BLOCK 2

MILESTONES OF DEVELOPMENT DURING EARLY CHILDHOOD

BLOCK 2 INTRODUCTION

The knowledge about Developmental Milestones of Early Childhood years is very important, because any deviation in the development pattern of children may indicate a disability. This Block describes development of children in physical, motor, cognitive, language and socio-emotional domains during the early childhood years (birth to six) and also highlights how visual impairment impacts the development of children in different areas.

Unit 5 introduces you to the physical characteristics and abilities of children at the time of birth, how the height and weight of children changes in early years and how the development of brain takes place during infancy, toddlerhood and preschool years.

You will also learn about typical development of sensory capabilities during the early years and the impact of visual impairment on the development of sensory abilities in the later section of this unit. Importance of early stimulation is also discussed in the Unit.

Unit 6 will help you in understanding what are primitive reflexes and how their emergence and disappearance is related to the motor development of children. The developmental milestones of gross and fine motor development are discussed in detail. Further, the impact of visual impairment in the gross and fine motor development is also discussed with supportive examples.

Unit 7 exaplains the meaning of cognitive development and describes the process of development of concepts during early childhood years. Further, the impact of visual impairment on cognitive development and its imapct on the process of acquiring concepts has also been discussed.

Unit 8 is centered around the famous theorist Piaget's theory of cognitive development with focus on early years. The stages of cognitive development from birth to early childhood years are discussed in detail with suitable examples. The impact of visual impairment on the cognitive development during these stages is also discussed. The strategies to foster cognitive development of children with visual impairment are also highlighted in this Unit.

Unit 9 is about language development from birth to early childhood years. The relationship between language and communication is explained in the beginning of the unit. The principles of oral language development and milestones of development during early childhood years are discussed in detail. The impact of visual impairment in the language development children is also discussed with suitable examples.

Unit 10 will help you in understanding how social and emotional development of children takes place from birth till early childhood years. The process of formation of attachment bond with mother or caregiver in infancy and its significance in laying the foundation for social and emotional development is discussed in detail. The impact of relationship with siblings, family members, peers and teachers in the overall social development of children in early years is also discussed. Further the development of self concept and impact of child rearing practices in the personality of children is also explained. The impact of visual impairment on social and emotional development of children is also highlighted.

UNIT 5 PHYSICAL DEVELOPMENT DURING EARLY CHILDHOOD

Structure

5.1 INTRODUCTION

In this Unit, we will focus on the development that takes place during the first six years of the child's life in the physical development domain. Physical development relates to the overall physical growth of the body, the changes in body proportions with time, the development of the brain, muscles and the sense organs. In the following Sub-sections you will read about these aspects in detail, from birth to six years of age.

You will learn about how a child typically develops in the physical domain. You will also learn about the corresponding developments in children with visual impairment. You will read about the importance of early stimulation to promote the child's development.

Objectives

After studying this Unit, you will be able to:

- state the gain in height and weight during the early childhood years;
- describe the development of brain and the impact of visual impairment on brain development during early childhood years;
- describe the typical development of sensory capabilities during the early years and the impact of visual impairment on the development of sensory abilities;
- explain the importance of early stimulation of senses for children with visual impairment and some strategies of providing early stimulation; and

- explain how visual impairment affects sleep pattern and the impact of changed pattern on the child's development

5.2 GAIN IN LENGTH/HEIGHT AND WEIGHT

The most dramatic gains in height and weight occur in the prenatal period, when a single-celled organism grows to a baby that is 20 inches in length and about 2.5 to 3.0 kg in weight at the time of birth. **A baby who weighs less than 2.5 kg at birth is identified as a low birth weight baby**. These neonates (newborns) are 'at risk'. This means that their development is more likely to be affected by unfavorable experiences; therefore, there are more chances of their development being delayed. Thus, special care needs to be taken to enable the child who is 'at risk' to develop optimally.

After birth, infancy is the period of fastest growth. Changes are visible in the infant almost on a weekly basis. A growing baby doubles her birth weight by six months of age and triples her birth weight by the time she is a year old. A typical healthy infant weighs up to 8 to 9 kgs. by the time she is one year old.

Growth during the second year, though not as fast as in the first year of life, is still fast compared to the later years of childhood. By the time of the second birthday, children's weight increases by about 3 kgs and their height increases by about 12 cms.

The rate of physical growth is slower during the preschool years as compared to infancy and toddlerhood. However, preschool children show a steady gain in height and weight. They gain two to three inches in height every year. At the same time, the weight increases by about two kilograms every year. **A steady gain in height and weight usually indicates good physical growth**. During preschool years, along with the changes in height and weight, there are changes in the muscle tissue, adipose tissue, internal organs and various systems of the body.

Table 5.1: Average Weights and Heights of Indian Children

Age	Weight (Kgs)		Height (cms)	
	Boys	Girls	Boys	Girls
1 Year	9.6	8.9	75.7	74.0
2 Years	12.2	11.5	87.8	86.4
3 years	14.3	13.9	96.1	95.1
4 Years	16.3	16.1	103.3	102.7
5 Years	18.3	18.2	110	109.4
6 Years	20.5	20.2	116.0	115.1

Source: WHO Child Growth Standards, 2006-2007

Training Module 8 of PoshanAbhiyaan Scheme; Ministry of Women and Child Development, Government of India, 2018 (based on WHO Child Growth Standards, 2006-2007);https://icds-wcd.nic.in/nnm/NNM-Web-Contents/LEFTm MENU/ILA/Modules/NNmILAmodule-08-Assessment_Growth.pdf

