Justice dilemmas involved conflicts concerning impartial rules, fairness, or legal issues. The care dilemmas involved conflicts concerning close interpersonal relationships, others' welfare, or prevention of hurt. The mixed dilemmas involved conflicts concerning both prevention of hurt and legal issues). Results indicated that on the mixed dilemma, women scored higher than men on care orientation reasoning, whereas men scored higher than women on justice reasoning. Moreover, care
prevailed over justice for women only. Thus, when care and justice principles are in conflict, women alone seem to emphasize care more than justice. Results also revealed that justice did not prevail over care for men in the mixed dilemmas, and there were no significant sex differences in care or justice reasoning scores for the real-life dilemmas.

In an effort to investigate the influence of sex on moral reasoning Adebayo (2007) selected 745 adults (391 men and 354 women) from five different occupations such as medicine, teaching, banking, police and civil service. The average age range of the participants was 35.80 years. Findings refuted Gilligan’s postulations about the unique moral voice of women and found no significant difference between men and women on moral reasoning.

In a study conducted by Leman, Keller, Takezawa, and Gummerum (2009) two hundred and ninety-four participants aged between 7 and 17 years of age were asked to share money between themselves and another imaginary group. Individual responses were recorded as well as responses after discussion in a group with two other participants. The distribution task took place in two different experimental conditions that either gave participants a free choice about how much to offer to the other group or involved making a strategic offer to avoid the other group rejecting an offer and losing all the money. From 10 years of age onwards, when allowed to choose freely how much to share, boys made progressively less generous offers than girls whereas girls' offers remained same with age. However, when inter-group strategic constraints were present, there were few gender differences from 10 years of age. The order in which games were presented was a powerful influence on the offers that participants made.

Some of the studies mentioned above are on gender and distributive justice and some of them are on gender and moral reasoning. The results regarding gender and distributive justice are inconclusive because some studies reveal that women generally prefer care orientation and men favour justice orientation and the reverse trend is also evident in some other studies. No significant effect of gender on moral reasoning is also found in some studies. Some researchers suggest that men tend to identify effort and skill as relevant input, women tend to identify participation as more relevant (Walster & Walster, 1975). Results of the studies on gender and distributive justice reveal that generally men invoke equity (merit) where women tend to prefer equality in order to maintain good interpersonal relationship. Inconsistency in results in the existing literature prompts further study in this area.
2.3. Socio-economic status (SES) and distributive justice:

Socioeconomic status (SES) is an economic and sociological concept that combines total measure of a person's work experience and of an individual's or family's economic and social position relative to others, based on income, education, and occupation. There is a paucity of studies on socioeconomic status and distributive justice. One study in this context is reported below:

Enright et al., (1980b) examined the effect of socio-economic status (SES) on distributive justice. 28 children (14 children from middle SES and 14 from low SES) from kindergarten and 28 (14 children from middle SES and 14 from low SES) children from third grade were selected for the study. Distributive justice scale (Enright et al., 1980a) and Standford Binet vocabulary (Terman & Merrill, 1973) were used. Results indicated that children from lower socioeconomic class showed lower levels of distributive justice development than middle socioeconomic class. According to him, the possible reason for this type of findings is that society is unfair to lower socioeconomic class children with regard to equal distribution of goods and this group of children also lack opportunities for participation in distributive decision which make them incompetent in their distributive justice reasoning than the children from middle socioeconomic class.

Only two studies regarding the effect of SES on moral reasoning were found which are reported below:

Rodrigues (1983) studied the effect of socio-economic status on moral development of young children (6-12 years). He found that socio-economic status had a positive influence on moral judgement of children.

Newton (1984) found that socioeconomic status of the parents and achievements were not significantly correlated with the stage of moral development in young children.

Srivastava and Romani (1988) found that there were not much differences in the value patterns of adolescents across different socioeconomic status of the parents (high, medium, low).

Lack of study on SES and distributive justice have led the researcher to include this variable in the present study.

