

THE ROLE OF PLAY IN THE DEVELOPMENT OF
PRESCHOOL CHILDREN

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A thesis

submitted in partial fulfilment of the requirements for the
degree of

Doctor of Philosophy

in the

Quaid-i-Azam University

National Institute of Psychology
Centre of Excellence
Islamabad, Pakistan

1992

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الْحَمْدُ لِلَّهِ الَّذِي

Dedicated to:

Ali, Sabeen and Amna

Whose existence revived my playfulness

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ACKNOWLEDGEMENTS

On the completion of this dissertation it is a pleasant opportunity to express my first and foremost gratitude to Dr. Z. A. Ansari for the guidance and encouragement which I received consistently. He was always helpful, both as my research supervisor and as the Director of the Institute.

I am indebted to Dr. I. N. Hassan, who in the early phase of the study supervised my research, and later on remained a source of inspiration for me.

Special thanks for Mrs. Quratul Ain for her sincere help in data collection throughout the study. The contributions of Miss. Anila and Miss. Samina in data collection at later stages are also thankfully acknowledged.

The Principal and the staff of The Play School deserve grateful acknowledgement for allowing me to conduct the study in their school. The lively and innocent children who served as the subjects, deserve a note of thanks for giving me a glimpse of the wonderful attribute of their life i.e., the play.

The help of Mr. Sabir Qamar Chaudhry, Mr. Azhar, Mr. Aslam, and Mr. Usman is thankfully acknowledged in data analysis and word processing. The assistance of Mr. Azhar in typing the manuscript is specially acknowledged.

Lastly, I am obliged to my family and friends for extending emotional support throughout the study, specially during the last semester.

S.P.

ABSTRACT

Play among preschool children is a highly well researched phenomenon. The present study aimed to find out relationship of play in child development. A series of three pilot studies were carried out to develop (a) an insight in to the play behaviour of preschool children— study 1, (b) try-out the play material, observational schedule and play activities— study 2, and (c) to develop a scale for the measurement of play behaviour of pre school children— study 3. These three observational studies were carried out on children at day care centre, in the family situation and also in play groups, specially created for the purpose. Play behaviour was rated on a five point rating scale. Inter-rater reliability was established the observational schedule tried out in study 2 had 25 dimensions of play behaviour. In the pilot study 3, the observational schedule was tried-out on 40 children of preschool age children. As a result of the Factor analysis 10 dimensions out of the 25 dimensions were retained in the final scale. These 10 dimension had the factor loading of higher than .70 on the factor of playfulness. Internal consistency was computed by Cronbach's Alpha coefficient, which was .94 for the pilot study and .98 for the main study. The objective of the main study was to find out the relationship of intellectual, social and emotional development and home environment of children with playfulness. The main study was conducted on 40 children, 20 boys, 20 girls age ranging between 42-59 months, mean age 49.60 months and *SD* 4.02. Play behaviour was observed during 5 sessions of free play, of 90 minutes each, on

Nevertheless, there are researchers who have defined the concept objectively and within specific theoretical framework.

Generally play is defined by emphasizing what the play is not, rather than, what it is. A very popular dimension of defining play is to contrast it from work. Victorian society and industry needed to define play and leisure as rare, abnormal activities that were opposite of normal activities. In middle ages children were seen as miniature adults, inferior human beings, having no childhood. Whenever physically possible, earliest attempts were made to integrate them into adult life. Usually play is seen as something children do and adults do not. It gives the impression that work cannot be playful. Whereas, in reality sometimes work may be playful and play can be experienced as work. Anthropologists have often found that the categorical distinction of work and play (labour and leisure) is a characteristic of industrialized societies and is absent in non-industrialized cultures (Schwartzman, 1978).

The traditional attitude towards play is that it is some thing childish and non serious. Whereas, work is considered the most acceptable way for a person to demonstrate his worth (Hurlock, 1972). Generally, work and play are considered, two extremes of a pole that cannot overlap each other. Work with some element of play it would not be authentic work. Similarly if play is contaminated by some criteria set for work, will loose its charm and worth.

Klinger (1971) emphasized that play is the form of behaviour that is separated from the usual motivational context

of the work, learning or problem solving. It is the behaviour other than consummatory behaviour, instrumental behaviour, competition with a standard of excellence, socially prescribed institutionalized or ritual behaviour.

A cricket match with strong motivation to win should be excluded from the category of play, whereas, the act of memorising ABC in rhyme, enjoying a T. V. programme, learning many things while watching a cartoon on video, these can be categorized as play. When the activity is directed towards an end it would not remain play. The content of behaviour by itself should not be categorized as play or work. Rather, it is the attitude and the spirit that makes the segment of behaviour play or work.

Fingarette (1969) questioned the high cultural value traditionally attached to work and low cultural value attached to leisure. The argument was based on the evidences that social esteem is no longer limited to those who work hard but is also given to those who play hard. The old sayings and proverbs conveying that playing is waste of time, it spoils the life or it will force you to repent, are loosing their validity and popularity.

The work and play should not be segregated categorically. Both aspect of human life pattern are important for a healthy growth and well being of the personality. Play and work both are equally valuable for the healthy growth of the personality. A balanced ratio of play and work is essential for happy living. A

categorical distinction between play and work is neither possible nor desirable.

The researches in the fields of play and work behaviour have helped in concluding that these aspects of human life should not be categorically independent and segregated. Schools have acknowledged the educational value of play by introducing it into curriculum. Increasing emphasis on preschool education through play reveals the acknowledgement of the educational value of play. Manufacturers of toys have also realized the worth of overlapping of play and work. The toy that is high both on fun and education becomes the best seller toy.

Theories of Play

Many psychologists, anthropologists, philosophers and intellectuals have attempted to provide theoretical framework in order to understand play, its properties, functions, origins and indicators.

It was the mid of the 19th and the beginning of the 20th century that brought play in to the focus of systematic theoretical framework and research. The classical theories of play formulated by Herbert Spencer, Karl Groos (1901), Patrick (1916) and G.S. Hall (1908) provided strong base for the study of child development and education.

Herbert Spencer considered play as an expression of surplus energy. He stated that the children play to blow off

their energy. To further elaborate his notion he applied it to the evolutionary process also. He observed that the animal on the lower scale of evolution spend more time and energy to protect themselves from enemies, therefore they do not have surplus energy. Consequently, play does not exist in such species and is only a characteristic feature of higher animals. They have better skills and more energy, therefore, can afford to play. Schiller (1759-1805) gave similar explanation by labeling play as an aimless expenditure of exuberant energy.

This theory has been very widely criticized for not giving due recognition to the role of play in child development by looking at it as an aimless activity. According to the critics of this theory play should be considered much more than just the consumption of the surplus energy (cited in, Bjorklund, 1978). Children do not play only because they have nothing else to do, rather, play provides them with them gratifications and serves them functions as well.

A somehow contrary explanation of the play behaviour was made by Patrick in 1916 (cited in, Bjorklund, 1978) under the name or relaxation theory. It assumed that child restores his energy while playing. Although it highlights the positive contributions made by play in the field of learning, yet fails to explain why and how it happens.

Darwin (1872) was interested in the expressions of emotions in animals and men and the connections between human and animal behaviour. His interest in smile of humans

and ape babies stimulated the interest of his followers in the area of play of animals. Karl Groos was one of them. He concentrated on the play of animals in the beginning and then shifted his emphases on the play of humans. He was a Dutch anthropologist, professor of philosophy at Basle University. His books *The Play of Animals* (1896) and *The Play of Men* (1901) are considered the first two books, entirely devoted to the subject of play. He got fascinated by the inherited instinctual pattern necessary in the animals to struggle for survival.

While observing the play behaviour in animals he realized that those animals, who have more complex forms of adaptation are more playful. He inferred that the youthful play was required to practice a variety of behaviour for which inherited instincts might not be wholly adequate. Later he extended this thesis to explain play behaviour in human beings. Human child with a long childhood has more time to play and pre-exercise the skills needed for adult life. He introduced the pre-exercise theory or the practice theory, which postulate that play is a form of practice for more serious adult behaviour. It has become one of the commonly accepted explanations available in the literature (Schwartzman, 1978).

The next explanation of play behaviour was proposed by G. S. Hall, in 1904, who had special interest in evolutionary theory and also in education. Under the name of recapitulation theory he gave special attention to the contents of play. It placed the motive of play in the past rather than in present or future. He believed that the child relives the history of the race. The child

while playing reenacts the experiences handed over to him by his ancestors. In support of this notion G. S. Hall mentioned the pleasure child gets from playing with water or by climbing over the trees. Such play contents can be connected with his fish-like ancestors' joy with water or the habitat of anthropoid apes' in forest. Although the recapitulation theory was very widely criticized and rejected, but its role in generating interest in child's behaviour cannot be ignored.

The psycho-analytic explanation of play gave a new perspective that was accepted by many followers of Freud and his school of thought such as Melanie Klein, Anna Freud, Hellersberg (see , Schaefer, 1979). Freud's main interest in evolving the psycho-analytic theory of personality was the treatment of mental patients. The basic assumption underlying all his formulations was that no behaviour can be considered as uncaused. Behaviour of adults as well as of children, always has some motivation, conscious or unconscious. Freud did not even spare the slips of tongue and forgetting. He believed that each segment of behaviour has a cause and a purpose; so is play.

Originally, Freud examined the fantasy of adults and concluded that fantasy helps the person to hallucinate about the object of gratification in the situation of severe deprivation. This hallucination serves as a foundation of ego development. The child learns to tolerate the delayed gratification of his needs and to get gratification in the absence of gratifying object. This learning is the basis of play in which the child tries to fulfil his unsatisfied wishes and to overcome the anxiety provoking

situations. The opportunity of catharsis during play helps the child to resolve conflicts in the absence of a realistic situation. Freudian explanation of play served as a significant milestone in the history of play. Buhler (1927), Anna Freud (1936), Peler (1954) and Erikson (1963) further elaborated Freud's explanations (cited in, Schaefer, 1979). They highlighted the role of conflict and deprivation in the development of play and also about play's adaptive role in the mastery of anxiety.

Erikson (1963) emphasized that play helps in the formulation of identity. The child learns to cope with reality through play and masters the skills that are required for encountering with the life. According to him the spontaneity of play is the most significant attribute which helps the child to mould it according to his needs and requirements. This aspect of play contributes in the formation of identity. Erikson emphasized the role of play in the mastery of reality rather than anxiety. Adults can positively contribute in childhood play by an opportunity to learn and experience the real world.

Many psychologist, especially during first half of the twentieth century, those belonging to the Psycho-analytic school of thought, emphasized the therapeutic role of play . It was thought that the child who plays is trying to resolve some conflict or to fulfil some unsatisfied wishes. Gradually, the emphasis was shifted towards Ego Psychology. The emphasis on play as a normal adaptive behaviour highlighted it as an autonomous ego function. Singer (1973) considered the new ego psychological position helpful in bringing Psycho-analytic

observations in line with more general psychological approaches. It helped in the development of a cognitive orientation to play. Such an orientation is free of the difficult requirement of reducing all play to a very specific set of conflicts between id, ego, and super ego, and the elaboration of symbolism and inferences, that has characterized so much of the clinical literature of play produced by Psycho-analysts.

Play, according to Piaget, (1962) is merely a pole of behaviours defined by assimilation. Almost all the behaviour is susceptible of becoming play when they are repeated just for assimilation i.e., purely for functional pleasure. Piaget stated that play develops from the interaction of two fundamental characteristics of child's modes of experience and development i.e, accommodation and assimilation. Through these modes of behaviour the child attempts to initiate and interact with the environment. Integration of the externally derived percepts or motor action is attempted in to the available cognitive schemes of a particular given stage. Play is assimilation of reality into the ego, as distinct from serious thoughts in which assimilating process is in equilibrium with accommodation to other persons and things.

Types of Play

Play is an extremely broad concept that encompasses a large variety of segment of behaviour. Unless these are classified, a systematic study of the phenomenon may not be possible. Classification of play has been attempted by many theorists from

different perspectives, such as the age level, the material used in play, the movement level, the psychological processes involved, modes of behaviour, interactional level, etc. The list is too long, however, a brief account of the classification systems of play is as follows:

Piaget (1962) classified play from the perspective of developmental stages of the child. The cognitive processes and abilities required, are the basis of the classification. He categorizes play as: (a) Practice or sensory motor play; (b) Symbolic or representational play and (c) Games with rules.

Garvey (1977), categorised play on the basis of the resource material being used in the play. This typology classifies play as: (a) Play with motion and interaction; (b) Play with objects; (c) Play with language; d) Play with social material and (e) Play with rules.

Play can also be classified according to the modes of behaviour. It emphasizes on the style in which the child would interact with the environment. This classification labels play as: (a) Visual Exploration; (b) Motor exploration; (c) Pretend play; (d) Role playing and (e) Communication play.

Bjorklund (1977) classified play based on the interaction. According to him all play behaviour can be broadly categorised as: (a) Object play: Children play mainly with materials and (b) Social play: Peers are more important while playing.

Parten (1932) (cited in, Bjorklund, 1978) studied the social participation of preschool children. The systematic observation of the play she made, was later considered as a classification system. It includes: (a) Solitary Play; (b) Onlooker Play; (c) Parallel Play; (d) Associative Play, and (e) Cooperative Play.

Value of Play

Plato and Aristotle are often cited as the pioneers who recognized the practical value of play. Plato used apples to teach arithmetic to his pupils. Aristotle (Millar, 1976) considered childhood play as indication of what the child would be as the adult. Period of seventeenth to eighteenth century is distinctly known for the growth of knowledge in learning and education of children.

Rousseau (1712-1778) was the first one who emphasized the role of play in child development specially in learning. Froebel (1782-1852) evolved a specific teaching method which helped him to prove himself a good teacher. But it could not provide any systematic explanation of play behaviour due to lack of knowledge in child development. Froebel, had a very unpleasant childhood due to his stepmother. It made him determined to bring happiness in the life of other children. From an ordinary teacher he turned into the originator of Kindergarten system, which literally means children's garden. He had a strong conviction that play can be used to make the child learn the things that are apparently non-interesting for him. He believed that the role of a teacher should be of a

gardener. The children should be allowed to un-fold their potentials in a playful environment. In the perspective of the socio-political system of that period, the amount of freedom recommended by Froebel was unprecedented. It resulted in a complete ban on this system of education in his country within 13 years of its start. During his life time he could not see his system getting recognition.

Montessori (1870-1952) was originally a medical doctor. She treated mentally retardate children in an asylum so that they could join the main stream schooling afterwards. The success of her interventions did not give her much satisfaction, as she got interested in discovering the reasons of their previous low performance. She considered fantasy as a product of the mind that lost its tie to reality. Although she insisted on allowing the natural inclinations of child and she also accepted that children are naturally inclined towards fantasizing, nevertheless she insisted that we should try to help child to overcome these tendencies.

Froebel and Montessori were influenced by the ideas of Rousseau about childhood, however, they could not safe guard themselves from the Victorian ideas of that period. In spite of advocating play, they attempted to restrict and discipline it and the spontaneity of play was tamed.

As it has been indicated earlier, play is a special characteristic of childhood, the importance of play is the development of human beings has been a keen interest of

researchers. The number of empirical and observational studies of play has increased a lot. Koolj in a survey of the last 15 years researches conducted by himself (1989) feels that since play is a complex behaviour, the need of dialogues between individual and environment should be emphasized. The theoretical disagreement and disparity in the explanations of the concept of play gives justification for adopting a pragmatic approach in the study of play.

Childhood and Play

The importance assigned to the role of play in child's development is directly related with the concept of childhood in a society during a particular period. A brief review of the historical changes in the concept of childhood would help in understanding the changing attitudes towards play also.

Childhood is an arbitrary division in the sequence of human development. The decision of the age at which a human infant should be stopped being called child, is difficult. Drawing a permanent line between childhood and adulthood is neither possible nor desirable.

At the time of birth child is a helpless creature and he gets the satisfaction of his basic needs by the elders. Throughout the period of childhood, the youngsters are dependent on elders for the satisfaction of their basic needs. Childhood of human infant is the longest as compared to other species. A simple observation would highlight the unidirectional nature of the

relationship of the length of childhood and the level of evolution. The lengthier the childhood period, the higher, would be the evolutionary level. As mentioned by Barnett (1990) Groos postulated that the length of play period varies directly with the organisms position on the phylogenetic scale: the more complex the organism the longer its period of immaturity and hence the longer its period of play (cited in, Barnett, 1990).

During childhood the infant is dependent on elders for the psychological needs as well; such as love, security, new experiences, praise, recognition, responsibilities and sacrifice. These needs are gratified by elders, and in-turn, the child also learns to pay it back later to the younger. This characteristic makes the human child unique and superior from other species.

The children of the last decade of the twentieth century are luckier than their predecessors for being in a world of concerned adults. During medieval period in Europe children were considered as miniature adults ; without specific needs and demands. Being small in size, they were also considered in need of smaller clothes, less quantity of foods, smaller place to sleep and less attention. This type of attitude is reflected in the paintings and sculptures of 10th century. Children were depicted as small adults through being dressed-up in adult fashion and working like adults. In the paintings of 16th century children were depicted as dressed uniquely of their own style.

It was only by the 17th century that the world of children began to be separated from the world of adults. The idea of

treating child as an inferior adult was challenged by John Locke (1632-1704). Childhood was considered as a formative period and children's need of curiosity and need to explore their learning potentials were acknowledged. He believed that the experiences during childhood determine what the child would become in adulthood. However, he could not acknowledge the significance of individual differences.

Jean-Jacques Rousseau (1712-1778) highlighted the importance and uniqueness of childhood. He believed in the positive nature of the child. His assumption was that the abilities of children would unfold through maturation and adults should provide experience and stimulation at proper stage. Johann Heinrich Pestalozzi (1746-1827) attempted to implement Rousseau's ideas in to education. It provided a baseline for the systematic study of childhood and child development. (Clarke-Stewart & Friedman, 1987).

A survey of American families for the period of 1730-1860 was carried out by Stephen Brobeck (cited in Lauks, 1981). He found over 1,000 portraits of adults as compared to 139 of children. It might be that they wanted their future generations to be remembered only by their adults. It was also found that the deceased infants were buried any where without any ceremony. Children under seven were not given any respect. Sexual abuse of children was a common thing and they were treated as a little more than a plaything. Family was a moral, social and economic reality, not a sentimental one.

The developing countries, even today, do not show as much concern about children's specific needs and demands, as the developed nations do. It may be due to financial constraints and developmental priorities. The economic conditions do not allow for a long childhood care. However, the awareness is there that children and adults have different needs, demands, feelings, and potentials. Now it is being realised that the period of childhood should be considered as a period of innocence, joy, learning and development.

Play produces a greater variety of behaviour with minimum consequences. Therefore, children feel free and relaxed at playing and exploring their environment. It broadens the child's experiences and thus increases the number of creative responses available.

Research on play behaviour is a rapidly growing interest in western countries. People have started acknowledging the contribution of play in various aspects of child's life. In Pakistan very few researches have been done on play (Pervez, 1988). Parents and teachers do not realize the positive and indirect contribution of play behaviour in child development. The value and significance of play and the role that it plays in the personality development, can be seen from various angles and perspectives.