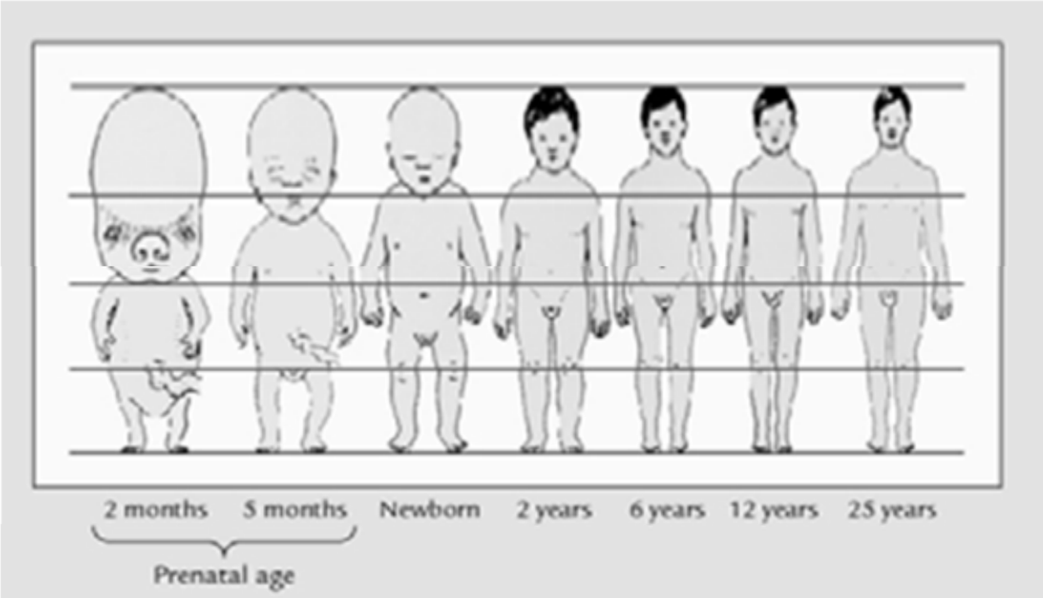

Fig. 5.1: Changes in body proportions from prenatal period till adulthood
Source: Berk, L. (2017). *Development through the Lifespan*. (7th Ed). Boston: Pearson.

5.3 DEVELOPMENT OF THE BRAIN

The brain is made up of neurons which can be called the 'messengers of the brain'. The neurons pass on (transmit) the inputs/information we receive from our environment through the five senses to the relevant area in the brain. The brain then processes (makes sense of) this information and directs our body to act in a particular way. These commands from the brain to the various parts and organs of the body are transmitted through the neurons.

While the brain has all the neurons it will ever have at the time of birth, the connections (synapses) between the neurons develop and multiply rapidly during infancy. The extent and complexity of the connections between the neurons influences the cognitive development of the child. **The more the connections, the better the functioning of the brain.** The formation of synapses is dependent on the type of environment the infant grows up in. The more stimulating the environment, the more will be the extent and complexity of connections. The formation of connection (synapses) between the neurons occurs most rapidly during the period of infancy. **The implication for us is to provide a stimulating environment to the infant right from the time she is born.**

By a stimulating environment we mean an environment where the child

- Gets opportunities to explore objects and places around her.
- Receives the loving attention of adults who talk and communicate with her
- Participates in meaningful and relevant play activities.
- Has play material and toys available (these do not have to be expensive toys).

As you will read through this Certificate Programme, you will understand that what the child finds stimulating will change with age as her abilities develop and interests change.

5.3.1 Impact of Visual Impairment on Development of the Brain

Visual impairment can result from damage to the brain and can also be caused due to eye diseases. Brain damage can be due to lesions in the brain or malformations in the brain. The type and severity of vision loss will depend on which area of the brain was affected and to what degree. Not all types of brain damage causes visual impairment. However, **visual impairment, especially severe visual impairment, affects the brain by causing structural changes in the brain.** This is because due to visual impairment the child acquires information more slowly and it also gets processed more slowly in the brain. The brain develops and evolves through both quality and quantity of information it receives. Since this flow of information to the brain (such as regarding shape, size, colour, distance and movement) is reduced due to visual impairment, ***it causes structural changes in the brain***, which means that the brain may re-organize itself functionally. The following information will help you to understand this point better.

A large part of our information about the world around us comes from our eyes. In fact 70% of all sensory receptors (i.e., nerves that help us to sense) are located in our eyes. Further, almost half (40%) of the cerebral cortex (this is a part of the brain), is used to understand what our eyes are seeing. What this means is that our eyes play a huge role in how we perceive the world, and our brain dedicates a lot of its resources to process what our eyes see. When the information from vision does not reach the brain, the brain structure recognizes itself.

Check Your Progress Exercise 1

1) Answer the following questions briefly in the space provided below:

   a) Why are neonates who weigh less than 2.5 kg at birth considered 'at risk'?

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   b) How does physical growth progress during the preschool years in terms of height and weight?

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c) What is the role of neurons in the brain, and how do these influence cognitive development?

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d) How does visual impairment impact the development of the brain?

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2) State whether the following statements are correct or incorrect.

a) The most dramatic gains in; ength and weight occur during the prenatal period. ( )

b) After birth, infancy is the period of fastest growth, with a typical healthy infant doubling her birth weight by six months of age. ( )

c) Growth during the preschool years is faster compared to infancy and toddlerhood. ( )

d) The brain is made up of neurons, which are responsible for transmitting information and commands throughout the body. ( )

e) The connections (synapses) between neurons develop and multiply rapidly during adolescence. ( )

f) Visual impairment can lead to structural changes in the brain, especially affecting the processing speed of information. ( )

5.4 SENSORY CAPABILITIES

By 'sensory capabilities' we mean the capabilities of the senses of vision, hearing, touch, taste, smell and kinesthetic sense. (Kinesthetic sense is the awareness of the position and movement of body parts. This sense uses sensory organs, known as proprioceptors located in joints and muscles).

