

Leading Article

Play: have we forgotten its importance?

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Children, the world over, play. Do paediatricians, during their professional work with children, utilise this childhood activity adequately? Or, does this childhood occupation only deserve the attention of parents, teachers, child minders and others rearing children but not that of paediatricians?

What is play?

Prior to answering the above questions we need to clarify what is meant by play. Many books have been written on this subject but each author defines play somewhat differently. So do dictionaries. The Oxford Dictionary defines play as 'spontaneous activity of children or young animals', the Chambers English dictionary as 'acts not part of the immediate business of life, but in mimicry or rehearsal' and still others as 'to amuse oneself,' 'to behave without seriousness' and 'to engage in pleasurable activity'. To those of us working with children professionally, a more searching definition covering practical aspects of play with a relevance to paediatrics and child care is necessary.

Bronfenbrenner¹ and Garvey² outline certain characteristics as being critical to play. Catherine Garvey in her book entitled "Play" claims that a definition encompassing all the following features is necessary for a better understanding of this subject. These characteristics are:

1. *Play is pleasurable*
Is positively valued by the 'player' even when not accompanied by signs of mirth.
2. *Play is spontaneous.*
Is undertaken without much persuasion or force.
3. *Play is voluntary.*
Is not obligatory but freely chosen by the player.

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4. *Play has no extrinsic goals.*
Its motivations are intrinsic and serve no other objective.
5. *Play involves active engagement on the part of the player.*
6. *Play has certain systematic relations to childhood activities that are not play.*

The definition remains elusive. "Play is like love; everybody knows what it is but nobody can define it" Chance³.

Play vs work

Is play the work (or business) of children? Mary Sheridan in "Spontaneous play in early childhood" (1977) describes play as 'the eager engagement in pleasurable physical and mental effort to obtain emotional satisfaction'; and defines work as 'voluntary engagement in disciplined physical or mental effort to obtain material benefit'. Thereby she implies that work and play overlap⁴. However, a clear demarcation is made between play and drudgery. Drudgery is described as enforced engagement in distasteful physical or mental effort. If play is the work of children it is perhaps the only work or occupation so enthusiastically pursued at any stage of one's life for which not a pittance is ever received.

A universal childhood activity

Children busy themselves with "playing" even under the most dire circumstances. It is not uncommon to see children in war-torn or disaster-affected areas, as well as within refugee camps or prisons, playing. Under such circumstances their play may involve the striking of two stones at each other - the only play things available to them.

Why do children play?

Children are not alone in playing. The young of most higher mammals also play with children being

described "as playful as kittens". What then is the function of this curious occupation which is engaged in by all children in the absence of encouragement or reward? What is its importance?

Psychologists have suggested varied theories to explain why children play; and the functions and benefits of play. The psycho-analytic theory of Freud (1924) claims that the function of play is to help develop ego-strength. Erikson (1950) suggests that by being a source of gratification, play gives the child control over his experiences. This mastery may extend into overwhelming situations in his life and environment. Withdrawal and apathy are implicated as a result of denied or restricted play. Piaget (1951) proposed the cognitive theory saying play was a way of learning about new and complex objects and events. He suggests that play integrates thinking with action. Thorn-dike (1961) in his behaviour theory sees play as a learned behaviour reflecting different cultural values. Thus have the psychoanalytic, behavioural and cognitive theories of play been expressed by the different theorists of psychology. The various benefits and functions of play have been tested to show that play influences many aspects of the child's life both in the short and long term.

Animals of lower and lesser complexity are endowed with instinctive, behavioural patterns but are devoid of flexibility. Flexibility and adaptability to challenges from a wide variety of sources are among the benefits that play provides to the growing child who thereby begins the process of decision making, judgment and reason. Play is indeed an important path along which "growing up to maturity" is achieved.

The role of play in clinical work

It has long been accepted that play is a basis for learning. Children grow and develop through play. As detailed in the psychological theories, play entwines and runs through the entire fabric of a child's life adding colour and form to the cognitive, developmental and behavioural aspects of the growing individual. Since play is an integral part of child development, it cannot be ignored by paediatricians. However, awareness of the importance of play should not be limited solely to developmental paediatricians. It is hoped that instances detailed here would illustrate to the readers of this article that play is a topic worthy of attention by all paediatricians.