CHILD DEVELOPMENT

Process of Development

The journey of development from infancy to adulthood, is a long way. Child's capabilities, potentials and characteristics get unfolded at various stages and through various aspects of development, such as physical, social, emotional and mental. The developmental process is a combination of many factors operating together. It is a set of progressive changes in attributes and characteristics. The criteria of development may differ for a particular society, at a particular time. A set of specific motives, beliefs and style of behaviour, promoted by a society may become an indicator of development for that particular society at a given time. It partially depends on the realities of society and social changes may alter it. For example, in a society, very strongly adhering to pardah system, a woman not having capability to purchase things of daily use from a grocery store, would not be considered as an immature person. Whereas, in a western country or even in most of Pakistani big cities, she would be considered socially immature.

Through the developmental process the child adapts to the environment, gradually over a period of years. It can be viewed from a mechanistic approach or dynamic approach. The mechanistic approach would see the developing child as passive and recipient of external stimuli. This approach would label the factors in development as independent or dependent variable, in a stimulus-response relationship. Whereas, the dynamic

approach would perceive the child as inherently active and acting upon the environment. Various aspect of development may be inter-related. Instead of having cause and effect relationship, these aspects should be considered as having a circular or spiral relationship in which the various elements, configured in an organized way, make the whole (the person), which is more than the sum of the elements. Although the child is influenced by the environment, yet, the influence is not passive and unidirectional. The child also would influence the environment as an intentional and active mediator with his plans, motives desires, goals etc. Selection and manipulation of various segments of the environment is also possible.

Intellectual Development

It is the development of child's abilities to know the world around him. The processes which helps child in the acquisition of the knowledge reflects the intellectual development. Child's first knowledge depends on perceptual experiences and actions only. The basic sensations are the gateway of this world for a new born child. It is through seeing, hearing, touching, smelling and tasting that child develops cognition about the world around him. intellectual development of a pre-school child is attained through the activities he is capable of preparing the type of queries he makes, the level of reasoning and problem solving, the explanations of the every day phenomena, etc. All these are the indicators of the child's intellectual development.

During late 19th and early 20th century the intellectual development was focused on the development of intelligence which was measured through intelligence tests. The concept of IQ help in popularization of the role of Psychology in many fields such as education, army, industry etc.

Intelligence is usually considered as sum of many capabilities such as memory, reasoning, information, numerical abilities. It is believed that intelligence is a stable and static ability. The tools developed to measure intelligence have been criticized for not taking into account the experiences of minority and sub-cultural groups.

During early 1960s, many developmental psychologists developed a new and global perspective of intellectual development due to the influence of Jean Piagets theory of cognitive development while giving an integrated view of cognitive development. He gave an active role to the child in the development of cognition. This brought about a major change in the way development of intellect proceeds.

Social Development

Social development means acquisition of the ability to behave in accordance with social expectations . The child when born has many potentials but it is only by the demands of the society that the behaviour he learns to exhibit is shaped. The behaviour child exhibits, is the product of the process of socialization plus his personal capabilities. Children learn to

narrow down the range of his potentials and demands in accordance with the standard of his group. For example, a child feels hungry but, how and when he would asks for food, depends on the process of socialization. A preschool child would know through social development that the food would be served only at certain time at a certain place and by a certain person. Similarly, an older child would also learn what type of food would be suitable for dinner, lunch or breakfast.

Social development makes the child predicatable for behaving in certain social situations in certain style, which is approved by the society. Social development also implies the learning of social roles, in which gender role is very important. In most of the societies children from the very beginning learn to perform certain roles specific to their gender. How strictly one has to adhere to these gender specific roles would vary from society to society. Certain societies very strongly and in a clear cut fashion categorize the expected gender roles, whereas, some allow a lot of overlapping.

Social expectations are important determinant of social development. A child has to behave in a way which fulfils certain social expectations of time. These expectations are some times also called Developmental Tasks. In every culture people learn certain behaviour patterns and skills more easily and more successfully at some ages than others (Pervez & Haque, 1990). The group then starts expecting from other persons to behave according to that time table of development and consequently

the tasks become the indicator of level of the social development.

The social development as a result of the process of socialization is reflected in the social developmental tasks which, the child can perform at various levels. The child during the preschool years, i.e., 3-5 learns certain tasks for every day life, such as dressing, bathing, eating etc. This is the period which is important from the point of view of learning of gender role, child's relationships, peer group relations and the identity of the self. For a pre-school child it is essential that he should learn to be independent from his mother and should learn to remain away from mother at least for few hours. It is a period of preparing the child for spending many hours in the school where child would not be able to call the mother for the satisfaction of his physical and psychological needs. Therefore, this a an essential requirement of the social development during pre-school years that the child should develop autonomy (Clark-Stewart & Friedman, 1987).

Emotional Development

Emotional development means the variation in emotional functioning over the course of life span. Conceptualization of emotional development is difficult because of the complexity of the construct and also because of a theoretical disagreement about the functions that the emotions serve. Emotional development is a multidimensional construct that has components of physiology, cognitive attitudes, expression and

social approval. These components have the developmental etiology and time table, which makes it complicated and difficult to generalize about the nature of emotional development as a unitary construct.

Despite theoretical disagreements about the nature of interaction between various components of emotional expression theorists agree that emotional functioning has clear developmental trends. For example a biological preparedness for emotional expression is present at the time of birth which helps in child rearing.

In due course child learns to express and experience the emotions in a more stable, regulated and differentiated manner. Quite early in life, the child starts understanding the socio-cultural acceptability of emotional expression (Brody & Carter, 1982). Child gradually learns to associate an emotion with a number of situations. A six months old infant would express his disgust only to a bad taste or a non-sweetened milk, whereas, for a two-year-old the disgust also may include situations in which a standard of cleanliness is violated (Brody, 1985).

In a review Brody (1985) found that with the development, the cognitive component of emotions becomes increasingly sophisticated. Child's ability to label and recognize emotions by situation and expression increases with age. Child also learns that feelings have internal, intra-psyche and situational components. The various components of emotions, that is the expression, recognition, physiology, cognitive attitude, social

approval, all have developmental trends, which make the growth of emotions also developmental. Emotions are very important in the life of a child. They add pleasure to everyday experience, prepare body for action, serve as a form of communication, interfere with mental activities, provide source of social and self evaluation, colour child's perception of life, effect social interaction, and affect the psychological climate (Hurlock, 1972).

Emotions covers a wide spread developmental span of life. They are present at birth but their development depends on maturity, learning and social approval. Emotions form a basic part of ones daily life in a way that the activities one does are operated by emotions. Emotions, positive or negative, provide an essential human characteristic and serve as a raw energy that can be channelized in a constructive or destructive style.

Emotional behaviour changes on a continuum as indicated by the physiological changes, observable behaviour pattern and the experience of emotional awareness. As the child grows in chronological age the emotion are developed from general to specific. During the preschool years the child's emotions are sharpened and differentiated. The child learns to associate feeling and awareness of emotion with objects, persons, events and situation.

Home Environment

Home environment has a significant role in child development. The most common indicator of home environment is social class or socio-economic status. Until 1965 socioeconomic status designations were employed almost exclusively as an index of how adequate a child's environment was (Caldwell & Bradley, 1984). The underlying assumption of the idea of using socioeconomic status as an indicator of home environment was that SES is related with the neighbourhood in which the child lives and socialization practices and motivational aspiration which in turn influence the occupation of the parents. Bloom (1964) was among the pioneers who brought a significant change in the style of measuring home environment in which emphasis was given to the individual's family environment, including assessment of achievement, language models, academic guidance opportunities for exploration, and development of intellectual interests and work habits.

Learning situation, language stimulation, physical environment, warmth and affection Academic stimulation, modeling, variety of experiences and punishment have taken by Bradley & Caldwell (1984) as important aspects to be observed for the measurement of home environment.

PLAY, CHILD DEVELOPMENT AND HOME ENVIRONMENT

Play has an extremely significant role in the development of a child. The child starts playing, we can say just after birth,

when he gives smile to his mother. The child even before language and the other means of communications are not attained the child, may express his emotions and feelings through play. The child acts them out through play and at times he himself become aware of these feelings and emotions through play only.

Although Freud called the dreams a royal road to the unconscious but Bruno Bettelhem (1967) has called play the royal road to the child's conscious and unconscious inner world. If one wants to help child and to understand the inner world of the child one should try to understand his play.

Play and Intellectual Development

Child learns through play. Significance of play in learning and in the development of mental abilities has been an important concern of researchers and philosophers. Rousseau (1712-1778), Pestalozzi (1746-1827), Schiller (1770-1835), Froebel (1782-1852) and Montessori (1870-1952) are among the pioneers who emphasized on the importance of play in the intellectual development of the child. It was only because of their efforts that play was recognized as an important attribute in child development.

Froebel and Montessori tried to explain play in educational context. They attempted not only to see why children play, but also how the play could be used for learning. They did not see play as a goal in itself, rather as a means through which the child

could be taught formal skills. Increasing emphasis on Montessori system, kindergarden system, preschool education, play groups, etc., indicates that people have started perceiving the importance of play in learning. If play is incorporated into the knowledge at an early stages, it might facilitate a better comprehension and a stronger base for future learning.

Later in early 20th Century, Piaget's (1928, 1952) contributions in highlighting the importance of play in the development of cognitive skills are most significant can not be denied. The aspects of intellectual development, which are most favourably affected by play, is thinking and problem solving ability (Barnett, 1990). Children acquire knowledge most easily through play across a variety of contexts. Play material and play activities help the child to learn the realities of life on one hand, while at the same time the child develops convergent and divergent problem solving abilities.

Dias and Harris (1988) found that the play group children performed excellently on syllogism with contrary facts. He further argued that the Make Believe context of play facilitates children's reasoning when the premises of the problems run counter to other experiences.

Dansky and Silverman (1975) found that the children who have been involved in free play before being asked to participate in situations requiring divergent thinking produced more varied and creative answers, as compared to the children who were

exposed to structured experiences before the problem was posed to them.

Pepler (1981) also found children previously involved in free play could produce better divergent thinking than the children who were not involved in the play. A wide range of researches are available highlighting the importance of free play, fantasy play, manipulative play, pretense play in the development of mental abilities, cognitive development and intellectual performance (Dansky, 1980 DeLoache; Sugerman; Brown (1985). DeLoache et al (1985) found that children not only learn to avoid errors through play but also learn the correction strategies during manipulative play.

Eckler and Weininger (1989), however, in a critical review of researches on play and cognitive development in preschool children, suggest that the role of play in cognitive development is inclusive, that this may be due to the problem of defining play. They suggest that the consequences of play would be influenced how cognitive development is being defined.

Pepler and Ross (1981) believed that play is a medium through which the child develops cognitive skills. In a study the effects to be they found beneficial, at least in the short term for which the study was conducted. They suggest that play should be used as a powerful tool for developing problem solving abilities by systematically relating the type of play experience to the desired learning effect.

Play and Social Development

Play of children has a significant role in social development of young children. While playing, the child learns to handle social relations, to solve social problems and also to come up to the social expectations, specially concerning the gender roles. Play can be used to mould children into good citizen. The play keeps them away from the idleness of the street and can produce excellent social consequences. The freedom being provided through play is not just to let them enjoy rather to stop them from being nuisance (Sutton-Smith, 1984). Cohen (1984) feels that at times the developing countries spend a lot of money on play grounds etc. It is not only because of the commitment to the case of children's welfare rather it is social engineering. The policy makers want to keep the children away from the idleness of the streets which was thought dangerous. In spite of the apprehensions that the play is promoted by policy makers to attain certain social gains; positive gains of play in social development can not be ignored.

Piaget (1962) outlined a systematic progression from self representation to the representation of more complex roles in play. He regards play responsible for the development of the ability to differentiate the symbolizer from the symbolized. A child playing teacher in a "School-School" game knows that she is not a real teacher. But at the same time she would be able to adapt the manners and qualities of a teacher she deserves in a teacher or wants to be in a teacher. In this social play through the representation of the role of a teacher the child would not

only learn about the demands being a teacher but also would be able to see the educational process from the perspective of the teacher.

Play has two fold role in social development. Firstly, it helps child in learning social tasks and social roles and secondly, it gives opportunity to understand the social development of the child.

A review of the researches during contemporary period reveals that there is long list of the studies carried out to highlight the role of play in child's social development (Barnett, 1990; Bruner, 1972; Garvey, 1977; Singer, 1973). Social play not only facilitates social development but also helps child to learn about his capabilities to handle social relations, social roles, and social interactions.

The role of play in enhancing social competence was highlighted by Connolly & Doyle (1984). It was found that those children who were more frequently engaged in fantasy play were more socially competent. It was suggested that fantasy play measures could be taken as significant predictors of social competence measures.

Play and Emotional Development

Emotional development of a child is greatly influenced by the type of play a child adopts during early years of his life. Play helps child in learning about the feelings of one self and also of

others. It gives him an opportunity to express his own emotions, negatives and socially non-acceptable; conscious or unconscious. It was the awareness of this aspect of play which highlighted the role of play in the treatment of children also. The therapeutic role of play has been highlighted by various schools of thought (Schaefer, 1979). They may have different explanations for the emergence of play yet agree upon the significant role that play has in the emotional development. Play provides ventilation to the emotions, helps in understanding conflicts of interpersonal relations and also to unlearn the maladaptive behaviour.

It is only through play that the child may assess his own abilities with out being embarrassed of the failures and can experiment with his capabilities with out taking the full responsibilities of his actions. Children allowed to master the traumatic experiences of childhood through play; would be able to lead an emotionally balanced adulthood (Barvett, 1990).

Bolig (1980) (cited in Barnett, 1990) found that the time children spend in play, helps in increasing the perception of control over stressful events. Barnett (1984) (cited in, Barnett, 1990) found that children use fantasy play to react the source of their distress. Through play they attempt to neutralize the anxiety.

Major changes in the conceptualization of emotions are pointed out by Campos, Campos &, Barnett (1989). They focussed on how emotions are elicited: what are the functions of emotion in the adaptation of human to their social and nonsocial

world and how emotions lay the basis for important enduring personality dispositions.

Play and Home Environment

Play and home environment relationship can be seen from two perspectives. Firstly, from the assumption that the home environment would affect amount, type and style of playing of the children and secondly the playfulness of children would affect the environment of the home.

Relationship of home environment and cognitive development is a well researched area (Gottfried, 1984). A large number of studies, longitudinal and short term, have concentrated on the understanding of the construct and the magnitude of the relationship between the two. Studies on relationship of home environment and demographic factors, social and configurational variables, and parental characteristics have also been carried out. However, the area of researches on the relationship of home environment and play has been touched upon by a lesser number of researches. The researchers interested in the area of play have concentrated on specific variables of home environment such as language, mother child interaction, socio-economic status etc. (Fein, 1981; Rosen, 1974; Friedrich-Cofar, Huston Stein, Sussman & Clewet 1977; Rubin, Maioni, Hormmg, 1976; Hoowes & Stewart, 1987). However, the relationship of play with the over all home environment is a much ignored area of the contemporary researchers.

THE PRESENT STUDY

Preschool age children have drawn the attention of researchers in Pakistan in the area of research on child rearing practices, socialization processes, cognitive development, etc. (Pervez, 1989), however play is still an ignored area of research in Pakistan. A preschool child is at the stage when his personality starts getting influenced from outside sources other than his home. Therefore, it seems important to look into the relationship of home environment also with play and other aspects of child development. The present study attempts to find out the relationship of the various aspects of development such as Intellectual, social and the emotional development with play of preschool children. It also aimed to investigate the relationship of home environment with play and other aspects of development of preschool children.

CHAPTER II

THE PILOT STUDIES

Play is rather a new field of research in Pakistan. This study is probably the first of its kind, in terms of scope and method in Pakistan. Therefore, it was felt necessary to carry out a few pilot studies before the main study. Three such studies were carried out to explore the field and obtain basic understanding of play in Pakistani children.

The first one was an observational study of preschool age children in homes and Day Care setting. The second and the third were the observations of play behaviour during play sessions specially organized for the purpose. These three studies helped in understanding the phenomenon of play in various situations and from various perspectives. The findings of the pilot studies helped in the conceptualization of the main study. The play material, play activities, and the observation schedule were developed on the basis of the findings of these studies.

Objectives

These pilot studies were carried out to:

- (a) have an insight into the play of preschool children—
Study 1,

- (b) tryout the play material, activities and group size and the observation schedule – Study 2, and,
- (c) develop a rating scale for measuring the play behaviour of preschool children – Study 3.

STUDY 1

During this study open ended observation was carried out to develop an insight into the play behaviour of preschool children. It was to know what are their play preferences and the activities. The type of activities were noted in which the preschool children keep themselves busy. It helped knowing what they could do and what they would like to do during the play sessions.

Sample

Two samples of children were taken for this study. The first sample consisted of ten children, who were observed at their homes. Among the ten children, selected for the purpose of observing the play behaviour of preschool age children, five were from the neighbours, three from the friends and, two were from the relatives . All of the children were raised in nuclear families, however, in four families the younger uncles and aunts of the children were residing temporarily. None of the mothers was employed. Six of them were the youngest in the family, one was the only child and three had younger siblings. The second sample consisted of 20 children who were observed at a day care centre. The children in both these group were from 3 to 5

years. In terms of social class they belonged to middle and upper middle class.

Procedure

Observation of the Children at their homes. The observation of the children at their homes was carried out in as naturalistic an environment as possible. In most of the cases, only the mothers knew that the child is being observed. The elder siblings or other adults in the family were not even aware that the child is being observed. For the rest of the family members the researcher was just a casual visitor or a social friend of the lady of the house.

These children were observed during a number of situations: when the child was busy by himself, with the observer, with other family members or with the siblings. These children were observed for the type of activities they do when alone, the level of communication they have with the elders, and the way in which elders communicate with them. Although, it was mainly an observational study, however, at times, the researcher talked with the playing child and occasionally participated in the play also. Two to four visits were paid to these families which made about two hours of observation on an average.

Observation of the children in the Day Care Centre. The children were observed in groups to see how they would behave with the people other than their family members. A group of 20 preschool children was observed for six consecutive days at the

Day Care Centre of the F.G. Degree College for Women F-7/2, Islamabad. This Day Care Centre is being run by the Home Economics and Child Development Department of the college. It provides a facility of child care to the working mothers, specially to the teachers of the college. It also gives an opportunity to the graduate students of the Department of Home Economics and Child Development, for obtaining a practical experience of observing young children.

The group of children was observed on a number of occasions, while busy in indoor play, in the play ground, while at lunch time and during their rest period. In the earlier sessions the researcher observed the children by sitting in a corner of the class room. Since these children were familiar with this type of observation (by the students of home economics) they did not feel uncomfortable and uneasy in such a situation. After a couple of days the researcher tried out a slightly different role by being a part of the group. While playing with the preschool children the researcher could have a feel of the difficulties one can come across while dealing with the children of this age group.

Results

The observation resulted in developing an insight into the following aspects of the play of preschool child.

The Pre School Child: In Family Perspective. The observations of preschool child were made during fore noons and

after noons. Mostly the mother, child, aunts, siblings and few servants were present in the house.