It may surprise you to know that the infant is born with well-developed senses at birth. Our tendency is to think of newborn babies as helpless. While it is a fact that newborns are completely dependent on adults, **it is also true that they have capabilities that help them to adapt to their surroundings and ensure their survival.** These capabilities include the primitive reflexes and the sensory capabilities. In this section, you will read about the sensory capabilities. Primitive reflexes have been discussed in Unit 6 of this course.

On the basis of many research studies, it is now known that the eyes, ears and other sense organs function in a remarkable manner from birth onwards. In the very first month of life, the newborn responds to touch, heat and cold and can distinguish certain sounds, tastes and smells.They are more aware than we think them to be. Have you ever seen a baby a month old or younger? Do you think she is born with some abilities? Write your thoughts in the space below:

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Let us read about sensory development during infancy and early childhood in detail.

5.4.1 Vision

- The newborn's eyes are sensitive to light. If placed in a dark room, her/his eyes search actively for light and if baby finds a source of light, she continues to look at it. This means that baby can differentiate between light and dark.

- Immediately after birth, the baby can follow a moving object with her eyes. The object should be moderately bright and should move slowly. The newborn is attracted by things that move, produce sound and those which have a light and dark contrast. The human face has all these characteristics and it greatly attracts the newborn. When the adults interact with the child, their eyes and mouth move frequently. In fact, the newborn baby continuously scans the surroundings and on seeing an object, the infant gives it a good deal of attention. The child thus seems predisposed (inclined) to look around and examine the world. Though she may not understand all that she sees, but she is building up a store of experience which will help her in learning later.

- The neonate can see objects and people clearly when they are at a distance of eight to ten inches from her face. This is usually the distance between the adult's and the baby's face when the baby is held in the arms. Thus, during these interactions the baby can clearly see the caregiver's face and gets an opportunity to examine it. This is the way in which the baby learns to recognize the people around her. This mutual gazing also helps to establish an emotional bond between the child and the caregivers.

- The infant's ability to focus on nearby objects and paying attention towards distant object increases with age. By the time infants are two to three months old, they pay attention to the details of objects. This helps them to discriminate among things and they are able to distinguish familiar objects and people from unfamiliar ones. An example of this ability to discriminate is that infants at three months of age can tell their parents' faces from those of others as now they intentionally begin to gaze at them for longer duration and also smile at then in order to attract their attention.

- The infant refines her visual capacities greatly over the first year. Her eye-hand coordination also improves as now she can reach out for the objects placed at distance, and also manipulates the objects in order to explore them. During the early childhood years, the improved sense of vision helps children to explore their surroundings rapidly.

Impact of Visual Impairment on the Sense of Vision

In case of children with visual impairment, the vision is impaired. You may be having questions in your mind such as – do blind children not see anything at all; what do children with low vision see? While you will study in detail about the nature of visual loss in Course 3 (BCD 101) , here we will explain some general points about impact of visual impairment on the sense of vision.

When we use the word 'visually impaired' or 'blind' we think that the person cannot see at all. But this is not true. **Only about 15 per cent fall into the "totally blind" category, who cannot see anything at all. Most of the people with vision loss are not completely blind. They may have some sight, which means they have low vision or residual vision.** This vision could allow them to see light or colour or shapes. However, they may have trouble reading street signs, recognizing faces, or matching colours to each other. Low vision affects different people in different ways. In case of some people, the vision may be unclear or hazy. In case of others, they may be able to see objects which are directly in front of them, but will not be able to see the object on the side. The reverse can also be the case.

Visual impairment can have a profound impact on a child's development, The early years of a child's life are a critical period for the development of visual skills, which form the foundation for later cognitive, motor, and social abilities. Visual impairment can limit a child's ability to explore and interact with their environment, hindering the development of these essential skills. It can also affect a child's ability to form connections and relationships, as much of early social interaction is based on visual cues. Furthermore, visual impairment can impact a child's educational progress, as much of early learning is visually based. **Therefore, early intervention is crucial to limit the impact of visual impairment on children's development and to support them in achieving their full potential.**

5.4.2 Hearing

- The newborn is responsive to sound from birth onwards as they show body movement in response to different sounds. Newborns can hear moderately loud sounds.
- Of all the sounds, the newborn is most responsive to the human voice. The newborn's preference for human speech is reflected in the fact that they move their arms, legs and body in rhythm to the caregiver's speech as early as twelve hours after birth. They respond more to high pitched voices (female) compared to low pitched voices (male). If the pace of the adult's speech is fast, the movements of the neonate become fast. If the rhythm of the speech slows down, so do the child's movements. While it will take the infant another three months to distinguish the mother's face

from other people's faces, she can discriminate the mother's voice from other female voices in the very first week of birth. This is probably because the baby has been hearing the mother's voice while in the womb and is already familiar with it.

- Different levels of sounds have different effects on the child. Loud noises distress the babies and they get startled, begin to cry, waving and thrashing their arms and legs. Soft sounds soothe them. Infants are also responsive to rhythm. They are soothed by rhythmic sounds such as music or ticking of the clock.
- During the first few months of life, infants begin to discriminate between different sounds such as a bell ringing, someone singing or a knock on the door.
- By six months, they are usually able to judge the direction of the sound source correctly.
- The hearing capabilities of children continue to refine with increasing age. They become better at differentiating between different types of sounds in their environment.
- Hearing plays a critical role in learning of language. Children use their hearing to listen to others talking. Through listening to language, they begin to understand and learn to use language.
- Listening skills are also very important aspect of formal schooling.