Developmental paediatrics

Development, an essential part of paediatrics, deals with the maturational process of normal and abnormal children. This branch of paediatrics involves:

- the promotion of optimal capabilities of children, with increasing complexity with age;
- the early detection and effective treatment of any deviations in the normal progress of achieving these skills and abilities; and
- the prevention of handicapping conditions.

In the field of developmental paediatrics play skills are used in assessment and therapy.

Developmental assessment and play

Since play is the main means by which children learn about themselves and their environment, the diagnosis of developmental deviations/delay cannot exclude play. Developmental assessment of a child's motor capabilities, intellectual competence, visual and auditory abilities and social behaviour is conducted by paediatricians either by observation of a child or by the use of standardised developmental scales. Both these processes utilise the activity of play. The widely used scales of Griffiths (1954) Weschler (1960), Bayley (1969) and Reynell (1969) all make reference to a child functioning at play.

Development in the first year

In infant development play is focused on mostly in the field of *social development* - sometimes termed the field of 'social behaviour and play'. This is evident in a variety of milestones such as 'imitates ringing action', 'plays peek-a-boo', 'finds toy partly/fully hidden', 'listens to and imitates sound making toys', 'plays pat-a-cake' 'puts cubes in and out of cup when shown'⁵. Play is also present in the developmental milestones of *locomotion*, *hand-use* and *language*. During infancy the development of fine movements and vision includes 'passing a toy from one hand to another' 'watching toy falling from hand and following to resting place', 'toy appraisal before grasping', 'two handed scooping-in approach of grasping a toy' 'release of toy' and 'scissor fashion grasp of toy with string'. Gross motor development observed at play include 'leans forward to pick up a toy with/ without losing balance', 'stands carrying a toy' 'pushes/pulls wheeled toy on level'. Likewise in speech development' localising sounds at play',

'imitating playful vocal sounds' are some of the milestones that refer to play. These lists are lengthy but essential in developmental assessment.

Development in the preschool child

Play skills occupy an even more prominent place in assessment of children after the developmental age of 12 months. Watching a preschool child at play with toys helps in determining his/her developmental age. A few such situations are:

- At the gross-motor developmental age of 18 months a child 'chooses to carry a toy around, while walking', indicating that he/she no longer needs to hold arms in extension to balance, 'squats to pick up fallen toys', and 'pushes or pulls along a wheeled toy' and at 2 years 'walks into a large ball when trying to kick' 'pushes wheeled toys with obvious control of direction'.
- Similarly in fine motor development 'a child begins to show hand preference', 'builds a tower of three bricks after demonstration or even spontaneously' at 18 months; and 'plays alone with floor toys' and 'reduces casting of objects to floor in play', in social development.
- A two year old 'talks to self continually in long monologues during play' and by 2 ½ years 'utters an intelligent meaningful running commentary while playing'.

These examples illustrate that developmental milestones, linked with play, span all four fields of development.

The development of play

Play itself develops through childhood. This is seen in the different stages of play skills at different ages - 'solitary play' at 18 months, 'simple pretend play' by 2 years, 'more advanced make-believe social play' at 3 years (with invented people and objects), 'playing with peers' and 'sharing toys' by 3 ½ years, understanding of 'taking turns during play' by 4 years and the 'comprehension of rules and fair play' by 5 years.

The types of play have been sequenced as explorative, independent (or "isolated"), parallel (side by side with peers but not together), associative, social (co-operative) and finally symbolic.

Hearing assessment

Play is used in the assessment of hearing. At around two years play audiometry is utilised in free field audiometry. Standardised tests available to assess a child's comprehension and expression of speech which utilise play (or toys) are: Stycar hearing tests known as the six-toy (2 years), seven-toy (3 years) tests, the four animal picture test, and the Doll's vocabulary test.