2.4. Parental education and distributive justice:

Parental education means the highest level of educational attainments obtained by parents. Speicher (1994) conducted an interesting investigation on the effects of parental
education and moral development of their children. 221 offspring in the 2 samples (121 male and 100 female) ranged from 10 to 33 years of age. It was found that fathers' education was the strongest predictors of their offspring's moral development. Developmental patterns indicated that, during adolescence, parent's moral judgment was related to offspring moral reasoning but was a stronger predictor of moral judgment among girls than boys. During young adulthood, fathers' moral judgment and education were the strongest predictors of both sons' and daughters' moral reasoning.

Gill and Jaswal (2007) did a study to assess the impact of parent's education and occupation on children for learning values through 'teaching values' programme. A group of 450 children aged between 5-7 years of age were randomly selected from a school of Ludhiana city. The results revealed that education level of the parents was not significantly associated with learning values through 'teaching values' programme for children in the experimental group. However, children in the control group at 7 years of age, the education of parents showed a significant association with learning values.

Paucity of study on parental education and distributive justice has impelled the researcher to include this variable in the present study.

2.5. Parental occupation and distributive justice:

Parental occupation means parents' engagement in external activities that serve their regular sources of livelihood. To determine whether the moral judgments in the areas of guilt-innocence and apology-restitution are related to the preschool child's age, sex, intelligence and parents occupation, a sample of 29 boys and 29 girls ranging in age from 35 to 70 months with a mean age of 51 months were studied by Flynn (1984). The results of multiple linear regression analysis indicated that preschool children were capable of making moral judgments in both apology-restitution and guilt-innocence. Age and sex were significantly related to both moral judgment measures while intelligence and parent's occupation were unrelated to both measures of moral judgments.

Study done by Gill and Jaswal (2007) on a group of 450 children revealed that parent’s occupation was not significantly associated with learning values.

Parental occupation has been included as a predictor variable in the present study as there is no study in the field of distributive justice with respect to this variable.
2.6. Parenting style and distributive justice:

Parents play an important role since the day a baby is born. Most people will agree that parenting is not an easy job. Parenting style is a complex concept, which includes parents’ behaviours that work individually or in group to influence the children’s outcomes. In other words, parenting style is a psychological construct representing standard strategies that parents use in their child rearing. There are many differing theories of parenting style. One of the best known theories of parenting style was developed by Diana Baumrind (1966). She (1966; 1971) introduced three qualitatively different patterns of parenting style: authoritarian, authoritative and permissive. Later, she (1991) conducted extensive researches on parenting style and proposed the categorization of parenting style based on two dimensions. These two dimensions are parental demandingness and parental responsiveness. Parental demandingness (also referred as behavioural control) refers to “the claims parents make on children to become integrated into the family whole, by their maturity demands, supervision, disciplinary efforts, and willingness to confront the child who disobeys” (Baumrind, 1991). Parental responsiveness (also referred to as parental warmth or supportiveness) refers to “the extent to which parents intentionally foster individuality, self-regulation and self-assertion by being attuned, supportive and acquiescent to children’s special needs and demands” (Baumrind, 1991). Based on these two dimensions a typology of four parenting styles such as authoritarian, authoritative, permissive and uninvolved parenting style has been created. This is presented schematically in Figure 2.6.1.

Responsiveness

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Figure 2.6.1: Schematic representation of Baumrind’s (1991) typology of four parenting styles
The above figure indicates that authoritative parents are highly demanding and highly responsive. These parents use disciplinary methods that possess a rational and supportive quality, but not punitive in nature. The goal of these parents is to facilitate cooperative-oriented and self-regulated children. These parents give clear rules that are enforced but rules are not absolute. Authoritarian parents are high on demandingness and low on responsiveness. This parenting style consists of punitive style of discipline and includes parental demands that are expected to be strictly followed. Permissive parents are low on demandingness and high on responsiveness and uninvolved parents are low on both responsiveness and demandingness. These parents use no rules, no monitoring and no supervision on their children.

There are ample research evidences that show parents play significant roles on their children's moral development and delay in moral development are related to perceptions of poor parenting and conflict in parent-child interaction styles (Lopez et al., 2001; White & Matawie, 2004; Walker & Taylor, 1991). Studies in the field of parenting style and moral development revealed the following things:

Authoritative parenting style tended to facilitate the development of moral reasoning more effectively than any other parenting styles (Maccoby & Martin 1983; Pratt et al., 1999; Steinberg, 2001).