Impact of Visual Impairment on Inputs from the Sense of Hearing

Lack of vision affects the inputs received from the sense of sound in two broad ways:

a) **Firstly**, in a typically developing child, hearing and vision work together. For example, whenever the child hears any sound, she spontaneously turns towards the source of sound and identifies that particular object has caused that sound. But when vision is decreased or absent, then hearing continues to provide information, but vision is not available to confirm much of what is heard. **Sound without visual verification is only noise coming from nowhere.** Without seeing what is causing that sound, the child is not able to attach meaning to the sound and so that sound appears like noise to her. For example, if a phone is ringing some distance from the child, then child will hear the sound of ringing, but does not understand that sound is associated with the phone because of visual impairment. The child needs a lot of experiences of touching and holding objects, along with hearing the sound produced by these objects, in order for the child to associate the sounds meaningfully with the objects. In other words, only after much tactual, motor, and auditory interaction does sound acquire meaning. Only then can the sense of sound be used as a source of information. **So, in the absence of vision, sound helps the child to form an idea about her surroundings, people and objects around her, but this process takes time and requires deliberate teaching and is not automatic as it is in the case of children who have both vision and hearing**.

b) **Secondly**, sound is not as powerful a motivator as sight, and it takes a while for the child to connect sounds with specific objects or events. It takes about a year for a child who cannot see to start reaching for things based on the sounds they make. So the child usually does not start exploring the surroundings until she reaches this milestone. For children who can see, things like colour, pattern and shape, often motivate them to touch and explore. But a child who cannot see does not have access to these visual cues and so they child does not engage in as much purposeful touch and exploration because their environment remains unfamiliar and uninteresting.

We can that in the absence of sense of vision,the sense of hearing is not utilized to its maximum extent for learning to know about the environment. The lack of vision limits how the sense of hearing can be used.

5.4.3 Touch

- Newborns are responsive to touch — we all have experienced how the soothing touch of the mother calms a crying infant. Experiencing the loving touch of the caregivers is crucial for the infant's healthy emotional development. Touch also stimulates physical growth. It is because of this reason that giving massage to infants is such a common practice across most parts of our country.
- Touch is also a medium for developing attachment to the caregiver in the early months as the infant is usually comforted when being held up by mother or caregiver. Touch holds a deeper meaning for older children as well. You can generally find the pre-schoolers or school going children rushing towards mother when they fall down or feel threatened by any unfamiliar object.

Impact of Visual Impairment on Inputs from the Sense of Touch

Touch is an extremely important sense for a child who has blindness or low vision. Many children with blindness or low vision use touch as one of their primary means for gathering information. Therefore, it's a good idea to encourage child to touch objects as a way of exploring the world, from infancy onwards. As the child touches various objects, the adults need to point out the different features of what the child is touching. You will read more about the challenges in using the sense of touch to form concepts in Unit 7 and 8 of this Course.

5.4.4 Taste and Smell

- With respect to the sense of taste, newborns can distinguish between basic tastes of sweet, sour, salt and bitter. That they can differentiate between tastes is evident from their facial expressions. As they grow old, the infants begin to show their preferences of taste by refusing to eat or spitting out the food with specific taste. Food preferences on the basis of taste of food is very commonly seen in preschoolers and school-going children too.

- Newborns can also distinguish between good and bad smells. They can identify the location of the smell and protect themselves from unpleasant smells by turning their heads away from that location. The sense of smell refines with age.

Impact of Visual Impairment on Inputs from the Sense of Taste and Smell

Whether a person can see well or not, it does not change their ability to recognize or tell the difference between smells. Smell and taste are not often thought of as significant senses for gathering information about the environment, but they are important for a child with a visual impairment. Like vision, hearing, and touch, they can help the child in gathering information about the world. For example, the child may use the sense of smell when she is traveling to seek out clues in the environment which can tell her about her location and help her be more independent.

The child can also use both smell and taste to identify foods. You may find that child is resistant to tasting new foods or eating foods that have a certain kind of texture. If you notice the child hesitating to taste foods, you might want to consult with other members of the educational team, especially an occupational therapist or speech therapist, to get some ideas for increasing her interest and willingness to taste new foods.

To summarize, we can say that the development of senses of touch, smell hearing and taste is affected by absence or poor functioning of the sense of vision.

Children with visual impairment are generally at the risk of being under-responsive or over-responsive towards the stimulation they receive from their other intact senses as the integrative role played by the sense of vision is affected. For example, the children with visual impairment may become hypersensitive (over-responsive) towards sense of touch because they find it easy to understand an object by touching it and any small change in the structure or texture of objects may make the child alert. Similarly, for other senses too, children with visual impairment may show hypersensitivity. But when the children with visual impairment cannot draw a meaningful conclusion from the information they receive from any intact sense, they become less responsive (under-responsive) towards that sense.

5.5 IMPORTANCE OF PROVIDING SENSORY STIMULATION TO THE CHILD WITH VISUAL IMPAIRMENT

The senses help children to stay attuned (in touch with) with their environment and also help them to learn about the environment and interact with it in meaningful ways. Children require sensory stimulation of an appropriate nature and duration as per their age and abilities. Failing to provide children with adequate sensory stimulation puts them at a high risk of developmental and cognitive delays.

Vision is the sense through which children learn the most about their world. It is used for both gathering information about nearby objects (what can be touched) and those at a distance (beyond arm's reach). **For young children whose vision is developing typically (that is, there is no disability), 80 to 90 per cent of what they learn about the world comes to them through vision.**

In case of children with visual impairment, it is not possible for them to use vision as their primary sense for learning though children with low vision can rely upon their residual vision to some extent. **Children with visual impairment have to rely on the other senses — touch, smell, hearing and taste — to get information about what is happening around them and to learn.** These senses perform compensatory function in order to facilitate the learning. It is very important to provide an environment where the child receives optimal sensory stimulation to nurture her senses of hearing, touch, taste and smell since the sensory stimulation is linked to emotional, cognitive and physical development. In case of children with visual impairment, it is through sense of touch that the child gets concrete (specific) and precise knowledge of the world around her. Only through touch (tactual exploration) does the child with visual impairment get realistic information about object's shape, size, texture, smoothness weight, surface qualities and temperature. The sense of hearing is very important for a child with visual impairment. Lot of information can be collected by listening. In a classroom it helps her to understand teacher's instructions. Good listening is also required for developing good orientation and mobility skills.