Recognising autism

Autism is a complex disorder that requires evaluation in a number of areas of development. It is by observing the behaviour and play of these children that the unique symptoms of autism can be recognised. Eye contact avoidance, solitary play, reluctance to be near playmates, a desire for sameness are some of the characteristic behaviour patterns that are noticed during play. An obsessive attachment to unusual objects (to which normal children are not usually drawn) is yet another feature.

The usefulness of play in the diagnosis of conditions other than developmental problems

Apart from the field of developmental paediatrics, play is also of help in the assessment or diagnosis of other conditions. Play assists in the general examination by being a means of obtaining co-operation.

Obtaining the co-operation of sick children

Toys and other play material can be used very effectively in obtaining the co-operation of an otherwise uncooperative child. This is a factor that is often forgotten by both doctors and parents in Sri Lanka. Toys are often not visible in the clinics or ward settings and the waiting areas are equally starved of this essential commodity. Neither do parents remember to bring along a toy to which the child is attached to when consulting a doctor.

Examination of the motor system in pre-school children

Abnormalities of the motor system are best demonstrated during movement. Eliciting physical signs of the central nervous system (especially of the motor system) is made easier if the child is engaged in play activities. This would facilitate movements that are tested. Engaging the child in play activities is an easy way of coaxing him/her to make the necessary movement, a technique of particular value when the child is in the pre school age group.

Facilitating the process of history-taking when dealing with sexually or physically abused children

Children traumatised by physical or sexual abuse often require a medium of expression other than that of a face-to-face interview. Clinical psychologists often encourage the child to draw (using coloured crayon or pencils) in between the interview sessions. Drawing pictures simulates a play activity; and has been found to be very revealing. This is a method of history taking that the paediatrician also should become familiar with when dealing with victims of child abuse.

Determining the psychological sex

The manner of play as well as the choice of play material denotes the child's psychological sex. This is made use of in situations when it is necessary to determine whether the child's psychological framework is male or female. Studies on gender-stereotyping play among preschool children have concluded that the preferences manifest are influenced by past experiences. This has been shown by evaluating types of play e.g. doll play or truck play; as well as types of future roles - teacher or firefighter?

Therapy through play

Healthy children play spontaneously. Sick or developmentally delayed children need extra encouragement to play. When used as a treatment goal play can rectify, completely or partially, developmental delay or disorders. Even severely malnourished children require help with their play activities. So do psychologically disturbed children. The motivational factor that can be achieved is the main reason for the good results obtained with play therapy. Mentally retarded and the physically handicapped such as cerebral palsy, comprise the majority of children needing stimulation through play. But speech delayed and visually handicapped children also benefit by structured programmes of play. A brief description of the therapeutic value of play programmes in specific areas of development is given below.

First steps in helping a child to play

Imitation is one of the first activities that should be demonstrated. Encouraging repetition or copying is one such method. Looking into a mirror, clapping hands and beating on to a drum etc are ways of achieving this objective. By these methods the child realises his/her capabilities in making sounds or performing actions.

Improving gross motor skills through play

Weight bearing, co-ordination and mobility are the motor skills that can be improved through play. The methods of encouraging these motor skills could be very simple. A child can be made to move or reach out merely by placing a toy at a distance slightly out of his/her reach. Gross motor skills of walking, running and climbing can be promoted through play-ground play. Play programmes should include sliding, ball throwing, ball kicking etc.

Improving fine motor skills through play

Grasp, release and manipulation are enhanced through play. To ensure that a hemiplegic child uses both hands instead of only one, play programmes can be devised that require the use of both hands, e.g. tearing paper, kneading dough.

Improving language skills through play

Speech can be encouraged through play. Action songs recited in play are helpful in both developing comprehension and expression. Non speech communications can also be improved by play. Many are the games that combine action with words that help with speech development. Coloured pictures and everyday objects are useful tools in verbal labelling⁶.

Improving social skills through play

Play trains in sharing, turn taking and interacting with others. Studies have shown successful social competence being achieved through play therapy.

The Sri Lankan experience

Home based play therapy programmes can be successfully used provided there is good parental participation and understanding. Adaptive play strategies are recommended by speech therapists, occupational therapists, physiotherapists and special educators. However, it is my experience and that of others working in the Child Developmental Clinic at Lady Ridgeway Children's Hospital Colombo that the concept of play as a means of therapy is alien to parents. It is up to paediatricians and others treating children to make every effort to help rectify this attitude.