The first visits

The first visits to these families resulted in some common observations. Since the mother knew that one researcher would be visiting to observe the child, the child was dressed up quite nicely; the house was specially cleaned and a formal tea was offered. In spite of the special request that the visit of the researcher should be taken casually, the mother took it as a special occasion. However, the researchers tried to reassure them, and introduce informalities. It worked and the subsequent visits were taken in a more relaxed manner. The mother continued with her house-hold tasks, while the researcher either observed wanted to communicate or with the child.

The companions

Since the children were quite young they could play only within the house, specially during mornings, when the other children of the family had gone to schools. These children were not allowed to go out to play in the street or to play with the children in the servant quarters. However, the children reported that at times when the mother is busy, they manage to go to servant quarters to play with these children. Those who had younger sibling reported to enjoy playing with them, however they complained that the younger ones kept the mother very busy. Doll and teddy bears as the intimate companions were reported by the mothers of some children. These to children were extremely attached to those toys. The

doll, was being called by proper noun, special habits and preferences of those toys were mentioned. One child reported that the doll was supposed to follow specific time schedule of her own.

Activities

It was observed that the children were mostly involved with toys which were inexpensive, were well-worn and even damaged. The expensive and decorative toys were mentioned by the mothers during conversation but most probably the children were not allowed to play with them. The children of preschool age were not supposed to interfere in the adult activities. However, a few mothers encouraged the child to help her while she was serving the tea.

A few children were observed taking interest in paper cutting or looking at the pictorial magazines. Almost all of them had a few illustrated books of Urdu and English. Mothers did not encourage the use of pencils, crayons and chinks, because they thought that the children would create a mess with them. It was rare that a child was given plasticine, dough or clay.

Almost all the families (specially those who had a girl child) had a few dolls, and car's models. These toys were the most popular ones. A few boys had a craze for pistol and airplanes. But all of the boys were fond of cars. Tricycle was equally popular in boys and girls, whereas, a few children had swings in the *verandahs*, porch or lounge, inside the house. Going out in parks or in the streets was not allowed.

Fluctuation

As observed and also reported by the mothers that children of this age were not able to concentrate for a longer time. They would shift from one corner of the house to another. At times they would play alone; at times they would need the company of other children and at times their emphasis would be on the activities which could draw the attention of the adults particularly that of their mothers also.

Fantasy

The children who had another child around were noticed being involved in fantasy play. But the the play of single child was mainly of exploratory and of manipulative nature. It might be because the lonely child while playing was not communicating with other. as a result of which the fantasy was could not be observed. At times the researcher herself participated in the play and it was found that the verbal explanation of their play had an element of pretence.

Communication

Although the children were from Urdu as well as Punjabi speaking families; yet, their medium of communication was mainly Urdu. It was interesting to note that many mothers preferred to over load their language with English words specially when conversing with the child in the presence of the researcher. The mothers also used special lingo developed by the child or by the other kids. The child-mother communication pattern was keenly observed to understand the strategies to be adopted for establishing rapport with the child. It was observed

that physical touch and a little non serious and humorous style of conversation created intimacy and frankness. Very direct questioning and interference in their activities made the children defensive and non communicative.

On a few occasions the father returned from work in the presence of the researcher. It was noted that the child immediately got attentive towards the father. It was observed that the fathers give more attention to preschool age children than the elder children. Specially in better off families the fathers were more expressive of positive feelings for the preschool child. It is difficult to draw inference, if it was the regular style or it was only because of the presence of the researcher that they behaved in that style. Anyhow, they were aware that this is a socially desirable style.

Pre School Child: In a Day Care Centre's Perspective. The group of children, observed at a Day Dare Centre, consisted of 12 girls and 8 boys. The majority of these children were from the families with working mothers. They had joined the centre almost four mouths ago. They aged between 2.5years to 4.5 years.

Salient findings of the observation of their play behaviour were:

1. Playing in group promotes social play of various level. Parallel and Cooperative play was most frequently noticed. A few children preferred to remain busy in Solitary play. The younger

and shy children preferred to remain absorbed in their own solitary play.

2. Presence of observer and teacher in the room resulted in a more disciplined and systematic play. It became quite obvious when compared to their behaviour in the play ground or at the swings. The out door play was highly loaded with fantasy and communication.

3. Guided play was a special feature of this group. The centre provided a discarded bus in the play ground. In fair weather the children were taken there to play with it. It used to generate a lot of fantasy and role playing in children. They used to enjoy that play thoroughly.

4. Another salient feature of their play was that their play was a blend of learning and play. Some play activities initiated and supervised by the teachers were fairly learning oriented. Playing a token money game during recess period is a good example of this orientation.

5. Quarrels and discussions were distinctly noticed as a feature of their play behaviour. Snatching of toys from each other. Quarrelling for swings and Merry-go-rounds were very frequently observed.

6. Their play was spontaneous and varied. It is inferred that it was because of the familiarity of the group members. Their play was also repetitive, may be because of the same reasons.

Repetition and continuity was more noticeable in the play of girls.

7. A clear cut preference in the selection of play material was gender biased. Boys and girls had their own choices of play style and play material. Girls preferred to play with dolls, kitchen utensils, blocks, pictorial books, etc., whereas boys preferred cars, airplane, pistols, paper foldings. In outdoor games girls preferred to play in larger groups as compared to boys. Girls were more communicative among themselves.

8. Gender-biased segregation was obvious even at this age. Although, not consciously encouraged by the centre, boys and girls made their own segregated play groups. There were two pairs of cousins in that group. Even they did not play together.

Based on the observation of 10 preschool children in homes and the group of 20 children in class room situation, the following decisions about the organization and the contents of play group were taken:

- (a) It was felt that variety in material provides an opportunity to the child, for selecting the play activity of his interest. His playfulness would be enhanced if he gets proper stimulation. Therefore, it was decided that to facilitate play behaviour a variety of play material should be provided.

- (b) It was observed that unstructured and semi-structured play material would be used to provide them an opportunity to express their fantasy. Therefore, it was decided that the play material would include semi-structure toys and unstructured material for play.
- (c) It was observed that the children become cautious and restricted while playing with an expensive toy. They are trained from the very beginning to handle the expensive toys with care. If the play material is very expensive and novel the child becomes very cautious in the handling it and the process of play becomes secondary. Therefore the play material, which was supposedly beyond their reach in their personal life, should not be used for the play group. To make children comfortable, relaxed and at home in play situation only inexpensive and easily available play material would be used.
- (d) It was observed that the preferences of boys and girls for the play material are different. Gender roles are emphasized in the early child rearing practice also, therefore, the boys and girls felt more facilitated in the play group when they had the play material of their choice. Although the plan was not to segregate the group by gender, yet a varied choice of gender preferred play material was made available to them. It provided an opportunity to allow fantasy and make

believe games typical of their gender, if they wanted to do that.

- (e) The observation of these children showed that children of this age level cannot concentrate on one activity for a long time. They prefer to switch over from one activity to an other activity. Therefore the duration of play group should be kept only two hour with three to five, formal or informal breaks.
- (f) It was observed that if children, in the beginning of the session, were left without the supervision of the adults, their play proved to be more spontaneous. Therefore, it was decided that the researcher should enter the play room at least five minutes after the children. This time period would give a good start to the communication during the play sessions.
- (g) The children when busy in their play would ignore the presence of the adults. The presence of a non-interfering adult does not hamper the spontaneity of the play. Therefore, it was decided that the researcher would observe while remaining the room during the play sessions, but would make minimum interferences.

With those observations and considerations in mind the following play material was made available for the play group of the pilot studies.

1. Dolls of different sizes

2. Car models in different sizes
3. Aeroplane models
4. Pistol models
5. Balls of different sizes
6. Doll house, animal models, kitchen utensils, furniture
7. Plain paper and scissors
8. Plasticine
9. Junk of odd toys and packing material
10. Colour pencils crayons.

STUDY 2

This part of the pilot study was carried out to: (1) Finally select and tryout the play material, (2) Select activities, (3) Decide about group size and, (4) tryout the observation schedule for the main study.

Subjects

A group of 10 children between ages of 3-5 years was taken from the area of G-6/4 and G-6/3, where people from middle and upper middle class live. They had no previous experience of going to play group or school. They were not familiar with each other.

Procedure

An Observation Schedule consisting of 25 observable dimensions of play was developed. Many researchers have attempted to classify play behaviour into categories, for qualitative and quantitative assessment. Many of the the 25 categories of the dimensions of play behaviour used in the pilot study were borrowed from various studies previously done to assess the play behaviour. (Cohen & Tomlinson-Keasey, 1980; Fiese, 1990; Howes, 1979; Iannotti, 1985; Koolij, 1989; Power, 1985; Power, Chapieski & McGrath, 1985; Shea, 1981). These categories were operationally defined for preparation of a scale. The children were rated on a five point rating scale; ranging from one to five. The rating of one was given for the minimum occurrence of the behaviour and the rating of five was for the maximum occurrence.

The group sessions were held daily for two hours . The children were observed for eight days in all. The first day was devoted to establishing familiarity and then seven play sessions were held. Attention was paid to establishing rapport with the children, making the play material and surroundings of the play room comfortable for the children and familiarizing with the observers. Before starting the observational sessions, the observation categories were fully explained to the observers. They were as follows:

1. Initiative: The child was observed for the initiative he takes during play. Initiative was recorded when the child started an

activity on his own or took some toys or play material without being asked or invited by the other group members.

2. Complexity: The complexity of play was indicated by the number of toys used by the child. For instance the use of many objects and organizing play around these objects was considered as the highest sign of complexity. If a child played with single object it was rated at the lowest point.

3. Sharing: Sharing means giving physically or offering verbally, an object that was previously in possession of the child. This was considered as an expression of pro-social behaviour. Child's willingness to allow others to use his possessions, toys, physical space etc., was taken as an indication of the sharing behaviour.

4. Cooperation: Child's willingness to play in collaboration with others was considered as a dimension of play. The child willing to play in accordance with the suggestion of other children was rated on the highest point of the scale. whereas, a child insisting on playing on his own, not allowing any body to suggest a play activity was rated on the lowest point of the scale.

5. Helping: Helping means child's attempt to provide information, comfort or solution to the problem of other children during play session. A child showing the helping behaviour for most of the time was rated at the fifth point of the scale, whereas, a child with rare expression of such behaviour was rated at point one of the scale.

6. Monopolizing: Monopolizing means that the child is not prepared to give the toy of his choice to another child.

7. Hitting: A child using physical force to stop another child from doing anything against his will, was categorized as hitting.

8. Quarreling: A child not in good terms with other children or not willing to remain pleasant with other children was considered as quarreling.

9. Refusal: A child's expression of rejecting the group, not willing to remain in the group or not willing to play with the group was categorized as refusal.

10. Visual exploration: Visual exploration meant that the child keeps himself busy in exploring the play material visually.

11. Motor exploration: It meant that the child explores the material through touching, holding or putting the toys from one place to another.

12. Pretend Play: Pretend play meant that the child uses an object for the purpose other than the one it was meant for.

13. Role playing: Role playing was categorized when the child adopted the role other than the real one.

14. Communication play. A child adopting a role in which he maintains communication with other children was rated for this category.

15. On lookers play: This type of play was scored when the child was passively looking at the play of others.

16. Solitary play: The child playing all alone in his own style was rated for this category.

17. Parallel play: The child playing the same thing that one of his group member was also playing but not communicating with anyone, was rated for this category.

18. Cooperative play: A child playing in cooperation with other children of the group, involving them in his play or taking part in their play was rated for this category.

19. Games with rules: A child playing an organized game in which he himself follows certain rules and asks others too to adhere with the rules, was rated for this category.

20. Fantasy: The fantasy was recorded based on the verbal comments, drawing, role playing or make believe play.

21. Communication with the other children: A child communicating with other children was rated for this category.

22. Communication with the observer: A child communicating with the observer was rated for this category.

23. Perseverance: A child who goes out of the play room only for some play activity or to satisfy some basic need such as toilet, water was rated for this category.

24. Restlessness: It was rated if the child would go out repeatedly from the play room without justified reasons.

25. Excitement: It was recorded if the child made pleasant noises or communicated in a high pitch.

Results

The study helped in understanding the play behaviour of the children in smaller group i.e. in a group of 8 to 10. Following are some decisions, taken for the main study, based on the observations made in the Study 2 of the pilot studies.

1. The difference in the play style and communication level of the children of both phases helped concluding that children of preschool age feel uncomfortable in communicating in a temporarily established group,. These children did not have any previous friendship or relations with each other. They were more depending on the observers for the communication. To facilitate the play, the observers had to play more active role with the group.

2. Decision about the extent of involvement of the observer in the group was also taken. It was noted that the process of play was facilitated if the observers participated in the play at the opening of the session, whereas, it retarded the process if the observers wanted to enter the play during the session. When the children become involved in the play with their age mates, they did not like the interference of adults, however, they needed adult's help to get a start. Therefore, it was decided that the observations will be recorded while sitting in an adjoining room. There was a row of windows between the observation room and the play room. The observers from these windows, very conveniently were able to observe the children involved in the play.

3. It was observed that the play material was more than enough in quantity . Since the children belonged to middle socio-economic class, they were not exposed to that much play material at a time. It was felt that the children became too excited by seeing so many new toys at a time at one place. Therefore, it was decided to withdraw some play material and to add some old toys with the new ones.

4. An observation schedule based on 25 categories of play dimensions was developed. The observers operationally defined these categories on five point rating scale. In view of the limited data the inter-rater reliability was not computed. However, the observers could learn and practice to rate the observation categories and to clarify the confusions and ambiguities in the observation schedule.

STUDY 3

The study 3 was carried out to develop a valid and reliable rating scale for measuring the play in preschool children.

Subjects

The subjects were taken from a middle and upper-middle class community of Islamabad.

The sample consisted of 19 girls and 21 boys, age ranging between 36 to 59 months, mean age 48 months. Most of the parents had education up to graduate level. Mothers of nine children did not have any formal education. Few fathers had professional and technical education. Majority of the mothers was unemployed and fathers had regular jobs or average level self employment. None of them had any previous experience of going to school, play group or day care centre. The sample characteristics are in Appendix A

Procedure

The houses which had young children were identified. A brief proforma was distributed to collect the information the education and profession of the family, the number of siblings and also about how the preschool child spends the time, i.e., whether the child stays at home, goes to a day care centre or any relative, other than the mother, looks after the child.

In a personal interview the parents were briefly told about the play group study and their permission about registering their child as a subject of the study was recorded. The children who fulfilled the above mentioned criteria were divided into five groups having 8 children in each group. These five groups had a mix of children by age and sex. Each group was called for play for seven days, daily for two hours. The first two days were kept for familiarisation. The children played without the interference or guidance of the observers. Yet the observers were available to help them or to solve their problems, whenever a child needed that. The ratings were made at the end of each session by both the observers independently, on the Five Point Rating Scale for the 25 dimensions of play.

Results

The ratings of the play behaviour were used for two objectives:

- a) to establish the reliability of the rating scale.
- b) to establish the validity of the scale.

Reliability of the Scale:

Children's behaviour on the 25 dimensions of play was rated in five sessions. To find out the reliability of the rating scale, attempt was made to see the consistency of the five ratings on a particular dimension. Analysis of variance was computed to get intra-class correlations of the means of the five ratings for the

25 dimensions of play behaviour. Intra-class correlations were obtained to find out the reliability of the five point rating scale. Table 2.01 shows the source of variance and intra-class correlation for the five observations of 40 children's play behaviour on 25 dimensions of play.

Table 2.01

Source of variance and intra-class correlation

Dimensions	Source of Variance		Intra-class Correlation
	Person	Residual	
Initiative	4.395	.504	.885
Complexity	4.367	.422	.903
Sharing	4.149	.530	.872
Cooperation	4.590	.592	.871
Helping	5.806	.581	.900
Monopolizing	2.677	.416	.845
Hitting	2.162	.293	.864
Quarreling	2.973	.383	.871
Refusal	3.412	.928	.828
Visual Exploration	2.256	.503	.777
Motor Exploration	3.075	.861	.720
Pretend Play	4.784	.769	.839
Role Playing	5.463	.823	.849
Commun. Play	4.279	.769	.820
On Lookers Play	1.273	.558	.562
Solitary Play	2.599	.680	.738
Parallel Play	2.919	1.270	.565
Cooperative Play	7.915	.614	.922
Games with Rules	3.522	.544	.846
Fantasy	7.041	.763	.892
Commun./ others	4.669	.508	.891
Commun./Obs.	5.802	.524	.910
Perseverance	3.915	.773	.803
Restlessness	3.914	.961	.754
Excitement	6.359	.772	.979

Validity of the Scale

Validity of the rating scale was determined by factor analysing the various dimensions of play included in the scale. The aim was to find out if the dimensions included in the rating scale, really measure the playfulness, the concept it intended to measure.

Table 2.02

The Rotated Factor Matrix

Dimensions	Factor 1	Factor 2	Factor 3
Initiative	.91356	.10614	-.25759
Complexity	.94148	.04792	.21182
Sharing	.77301	-.04792	-.41773
Cooperation	.88070	-.14728	-.23359
Helping	.75518	-.30281	-.35599
Monopolizing	.26918	.77483	.10104
Hitting	.27224	.84449	-.18645
Quarrelling	.36874	.385357	.18722
Refusal	-.28025	.39763	.83761
Fantasy	.87035	.32508	-.12816
Coom./Peers	.94237	.32690	-.18079
Com./Obs.	.87870	.13085	.22102
Perseverance	.81632	.18231	.83342
Restlessness	-.02156	.24984	.83342
Excitement	.87801	.34936	.01821

The factor analysis was carried out up to three factors. The total Variance accounted for these factors was 83.8. The Eigen Values of one or more were selected for rotation. The Rotation Matrix (Table 2.02) showed three factors The three factors thus obtained were labeled as:

- a. Playfulness
- b. Anti-social behaviour
- c. Disobedience

The following 15 dimensions, out of the 25 dimensions of the play behaviour, got high loading (more than .70) on any one of the above mentioned factors.

Factor 1: Playfulness

1. Initiative,
2. Complexity,
3. Sharing,
4. Cooperation,
5. Helping,
6. Fantasy,
7. Communication with peers
8. Communication with observers
9. Perseverance
10. Excitement

Factor 2: Anti-social Behaviour

1. Monopolizing
2. Hits
3. Quarreling

Factor 3: Disobedience

1. Refusal
2. Restlessness

Since the objective was to select the dimensions of behaviour which reflect playfulness, only those dimensions were selected for the final scale that had high loading of factor 1, i. e., playfulness. Table 2.03 shows the dimensions that have high factor loading on the playfulness factor.

Table 2.03

Dimensions with High Factor Loading on Playfulness

Dimension	Factor Loading
Initiative	.91356
Complexity	.94148
Sharing	.77301
Cooperation	.88070
Helping	.75518
Fantasy	.87035
Comm/peers	.94237
Comm/observer	.87870
Perseverance	.81632
Excitement	.87801

(Cronbach's Alpha) $\alpha = .94$

Thus the scale for measuring playfulness was developed with 10 dimensions of play (Appendix B). Cronbach's alpha for these ten dimensions was found to be .94, which indicates that the items of playfulness scale are quite homogeneous. This scale was used in the main study to measure the playfulness of preschool age children.