But learning about objects, events and people through senses other than vision requires more effort. As compared to the sense of sight, the input from all the other senses may appear to the child to be disorganized, broken (discontinuous) and reduced. We have explained this aspect in Sub-section 5.3.2 when we discussed the impact of loss of vision on sense of hearing. **The role of the parents, caregivers and early childhood educators becomes important as they have to plan to help the child to learn through deliberate and intentional teaching.**

Stimulating the child's sense of touch through planned playful activities

The description of the sensory abilities of the children in the above sections brings out that the baby interacts with her environment, right from birth. **The implication for us as parents, caregivers or early childhood educators is that we should interact with the infant right from the time she is born.** Only then will the infant's development in different domains be fostered. We do not have to wait for some appropriate age or time to begin our interaction with the infant.

Interacting with the infant means

- talking to her even though she cannot speak yet
- lifting and holding her
- smiling at and touching her and
- looking after her needs so that she is comfortable.

How to Provide Sensory Stimulation

a) **In order to help the child to learn through the sense of touch, the teacher/caregiver must give verbal description when the child with visual impairment is tactually exploring the object. This helps in correct concept formation**. Parents can encourage the child to feel different objects around the house. This is the first step in teaching the child to use the hands. It will help in increasing the child's finger movements. The stimulation activities may include grasping and holding objects, transferring objects from one hand to the other, exploring objects, moving fingers, tactual discrimination, fine muscle control. Use of age-appropriate play materials and activities such as rattles, toys, singing lullabies, sand and water play, blowing whistles and use of puppets, stimulate the senses and help the child to achieve developmental milestones. Many of these activities will also be important for teaching pre-Braille skills. Some children may be resist touching objects; this is referred to as "tactile defensiveness." It can be challenging to cope with a child's avoidance of touch because it is very important for children with visual impairment to explore and gather information through touch.

b) **The training of the child's sense of hearing should start as early as possible**. The child with visual impairment needs training in listening to what is being said as well as picking up the main points of the conversation, ignoring distracting noises, knowing activities by their sounds, identifying people by their sounds. The objective of this training is to make the child aware of sounds, help her to identify different sounds, localize sounds (from where the sound is coming) and tracking different sounds. But as a parent or early childhood educator you must keep this point in mind that you do not burden the child with too many words.

c) Development of the sense of taste and smell is also very important when it comes to the training of children with visual impairment. These senses helps in development of concepts, developing awareness about surroundings and making comparison.

d) Often we use a combination of two or more senses to teach a child with visual impairment – this is called **'multisensory integration'.** This approach is extremely important for developing life skills among children with visual impairment and to foster their development in all developmental domains.

To summarize, in this section you have read how each sense is important in its own way in the development of a child and how the other senses play a complimentary role when any one or more senses are impaired due to disability.

In the various Units of Course 3 (BCD – 103) you will learn how to stimulate the senses of the child and help the child to learn. You will also read about how to stimulate the remaining vision of the child who has low vision.

5.6 SLEEP PATTERN

Newborns sleep for about 16-18 hours in a day — not continuously but there are periods of being awake and periods of sleep. While they are awake and alert, they look around and respond to their caregiver's voice, movements, and gestures, if the caregivers interact with them. In this way, the infant begins to learn about her surroundings — a process that will continue for the rest of her life.

Children with visual impairment face sleep-related challenges and difficulties.

Children may show bed-time resistance (not wanting to go to bed) and anxieties surrounding bed-time. This disturbs the circadian rhythm, which is the 24-hour cycles of alertness and sleepiness activated by our response to the light changes in our environment. The disruption of the circadian rhythm can cause many major health problems. The reason for this is because our body functions rely on the right hormones being produced at the right time during the 24 hour cycle. Many hormones and especially melatonin is only produced during the night. Lack of melatonin production can result in symptoms including memory loss, inability to concentrate, digestive problems and lack of energy.

Depression is another common health problem that is associated with lack of proper sleep and lack of melatonin production.

The immune system also does not work as well without melatonin, making the person with visual impairment more susceptible to illnesses.

Check Your Progress Exercise 2

1) Answer the following question briefly in the space provided below:

   a) Why is sensory stimulation important for children with visual impairment, and how can it be provided?

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2) State whether the following statements are correct or incorrect.

   a) Newborns can differentiate between light and dark.

   b) A completely blind person does not have residual vision.

   c) During the first few months of life, infants begin to discriminate between different sounds.

   d) Sound is as powerful a motivator as sight for infants.

3) What role does touch play in the development of a child with visual impairment?

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4) How does visual impairment affect the sense of taste and smell in children, and why are these senses significant?

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5.7 SUMMING UP

- In this Unit, you read about the development that occurs during the first six years of life in the physical domain. The neonate adapts and adjusts to her environment. She has well-developed sensory capabilities — she can see, hear, smell, taste and feel touch. The infant is born with reflexes which enable her to adapt to the environment.

- The development of the brain is rapid, and this period is crucial for the development of the nervous system. Growth in size occurs on a weekly basis during infancy. The weight of the infant doubles by the time she is six months old, and triples by the time she is one year old.