Boyes and Allen (1993) assessed moral reasoning and parenting style of grade 10 and 12 students (N=74) by following different methods. The purpose of the study was to test whether adolescents of authoritative parents exhibit greater preference to post-conventional moral reasoning than adolescents of authoritarian parents. They found that the adolescents of authoritative parents used the highest level of moral reasoning (post-conventional moral reasoning) followed by adolescents of permissive and authoritarian parents.

Pratt and Diessner (1994) reported that adolescents' moral reasoning is predicted positively by authoritative parenting style and negatively by permissive parenting style.

Pratt, Arnold, Pratt, and Diessner (1999) suggested that adolescent and college students' moral reasoning were predicted positively by authoritative parenting style and negatively by permissive and authoritarian parenting style. The study also showed that parents who were very responsive to their adolescent's voice generally tended to promote mature moral reasoning in their children. In this particular study, high responsiveness in mothers was linked to progression in moral reasoning over a two year period.
The study done by Walker and Hennig (1999) revealed that parenting style is influential in children's moral development. They found that parental hostility and conflict disrupted children's moral development and parental support and encouragement tended to facilitate moral development. They also found that more support and attention from parents could be effective in positive moral reasoning of children. The study also suggested that a parent who is child-centered, supportive and attentive would help the child to advance to more mature levels of moral reasoning.

In contrast to the above findings on parenting style and moral development, Palmer and Hollin (2001) found that mature moral reasoning was promoted by low levels of child-parent interaction and low parental involvement.

Study conducted by Leman (2005) on 100 children (48 boys and girls) with a mean age of 10 years 7 months were asked to indicate what they thought an adult would say to justify a moral rule in five different scenarios. Results indicated that parenting style did not relate to the number of justifications that children thought adults would produce but did affect the types of justifications they thought adults would give. Children of authoritative parents thought that adults would use more justifications based on reciprocity or equality in social relations than children of authoritarian parents. The results suggested that children of authoritative parents do not perceive adults to offer a more discursive moral atmosphere than children of other parents do, rather these children were more likely than others to think that adults would justify moral rules specifically in terms of equality in social relations. An unexpected finding was that children of permissive parents tended to judge that adults would legitimize judgments by pointing to the consequences of action for other people.

Most of the literatures cited above suggest that parental support and encouragement facilitate the development of moral reasoning with a few exceptions. Only one research evidence on distributive justice reasoning and parent-adolescent interaction is reported below:

Marshall, Adams, and Ryan (2001) conducted a study on the determinants of adolescent distributive justice reasoning skills in a face-to-face resource allocation task with parents (mothers and fathers) of 45 families. The finding revealed that adolescents’ distributive justice reasoning was associated with family cohesion, mother-adolescent communication, and empathy, but not with father-adolescent communication, gender and socio-economic resources.

Paucity of research in the field of distributive justice and parenting style has led the present researcher to include this variable as a relevant variable for the present study.
2.7. Altruistic behaviour and distributive justice:

Vaughan and Hogg (2002) defined altruism as a special form of helping behaviour that shows concern for human beings and is performed without expectations of personal gains. Callan and Gallaois (1991) defined altruism as an action that increases the welfare of others, regard for one's self interest. According to Damon's theory of distributive justice the concept of reciprocity comes when a child enters Level 1-A i.e. when the notion of equality emerges. Because children at Level 0-A (prefer self-interest) and Level 0-B (prefer physical characteristics of recipients) are egocentric and have little or no understanding of reciprocity.

Blotner and Bearison (1980) studied the relation between subjects' level of justice reasoning and altruistic behaviour. The sample consisted of 120 males from kindergarten to grade five ranging in age from 4-11 years. The result suggested that altruistic behaviour differed with respect to different levels of distributive justice. Subjects integrating both need and merit principle of distributive justice i.e. Level 2-B (Damon, 1977, 1980) showed significantly greater helping and sharing in all conditions than those who preferred merit (Level 1-B) and physical characteristics of recipients (Level 0-B).