CHAPTER III

THE MAIN STUDY: METHODOLOGY

The study was preceded by a series of three pilot studies as described in chapter II. This part describes the methodology used in the main study. In the present study preschool age children were observed for play behaviour and their intellectual, social, emotional developments and the home environments. It was aimed at understanding their Play Behaviour and the relationship of their play with other aspects of development and also with their Home environment. The present section provides an account of the characteristic patterns of the children on whom the study was carried out, the description of the instruments used and the procedure adopted for conducting the study.

The methodology adopted for a study depends on the nature of the problem to be investigated and also on the type of results aspired to be achieved. The study was about the phenomenon (play) which was possible to observe only in specific environmental situations suitable for it. Therefore, for assessing the play behaviour, a situation was created in which the phenomenon was observable and it was possible to assess it. Free play groups for preschool children were conducted. Thus provided maximum opportunity of playful interaction among the children and also facility to observe that interaction for the

assessment. Assessment of other aspects of development was made through tests scales and inventories.

Sample

The study was conducted on preschool children. Tables 3.01-3.05 describe the demographic details of the sample.

Table 3.01

Age and Sex of the Children

Sex	Ages in months			Total
	42-47	48-53	54-59	
Boys	8	8	4	20
Girls	6	10	4	20
Total	14	18	8	40

Mean age = 49.60 SD= 4.02

Table 3.01 shows ages and gender of the children. A sample of 40 children with equal number of boys and girls was taken. Age range between 42 to 59 months.

Table— 3.02

Parents' Education

Parents	E d u c a t i o n a l L e v e l		
	Fathers	Mothers	Total
Upto Matric	1	10	11
F.A./B.A.	16	18	34
M.A./M.Ed.	12	11	23
Professional	11	1	12
Total	40	40	

Table 3.02 gives the educational level of the parents. It ranges between below matric to professional degree. None of the parents was illiterate.

Table— 3.03

Parents' Profession

Parents	P r o f e s s i o n s		
	Fathers	Mothers	Total
Non.Employed	0	33	33
Self-employed Average	12	0	12
Self-employed Outstanding	4	0	4
Regular job	24	7	31
Total:	40	40	80

Table 3.03 has the details of the professional status of the parents. It was categorized as Unemployed, Regular job, Self-employed of average level, Self-employed of outstanding level.

Table-3.04

Number of Siblings

	Boys	Girls	Total
None	2	2	4
1-3	13	14	27
4-6	5	4	9
Total	20	20	40

Table 3.04 shows the number of siblings the child has. Majority of children had upto three siblings.

Table-3.05

Birth Order

	Boys	Girls	Total
Eldest	7	6	13
Middle	5	6	11
Youngest	8	8	16
Total:	20	20	40

Table 3.05 shows the birth order position of the child. Majority of the children was the youngest in the family.

Instruments

The Scale for Playfulness

The play scale used for the assessment of play behaviour, as described earlier in Chapter II, was developed by the researcher through a series of pilot studies on preschool age children. Originally 25 dimensions were collected. Factor analysis of the data revealed three meaningful factors. The major dimension appearing was of playfulness, consisting of 10 items. A scale for playfulness was constructed having items relating to: Initiative, Complexity, Help, Sharing, Cooperation, Fantasy, Communication with peers, Communication with Observer, Perseverance and Excitement. A reliability of the ratings, measured through the Intra-class correlation, ranges between .87 to .97. Cronbach's Alpha was calculated to measure internal homogeneity of the scale. It is .94, for the pilot study which shows high internal consistency of the scale.

Test of Intellectual Development for Pakistani Preschool Children

The basic concept of Test of Intellectual Development for Preschool Children is to identify the difference in the intellectual ability with the difference in levels of development as represented by the average capacities of the children at various ages. It is a test to assess the intellectual development of Pakistani preschoolers. It was developed at the National Institute of Psychology in a response to a need for a reliable and valid instrument to assess intellectual abilities of children

at preschool level (Israr & Abbas, 1990). The test has been standardized on the urban population of Islamabad. The test consists of 8 sub-tests: Colour Naming, Reasoning, Seriation, Verbal Memory, Pictorial Memory, Perceptual Motor Tasks, One to One Correspondence and Conversation. It was developed on the sample of 1187 children (729 boys and 458 girls) who applied for the admission to Nursery classes in the Model Schools of Islamabad. It was test/retest reliability of .53 and inter consistency as measured through Kuder Richardson method was .93. The validity coefficient ranged from .31 to .71. for various groups. For detailed description of the test and instruction for administration see Israr & Abbas (1990) . They are briefly reproduced in Appendix 'C'.

The Scale for the Measurement of Social Development

A scale for measuring the social development of preschoolers had not been developed in Pakistan, as yet. However, for the purpose of this study selected items from the Developmental Tasks Scale for primary school children (Pervez & Haque, 1986; 1990) were taken to assess the social developmental level of preschoolers.

The Developmental Task Scale for primary school children was developed on 322 children of Islamabad schools. The scale consisted of 54 items covering 10 areas of social development viz, Preparation for School, Dressing, Bathing, Locomotion, Educational & Hobbies, Communication, Money Concept, Religion, Interpersonal Relations and Help in House-Hold Tasks.

The items for the scale were developed by in-depth interviewing with the families of younger children. The test items were in ascending order of difficulty based on the passing percentages mean ages, and *SDs* for all the items.

A scale for the measurement of the social development of preschool children was derived from this test. It has 40 items with mean ages from 3.23 years to 5.99 years. 31 items were taken from the Developmental tasks scale for primary school age children and 9 items were taken from the Vineland Social Maturity Scale (Doll, 1953). These items were taken to extend the test upto preschool age level.

Children's Apperception Test Pakistani Adaptation (CAT-P)

CAT is based on Murray's well known technique of studying personality through apperceptions. CAT-P is the modified version of the original CAT that was developed by Bellak in 1950. CAT-P was culturally adapted for Pakistani children in 1980 (Pervez & Bokhari, 1984). It has ten picture cards depicting animals in various life situations (Appendix 'E'). The child is asked to make a story for each card. The pictures are designed to elicit responses with special reference to feeding, sibling, rivalry, aggression, anxiety, attitude toward parental figures etc.

The stories in response to these picture cards are considered as a sample of child's apperceptions that are related to his real life. It is envisaged that the interpretation of these apperceptions would through light on the motivational forces

that regulate his personality. It is recommended to be used with children of 3-10 years of age.

Many researchers use the complete set of cards for getting on interrelated thematic picture of the personality. But a recent survey of TAT studies (Keiser & Prather, 1990) has revealed that the number of cards used was highly varied. More than 50% researchers used five or fewer cards. Similarly, only 26 articles out of the 70 articles mentioning the use of thematic apperception techniques, used the original cards, designed by Murray in 1943. It supported the decision of using only the five cards of the set. The cards selected for the administration were: No. 3, 5,6,8,9. These cards have high stimulus value for eliciting the themes of loneliness, insecurity anxiety, aggressiveness (Pervez & Bokhari; 1984).

Home Observation for Measurement of the Environment: HOME Inventory

Caldwel and Bradley in 1984 developed two separate versions of the HOME Inventory, one having 45 items for infants and toddlers and the other for preschoolers, containing 55 items divided into 8 sub-scales. The Preschool version was used for the study.(Appendix 'F'). The subscales contained by the preschoolers versions are: i) Stimulation through toys, games and reading material; ii) Language Stimulation; iii) Physical Environment, Safe, Clean and Conducive to Development; iv) Pride Affection and Warmth; v) Stimulation of Academic Behaviour; vi) Modeling and Encouragement of Social Maturity;

vii) Variety of Stimulation and ; viii) Physical Punishment. These subscales contain specific items to be observed from the perspective of the child under the observation.

Although this inventory is being used for the first time in Pakistan, it is a highly researched instrument (Bradeley & Caldwell, ; 1976a; 1976b; 1979, 1981). In an ongoing Pakistani study, the correlation for the sub-scales range from .53 to .83 and the internal consistency estimate for total scale is .93. The coefficient of internal consistency through Kuder Richardson formula was .85 for Pakistani population. (Pervez & Anila, 1991).

Procedure

Selection of the Children:

The principal of a local school was requested to allow the researcher to conduct the study of play on the preschoolers, registered at the school.

A registration form (Appendix 'G') was filled with the help of the principal and the registration diary of the school, for each child separately. It contained name, age, parents name, education, nationality, occupation, address, phone numbers, number of siblings and birth order. The children with age between 42-59 months, having parents of Pakistani origin were included in the sample.

The school had two sections of preschoolers, section A and B with 30 children in each. 20 children were identified from each section who were within the required age range (42-59 months) and had parents of Pakistani origin. Thus four groups of children (10 in each group) were selected for the study.

Assessment of Play Behaviour

The study was conducted by observing the play behaviour of children during five play sessions of 90 minutes duration. Twenty children were identified as the subjects for the study, from each section. Ten children were selected for observation at a given time. Thus each section had two groups, having 10 children in each. To cancel out the effect of familiarity, practice, boredom and other unknown situational factors on the play behaviour, both the groups were observed on alternate days.

The children being observed in a particular session were identified by a tag on their shirts carrying name and number of the group. Each section of the preschoolers (A & B) having two groups of 10 children in each, was given the opportunity of playing for 14 days. The first two days in each group, were for establishing rapport with the observers and peers. The observations of play behaviour were recorded from the third day.

For the convenience in observations, both the groups were separately identified by using different font style in their name tags. These children were asked to wear their name tags through out the sessions, whether being observed or not. The

children who were not included in the study were also allowed to remain in the group and play. The children of the sample not being observed in a particular session were also asked to remain in the play group to maintain the cohesions and to keep the interactional pattern of the group strong and stable.

The play sessions were organized in the morning hours (8.30 to 10.30). The classroom was rearranged according to the demand of the play session, i.e., the furniture was put along the side walls and a carpet was laid in the centre of the room. It helped in creating a non-school like atmosphere. The selection of the play material was based on the findings of the Study 2 of the pilot studies

Table 3.06 summarizes the scheduling of the observation of play behaviour of the four groups in both the sections

Table 3.06

Scheduling of Play Observation

S e c t i o n A			S e c t i o n B		
Days	Group I N=10	Group II N=10	Days	Group III N=10	Group IV N=10
1st	FM	FM	1st	FM	FM
2nd	FM	FM	2nd	FM	FM
3rd	Ob	No	3rd	Ob	No
4th	No	Ob	4th	No	Ob
5th	Ob	No	5th	Ob	No
6th	No	Ob	6th	No	Ob
7th	Ob	No	7th	Ob	No
8th	No	Ob	8th	No	Ob
9th	Ob	No	9th	Ob	No
10th	No	Ob	10th	No	Ob
11th	Ob	No	11th	Ob	No
12th	No	Ob	12th	No	Ob

FM: Familiarisation

Ob: Observation recorded

No: No observation

As indicated in the chart the children were observed for five sessions on alternate days, in a group of 10 children. The groups were of mixed gender and age range. Each child was individually observed and rated for the play behaviour on various dimensions of playfulness on five point rating scale. For the description of the scale see Appendix 'B'

The observation of play was carried out by the researcher herself for the whole sample. However, another trained psychologist also observed the play behaviour of these children on 50% occasions. The sessions, selected to be observed jointly by both the raters, were based on systematic randomization. Table 3.07 summarizes the plan of introducing two rater for the observation.

Table 3.07

Observation Plan by The Number of Raters

Observation	G r o u p s			
	Group 1	Group 2	Group 3	Group 4
Day 1	2 Raters	1 Rater	1 Rater	2 Raters
Day 2	2 Raters	2 Raters	1 Rater	1 Rater
Day 3	1 Rater	2 Raters	2 Raters	1 Rater
Day 4	1 Rater	1 Rater	2 Raters	2 Raters
Day 5	1 Rater	1 Rater	2 Raters	2 Raters

Table 3.07 indicates the number of raters who carried out the observation on various days. It is revealed that the group one and two were observed by two raters twice, whereas, group

three and four were observed by two raters thrice. This schedule could introduce the second rater twice for each day's observation.

The second rater observed the play of the first day with group 1 and 4, second day with group 1 and 2, third day with group 2 and 3, fourth day with group 3 and 4 and finally, fifth day's play was observed by the second rater with group 3 and 4. This arrangement was planned to cancel the observer's bias, the effect of familiarity and rapport on the correlation between the ratings of the two raters.

Play Sessions:

Play sessions were conducted daily for 90 minutes. Although the whole class was allowed to play; only 10 children, in a given session were observed and rated. The class teacher or any other staff member of the school was not allowed to join during the process of the play. The observers were supposed to make minimum interference or contribution. To achieve this objective they would sit in a corner apparently busy in their paper work, but available to help or 'play', whenever demanded by any child.

A separate rating sheet was maintained for each child; which includes informations like day, date, rater's name, child's name, group and serial number. Child's play behaviour was observed and rated on a five point rating scale ranging from one to five, with ten dimensions of play. The ratings were assigned just after the completion of the play sessions.

Children were provided the play material same, as was used in the Study 3 of the pilot studies. The play material consisted of dolls of different sizes, cars model in various sizes, airplane, pistols, balls, kitchen utensils, furniture simple blocks, paper plasticine, pencils and crayons. Very high quality and expensive play material was not used. It was to make the children feel comfortable and free without being apprehensive of causing damage to the play material.

The observers attempted to maintain an attitude of acceptance, relaxation and freedom through out the sessions. The children were freely allowed to play with any material freely. Occasionally the observer had to interfere to solve minor disputes among the children mostly on the issues of possessing any specific play material. However, most of the time the atmosphere of the play sessions remained friendly, smooth relaxed and *playful*.

Assessment of Intellectual Development

Children were assessed individually on the Test of Intellectual Development, developed for preschooler at the National Institute of Psychology. The test was administered by a trained Psychologist. The child to be tested was called after the play session. It was possible to test only two to three children daily, within the school time. Majority of the children cooperated and the assessment was possible to be carried out in the first attempt. Few children refused in the first attempt but

were could be persuaded by the observer or in certain cases by the school staff to cooperate with the tester.

Assessment of Social Development

Home visits were made by a psychologist properly trained in using the social development scale. These home visits were made with prior appointments. Mostly the mothers and in a few cases, grandmothers or aunts (living in the same house with the child) were interviewed according to a semi-structured interview schedule. The information collected through the interviewee could provide answers for the items on the social development scale. If two or more subjects were from the same family, the interview was conducted, separately, for each child.

Assessment of Emotional Development

Emotional development was assessed through Children's Apperception Test. Children were asked to tell stories in response to five cards (Nos. 3,5,6,8 and 9) selected from CAT-Pakistani adaptation. These cards mainly elicit the themes of Isolation, Insecurity, Deprivation, Loneliness and Oral Gratification (Pervez & Bokhari, 1984). The test was administered by a trained psychologists in one-to-one setting. An standardized set of instructions (Pervez & Bokhari, 1984) was used by the psychologists for all the children. Most of the children were cooperative in test administration, yet, few refusal cases or difficulties in persuasion were also recorded.

The child in an individual interview was asked to make a story after seeing the stimulus picture cards. Child's verbatim was written down by the psychologist for each stimulus picture card. Persuasive questions, queries and verbal appreciations by the psychologist, were allowed to bring out more elaborative apperceptions.

Assessment of Home Environment

Inventory of home observation was administered for assessing the home environment and family situation of the children in the study. The home visits were made with prior appointments. It was made sure that the child should be present in the home at the time of the visit of the observer. The child was not encouraged to sit with the interviewer, rather, was asked to remain busy in her routine activities. Responses for some items were not possibly observable directly. Therefore, were directly asked, whereas, the majority of the items could be answered through recording the observations and conversation with the family members.

CHAPTER IV

RESULTS

Play of preschool children was assessed in order to see its relationship with other aspects of development such as social intellectual, emotional development of child and also his home environment. Results of all these aspects of development are being presented quantitatively except that of the emotional development.

The Emotional Development was assessed through CAT-P which studies child's personality through apperceptions. Although many researchers have done quantitative analysis of CAT (Bellak & Hurrich, 1966; Weisskopf, 1950; Neuringer & Livesay 1970, Haworth, 1968; Moriarty, 1968; Bellak, 1968; Witherspoon, 1968). However, it was felt that a major portion of the richness of the apperception data would remain under utilized, if attempts were made to quantify. Therefore the Emotional Development in relation to play has been discussed in a separate section of this chapter.

The other aspects of development are being presented in quantified terms to see the differences in various demographic sub groups. In the Tables 4.01–4.10 the results about the Play Scale and Play Behaviour have been discussed. Tables 4.11–4.19 have the results about the Home environment. Tables 4.20–4.28 contain information about the Intellectual development. The

results about social development are being presented in Tables 4.29–4.36 Table 4.37–4.44 have the correlations between Play and various aspects of development. The subsequent section discusses the emotional aspect of the development in relation to playfulness.

The Play Behaviour

Correlation Between the Two Raters

Pearson Product Moment Correlation (r_s) were computed between the play observation ratings of the two raters on randomly selected days.*

Table-4.01

Correlation between the play ratings of both raters on various days

DAYS						Means \bar{x}
	I	II	III	IV	V	
Initiate	.63	.91	.62	.81	.81	.78
Complex	.55	.77	.54	.81	.77	.69
Sharing	.65	.74	.87	.83	.55	.75
Helping	.65	.71	.79	.77	.57	.71
Cooper	.62	.78	.67	.75	.59	.69
Fantasy	.51	.74	.44	.82	.53	.63
Com/p.	.66	.77	.57	.81	.67	.70
Com/obs.	.65	.85	.58	.70	.58	.68
Perseveration	.77	.87	.41	.74	.70	.73
Excite	.11	.87	.47	.79	.62	.69
Mean r_s	.60	.78	.62	.79	.64	.70

* To find out the overall correlation and the averages of the correlations for various dimensions of play the r_s were transformed into Fischer's Z. Arithmetic mean of the Zs was calculated which was finally transformed back to the corresponding mean r_s .

Table 4.01 has the correlations after the conversion from the z. scores The correlations range between .41 and .91, all significant at .01 and .001 level of significance. The average correlation between the two raters for all the days and for all the dimension is .70. The difference between the mean correlations for various dimensions and also for various days is almost negligible. It ranges between .78 to .63 and .60 to .79, respectively. The highest correlation was for the assessment of Initiative (.78) and lowest was for assessing fantasy (.63). The day-wise correlations reveal lowest on first day (.60) and highest on fourth day (.79).

The significantly positive correlations between the ratings of both the raters reflect the reliability of the play scale and the assessment procedure.

Table 4.02 shows the correlations between the dimensions of play and their correlation with total playfulness. Playfulness is highly correlated with various dimensions of the scale. Highest correlation is found with the dimensions of Complexity and Helping. Only the dimension Perseveration has slightly lower correlation i.e. .74, otherwise rest of the dimensions have the coefficient in 90s.