- Visual impairment in early childhood can significantly impact a child's development, particularly their visual skills, which are crucial for cognitive, motor, and social abilities. Newborns are responsive to sound, especially human voices, and this auditory sensitivity plays a critical role in language learning and formal schooling. However, visual impairment can disrupt the interplay between hearing and vision, making it difficult for the child to associate sounds with their sources, turning meaningful auditory information into mere noise. Therefore, early detection and intervention are vital to limit these impacts and support the child's development.

5.8 ANSWERS TO CHECK YOUR PROGRESS EXERCISES

Check Your Progress Exercise 1

1) a) Neonates weighing less than 2.5 kg at birth are considered ‘at risk’ because their development is more likely to be affected by unfavourable experiences, increasing the chances of developmental delays. Special care is needed for optimal development.

   b) During the preschool years, children show a steady gain in height and weight, with an average increase of two to three inches in height and about two kilograms in weight each year.

   c) Neurons, the ‘messengers of the brain,’ transmit information from the environment through the senses to the brain. The connections (synapses) between neurons develop rapidly during infancy, influencing cognitive development. A stimulating environment enhances the formation of these connections.

   d) Visual impairment can result in structural changes in the brain, affecting information processing speed. The eyes play a crucial role in sensory perception, and visual impairment may lead to delays in motor skills development, including ocular motor skills.

2) a) Correct
   b) Correct
   c) Incorrect
   d) Correct
   e) Incorrect

Check Your Progress Exercise 2

1) Sensory stimulation is crucial for children with visual impairment to compensate for the lack of vision. It can be provided by engaging the senses of touch, smell, hearing, and taste through intentional teaching, age-appropriate play materials, and multisensory integration.

2) a) Correct
   b) Incorrect
   c) Correct
   d) Incorrect

3) For children with visual impairment touch becomes a major sense for exploring the world. Encouraging tactile exploration and describing the features of objects through touch are important for their cognitive development. It also plays a crucial role in for emotional and physical development

4) Visual impairment does not impact taste and smell identification. These senses remain important for a child’s independence and understanding of the environment. Taste preferences and the ability to identify foods through smell can be crucial for a visually impaired child’s daily activities.

UNIT 6 MOTOR DEVELOPMENT DURING EARLY CHILDHOOD

Structure

6.1 INTRODUCTION

In this Unit, we will focus on the motor development that takes place during the first six years of the child's life. You will learn about how a child typically develops across the motor domain. You will also learn about the corresponding developments in children with visual impairment. You will read about the importance of early stimulation to promote the child's motor development.

As you know, 'motor development' refers to the coordination and control over the movements of the body. The motor abilities of children refine with increasing age. At the time of birth, the motor abilities of children are limited to primitive reflexes, but in the due course of development, the children become capable of voluntary movements and gain control over their body. Indeed, this advancement from reflex movements to voluntary movements takes time, but by the end of early childhood, children acquire a great degree of control over their body. Now let us read how the motor development of children takes place during the early years.

Objectives

After studying this Unit, you will be able to:

- explain what are primitive reflexes and the significance of their timely appearance and disappearance;
- describe the milestones in gross and fine motor development during the first six years of life; and
- explain the impact of visual impairment on achievement of gross and fine motor milestones.

6.2 PRIMITIVE REFLEXES

The infant is born with a number of reflexes that help the newborn to survive and adapt to her environment till she develops more control over her movements. **A 'reflex' is an involuntary and nearly immediate movement in response to a stimulus.** Reflex is not a planned or thought of action — it is an automatic movement. For example, the blinking of eye when something enters the eye. Some examples of reflexes shown by the newborn are as follows:

- the **rooting reflex** — as soon as an object — such as the nipple of the bottle or the breast, touches the infant's cheek, she turns her head towards it and tries to take it in her mouth.
- the **sucking reflex** — when an object is placed in the infant's mouth, she sucks on it automatically. The rooting reflex and sucking reflex together help the infant to satisfy her hunger.
- the **elimination reflex** — which helps the infant in urination and bowel movements.
- the **palmar grasp** — the infant tightly grasps any object placed in her palm.
- the **eye-blink reflex** — when something enters the eye, the eyelids blink.

These reflexes are help the newborn to survive, search for food (rooting and sucking reflex), avoid danger (grasping to prevent from falling), learn to walk (stepping reflex). These reflexes are the building blocks of all development right from development of head control, muscle tone, sensory integration, cognitive skills, behaviour patterns and overall development.

As the infant grows, the reflexes disappear and get "integrated" into voluntary motor movements. This means that the involuntary or automatic movements in response to stimuli are replaced with voluntary movements or motor abilities. So, for example, the sucking reflex means that as soon as the nipple enters the infant's mouth she begins to suck; but when sucking comes under voluntary control it means that the child now has the ability to suck if she wants to and not suck if she does not want to.

A very important point to understand about reflexes is that these are indicative of the health status of the child. For each reflex, there is a specific age range within which it is shown, and after this age range it should fade (disappear). The presence of these reflexes in the given age range shows that all is well with the infant neurologically. In other words, the **absence of a reflex when it should be present, or the presence of a reflex when it should have faded, is a pointer that the child may have a disability.** Some reflexes remain throughout one's life, like the eye blink reflex and these do not indicate a disability.

6.2.1 Impact of Visual Impairment on Reflexes

Movement is critical to integrating the primitive reflexes into the growing brain, so that these are replaced by voluntary movements. Vision has a big role to play in movement – a child who does not have vision needs to be specially motivated to move. From gross motor development (head control, sitting) to fine motor development (writing, tying shoelaces) to ocular motor development (eye movements), each aspect of development is affected by the timely integration of primitive reflexes. So if a child has visual impairment, then lack of timely integration of reflexes is likely to affect sensory development, development of gross and fine motor skills, cognitive development and emergence of behaviour patterns.