A study showed that moral reasoning is the significant predictor of self reported altruistic behavior (Maclean, Walker & Matsuba, 2004). Children's and adolescent's altruistic behaviour was positively correlated with needs-oriented reasoning and negatively related to hedonistic reasoning (Eisenberg, 1986; Janssens & Dekovic, 1997).

Insufficient research in the field of distributive justice and altruistic behaviour has prompted the present researcher to include this variable as a relevant variable for the present study.

2.8. Anger and distributive justice:

Anger, a negative emotion, is a strong feeling of displeasure or hostility. In other words, anger is a strong passion or emotion of displeasure or antagonism, excited by a real or supposed injury or insult to one's self or others, or by the intent to do such injury. Spielberger et al., (1983) classified anger into two types: state and trait anger. State anger is defined as a temporary emotional state while trait anger is a general tendency to react angrily to perceive situations. (Spielberger et al., 1983). Anger is different from aggression. It is a normal emotion and is present in everyone. Some people in general are more angry in nature than others. Aggression is an action carried out with an intention to harm another person.
No research evidence has been found on anger and distributive justice. Researches were found regarding aggression and moral reasoning among offenders (deviant population). But as the present study deals with school going adolescents (normal population), anger is selected as the relevant variable to study its' effect on distributive justice because it is a universal human personality trait. Some people are more angry than others and are unable to control their anger feelings effectively. Intense anger predisposition sometimes blocks reasoning ability and impairs decision making. So the present study wants to determine the relationship between the pattern of distributive justice and predisposition to be angry most of the time (trait anger), effective controlling of anger (anger control).

Schonert-Reichl (1999) conducted a study on moral judgement and aggressive behaviour and suggested that adolescent boys who scored lower in moral judgement were more aggressive in nature.

Palmer (2005) examined the association between immature moral reasoning and aggressive behaviour and revealed that children's early socialization experiences influence the development of moral reasoning and other social cognitive processes such as social information processing, cognitive distortion. The study also displayed that social cognitive processes and moral reasoning played a role in how individuals behave in social situations, including the use of aggression. The study implied that the use of multi-modal interventions in reducing aggression such as Aggression Replacement Training are needed to be considered.

Keller (2006) investigated the moral motivation of 2482 eight years old children. The finding showed that Children, who thought themselves as aggressive, showed less moral motivation than children, who assessed themselves as prosocial.

2.9. Studies on distributive justice in Indian context:

In case of India, there is dearth of developmental studies related to distributive justice. Some studies (Parikh, 1980; Saraswathi & Sundaresan, 1980; Snarey, 1985) provided evidence of Kohlberg’s moral developmental stages but these studies dealt with moral reasoning, not distributive justice. Some studies on distributive justice in Indian context are presented below:

Chatterjee (1984) investigated the effect of inequitable reward allocation and the allocator's justification, on recipient's satisfaction and on coalition mobilization. Her findings indicated that recipient subjects expressed a preference for equity based reward allocation. With respect to the justification given for inequitable allocation, subjects expressed less dissatisfaction
when the justification was need based, than when it was based on norms, chance or contributions. Moreover, in terms of the action that the subjects would take in response to inequitable allocation, subjects ranked “taking to the leader” as the first option, rather than coalition mobilization against the leader. Chatterjee’s study was perhaps the only Indian study that indicated a preference for equity (in any form) in reward allocation. An explanation for these findings could be that the investigations involved a structured work situation, and the evaluations for fairness were taken from the recipients’ rather than the allocators’ point of view.

Sinha (1985) examined developmental differences in the use of information integration in reward allocation. Children studying in class I, III, V, VII, and IX were asked to distribute coins or toffees in other-only allocation (where the allocator is a third party, not a co-recipient) and in self-other allocation (where the allocator is a co-recipient) situation. The findings were at variance with the developmental trend predicted in the Western studies (Hook & Cook, 1979). At all age level the ratio rule (i.e. equity) was followed, but the difference in the amount of reward decreased with advancing age, as did the difference between high and low performer. This suggested that ordinal equity developed from proportional equity, which is the converse of that predicted by the cognitive-developmental approach.