The dimension Excitement also poorly correlates with other dimensions of the scale. Initiative and Complexity have the coefficients in 90s with most of the other dimensions.

Correlation between the Dimensions of Play

Table-4.02

Correlation between the dimensions of playfulness

Play Dimensions	1	2	3	4	5	6	7	8	9	10
1. Initiative	1.00									
2. Complexity	.97**	1.00								
3. Sharing	.96**	.92**	1.00							
4. Helping	.91**	.93**	.99**	1.00						
5. Cooper.	.89**	.91**	.99**	.99**	1.00					
6. Fantasy	.92**	.94**	.92**	.92**	.92**	1.00				
7. Com/p.	.91**	.90**	.88**	.88**	.88**	.88**	1.00			
8. Com/obs	.90**	.87**	.85**	.87**	.85**	.85**	.88**	1.00		
9. Persever.	.68**	.65**	.70**	.68**	.71**	.70**	.67**	.68	1.00	
10. Excite.	.91**	.90**	.84**	.83**	.83**	.86**	.92**	.88**	.64**	1.00
Total	.96**	.97**	.96**	.97**	.96**	.96**	.95**	.94**	.74**	.92**

** $P > .001$

* $p > .01$

Cronbach's alpha was also computed for this group and was found to be .98. Like the findings of pilot study, it shows that the scale is quite homogeneous.

General Observations

The group was generally very lively and cooperative. The free play groups were conducted in the premises of the school. Therefore, an extra care was taken that the children should not perceive the researcher as one of the teacher. The children in habit of calling the elder person teacher, took a day or two before accepting the idea of calling the researcher as aunty.

The idea of unrestricted play and the bulk of toys at their disposal was a new experience for most of the children. When a large bucket, full of toys, was spilled out in the centre of the room, most of the children were just amazed, some started shouting at high pitch and few shrunk in the corner of the room.

The observation of children during the familiarisation sessions gave opportunity to understand their style of coping with novel situations. An offer to be engaged in free play with toys of their choice was definitely a pleasant one. For few children it was too good to believe. They asked again and again, if I really meant it. Some children attacked the toys immediately and tried to grasp maximum play material. Some children could not gather the courage to approach the play material and withdrew themselves, although the facial expressions revealed their maximum desire to remain in the centre of the play.

The researcher, through her direct or indirect interventions, attempted to relieve these children from the social and psychological resistances to play freely in group. In the group of 40 children there were only two children, who till the end of the sessions, could not play freely without hesitation. They reportedly used to behave in class room in the same style. They were socially isolates, shy and also physically weak. One of them was not good even in verbal communication. The other child used to say that she is tired and feels sleepy, so does not want to play.

Aggressive behaviour and quarrelling during play was generally exhibited by elder boys. They used to fight among themselves but never attempted to snatch any toys or play material from their girl fellows. Consideration for younger looking children was also noticed. Not a single episode of physical hurt or injury happened. The children, although very frank and expressive not even once got wild.

Most of the children developed their preference and choices for the play material. They attempted to get hold of the toys of their choices as quickly as possible, just in the beginning of the play session. Most of the time a continuity and repetition of play activity was noticed in the play of successive days.

The selection of the play material, play activities, make believes and fantasies were highly loaded by gender bias. Girls preferred to play with toys like dolls, blocks, kitchen utensils, crayons. They had their small sub groups consist of two to four girls. These sub group were more or less stable throughout the play sessions. When back to their class room, these sub groups were no more there. The boys preferred to play with cars, zoo, pistols, airplane etc. They played mostly with changing partners. Strong and clear cut sub groups were not noticed. Boys had more quarrels on the issues of possession of certain toy or play material.

Differences in the Play Behaviour

The Play Ratings were obtained by averaging the ratings of the five days on all the dimensions of the play scale. This mean rating was taken as the index of the playfulness. One way Analysis of Variance (ANOVA) was carried out to find out the significance of difference in the play behaviour of the children when grouped according to various demographic variables viz, gender, age, number of siblings, birth order, parents' education and occupation.

Table-4.03

Difference in Play Scores: Gender-wise.

Gender	<i>n</i>	Mean	<i>SD</i>
Boys	20	3.6	.99
Girls	20	3.2	.35
Total	40	3.4	.85
$F(1,38) = 2.53$		$p > .05$	

Table 4.03 shows that the play ratings have mean 3.4 and SD .85. The difference between the play ratings of boys and girls is negligible.

Table 4.04

Difference in Play Scores: Age-wise

Age in months	<i>n</i>	Mean	<i>SD</i>
42-47	14	3.2	.93
48-53	18	3.7	.76
54-59	8	3.2	.86
Total		3.4	.85

$F(2,37) = 1.60$ $p > .05$

Table 4.04 shows the age wise difference between the play behaviour of the children. The most playful group was the middle age group i.e. 48-53 months old, with mean play rating 3.7 and *SD* .76 whereas, the other two groups have 3.2 play ratings, and *SD* .93 for younger groups and .86 for elder groups.

Table 4.05

Difference in Play Scores: Fathers' Occupation-wise

Employment Status	<i>n</i>	Mean	<i>SD</i>
Self employ.	12	3.4	.85
Self -employed.	4	3.5	1.3
Regular job	24	3.4	.88

$F(2,37) = .01$ $p > .05$

Table 4.06

Difference in Play Scores: Mothers' Occupation-wise

Employment Status	n	Mean	SD
Unemployed	33	3.44	.80
Regular job	7	3.33	1.12
$F(1,38) = .63$		$p > .05$	

Table 4.05 and 4.06 show the difference in the play behaviour of the children of the parents with different occupational groups. Fathers occupation did not have any differential affect on play performance. Children of fathers with out standing self employment have lead of only 0.1, which is hardly worth mentioning. As revealed by Table 4.06 that the children who's mothers were not employed were a little more playful as compared to the children who's mothers were in regular job, although the difference is again non-significant.

Table 4.07

Difference in Play Scores: Fathers' Education-wise

Education Level	n	Mean	SD
Upto Matric	1	1.9	.0
FA/BA	16	3.8	.77
MA/MED	12	3.5	.94
Professional	11	3.6	.83
$F(2,37) = 1.28$		$p > .05$	

Table 4.08

Difference in Play Scores: Mothers' Education-wise

Education Level	<i>n</i>	Mean	<i>SD</i>
Upto Matric	10	3.1	.85
F.A/B.A	18	3.5	.78
M.A/M.ED	11	3.4	.98
Professional	1	4.2	.00
<i>F</i> (3,36) = .82		<i>p</i> >.05	

Tale 4.07 and 4.08 show the difference in the play behaviour of children with parents of different educational levels. The children of the parents with lower educational level were a little less playful. Table 4.08 shows that highest playfulness was shown by the child of the mother with professional education. Yet the sample being small any statistical significance of the finding is doubtful.

Table 4.09

Difference in Play Scores: No. of Siblings-wise

Number of Siblings	<i>n</i>	Mean	<i>SD</i>
None	4	3.6	1.00
1-3	27	3.5	.70
4-6	9	3.0	.97
<i>F</i> (3,36) = 1.31		<i>p</i> >.05	

Table 4.09 shows the difference in the play behaviour of the children with different number of siblings. The difference is not

statistically significant. However, the children without siblings have an indication of being more playful, whereas, the children who have more number of siblings show lesser playfulness. A unidirectional relationship between the number of siblings and playfulness is found although, statistically non-significant.

Table 4.10

Difference in Play Scores: Birth Order-wise

Birth Order	<i>n</i>	Mean	<i>SD</i>
Eldest	13	3.59	.85
Middle	11	3.50	1.00
Youngest	16	3.2	.76
<i>F</i> (2,37) = .67		<i>p</i> > .05	

Table 4.10 shows the relationship of birth order of the child and the level of play. The group of youngest in the families, showed lesser level of playfulness. However, the differences are not significant.

The Home Environment

Correlation between the subscales of HOME Inventory

The home environment inventory has 8 subscales. Six of them are correlated at .001 level of significance, with the total score. Only the subscale physical environment and modeling and encouragement for social development do not correlate

significantly. Highest correlation of the total score is with language stimulation; then come pride affection, warmth and stimulation through toys and games.

The correlation matrix (Table 4.11) shows that only a few correlations are negative. Majority of these are in positive direction and quite a number of them are statistically significant.

Table-4.11

Correlation between the subscales of Home Environment Inventory

Subscales	1	2	3	4	5	6	7	8
1. Toys & Games	1.000							
2. Language	.55	1.00						
3. Physical	.09	.17	1.00					
4. Pride	.34	.49**	.28	1.00				
5. Academic	.40*	.49**	-.12	.06	1.00			
6. Social	-.36	.05	.19	.30	-.26	1.00		
7. Variety	.54**	.38**	.09	.31	.38*	-.04	1.00	
8. Punishment	.23	.25	.24	.47**	.05	.11	-.03	1.00
Total	.72**	.78**	.26	.76**	.43*	.11	.63**	.49**

Note: Names of the subscales and their abbreviations.

1. Stimulation through toys games and reading material-Toys & Games.
2. Language stimulation -Language
3. Physical environment: Safe clean and conducive to development-Physical.
4. pride affection and Warmth-Pride.
5. Stimulation for Academic Behaviour-Academic
6. Modeling and Encouragement of Social Maturity Scale-Social
7. Variety of Stimulation - Variety
8. Physical Punishment - Punishment

Differences in the Home Environment

Table 4.12 to Table 4.19 give the scores of the Home Observation Inventory according to demographic variable. One way analysis of variance (ANOVA) was performed to findout if the

differences in the home environment of the children of different demographic sub groups, are statistically significant or not.

Table 4.12 shows that difference between the home environment of boys and girls is not statistically significant. Boys mean score is 31.90 *SD* 7.33, whereas girls' mean is 35.7 *SD* 3.39 slightly higher than that of boys. Mean and *SD* for the total group is 33.80 and 7.51.

Table 4.12

Differences in Home Environment: Gender-wise

Gender	<i>n</i>	Mean	<i>SD</i>
Boys	20	31.90	7.33
Girls	20	35.70	7.39
Total	40	33.80	7.51
<i>F</i> (1,38) =1.53		<i>p</i> >.05	

Table 4.13

Differences in Home Environment: Age-wise

Age in Months	<i>n</i>	Mean	<i>SD</i>
42-47	14	33.64	7.33
48-53	18	34.66	8.33
54-59	8	32.12	6.40
<i>F</i> (2,37) =.31		<i>p</i> >.05	

Table 4.13 shows the age-wise differences in the scores of home environment. These are not significant statistically. Yet

the home environment for the middle age group children is slightly better.

Table 4.14

*Differences in Home Environment:
Father's Occupation-wise*

Occupational Status	<i>n</i>	Mean	<i>SD</i>
Self Employed Average	12	30.66	7.13
Self Employed Out Standards	4	35.66	5.32
Regular Job	24	32.71	7.93
<i>F</i> (2,37) =1.53		<i>p</i> >.05	

Table 4.14 & 4.15 give the differences in the home environment of the children from different occupational groups Table 4.14 shows that the lowest score i.e 30.66 *SD* 7.13 is for the children who's fathers are self employed (average) and next come the children with father in regular jobs and with outstanding self employment. Their score is 35.66 *SD* 5.32, 7.77.

Table 4.15

*Differences in Home Environment:
Mothers' Occupation-wise*

Occupational Status	<i>n</i>	Mean	<i>SD</i>
Unemployed	33	34.03	7.53
Regular Job	7	32.71	7.93
<i>F</i> (1,38) =1.70		<i>p</i> >.05	

Employment of mothers has slight negative effect on the home environment of the children (Table 4.15). Mean Score of the families with unemployed mothers is 34.03 *SD* 7.53, whereas, children with mothers in regular jobs have home environment mean score 32.71 *SD* 7.93. Although these findings are not statistically significant yet they show a trend and possibility that the occupational status of the parents may effect the scores of the HOME Inventory.

Table 4.16

*Differences in Home Environment:
Mothers' Education-wise*

Occupational Level	<i>n</i>	Mean	<i>SD</i>
Upto Matric	10	33.60	7.96
FA/BA	18	32.61	6.91
Masters	11	36.09	8.57
Professional	1	32.00	-
<i>F</i> (3,36) =.49		<i>p</i> >.05	

Table 4.17

*Differences in Home Environment: Fathers'
Education-wise*

Occupational Level	<i>n</i>	Mean	<i>SD</i>
Upto Matric	1	36.00	-
FA/BA	16	33.12	8.39
Masters	12	34.42	7.98
Professional	11	33.91	6.54
<i>F</i> (3,36) =.09		<i>p</i> >.05	

Table 4.16 and Table 4.17 give the differences in the home environment as a effect of parents education. Table 4.16 shows that the children of mothers with Master's level education have mean score 36.09 *SD* 8.57 which is highest. Similarly, Table 4.17 shows that the fathers who have Masters level education, have the highest score. The home environment score of the families with fathers education professional or FA/BA level is slightly on the lower side. The findings are statistically not significant.

Table 4.18

Differences in Home Environment: No. of Siblings-wise

Number of Siblings	<i>n</i>	Mean	<i>SD</i>
None	4	35.50	7.32
1-3	27	34.88	6.97
4-6	9	29.77	8.58
$F(2,37) = 1.73$		$p > .05$	

Table 4.18 gives the difference in the home environment because of the number of siblings. The highest mean score was found for the families with only one child. This group has mean score 35.50 *SD* 7.32. Lowest mean score was for the children with four to six siblings. They have mean score 29.77, *SD* 8.58.

Table 4.19

Differences in Home Environment: Birth Order-wise

Birth Order	<i>n</i>	Mean	<i>SD</i>
Eldest	13	33.85	6.8
Middle	11	33.64	7.5
Youngest	16	33.88	8.5
$F(2,37) = 0.00$		$p > .05$	

Table 4.19 shows that the Birth order of the child did not have to any effect on the Home environment. Families of youngest children have slightly better home environment.

The Intellectual Development

Intellectual development scores were obtained by the Test of Intellectual Development scale for Pakistani preschool children prepared at the National Institute of Psychology Islamabad (Israr&Abbas, 1990).

Correlation Between the Sub-Scales of Intellectual Development

The Test of Intellectual Development scale for Pakistani preschool children has 8 subscales. Six of them are correlated with the total score at .001 level of significance; only two are at .05 level.

Table 4.20

Correlation between the subscales of the Test of Intellectual Development Scale

Subscales	1	2	3	4	5	6	7	8
1. Colour Naming	1.000							
2. Reasoning	.34	1.00						
3. Seriation	.13	.02	1.00					
4. Verbal mem.	.09	.16	.24	1.00				
5. Pictorial mem.	.45*	.26	.11	.20	1.00			
6. Percept.Motor	.27	.00*	.40*	.34	.25	1.00		
7. Correspondence	.61**	.49**	.02	.20	.53**	.27	1.00	
8. Conversation	.31	.30	.26	.27	.07	.37	.41*	1.00
Total	.71**	.54**	.39*	.48**	.59**	.56**	.81**	.68*

* <.01 ** <.001

The correlation matrix shows that none of the subscales has negative correlation with each other. Most highly correlated subscales is One-to-One Correspondence which has correlation of .81 with the total scale significant at .001 level with colour naming, reasoning, pictorial memory and conversation also. Seriation is most poorly correlated with other scales. It has significant correlation (at .05 level) only with perceptual motor task.

Differences in Intellectual Development

Table 4.21

Difference in Intellectual Development: Gender-wise

Gender	<i>n</i>	Mean	<i>SD</i>
Boys	20	23.35	6.46
Girls	20	23.35	6.83
Total	40	23.35	6.56
<i>F</i> (1,38) =00		<i>p</i> >.05	

Table 4.21 shows the Gender-wise differences in the scores of Intellectual Development. Mean of boy's and girls' performance is exactly the same i.e 23.35.

Table 4.22
Difference in Intellectual Development: Age-wise

Age in months	n	Mean	SD
42-47	14	18.57	5.03
48-53	18	26.78	5.70
54-59	8	24.00	6.09
$F(2,37) = 8.66$		$p < .001$	

Table 4.22 shows the age-wise difference in the scores of intellectual development. These are statistically significant at .001 level. The younger groups have the lowest mean score, SD 5.03. Although the scores of intellectual development show an increase with ages however, the middle group has a higher mean than the eldest group. It may be because of few higher scorers that the mean score has been increased. The range's upper limit score is the highest score of the total population. The use of the raw scores may be an explanation for the significance of the difference in the Development scores of various age groups.

Table 4.23
Difference in Intellectual Development: Father's Occupation-wise

Occupational Status	n	Mean	SD
Self-employed	12	22.3	7.95
Self-employed Outstanding	4	27.00	2.71
Regular Job	24	23.41	6.20
$F(2,37) = .87$		$p > .05$	

Table 4.24

*Difference in Intellectual Development:
Mother's Occupation-wise*

Occupational Status	<i>n</i>	Mean	<i>SD</i>
Unemployed	33	22.97	6.70
Regular Job	7	25.14	5.98
$F(1,38) = .62$		$p > .05$	

Table 4.23 and Table 4.24 shows the difference in the scores of children from different occupational groups. Table 4.22 gives the occupational group of the fathers. It is revealed that children of fathers with average self employment, scored lowest. Their mean is 22.0 and *SD* 7.95. Children of the fathers with out standing self employment scored highest; mean 27.0 and *SD* 2.71.

Table 4.24 shows the effect of mothers employment status on the children's score of intellectual development. Children of unemployed mothers scored less than the children of mothers in regular job. Although the finding is not statistically significant however, it reflects a trend.

Table-4.25

Difference in Intellectual Development: Mother's Education-wise

Education	<i>n</i>	Mean	<i>SD</i>
Upto Matric	10	21.30	5.61
FA/BA	18	23.61	7.37
MA/M.Ed	11	24.63	6.36
Professional	1	25.00	6.55
$F(3,36) = .17$		$p > .05$	

Table 4.26

*Difference in Intellectual Development:
Father's Education-wise*

Education	n	Mean	SD
Upto Matric	1	28.00	-
FA/BA	16	23.19	6.18
MA/M.Ed	12	23.00	6.82
Professional	11	23.55	6.71
<i>F</i> (3,36) =.17		<i>p</i> >.05	

Table 4.25 and 4.26 show the differences in the intellectual development scores, parental education wise. Although the findings are not statistically significant however, mothers educational level shows a positive increase in the scores as the educational level increases. The father's education does not bring any change in the scores on intellectual development.

Table 4.27

*Difference in Intellectual Development: No. of
siblings-wise*

No. of Siblings	n	Mean	SD
None	4	27.25	4.11
1-3	27	22.89	7.10
4-6	9	23.00	5.55
<i>F</i> (2,37) =.78		<i>p</i> >.05	

Table 4.27 shows the effect of the number of brothers and sisters on the Intellectual development scores. The group of children with out siblings has the highest mean (27.25) and

lowest *SD* (4.11). Children who had up to three siblings had lowest mean and highest *SD*.

Table 4.28
Difference in Intellectual Development: Birth Order-wise

Birth Order	<i>n</i>	Mean	<i>SD</i>
Eldest	13	21.85	6.28
Middle	11	21.82	6.85
Youngest	16	25.63	6.30
<i>F</i> (2,37) =1.66		<i>p</i> >.05	

Table 4.28 has the difference in the scores because of birth order. It is revealed that the last born had highest mean score (25.63). The rest of the groups have mean around 21.