Check Your Progress Exercise 1

Answer the following questions briefly in the space provided below:

1) What is a reflex, and why are primitive reflexes important in infant development?

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2) Write about the characteristic features of reflexes given below.

   a) **Rooting reflex** ………………………………………………………

   b) **Sucking reflex** ………………………………………………………

   c) **Elimination reflex** ………………………………………………………

   d) **Palmar grasp** ………………………………………………………

6.3 GROSS MOTOR DEVELOPMENT

You would remember from the reading of Unit 1 that gross motor development precedes (takes place before) the development of fine motor skills. We will read about the milestones in the development of gross motor skills first and then the fine motor skills.

As we have stated in Unit 1, there is an age-range during which a certain milestone is achieved — what this means is that there is no one exact time when a milestone is achieved. This is because there are individual differences in the rate of development of children. While development of all children will follow the same sequence, there are individual differences in the age when they achieve a particular skill. So there is a range of time (or age range) within which most children achieve an ability. **This age range for achieving any particular skill is referred to as 'norm' of development**. If a child does not achieve a milestone within this age range in which most children achieve the milestone, then we say that the child's development is not following the norms. **If a child does not achieve more than one milestone in the specified age range for that milestone, then it is a cause for concern and indicates the possibility of a disability.** Then the parents should seek information and support from a doctor**.**

The milestones of gross motor development for healthy children are presented in Table 6.1 below:

Table 6.1: Milestones of Gross Motor Development

Age	Developmental Milestones
0-6 months	• Lift head and chest when lying on tummy • Use arms to support upper body when on back or tummy • When held vertically holds the head steady (beginning 3 months) • Rolls over front to back and back to front • Sits with support and then independently
6-12 months	• Crawls forward on belly by pulling and pushing with arms and legs • Get to a seated position without help • Creeps on hands and knees with belly lifted off the ground • Moves into different positions independently : sitting, all fours, lying on tummy • Pulls self to stand • Walks while holding onto furniture • Takes 2-3 steps without support
2 years	• Walks smoothly and turns corners • Begins running • Is able to pull or carry a toy while walking • Climbs onto/down from furniture without assistance • Walks up and down steps with support • Picks up toys from the floor without falling over
3 years	• Imitates standing on one foot • Imitates simple bilateral movements of limbs (e.g. arms up together) • Climbs jungle gym and ladders • Pedals a tricycle • Walks up/down stairs alternating feet • Jumps in place with two feet together • Able to walk on tip toes • Catches using body
4 years	• Stands on one foot for up to 5 seconds • Kicks a ball forwards • Throws a ball over arm • Catches a ball that has been bounced • Runs around obstacles • Able to walk on a line • Able to hop on one foot • Jumps over an object and lands with both feet together

Age	Developmental Milestones
5 years	• Able to walk up stairs while holding an object • Walks backward toe-heel • Jumps forward 10 times without falling • Skips forwards after demonstration • Hangs from a bar for at least 5 seconds • Steps forward with leg on same side as throwing arm when throwing a ball • Catches a small ball using hands only
6 years	• Runs lightly on toes • Able to walk on a balance beam • Able to skip using a skipping rope • Can cover 2 metres when hopping • Demonstrates mature throwing and catching patterns • Mature (refined) jumping skills

Source: https://childdevelopment.com.au/resources/child-development-charts/gross-motor-developmental-chart/

"See! I can stand!"

A nine-month-old can stand with support

Preschoolers delight in running and have better control over their movements

6.4 FINE MOTOR DEVELOPMENT

The milestones of fine motor development for healthy children are presented in Table 6.2.

Table 6.2: Milestones of Fine Motor Development

Age	Developmental Milestones
0-6 months	• Reflexive grasp (at birth) • Global ineffective reach for objects (3 months) • Voluntary grasp (3 months) • Plays with hands • 2 handed palmar grasp (3 months) • 1 handed palmar grasp (5 months) • Controlled reach (6 months)
6-12 months	• Reaches, grasps, puts object in mouth • Controlled release of objects • Picks things up with pincer grasp (thumb and one finger) • Transfers objects from one hand to another • Drops and picks up toys
1-2 years	• Builds tower of three small blocks • Puts four rings on stick • Places five pegs in pegboard • Turns pages two or three of a book at a time • Scribbles • Turns knobs • Paints with whole arm movement, shifts hands, makes strokes • Self-feeds with minimal assistance • Able to use signing to communicate • Brings spoon to mouth • Holds and drinks from cup independently

Age	Developmental Milestones
2-3 years	• Strings four large beads • Turns single pages of a book • Snips with scissors • Holds crayon with thumb and fingers (not fist) • Uses one hand consistently in most activities • Imitates circular, vertical, and horizontal strokes • Paints with some wrist action, makes dots, lines, circular strokes • Rolls, pounds, squeezes, and pulls play dough • Eats without assistance
3-4 years	• Builds tower of nine small blocks • Copies circle • Imitates cross • Manipulates clay material (rolls balls, makes snakes, cookies) • Uses non-dominant hand to assist and stabilise the use of objects • Snips paper using scissors
4-5 years	• Cuts on line continuously • Copies cross • Copies square • Writes name • Writes numbers 1-5 • Copies letters • Handedness is well established • Dresses and undresses independently
5-6 years	• Cuts out simple shapes • Copies triangle • Colours within lines • Uses a 3 fingered grasp of pencil and uses fingers to generate movement • Pastes and glues appropriately • Can draw basic pictures
6-7 years	• Forms most letters and numbers correctly • Writes consistently on the lines • Demonstrates controlled pencil movement • Good endurance for writing • Can build Lego, K'nex and other blocks independently • Ties shoelaces independently
7-8 years	• Maintains legibility of handwriting for entirety of a story

Source: https://childdevelopment.com.au/resources/child-development-charts/fine-motor-developmental-chart/

6.5 IMPACT OF VISUAL IMPAIRMENT ON GROSS AND FINE MOTOR DEVELOPMENT

The physical and motor development of children with visual impairment also follows the same sequence but milestones may be delayed because of their inability to see. Read further to know why there is a delay in reaching milestones.