Sinha, Hassan, Carment, and Krishnan (1986) did a study in which scenarios were presented to college adults with instructions to indicate how they would distribute a given rewards if they were in allocator’s position. In this study, the nature of reward or resource (for example, money, goods, recommendations), the closeness of the allocator-recipient relationship (brother, relative or acquaintance), and self-other versus only-other allocation, were included as variables. Findings revealed that there was an overall preference for equality over need or equity, but this preference was significantly modified by the allocator-recipient relationship. As expected, a brother was given large share of the reward or resource than either a relative or an acquaintance, especially in the self-other allocation condition. Moreover, when the resource was relatively concrete, the frequency of choosing need was higher than in case of other kinds of resources, but this finding was also modified by an interaction between the nature of the resource and the allocator-recipient relationship.

The relative preference between equality and equity as shown in actual reward allocation by school going adolescents and college students was examined by Krishnan (1987). Findings from both samples indicated an unequivocal preference for equality over equity. The possibility of self-interest in allocation was allowed but equality was followed regardless of whether the
allocator had a higher or lower input than the other person, and whether he/she was a co-reipient of the reward (in a self-other allocation). College students preferred to distribute rewards equally though individualistic or cooperative 'set' was provided during task performance.

Studies done by Krishnan (1987, 1995) showed no significant age differences in actual allocation between 10 to 12-year old and 11-13-year-old children and between 15 to 16-year-old children. Her studies revealed that equality was adopted significantly more frequently by the younger and older Indian children.

Mishra and Mishra (1991) conducted a study among Indian children adopting a developmental approach (Damon, 1981; Enright, Bjerstedt, Enright, Lapsley, Buss, Harwell, & Zindler, 1984). Results of this study indicated that age and gender interacted significantly to influence the allocation judgements. In general, girls showed more maturity in their allocation judgement than boys and this gender difference was greater at the younger age levels. The older subjects showed more behavioural reciprocity in case of reward allocation than younger subjects.

Study conducted by Aruna, Jain, Choudhary, Ranjan, and Krishnan (1994) suggested the preference for equality and /or need, and a generally low preference for equity among Indian subjects.

Vanikar (2006) conducted a study on Indian students (34 girls and 40 boys) aged between 4 years to 10 years by following Damon’s research methods but he adapted distribution tasks to the cultural context of the study through the use of Indian names and culturally relevant situations. The results suggested that the Indian students followed an age related progression on positive justice development similar to Damon’s theory on the hypothetical distribution task. The younger children in this study did not use highly egocentric reasoning as revealed in Damon’s findings. Furthermore, while Damon (1977) found no influence of sex-related socialization on positive justice reasoning, the findings of this study suggested that overall girls seemed more prone to egalitarian distribution and more willing to give up their claims in order to avoid conflict. The results of the study showed the role of culture related socialization on children’s positive/distributive justice development.

In summary, some studies on distributive justice in Indian context indicated preference for equity based reward allocation whereas some other studies revealed unequivocal preference for equality over equity. More studies are needed in Indian context especially on adolescents as there is lack of researches on the pattern of distributive justice in Indian context.
Review of literature cited above reveal that most of the studies deal with moral reasoning, but not distributive justice except studies on cognitive-moral developmental stages and distributive justice. Few studies have been found regarding gender and distributive justice. Research findings cited above have revealed certain research gaps, which can be stated as follows:

- The effects of different demographic variables (age, gender, medium of instruction in school, economic background, parental education, mother’s occupation, father’s occupation and family type etc.) on the pattern of distributive justice have not been studied by using objective criteria of measurement.
- Lack of studies regarding the relationship between socio-cultural variable (parenting style) and distributive justice. Most of the researches cited in this chapter have revealed the effect of parenting style on moral reasoning in children.
- Studies regarding the relationship between personality trait such as altruistic behaviour and anger with distributive justice are rare. There is only one study (Blotner & Bearison, 1980) that reveals relationship between altruistic behaviour and distributive justice.
- Most of the studies in the field of distributive justice have been conducted on children and not on adolescents.
- Moreover, there is serious dearth of researches on the pattern of distributive justice in Indian context except some studies on age and distributive justice.

To overcome these research gaps, it seems reasonable to initiate a research work that investigates the pattern of distributive justice and its’ correlates among school going adolescents of India.

The comprehensive research design and objectives of the present study are presented in the next chapter.