The Social Development

Social development was measured by the Social development scale for preschoolers based on Vineland Social Intellectual Development Scale (Doll, 1953) and the Developmental Tasks Scale (Pervez & Haque, 1990).

Differences in the Social Development

Table 4.29

Difference in the Social Development: Gender-wise

Gender	<i>n</i>	Mean	<i>SD</i>
Boys	20	15.55	5.20
Girls	20	14.75	4.39
Total	40	15.15	4.76
<i>F</i> (1,38) =.28		<i>p</i> >.05	

Table 4.29 reveals that there is very little difference in the scores of boys and girls. Girls' mean is 14.75 *SD* 4.39 which is little lower than that of boys. These differences are statistically non-significant.

Table 4.30

Difference in the Social Development:Age-wise

Age in months	n	Mean	SD
42-47	14	12.14	3.11
48-53	18	16.78	4.45
54-59	8	16.78	5.70
$F(2,37) = 5.21$		$p < .05$	

Table 4.30 shows difference in social development because of age. These differences are significant at .05 level of significance. Since the social development was assessed by the raw scores, the difference because of the age is explainable. The youngest group has mean 12.4 with *SD* 3.11. Higher age groups have mean around 16.

Table 4.31

Difference in the Social Development:Father's Occupation-wise.

Occupational Status	n	Mean	SD
Self-employed Average	12	16.58	4.80
Self-employed Outstanding	4	18.50	3.79
Regular Job	24	13.87	4.57
$F(2,37) = .26$		$p > .05$	

Table 4.31 and Table 4.32 show the difference in the score because of the occupation of the parents. It is revealed table 37 that the lowest mean is for the children who have fathers in regular jobs. Highest social development was attained by the children who's fathers were in outstanding self employment.

Table 4.32

Difference in the Social Development: Mother's Occupation

Occupational Status	<i>n</i>	Mean	<i>SD</i>
Unemployed	33	15.24	4.70
Regular Job	7	14.15	5.76
<i>F</i> (1,38) =.06		<i>p</i> >.05	

Table 4.32 shows that mothers employment status did not affect the social development of the children.

Table 4.33

Difference in the Social Development: Father's Education

Educational Level	<i>n</i>	Mean	<i>SD</i>
Below Matric	1	13.00	-
FA/BA	16	17.19	5.23
MA/M.Ed	12	13.58	4.56
Professional	11	14.09	3.65
<i>F</i> (3,36) =1.75		<i>p</i> >.05	

Table 4.33 gives the scores according to fathers' educational groups. It shows mean 17.19 and *SD* 5.23 for the children who's

fathers had education up to FA/BA. For the rest of the groups the means are around 14.

Table 4.34

Difference in the Social Development: Mother's Education

Educational Level	<i>n</i>	Mean	<i>SD</i>
Below Matric	10	14.80	4.90
FA/BA	18	15.94	5.17
MA/M.Ed	11	14.09	1.34
Professional	1	16.00	-
<i>F</i> (3,36) =.36		<i>p</i> >.05	

Table 4.34 shows the difference in Social development scores due to education. Highest mean is for children who's mothers had education up to FA/BA. However, the findings are not statistically significant.

Table 4.35

Difference in the Social Development: Number of Siblings

No. of Siblings	<i>n</i>	Mean	<i>SD</i>
None	4	14.5	5.19
1-3	27	15.33	4.11
4-6	9	14.88	6.71
<i>F</i> (2,37) =.07		<i>p</i> >.05	

Table 4.35 shows the difference in Social development because of number of siblings. Although the differences are not

significant, the children with out any siblings were least mature socially.

Table 4.36

Difference in the Social Development: Birth order

Birth Order	<i>n</i>	Mean	<i>SD</i>
Eldest	13	15.54	4.07
Middle	11	15.91	4.74
Youngest	16	14.31	5.42
<i>F</i> (2,37) =.42		<i>p</i> >.05	

Table 4.36 shows the difference because of birth order position. The last born are least mature, whereas, the middle children have highest mean. However, the differences are not statistically significant.

Relationship of Play with Home Environment, Intellectual Development and Social Development Scores

Table 4.37

Correlation between Play, Intellectual Development, Social Development, and Home Environment

Variables	C o r r e l a t i o n s			
	1	2	3	4
Play	1.00			
Intellectual Development	.33	1.00		
Social Development	.55**	.26	1.00	
Home Environment	.11	.20	.03	1.00

** *p* = .001

Table 4.37 shows the correlation matrix for relationship of play with other variables. Relationship of play with the social

development is significant at .001 level. Play has lowest correlation with the home environment. The variable of the home environment is poorly correlated with other variables also. The Intellectual development has highest correlation with the play, although statistically it is not significant.

The Differences in High Playful and Low Playful Group

Relationship of the Play scores with the Home environment the Intellectual development and the Social development was investigated in the sub sample of ten most playful (The High Play Group) and ten least playful children (The Low Play Group).

Table 4.38

Difference Play Scores of Extremely High Playful and Extremely Low Playful Groups

Groups	n	Mean	SD
High Playful	10	4.5	.29
Low Playful	10	2.4	.51
$t = 11.78$ df= 18		$p < .001$	

Table 4.38 shows that the difference of the mean score of the extremely high playful children and the low playful children's groups is significant at .001 level.

Table 4.39

Difference in Intellectual Development of Extremely High Playful and Extremely Low Playful Groups

Groups	n	Mean	SD
High Playful	10	26.30	3.5
Low Playful	10	20.30	7.3
$t = 2.3$		$df = 18$	$p < .05$

Table 4.39 shows that the difference between the mean score of Intellectual development of the extremely high play group and the extremely low play group is significant at .05 level of significance.

Table 4.40

Difference in Social Development of Extremely High Playful Group and Extremely Low Playful Group

Groups	n	Mean	SD
High Playful	10	18.40	4.2
Low Playful	10	11.00	2.8
$t = 4.62$		$df = 18$	$p < .001$

As indicated in Table 4.40 the difference in the Social development of High Playful children and Extremely Low Playful children is highly significant ($p < .001$).

Table 4.41

Difference in Home Environment of Extremely High Playful Group and Extremely Low Playful Group

Groups	n	Mean	SD
High Playful	10	30.70	4.7
Low Playful	10	31.70	8.5
$t = -.39$		$df = 18$	$p > .05$

Table 4.41 indicates that the extremely low playful group has a higher mean score than the extremely high playful group. However, the difference is not statistically significant.

Table 4.42

Difference in Subscales of Intellectual Development Test Scores of High Playful and Low Playful Groups

Subscales	High Playful <i>n</i> = 10		Low Playful <i>n</i> = 10		<i>t</i>	<i>p</i>
	Mean	SD	Mean	SD		
Colour naming	4.00	1.15	3.4	1.95	.84	>.05
Reasoning	2.7	1.34	2.5	.85	.40	>.05
Serial Iton	1.0	.66	0.40	.52	2.25	<.05
Verbal Memory	3.6	.97	3.1	.74	1.30	>.05
Pictorial Mem.	3.5	.97	3.0	1.15	1.05	>.05
Perceptual Mem.	1.7	1.05	.70	.95	2.22	<.05
One to one	3.8	1.55	2.8	2.04	1.23	>.05
Conversation	6.0	2.31	4.4	1.43	1.86	>.05

Tables 4.42 and 4.43 show the difference in the scores of the subscales of intellectual development and home environment scales in the groups of high playful and low playful children.

Table 4.42 shows that the subscale Seriation and Perceptual-Motor coordination significantly differentiate between the high playful and low playful groups. Rest of the subscales do not have significant difference

Table 4.43

Difference in Subscales of Home Environment Test Scores of High Playful and Low Playful Groups

Subscales	High Playful <i>n</i> = 10		Low Playful <i>n</i> = 10		<i>t</i>	<i>p</i>
	Mean	<i>SD</i>	Mean	<i>SD</i>		
Toy and Games	6.0	1.88	6.5	2.64	-.49	>.05
Language	3.9	1.37	4.60	1.71	-1.01	>.05
Physical	6.90	.31	6.90	.31	0.00	>.05
Pride	4.10	1.79	4.10	2.69	0.00	>.05
Academic	1.60	1.08	1.80	1.03	-.42	>.05
Social	2.40	1.58	2.20	1.10	.33	>.05
Variety	5.00	1.76	3.60	1.35	1.99	>.05
Punishment	0.80	1.31	2.20	1.93	-1.89	>.05

Note: Names of the subscales and their abbreviations.

1. Stimulation through toys games and reading material-Toys & Games.
2. Language stimulation -Language
3. Physical environment: Safe clean and conducive to development-Physical.
4. pride affection and Warmth-Pride.
5. Stimulation for Academic Behaviour-Academic
6. Modeling and Encouragement of Social Maturity Scale-Social
7. Variety of Stimulation - Variety
8. Physical Punishment - Punishment

Table 4.43 reveals that the home environment inventory is not differentiating between high and low playfulness. All the *t*s are large which indicate that the difference between the mean of the subscales of high and low play groups, is not significant. On the subscales, Variety of Stimulation and Punishment the difference is noticeable although statistically not significant.

Table 4.44

Correlation between Play Dimensions and Intellectual Development, Social Development and Home Environment

Dimensions	C o r r e l a t i o n s		
	Intellectual Development	Social Development	Home Environment
1. Initiative	.32	.50**	.06
2. Complexity	.30	.51**	.11
3. Sharing	.33	.51**	.16
4. Cooperation	.34	.53**	.15
5. Helping	.30	.52**	.18
6. Fantasy	.28	.47*	.05
7. Com.peers	.21	.53**	.07
8. Com.obs.	.30	.51**	.08
9. Perseverance	.34	.44*	.24
10. Excitement	.24	.53**	.07

** $p < .001$ * $p < .05$

Tale 4.44 shows that all the ten dimensions of play significantly correlate with the score of social development. Only fantasy and perseverance is significant at .01 level, where as, for

the rest of the dimensions $p < .001$. None of the dimensions of play has significant correlation with intellectual development and home environment. However, all the correlations are positive.

Relationship of Playfulness with Subscale score on Intellectual Development Scale

Table 4.45

Correlation between the Play score and the subscale scores of Intellectual Development

Subscales	Correlations
Colour Naming	.09
Reasoning	.10
Seriation	.19
Verbal Memory	.17
Pictorial Memory	.20
Perceptual Motor	.23
One to One Correspondence	.23
Conversation	.33

Table 4.45 shows the correlation of the subscale of the test of intellectual development. None of the correlation is significant.

Table 4.46

Correlation between the Play score and the subscale scores of Home Environment

Subscales	Correlations
Toys & Games	-.01
Language	-.01
Physical	.12
Pride	.15
Academic	.01
Social	.11
Variety	.35
Punishment	.10

Note: Names of the subscales and their abbreviations

1. Stimulation through toys games and reading material-Toys & Games.
2. Language stimulation -Language
3. Physical environment: Safe clean and conducive to development-Physical.
4. pride affection and Warmth-Pride.
5. Stimulation for Academic Behaviour-Academic
6. Modeling and Encouragement of Social Maturity Scale-Social
7. Variety of Stimulation - Variety
8. Physical Punishment - Punishment

Table 4.46 gives the correlation of subscales of home inventory with play score. Three subscales have negative correlations although non-significant.

Table 4.47

Correlation between Play of High Play Group and Intellectual Development, Social Development, and Home Environment

	Play	ID	SD	HE
Play	1.00			
Intellectual Development	.60	1.00		
Social Development	.50	.66	1.00	
Home Environment	.23	.50	.12	.100

Table 4.47 shows the correlation of the play of high play group with intellectual development, social development and home environment. The highest correlation is found between intellectual development and social development.

Play is most highly correlated with Intellectual development than comes the social development. Lowest correlation is found with home environment and social development.

Table 4.48

Correlation between Play of Low Play Group and Intellectual Development, Social Development, and Home Environment

	Play	ID	SD	HE
Play	1.00	-	-	-
Intellectual Development	.02	1.00	-	-
Social Development	.68	.03	1.00	-
Home Environment	.64	-.28	.80	-

Table 4.48 shows the correlation of play of low play group with intellectual development, social development and home environment. It is revealed that correlation between home environment and social development is significant at .01 level of significance. Social development is also highly correlated with play in the low play group, however, the coefficient is statistically not significant. Home environment of low play group children is also positively related with their play scores.

Emotional Development of Play: A Qualitative Account.

Children Apperception Test has been scored quantitatively and objectively by many researchers (Haworth, 1968, Witherspoon 1968, Moriarty, 1968). Non statistical account of the data on child development is not a new approach in psychology. Piaget (1952) Chukovsky (1963) Velentine (1942) and Cohen (1985), all of them have monitored the development of their own children to understand and generalize the various aspects of child development.

The utility of objective and normative analysis of a test can not be denied. However, as Bellak (1960) pointed out that the main objective of CAT, and the advantage of using projective techniques is its sensitivity in detecting dynamic meanings of individual responses.

Evidence is available to show that analysis of CAT/TAT stories both by emphasizing the structure of the stories and contents of the stories (see McGrew & Taglasi 1990) can be useful. For the present part of the study attempt has been made to emphasize the content of the stories.

The qualitative account of the emotional aspect of the children's personality is based on their apperception expressed through CAT -P. In a study of the personality dynamics of Pakistani children (Pervez, 1984) the approach of the thematic analysis of the stories was undertaken. In the present study the emotional aspect of the children development is being assessed

through their apperceptions of CAT cards. Dynamics of relationships with family, parents, siblings and peers, themes of loneliness, insecurity, anxiety aggressiveness were assessed through the stories made by the children.

There was only one child (Jv.) who refused to respond on CAT. She was very non-cooperative though otherwise submissive during the play sessions. On other tests also she did not respond well. During the one month's interaction in the group and three visits to her home, it was rare that she talked freely with any one of the observers or the research assistants. The refusal of responding to the apperception test indicates her strong resistance in revealing her self, blocking in fantasy and inability in communication. These aspects of her personality are supported from her play behaviour also. During play sessions she was playing alone all the time; in a corner of the room or under the tables. Arranging the kitchen utensils (toys) in line and making small pieces of plasticine were her favourite play activities. She was insecure in her relationship with peers and elders. The play behaviour through out the play sessions was rated at or below three point; one being the lowest possible score.

The CAT protocols were divided in to three groups according to the play scores of the children. These were labelled as top, bottom and middle groups. The three groups had 13 children in each.

CAT Responses of the Children of Top Playful Group

There were three children who responded to the cards in an inhibited manner. Very few children omitted the main figures. Many children over emphasized the personifications of the figures. When compared with the stories of the other groups it was found that these children exhibited more fantasy, and the dialogues were often given in direct speech. The stories were lengthier, more new characters were introduced, and a thematic consistency in most of the five stories was found in many children of this group. For example a child (Nd) in four out of the five stories mentioned that the characters would go to sleep. Three out of five stories of (An) carried a persistent theme of looking for a pencil. It may be interpreted that their apperceptions are influenced by the immediate needs and the intensity of the need over shadows their apperceptions. She (An) not only repeatedly mentioned the desire to have pencils (of course through the animal characters) at the same time these characters were mentioned as working with those pencils.

Themes of loneliness and insecurity are rarely found in the responses of this groups. Only two children repeatedly mentioned the death and ghosts in the stories. Cow, tiger, elephant, donkey, T. V., pig, hippopotamus, and wolf are some of the new characters introduced by these children in their apperceptions. The high play group stands out significantly in the introduction of new characters in the stories. They have mentioned the characters who have not been shown in the picture cards. These characters are generally in personified

terminology. However there was one child who introduced many new animals and birds as the character of the stories.

Aggression is very distinctly found in the themes of the stories of the top playful children. The aggressive themes carry an element of play also. It is interesting of note that the characters of the stories of playful children are also playful. These stories have a strong element of the description of activities. At times these activities lead towards aggression and at times these turn out to be playful.

Themes of oral gratifications were also dominant. It was noticed that most of the children while describing the routine or activities of the story characters emphasized on food and school. These two aspects are generally very important in a child of this age. It shows that there was a strong identification with the story characters. Breakfast and food is frequently mentioned but feeling of deprivation is not there.

The dynamics of relationship are undermined in the group of top playful children. Only two children mention the mother as a character and father was mentioned only by one child in the stories. Mother-child relationship was mentioned in these story.

CAT Responses of the Children of Middle Playful Group.

There were 4 children who responded to the cards in an inhibited manner. Their stories consist of only the description

of the card. They needed persuasion and took more time to make the stories. One child had made outstandingly very long stories. Introducing new characters in the stories was frequently found.

Themes of insecurity were found in the stories of six children, dog will eat it, snake would bite, feeling extreme cold, uncertain happenings, conspiracy are some of the themes which reflect insecurity. Some of these children mentioned about the unexpected attack or unseen characters influencing the life of the characters. Themes of loneliness were not found in even in this group. An expression of "I don't know who it is" was a frequent characteristic of the stories made by few children of this group. It shows that their fantasy and imagination was at mediocre level. They were not that inhibited that they would not try to fantasize but the fantasy was not wild enough to be transferred in to vocabulary.

Themes pertaining to relationships were very rarely found. One child repeatedly mention home and only in one story, there was a brother. Mentioning of the activities of the story characters was limited to sleeping and dressing up. Play was not mentioned as an activity of these characters.

CAT Response of the Children of Bottom Playful Group

There were six children who responded the cards in an inhibited manner. Two of them described the cards just in mono-syllables; and four protocols had the description in short

sentences. The protocols which have the element of fantasy were limited to the stories of the characters present in the picture. Introducing new characters was very rare in the stories of the children of bottom playful group.

One child (Sh.) was extra ordinarily pre occupied with the themes of violence and death imagery. He mentioned that the lion bite the (animal) and it will die (Card 1). These are animals eating grass than will eat potty (card 3). People are sleeping. Lion would come and roar, they will fire and shoot him (Card 2). Monkey will shoot snakes (Card 4) and finally for Card No. 5 cat's death was mentioned. Destruction in the environment and eating of filth etc were also mentioned in his stories. This child, while in the play sessions, also had very peculiar behaviour. He carried, most of the time, the expressions of unpleasantness. He tried to crush and break the toys when ever he could find the opportunity. He was also non-communicative and inhibited.

CAT protocols of another boy (Ar.) is also worth mentioning. This child was extremely non-communicative and non-playful through out the sessions. The teachers also mentioned that he has no relationship with peers. The CAT protocols unexpectedly were not that inhibited as was his play was. He was communicative during the testing and element of fantasy was also noticed.

The characteristics of the CAT stories of the children highlight that the more playful children were more communicative in their verbal expression and fantasy elements.

Mentioning of play activities and playfulness of the identification figures was also highlighted in the stories. Introduction of new characters was also a discriminatory element of the stories of playful children. Themes of aggression were dominated in playful children where as anxiety fear and loneliness was evident in low playful children.