Toys and play material

Toys enhance development in all four basic areas. The choice of toys should be made on appropriateness. Children with motor needs require toys that

need manipulation. The visually handicapped will need toys appropriate to their intact sensory abilities - touch and hearing. Cheap, safe toys can be produced with items in and around the house. Many of these may be discarded, everyday objects. A plastic bottle partly filled with coloured seeds, makes a rattle⁷.

Used thread cotton reels, plastic bangles or circular rings cut out of plastic bottles may be threaded on to a string and swung just out of reach to encourage grasping. Making an older child thread these items will teach eye hand co-ordination. A bar placed across the bed/cot with colourful objects suspended is another easily assembled home made educational toy. The home, the kitchen and the garden can be rich sources of material with which low cost toys of educational value may be made. Empty cans, jars and plastic bottles can come in handy. Dish cloths or dusters folded, piled up or sorted according to colours, are ways in which parents can play with their child who has special needs. A child can be well stimulated with these simple toys whilst having great fun. Toy shops and expensive toys are unnecessary⁸.

Play and psychotherapy

A disturbance in play occurs in children with severe psychopathologies; as it does in those with developmental disorders or serious deprivation. Donald Winnicott, the first British paediatrician to undertake psychoanalysis, highlighted a definitive function of play in the psychotherapeutic process. He described play as "a crucial vehicle of communication" between the child and his therapist. Imaginative play shared with the therapist is believed to enable the child to communicate and overcome his problems.

Modern day play activities and child development

Home computer play and child development

Play that is governed by rules are 'games'. With children spending increasing time playing computer games it is important that we know how computer technology can affect child development and the future life. Research in this area show an increased risk of obesity due to the long hours at the computer at the expense of physical activity and an increased ability to read and form visual images in a three dimensional space. Computer games have been shown to increase the ability to track multiple images simultaneously. On the negative side is the impact on behaviour and emotions. Aggressiveness stemming from exposure to violent games and an increase in depression and loneliness with prolonged use of the Internet are

described⁹. What is required is to find ways and means of maximising the positive and minimising the negative effects of playing with computers.

Video games

The risk of seizures while playing video games in photo-sensitive children with epilepsy is well established. Aggressiveness as a result of violent games is a recognised consequence of video games.

Out-door play, lively games and sports

The benefit of sports on physical and mental health and personality development are well accepted. Recent research shows that childhood physical activity provides a unique opportunity for adding strength to the skeleton. Studies comparing playing to non playing arm differences in bone mineralisation in adult life among children who trained in racquet sports has shown that the mechanical loading is beneficial if it takes place before the end of puberty. Tanner stages II and III are the maturational stages at which this extra exercise should occur. Children who are skilful in outdoor play have the added benefits of being less obese and less prone to injuries since their skills will assist them in safeguarding themselves. Physical Medicine and Rehabilitation Clinics of North America cover a wide gamut of sports and health implications. To quote just one sport; "Hockey is a game of strength, speed and skill, combining power with endurance and control over both emotions and flying objects"

The role of play in child nursing

Play helps cope with stress

Playing helps the child cope with the stress of hospitalisation. It reduces the unpleasant experiences which children associate with health care. The play-room within a hospital has been described as the "emotional hub of the treatment centre"¹⁰.

Play hastens recovery

The effects of playing by child patients has been researched extensively. The kinds of play enjoyed by sick children have also been studied. According to surveys in the United Kingdom, play within hospitals was first started with the object of improving ward management. However, before long the effects of play on the development of child patients and its ability to provide more effective treatment became the focus. It was realised that play enhanced recovery from illness. "All work and no play makes Jack a dull

boy" held true in both sickness and health. Play opportunity was provided to all chronically hospitalised children since they were behaviourally limited. Current evidence on the benefits of play are such that it is now recommended to children of "every health level." Therefore it is the responsibility of paediatricians to ensure that every patient, regardless of his or her health level, within a paediatric clinic, ward or hospital, is provided with the benefits of play - be it indoor or outdoor.

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