CHAPTER V

DISCUSSION AND CONCLUSIONS

The present study was meant to investigate the play behaviour of Pakistani children and see its correlates with home environment and social emotional and intellectual development of children in an urban middle class settings. Since the study is probably the first of its kind in Pakistan, a number of pilot studies were carried out to establish the methodology of the study.

The pilot studies indicated the conditions in which play could be observed. These studies also yielded a major research instrument, the playfulness scale for Pakistani children. The scale was developed in two studies from a wide range of children's behaviour observed in pilot studies. Through factor analysis 25 initially selected dimensions were reduced to ten. It was found that children could be rated quite reliably by trained raters on various dimensions of this scale. The internal consistency as measured by coefficient alpha was found to be .94 in the pilot study and .98 in the main study. One expects that this would prove to be a useful instrument in future research in the area of play in Pakistan.

The main study attempted to explore the relationship between playfulness and a number of measures of development, and home environment. The difference in play behaviour and

various aspects of development was seen from the perspective of demographic groups. None of the variable could bring significant difference. Since the group under study was quite homogeneous, in terms of age, social background and economic level, the demographic factors could not bring the differential results.

The study to understand the relationship of play with development was vulnerable to two type of problems. First was how to assess the development. The findings of the research had to be analyzed in the specific perspective in which the various aspects of development were defined. The second was the nature of group available.

A second problem was the sample taken for the study. Since this was an indepth investigation which involved observation of children interviews of parents and test administration, the sample could not be very large, or from a number of localities. The resulting homogeneity of the population was probably responsible for many of the low correlations that were found here.

The results were analyzed in two ways. Taking the group as a whole correlations were computed. However, probably due to homogeneity of population, the correlation were quite low. A future analysis was carried out by taking two extreme groups of high and low playful children. Since the traditions of research in Pakistan are not very strong, well-researched instruments are not available. Many of the instruments were being used for the

first time in this investigation, or were specifically developed for this study.

Play and Social Development

The research shows that play in preschool children is most significantly correlated with social development. Social development was measured through the scale which qualifies social development as the attainment of certain social skills and developmental tasks.

Social development scores of preschool children do not show significant differences when segregated in terms of various demographic variables. Only the age-wise difference is statistically significant. Children when grouped into high playful and low playful groups, (10 children from the each extreme of the play score range) also showed the significant difference in their social development ($t = 4.62; p < .001$).

Significantly high positive correlation of all the dimensions of play with social development shows that play and social development share most of the attributes. The free play carries the characteristics which are the demand of social developments. Acquisition of the social competences, social roles and gender roles are learned and practiced through play which makes the child more playful on one hand while on the other hand makes him more mature and socially developed.

The significance of social developmental factors in play was highlighted also by Fein (1981) and Rubin, Mainoni & Hornung (1976) who found positive correlations between the dramatic play and performance on role taking task. However, they concluded that the difference in the play of children from different social class may be due to the structured situations of the play group; rather than the difference in the children. This apprehension is more valuable in the context of pretend play.

It is difficult to conclude from this study if the social development enhances play in preschool children or the play process facilitates the social development. However, a significant positive relationship is found in the social development of preschool age children and their play behaviour.

Play and Intellectual Development

Relationship of play with intellectual development has been the concern of educationists and psychologists both. Psychologists have been interested in investigating how play facilitates the cognitive skills whereas the main concern of the educationists was to understand the impact of play on learnings and achievement.

The results indicate that the intellectual development of the preschool children is not related to the demographic variables. However, the results of the present study indicate a significant difference in the intellectual development of high playful and

low playful children. High playful children are more intelligent where as low playful children are less intelligent.

Intelligence for this study was considered the ability as measured by colour naming, reasoning, seriation, verbal and pictorial memory, perceptual and motor coordination, one to one correspondence and conversation. It was found that perceptual memory and seriation are the two subscales of intelligence which significantly differentiate between the high playful and low playful group.

Cole & Lovoie (1985) also found no sex difference in the cognitive measures and correlation with various cognitive measure and fantasy play were also low and non significant. The difference in the frequency and duration of ideational and fantasy play did not differ sex-wise and age-wise. Harper & Sanders (1976), Mathews (1978) also could find the similar findings. Cole & Lavoie (1985) mentioned that differences exist among studies on the relationship between verbal IQ and pretend play but there is some support for positive relationship between IQ and dramatic play and role taking measures.

Some studies have shown a relationship of divergent thinking and play. The test of intellectual development was highly loaded by the subscales assessing convergent thinking. This might have been the reason for low correlation between play and intellectual development.

Jennings, Harmon, Morgan, Gaiter and Yarrow (1979) studying one year olds concluded that the quality of exploratory play was related to cognitive functioning and forms an interactive relationships between the two. They inferred that the infants who spontaneously by practice more in exploratory play master these skills earlier than the other children.

Emotional Development

Play and emotional development can be postulated as having a circular relationship. Play on the one hand helps to master anxiety and frustration and at the same time the contents of play may be influenced by the frustrations and stresses child faces in the real life. Gilmore (1966) found that hospitalized children preferred to play with anxiety relevant toys. But at the same time if this stress becomes the part of real life, as was found by Hetherington et al. (1979) in the study of the children of divorced families, it would have a suppressive effect on play.

Similarly, in the present study it was also observed that the play of those children who had problems in family or were from the broken families exhibited suppressed and inhibited play. Some such children became very destructive. It was observed that the emotional development was related with their play style. Those children who could produce CAT stories with expression, creativity and emotionally healthy themes, could also score high on the scale of playfulness.

The playful children had a better expression, communication and fantasy. They had less feelings of isolation and anxiety whereas, low playful children had recurring themes of anxiety, fear, death and isolation. It is important to note that play helped children in overcoming their anxiety, mastering their rational and irrational fears and getting away from feelings of being lonely.

It was observed that ability to communicate and express was the one which was most significantly related with play. The playful children were not only very expressive with the adults around, but were also expressive of their apperceptions too. As found in earlier studies play is positively correlated with divergent thinking (Fein, 1975,1981; Pepler & Ross, 1981). It can be said that the ability of the divergent thinking broadens the child's experiences and thus increases the number of creative responses. It seems that creativity, playfulness, divergent thinking and communications; these are all interrelated each other. It is through play that a child gets opportunity of the catharsis of these dimensions of his personality. It was observed that the more playful children gave vent to aggressive themes in their apperception test. It can be interpreted as the ability to accept and express socially undesirable responses which shows their maturity and mental health. From the play environment the child learns to experience emotions and to express emotions and which facilitates the acceptance of emotions.

Emotional development involve three phases as mentioned by Bjorklund (1978): (a) identification of feelings, (b) acceptance of feelings, (c) expression of feelings. The observation of play behaviour is our study and the apperceptive responses of those children show that majority of the more playful children was in the higher level of emotional development as far as their feelings level was concerned.

Home Environment

Attempts were made to know about the home environment of the children included in the sample. The findings do not show any significant result. The measurement inventory used for the observation of home environment included various aspects child-family interactions, child rearing practices and stimulation environment resources. None of the subscale differentiate between high playfulness and low playfulness. It may be attributed to the homogeneity of the family background of the children in the sample.

Jennings et al. (1979) studied influence of environmental factors on the development of exploratory play and concluded that the environmental factors were associated only with the production of effects of exploratory play. The other aspects of exploratory play were not related with environmental factors. It seems that the child develops the playfulness with his personal interaction with the environment. The home environment is not very significant because most of the time the family, specially the majority of the parents and other adults is the family are not

aware of the significance of the play. The factors which could have been contributory in the growth of play are not encouraged in the family environment. We have different styles of child rearing practices, which may have been responsible for our results being different from those of Caldwell & Bradley (1984) in their validation studies.

The findings of the study when seen in a larger perspective help in entering into a new world: the world of play: in which the child in his inimitable style of interaction not only learns some thing but also enjoys it. When most of the adults start doing some thing; a project, a research, an assignment, tend to postpone their *joy* till it is completed. But the children are lucky enough that while playing they do not deprive themselves from this joy from the very beginning. They enjoy the process as well as the end.

Enjoying the process is the valuable attribute of play which adults can also learn from their children. The interest in the process could be maintained only if the end, failure or success is not pressurizing. Over and above to the statistical findings about play and development I would highlight that benefit of play which I, as a researcher could see during the process of the research, and that was the incredible happiness, joy and pleasure, these children could draw from the play groups. The kids who served in the pilot studies are now in schools, yet they still remember their experience of being in the play groups, as a joyful experience. The joy and pleasure they got through the play group, has left positive ingrains into their memories.

Missing References

- Bellak, L., & Hurvich, M. S. (1966). Human modification of Children's Apperception Tests. *Journal of Projective Technique & Personality Assessment*, 30, 220-242.
- Haworth, M. R. (1968). Symposium: The CAT: Its use in developmental assessment of social children. *Journal of Projective Technique and Personality Assessment*, 32, 405.
- Moriarty, A. E. (1968). Normal preschoolers reaction to CAT: some implications for later development. *Journal of Projective Technique and Personality Assessment*, 32, 413-411.
- Neuringer, C.,(1970) Projective fantasy on the CAT and CAT-H. *Journal of Projective Technique and Personality Assessment*, 34, 407-491.
- Rabin, A. I., & Bellak, L. (1968). CAT findings with kibbutz and non kibbutz preschoolers. *Journal of Projective Technique and Personality Assessment*, 32, 425-427.
- Witherspoon, R. L. (1968). Development of objective scoring methods for longitudinal CAT data. *Journal of Projective Technique and Personality*, 32, 406-412.

REFERENCES

- Barnett, L. A. (1984). Young children's resolution of distress through play. *Journal of Child Psychology and Psychiatry*, 25, 477-483.
- Barnett, L. A. (1990). Developmental benefits of play for children. *Journal of Leisure Research*, 32, 138-153.
- Bellak, L. & Adelman, C. (1960). The children's apperception test. In A. I. Rabin & M. R. Haworth (Eds.), *Projective techniques with children*. New York: Grune & Stratton.
- Bettelheim, B. (1987). The importance of play. *The Atlantic Monthly*, March, 1987.
- Bjorklund, G. (1978) *Planning for Play: A developmental approach*. London: Charles E. Merrill Publishing Company. A Bell and Howell Company.
- Bradley, R., & Caldwell, B. (1976a). Early home environment and changes in mental test performance from 6 to 36 month. *Developmental Psychology*, 12, 93-97.
- Bradley, R., & Caldwell, B. (1976b). The relation of infant's home environments to mental test performance at fifty-four months: a follow-up study. *Child Development*, 47, 1172-1174.
- Bradley, R., & Caldwell, B. (1979). Home observation for measurement of the environment: a revision of the preschool scale. *American Journal of Mental Deficiency*, 84, 235-244.

- Bradley, R., & Caldwell, B. (1981). The home inventory: A validation of the preschool scale for black children. *Child Development, 52*, 708-716.
- Bradley, R. H., & Caldwell, B. M. (1984). A study of the relationship between home environment and cognitive development during the first five years. In A. W. Gottfried. (Ed.), *Home environment and early cognitive development: Longitudinal research*. New York: Academic Press Inc.
- Bretherton, I. (1984). Representation of social world in symbolic play: Reality and fantasy. In I. Bretherton (Ed.), *Symbolic play: The development of social understanding*. Florida: Academic Press Inc.
- Brody, G. H. (1985). Role relationships and behaviour between pre-school-aged and school-aged sibling pairs. *Developmental Psychology, 21*, 124-129.
- Bruner, J. S. (1972). Nature and uses of immaturity. *American Psychologist, 27*, 687-708.
- Caldwell, B. M., & Bradley, R. H. (1984). *Home observation for measurement of the environment*. Little Rock. University of Arkansas.
- Campos, J. J., Campos, R. G., & Barrett, K. C. (1989). Emergent themes in the study of emotional development and emotional regulations. *Developmental Psychology, 25*, 394-402.
- Chukovsky, K. (1963). *From two to five*. Berkeley: University of California Press.

- Clarke-Stewart, A., & Friedman, S. (1987). *Child Development: Infancy through Adolescence*. New York: John Wiley & Sons Inc.
- Cohen, D. (1987). *The development of play*. London: Croom Helm.
- Cohen, J. (1960). A coefficient of agreement for nominal scales. *Educational and Psychological Measurement*, 20, 37-46.
- Cohen, N.L., & Tomlinson-Keasey, C. (1980). The affect of peers and mothers on toddlers' play. *Child Development*, 51, 921-924.
- Cole, D., & Lavoie, J. C. (1985). Fantasy play and related cognitive development in 2-to-6-year olds. *Developmental Psychology*, 21, 233-240.
- Connolly, J. A., & Doyle, A. (1984). Relation of fantasy play to social competence in preschoolers. *Developmental Psychology*, 20, 797-806.
- Dansky, J. L. (1980). Make believe: A mediator of relationship between play and associative fluency. *Child Development*, 51, 57-579.
- Dansky, J. L., & Silverman, I. W., (1975) Play: A general facilitator of associative fluency. *Developmental Psychology*, II, 104.
- Dawson, G., & Galpert, L. (1990). Mother's user of initiative play for facilitating social responsiveness and toy play in young artistic children. *Development and Psychopathology*, 2(2), 151-162.

- DeLoache, J. S., Sugarman, S., Brown, A. L. (1985). The development of error correction, strategies in young children's manipulative play, *Child Development*, 56, 928-936.
- Denham, S. A. & Couchoud, E. A. (1990). Young preschoolers understanding of emotions, *Child Study Journal*, 20(3), 171-192.
- Dias, M. G., & Harris, P. L. (1988). The effect of make believe: Play on deductive reasoning. *British Journal of Developmental Psychology*, 6, 207-221.
- Doll, E. A. (1953). *The measurement of social competence: A manual for the Vineland Social Maturity Scale*. Minneapolis: Educational Test Bureau.
- Eckler, J., Weininger, O. (1989). Play and cognitive development in preschoolers. *Alberta Journal of Educational Research*, 34(3), 3179-3193).
- Elardo, R., Bradley, R., & Caldwell, B. (1977). A longitudinal study of the relation of infants' home environments to language development at age three. *Child Development*, 48, 595-603.
- Ericksons, E. (1963). *Childhood and society* (2nd ed.). New York: W. W. Norton.
- Fein, G. B. (1975). A transformational analysis of pretending. *Developmental Psychology*, 11 291-296.

- Fein, G. G. (1981). Pretend play in childhood : An integrative review. *Child Development*, 52, 1095-1118.
- Fiese, B.H. (1990) Playful relationship: A contextual analysis of mother-toddler interaction and symbolic play. *Child Development*, 61, 1648-1656.
- Friedrich-Cofer, K. K., Huston S. A., Kipnis, D. M., Sussman, E. J., & Clemet, A. S. (1979). Environmental enhancement of prosocial television contents: Effects on interpersonal behaviour imaginative play and self regulation in a natural setting. *Developmental Psychology*, 15, 637-646.
- Garvey, C. (1977). Play. In J. Bruner, M. Cole, & B. Lloyd. (Eds.), *The developing child*. London: Fontana Open Books Publishing Ltd.
- Gilmore, J. B. (1966). The role of anxiety and cognitive factors in children's play. *Child Development*, 37, 397-416.
- Gottfried, A. W. (1984). Issues concerning the relationship between home environment and early cognitive development. In A. W. Gottfried (Ed.). *Home environment and early cognitive development*. New York: Academic Press Inc.
- Gramza, A. F., Corbush, J., & Eliss, M. J. (1972). Childrens' play on trestles differing in complexity: A study of play equipment design. *Journal of Leisure Research*, 4, 303-311.
- Groos, C. K. (1898). *The play of animals*. New York: Appleton .
- Groos, K. (1901). *The play of man*. New York. Heinemann.

- Harper, L. V., & Sanders, K. M. (1976). Free play among gender, age, season and location. *Child Development*, 47, 1182-1185.
- Hetherington, E. M., Cox, M., & Cox, R. (1979). Play and social interaction in children following divorce. *Journal of Social Issues*, 35, 26-49.
- Howes, C. (1980). Peer play scale as an index of complexity of peer interaction *Developmental Psychology*, 16, 371-372.
- Hurlock, E. B. (1972). *Child development*. (5th edition). London: McGraw Hill.
- Iannotti, R. J. (1985). Naturalistic and structured assessment of pro-social behaviour in pre-school children: The influence of empathy and perspective taking. *Developmental Psychology*, 21, 46-55.
- Israr, N., & Abbas, I. (1990) *Test of Intellectual Development for Pakistani Children*. Islamabad: National Institute of Psychology.
- Jennings, K. D., Harmon, R. J., Morgan, G. A., Gaiter, J. L., & Yarrow, L. J. (1979). Exploratory play as an index of mastery motivation: Relationships to persistence, cognitive functioning as environmental measures. *Developmental Psychology*, 15, 386-394.
- Keisar, R. E., & Prather, E. N. (1990). What is the TAT? A review of ten years of research. *Journal of Personality Assessment*, 55, 800-803.
- Klinger, E. (1971). *Structure and function of fantasy*. New York: Wiley.
- Kooij, R. Van der (1989). Research on Child's Play. *Play and Culture*, 2, 20-34.

- Krasnor, L. R., & Pepler, D. J. (1980). A study of children's play: Some suggested future directions. In K. H. Robin (Ed.). *New directions for child development*: San Francisco: Jossey-Bass.
- Laucks, E.C. (1981). *The Meaning of Children*. Westview: Boulder, Colorado.
- Lennon, R., & Eisenberg, N. (1987). Emotional displays associated with pre schoolers' pro-social behaviour. *Child Development*, 58, 992-1000.
- McCune-Nicolich, L. (1981). Toward symbolic functioning: Structure of early pretend games and potential parallels with language. *Child Development*, 52, 785-797.
- McGrew, M. W., & Teglasi, H. (1990). Formal characteristics of thematic apperception test stories as indices of emotional disturbances in children. *Journal of Personality Assessment*, 54, 639-655.
- Millar, S. (1976) *Psychology of play*. London: Cox & Wyman Ltd.
- Morrison, H., & Kuhn, D. (1983). Cognitive aspects of pre schoolers' peer imitation in a play situation. *Child Development*, 54, 1054-1063.
- Murray, F. B. (1972). Acquisition of conservation through social interaction *Developmental Psychology*, 6, 1-6.
- Mussen P. H., & Taylor, N. H. (1954). The relationship between overt and fantasy aggression. *Journal of Abnormal and Social Psychology*, 49, 235-240.
- Parten, M.(1932). Social participation among preschool children. *Journal of Abnormal and Social Psychology*, 33, 243-69.

- Pepler, D. J., & Ross, H. S. (1981). The effect of play on convergent and Divergent problem sloving. *Child Development*, 52, 1202-1210.
- Pervez, S. (Ed.) (1989a). *The Pakistani Child: Educational and psychological research*. Islamabad: National Institute of Psychology.
- Pervez, S. (1989b). Resarches on mass media and play with reference to children in Pakistan. In S, Pervez (Ed.). *The Pakistani child: Educational and Psychological Research*. Islamabad: National Institute of Psychology.
- Pervez, S. (1991). *Children's Apperception Test (Pakistani Adaptation)*. Islamabad: National Institute of Psychology.
- Pervez, S., & Bokhari, T. (1984). *Personality dynamics of children*. Islamabad: National Institute of Psychology.
- Pervez, S., & Anila. (1991). *Validation of home inventory for Pakistani preschooler*. Unpublished, Islamabad: National Institute of Psychology.
- Pervez, S., & Haque, A.(1990) *Developmental Tasks for Primary School Age Children*. Islamabad: National Institute of Psychology.
- Piaget, J. (1928). The first year in the life of the child. *British Journal of Psychology*, 11, 170-177.
- Piaget, J. (1962). *Play, dreams, and imitation in childhood*. London: Routledge & Kegan Paul Ltd.
- Power, T. G. (1985). Mother and father-infant play: A developmental analysis. *Child Development*, 56, 1514-1524.

- Power, T. G., Chapieski, M. I., & McGrath, M. P. (1985). Assessment of individual differences in infant exploration and play. *Development Psychology, 21*, 974-981.
- Rardin, D. R., & Moan, C.E. (1985). Peer interaction and cognitive development. *Child Development, 42*, 1685-1699.
- Rosen, C. E. (1974). The effect of socio-dramatic play on problem solving behaviour among culturally disadvantage preschool children. *Child Development, 45*, 920-927.
- Rubin, K. (1980). *Children's play*. New York: Jossey Bass.
- Rubin, K. H., Fein, G. G., & Vandenberg, B. (1983). Play. In E. M. Hetherington (Ed.). *Handbook of child psychology. Vol. 4. Socialization, personality and social development*. New York: Wiley.
- Rubin, K. H., Watson, K. S., & Jambor, T. W. (1978). Free play behaviour in preschool and kindergarten children. *Child Development, 49*, 534-536.
- Rubin, K. H., Mainoni, T. L., & Hornmng, M. (1976). Free play behaviours and lower class preschoolers: Parten and Piaget revisited. *Child Development, 47*, 414-419.
- Scheafer, C. (Ed.) (1979). *The therapeutic use of child's play*. New York: Jason Aronson Inc.
- Schlosberg, H. (1947). The concept of play. *Psychological review, 54*, 229-231.
- Schwartzman, H. B. (1978). *Transformations: The anthropology of children's play*, New York: Plenum.

- Shea, J. D. C. (1981). Changes in interpersonal distances and categories of play behaviour in early weeks of preschool. *Developmental Psychology, 17*, 417-425.
- Singer, J.L. (Ed.), (1973). *The child's world of make believe*. New York: Academic Press.
- Smith, P. K. (1978). A longitudinal study of social participation in preschool children. *Developmental Psychology, 14*, 517-523.
- Smith, P. K., & Vollstedt, R. (1985). On defining play: An empirical study of the relationship between play and various play criteria. *Child Development, 56*, 1042-1050.
- Straker, G. & Jacobson, R. S. (1981). Aggression emotional maladjustment and empathy in the abused child. *Developmental Psychology, 17*, 762-765.
- Sutton-Smith, B. (1979). Play in cognitive development. In C. Schaefer (Ed.). *The therapeutic use of child's play*. New York.: Jason Aronson Inc.
- Sylva, K. (1976). The role of play in the problem solving of children 3-5 years old. In J. S. , A. Jolly., & K. Sylva. (Eds.). *Its role in development and evolution*. New York: Basic Books.
- Thomes, B. (1984). Early toy preferences of four-year-old readers and non readers. *Child Development, 55*, 424-430.
- Thompson, R. A. (1990). Vulnerability in research: A developmental perspective on research risks. *Child Development, 61*, 1-16.
- Tuker, N. (1977). What is child. In J. Bruner., & B. Lloyd (Eds.). *The developing child*. London: Fontona Open Books.

- Valentine, C. W. (1942). *The early life of the child*. London: Methuen.
- Vandenberg, B. (1982). *Play: A concept in need of a definition?* In D. J. Reiser, & K. H. Rubin (Eds.). *The play of children: Current theory and research*. Basel: Karger.
- Weisler, A., & McCall, R. B. (1976). Exploration and play: Resume and redirection. *American Psychologist*, 31, 483-494.

LIST OF APPENDIXES

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**SAMPLE CHARACTERISTIC
(STUDY 3 -PILOT STUDIES)**

Age & sex

<u>Ages (in months)</u>	<u>Boys</u>	<u>Girls</u>	<u>Total</u>
36-41	6	5	11
42-47	2	4	6
48-53	6	4	10
54	5	8	13
Total	19	21	40

Mean Age: 48

The five age group had 40 children (19 boys & 21 girls) age ranging from 36 months to 60 months. The mean age is 48 months.

Parents' Education

<u>Education</u>	<u>Mother</u>	<u>Father</u>	<u>Total</u>
upto Primary	13	0	13
Matric	17	13	30
FA/B.A	6	20	26
Postgrad/. Tech.	4	7	11
Total	40	40	

Majority had educated parents only 9 mothers were illiterate. Four mothers were trained teachers and most of them were upto matric education category. Majority of the fathers had education uptill FA/BA and few of them also had university and professional education. None of them was illiterate.

Family Income

Income group (In Rupees)	No. of Family
2000 & Below	4
2100 -4000	15
4100 - 6000	10
6100 - 8000	11
Total	40

The family income ranged from 1000 to 8000 per months. Almost 50% of the parents were included in the income upto Rs. 4000/- P.M., and rest of the families had income more than Rs. 4000/- P.M.

Parents Profession

	<u>Mother</u>	<u>Father</u>
No. job	38	1
Teaching	2	0
Office Job (16-)	2	18
Office Job(17+)	0	10
Self Employed	0	11
Total	40	40

As far as the profession of the parents is concerned only one father was out of job, 18 had office job up to grade 16, 10 had job in grade 17 or above, 11 were self-employed. Only two mothers were in office job and two were teachers. Rest of the mothers were house wives.

Birth Order

First child	6
Middle	20
Last	14
Total	40

Six children were eldest in the family, 14 were youngest and rest of them, i.e., 20 were in the middle the birth order.

No. of Siblings

1-3 Siblings	14
4-6 Siblings	23
6+ Siblings	3
Total	40

The most of children were coming from large families. There were 14 children who reported that they had upto 3 siblings. More than 50% children had four or more siblings. Two of them had even nine siblings.

THE PLAY SCALE

1. Initiative: The child was observed for the initiative he takes during play. Initiative was recorded when the child started an activity on his own or took some toys or play material without the help of other group members. If the child took initiative for most of the time during the play session he was rated at the fifth point of the scale, whereas, a child rarely showing initiative was scored at one point of the scale.

2. Complexity: The complexity of play was indicated by the number of toys used by the child. For instance, the child using many objects and organizing play around these objects was considered as the highest sign of complexity and if a child played with single object it was rated at the lowest point.

3. Sharing: Sharing means giving or verbally offering an object that was previously in possession of the child. This was considered as an expression of pro-social behaviour. Child's willingness to share his things, toys, physical space etc., was taken as an indication of the sharing behaviour. A child sharing the toys for most of the time was rated at the fifth point of the scale, whereas, a child sharing rarely was rated at the one point of the scale.

4. Cooperation: Child's willingness to play in cooperation with others was considered as a dimension of play. The child willing to play following others' suggestion was rated on the highest point of the scale, whereas, a child insisting on playing on his own, not allowing any body to suggest a play activity was rated on the lowest point of the scale.

5. Helping: Helping means child's attempt to provide informations, comfort or to solve the problem of other children during play session. A child showing the helping behaviour for most of the time was rated at the fifth point of the scale, whereas, a rare expression of such behaviour was rated at one point of the scale.

6. Fantasy: The fantasy was recorded on the basis of the verbal comments, drawing, role playing or make believe play. A child doing it for the most of the

time was rated at the fifth point of the scales, whereas, a child doing it rarely was rated at one point of the scale.

7. Communication with the peers: A child communicating with other children was rated for this category. A child doing it for the most of the time was rated at the fifth point of the scales, whereas, a child doing it rarely was rated at one point of the scale.

8. Communication with the observers: A child communicating with the observer was rated for this category. A child doing it for the most of the time was rated at the fifth point of the scales, whereas, a child doing it rarely was rated at one point of the scale.

9. Perseverance: A child who goes out of the play room for some play activity or to satisfy some basic need such as toilet, water was rated for this category. A child doing it for the most of the time was rated at the fifth point of the scales, whereas, a child doing it rarely was rated at one point of the scale.

10. Excitement: It was recorded if the child made pleasant noises or communicated in a high pitch. A child doing it for the most of the time was rated at the fifth point of the scales, whereas, a child doing it rarely was rated at one point of the scale.

**DESCRIPTION OF THE TEST OF INTELLECTUAL DEVELOPMENT FOR
PRE SCHOOL CHILDREN**

I. Colour Naming:

Material: Five coloured cards; Red, Blue, Yellow, Green & Black.

Procedure: The child is presented the five cards one after the other, in the order mentioned above, and is asked to name each colour.

Scoring: Each colour is considered as one item and scored as 0 or 1. Total Score=5

II. Reasoning:

Material: 7 pictures, each having three to four objects which differ in Use, Size and Classification. The first two pictures are used for demonstration and are not scored.

Procedure: Each picture is presented to the child, who is required to point to the picture, that does not belong to others or is different from the rest.

Scoring: Each picture is scored as 0 or 1. Total Score=5

III. Seriation:

Material: (1) Seven sticks differing in length. (2) Another set of seven sticks identical to the other set, but pasted on a board in order of length; starting from the smallest and going up to the largest.

Procedure: The sticks are presented to the child in a mixed fashion. He is then asked:

- (a) Which stick is the largest.
- (b) Which stick is the smallest.

These two questions are for child's orientation to the task and are not scored.

Now the sticks are again mixed. The child is shown the pasted model of seriated sticks for about half a minute and is asked to put the other stick in the same manner.

Scoring: The score will depend upon the number of sticks put in correct order by the child.

Putting only 3 sticks in correct order = Score 1.

Putting 4 sticks in correct order = Score 2.

Putting 5 sticks in correct order = 3.

Putting 6 sticks in correct order = Score 4.

Putting 7 sticks in correct order = Score 5.

IV. Verbal Memory:

Material: Five lists of words; 1st containing 2 words, 2nd 3 words, 3rd 4 words, 4th and 5th having 5 words;

Procedure: The tester speaks aloud and clearly the words of each line, one by one and the child is required to repeat those words. The repeated words should be the same, the order is not important.

Scoring: Each list of words is Scored as 1 or 0 Total Score =5.

V. Pictorial Memory:

Material: A card having pictures of five objects. Knife, Pencil, Ball, Horse and Lock.

Procedure: The child is presented the picture card and helped to name each object. He is then asked to recall from memory the names of objects, he has seen (while the card has been removed away).

Scoring: One point for recalling each picture. Total Score = 5.

VI. Perceptual-motor tasks.

Material: Separate consumable booklet.

1. Drawing of a square on one side of page, the other side being empty for the child to copy.
2. Drawing of a crooked highway. On one end there is a car and on the other is a house.
3. Nine dots on one side of the page, while some of the dots are connected by a line. On the other side of the page, there are same nine dots but unconnected.
4. Drawing of a diamond on one side of a page, the other side empty.

Procedure: One page is presented at a time with the instructions as given below:

- (1) *Square:* The child is given the page with square and is asked to draw a square just like the one he sees, on the other side of the page.
- (2) *Highway:* The child is asked to put his pencil on the car and draw a line from the car to the house. He is especially instructed to stay on the highway.
- (3) *Dot Pattern:* The child is asked to connect the dots just like the one which is already done.
- (4) *Diamond:* The child has to draw a diamond, just like the one already drawn, on the empty side of the page.

Scoring: One point-each for items square, highway and dot pattern; 2 point for diamond.

The acceptable responses as well as wrong ones are given in user's manual.

VII. 1:1 Correspondence

Material: Ten wooden red and ten green blocks, half-cubic inch each.

Procedure: The child is given red blocks while the tester keeps the green ones.

Step One: The tester puts six green blocks in the form of line a with a distance of half inch between the two blocks and asks the child to put the same number from his blocks (No reference to counting or the block being six in number).

Step Two: Six red and six green are arranged in form of two lines so that one block is against the other. The tester piles up green blocks and asks the child, "whether the red and green blocks are same in number or not."

Scoring: 2 points for step one and 3 point for step two. Maximum score= 5

VIII. Conversation:

Material: A list of 10 questions (given in scoring sheet).

Procedure: The child is asked these questions one by one. Acceptable responses are given in the user's manual. *Scoring:* One point for each correct response. Maximum score=

**THE SCALE FOR THE MEASUREMENT OF SOCIAL DEVELOPMENT OF
PRESCHOOL CHILDREN**

Items	Name.....	Group.....	Age.....	Raw Score	Mean Age
3.00-3.99 years					
1.	(L)		Walks downstairs one per tread		3.23
2.	(R)		Learning Holy Quran through extra coaching		3.29
3.	(D)		Buttons coat or dress		3.35
4.	(IR)		Helps at little house hold tasks		3.55
5.	(IR)		Performs for others		3.75
6.	(B)		Washes hands unaided		3.83
4.00-4.99 years					
7.	(B)		Washes face unassisted		4.65
8.	(IR)		Peels orange, egg shell etc		4.67
9.	(PS)		Gets up in the morning without much problem		4.71
10.	(C)		Spends own money		4.73
11.	(C)		Has concept of early, late, night and day		4.79
12.	(D)		Dresses self except tying		4.80
13.	(D)		Aware of privacy of body parts		4.85
14.	(B)		Cares for self at toilet		4.88
15.	(E)		Technical interest/aptitude		4.88
5.00-5.99 years					
16.	(E)		Prints simple words		5.23
17.	(D)		Dresses self independently		5.27
18.	(C)		Communicates with stranger		5.46
19.	(R)		Has started learning the prayers		5.73
20.	(IR)		Consults with parents in case of problems		5.84
21.	(L)		Goes to nearby market		5.85
22.	(IR)		Friends come to house		5.91
23.	(IR)		Goes to friends house		5.93
24.	(L)		Goes about neighbourhood unattended		5.93
25.	(C)		Handles only upto Rs. 5/-		5.98
6.00-6.99 years					
26.	(C)		Is trusted with money		6.00
27.	(PS)		Takes care for the school lunch and books		6.03
28.	(C)		Makes minor purchases		6.27
29.	(IR)		Does small hand work		6.29
30.	(C)		Brings back the change		6.36

31.	(C)	Follows TV serials and dramas	6.46
32.	(PS)	Gets ready for school independently	6.47
33.	(E)	Does the home work without supervision	6.53
34.	(IR)	Helps the youngers	6.62
35.	(D)	Ties the shoe laces, belt etc	6.65
36.	(L)	Goes to school unattended	6.81
37.	(D)	Combs or brushes hair with out assistance	6.89
38.	(IR)	Uses knife for fruits and vegetables	6.94
39.	(E)	Reads on own initiative	6.96
40.	(C)	Makes telephone calls	6.99

**Home Observation Measurement Environment Inventory
HOME INVENTORY**

(Preschoolers' Version)

Child's Name:

Informant's Name:

Address:

I STIMULATION THROUGH TOYS, GAMES AND READING MATERIALS

1. Toys to learn colours and sizes and shapes.
2. Three or more puzzles.
3. Record player and at least five children's records.
4. Toys or games permitting free expression.
5. Toys or games necessitating refined movements.
6. Toys or games facilitating learning numbers.
7. Ten children's books.
8. At least ten books are present and visible in the home.
9. Family buys a newspaper daily and reads it.
10. Family subscribes to at least one magazine.
11. Child is encouraged to learn shapes.

II. LANGUAGE STIMULATION

12. Toys to learn animals.
13. Child is encouraged to learn the alphabet.
14. Parent teaches child some simple manners--to say "Please,"
15. Mother uses correct grammar and pronunciation.
16. Parent encourages child to relate experiences or takes time to listen to him relate experiences.
17. When speaking of or to child, mother's voice conveys positive feeling.
18. Child is permitted some choice in lunch or breakfast menu.

III. PHYSICAL ENVIRONMENT: SAFE, CLEAN AND CONDUCTIVE TO DEVELOPMENT

19. Building has no potentially dangerous structural or health defects .
20. Child's outside play environment appears safe and free of hazards.
21. The interior of the apartment is not dark or perceptually monotonous.
22. Neighbourhood has trees, grass, birds--is aesthetically pleasing.
23. There is at least 100 square feet of living space per person in the house.
24. In terms of available floor space, the rooms are not overcrowded with furniture.
25. All visible rooms of the house are reasonably clean and minimally cluttered.

IV. PRIDE, AFFECTION, AND WARMTH

26. Parent holds child close ten to fifteen minutes per day, e.g. during TV, story time or visiting.
27. Mother converses with child at least twice during visit (scolding and suspicious comments are not counted.).
28. Mother answers child's questions or requests verbally.
29. Mother usually responds verbally to child's talking.
30. Mother spontaneously praises child's qualities or behaviour twice during visit.
31. Mother caresses, kisses or cuddles child at least once during visit.

32. Mother sets up situation that allows child to "show off" during visit.

V. STIMULATION OF ACADEMIC BEHAVIOR

33. Child is encouraged to learn colours.
34. Child is encouraged to learn patterned speech (nursery rhymes, prayers, songs, TV commercials, etc.).
35. Child is encouraged to learn spatial relationships (up, down, under, big, little, etc.).
36. Child is encouraged to learn numbers.
37. Child is encouraged to learn to read a few words.

VI. MODELING AND ENCOURAGEMENT OF SOCIAL MATURITY

38. Some delay of food gratification is demanded of the child (e.g., not whine or demand food unless within 1/2 hour of meal time).
39. Family has TV, and it is used judiciously, not left on continuously.
40. Mother introduces interviewer to child.
41. Child can express negative feelings without harsh reprisal.
42. Child is permitted to hit parent without harsh reprisal.

VII. VARIETY OF STIMULATION

43. Real or toy musical instrument.

44. Family members have taken child on one outing (picnic, shopping excursion) at least very other week.
45. Child has been taken by family member on a trip more than 50 miles from his home during the past year (50 mile radial distance not total distance).
46. Child has been taken by a family member to a scientific, historical, or art museum within the past year.
47. Tries to get child to pick up and put away toys after play session- without help.
48. Mother uses complex sentence structure and some long words in conversing.
49. Child's art work is displayed some place in house (anything that child makes).
50. Child eats at least one meal per day, on most days, with mother (or mother figure) and father (or father figure). (One parent families get an automatic "no".)
51. Parent lets child choose certain favourite food products or brands at grocery store.

VIII. PHYSICAL PUNISHMENT

52. Mother does not scold or derogate more than once during visit.
53. Mother does not use physical restraint, shake, grab, punch child during visit.
54. Mother neither slaps or spansks child during visit.
55. No more than one instance of physical punishment occurred during the past week (accept parental report).

APPENDIX 'G'

THE REGISTRATION FORM

Name of the Child: _____

Date of Birth: _____

Father's Name: _____

Father's Education: _____

Father's Occupation: _____

Mother's Name: _____

Mother's Education: _____

Mother's Occupation: _____

Number of Sibling: _____

Birth Order: _____

Any Other Information: _____

Address: _____