- When babies are born, their hands are fisted and held at shoulder height. At about 3 months of age, the fist begins to loosen and the thumb and fingers begin to uncurl. Now with respect to fine motor development, between 3 to 5 months of age, a sighted child begins to play with her hands and she explores them by bringing both hands together to the central axis (midline of the body). By six months of age the sighted child begins to reach for objects in a coordinated manner — she finds the object visually and then reaches for it with her hands. A little later she begins to transfer objects from one hand to another. However, in case of a child with visual impairment, due to lack of visual stimulation, even at 5 months the infant's hands will be fisted and held at shoulder height. The infant does not explore her fingers by mutual touching and does not bring hands to the midline. Since the child cannot see, she does not reach out for objects. **This delay in hand utilization will result in delayed fine motor and gross motor development.** The ability to transfer objects from one hand to another as well as the ability to pick up small objects using thumb and finger may be delayed. Scribbling may not emerge as the child cannot see.

- Without vision, hand and eyes do not work together. Instead, ear-hand coordination must occur. The child has to use the sound cue in order to reach out for objects and people in the environment around her. Until the child understands and grasps a sound cue, she will not move out in space either on hands and knees or feet. **Grasping a sound cue takes much longer to develop than grasping a visual clue.** It takes around the first birthday (12 months of age) for the infant to use sound as a cue (as a signal; as a motivation) to move towards an object while a child with vision begins to reach for and move towards objects around 4 months of age.

- **With respect to gross motor development, crawling and walking may be delayed** as the child does not see objects and so does not spontaneously move towards them. To move around, we need to develop a sense of space, understand that objects occupy space and so move around without bumping into them. The infant may appear afraid to walk or move around. Her movements may be clumsy or awkward for her age. The child with visual impairment will have to be taught to move around by the caregivers.

- The child's difficulty or reluctance in moving around the environment prevents her from seeking stimulation from the environment. So, **the child begins to engage in self-stimulating mannerisms** such as rocking one's body or swaying from side-to-side.

- One may think that a partially sighted person will find it easier to be mobile than one who is completely blind. However, studies have shown that this is not the case. The crucial factor is the motivation of the child. It has been seen that a child who is unable to see at all is more motivated to be independent than one who is partially sighted. Partially sighted children or adults have been found to have more attitude problems — since they can see somewhat, they know they cannot rely on their vision at all, they are more defensive.

- Children who lost sight a few years after birth, at least after they learned to walk as infants, have some advantage over children born blind from birth. These children had developed a certain understanding of space and objects, and how to move around. Though they will have adjustment problems once they are suddenly deprived of sight, they can be trained to move around more easily.

- It is commonly believed that the blind have some sixth sense that enables them to 'sense' an object in their path. This has also been referred to as **‘obstacle sense’**. **But it is not as if they have some extra sense.** Once again the explanation for this lies in the fact that since they are not able to depend on sight, they become proficient in using their other senses in picking up information from the surroundings. In sensing obstacles, so to say, they rely on their hearing. It is a common observation that as we approach a source of sound, its pitch rises. If we have not noticed this before, be alert as you walk on the road the next time. One reason why we may not have noticed this till now is because we are so distracted by what we can see that we miss out on information from other senses. People with vision problems, on the other hand, have learned to concentrate and detect subtle changes in the pitch of objects as they move toward them, which most of us would normally miss. So it is not as if they have some extra sense, but that they have learned to use their remaining senses fully.

- Through adult support, the child can learn to move around independently, using the cane and with other mobility techniques. The caregivers and early childhood educators have to help the child to acquire age appropriate gross and fine motor skills. **A six year old child with vision loss, can move around and play just like other children of her age, by using different mobility techniques and with some adaptations of the play equipment and play environment.** In Course 3 (BCD – 103) we have described in detail how the caregivers can support the child’s physical, motor and sensory development.

Check Your Progress Exercise 2

1) Answer the following questions briefly in the space provided below:

   a) What are some milestones in gross motor development for children, and why is it important to consider individual differences in the achieving these milestones?

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   b) How does visual impairment impact gross and fine motor milestones in children?

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6.6 SUMMING UP

- Motor development refers to the coordination and control over the movements of the body.
- At the time of birth, the motor abilities of children are limited to primitive reflexes, but in the due course of development, the children become capable of voluntary movements and gain control over their body.
- A reflex is an involuntary and nearly immediate movement in response to a stimulus.
- As the infant grows, the reflexes disappear and they get "integrated" into the growing brain. This means that the involuntary or automatic movements in response to stimuli are replaced with voluntary movements or motor abilities.
- The absence of a reflex when it should be present, or the presence of a reflex when it should have faded, is a pointer that the child may have a disability. Some reflexes remain throughout one's life, like the eye blink reflex.
- If child has visual impairment, then lack of timely integration of reflexes is likely to affect sensory development and development of gross and fine motor skills.
- If a child does not achieve more than one milestone in the specified age range for that milestone, then it is a cause for concern and indicates the possibility of a disability.
- Visual impairment in children can delay the development of fine and gross motor skills, as these children may struggle to reach for objects or move towards them due to their inability to see. This can lead to delays in milestones such as crawling and walking and may require caregivers to teach these children how to navigate their environment.
- Despite these challenges, with appropriate support and adaptations, children with visual impairment can achieve age-appropriate motor skills and engage in play like their peers.

6.7 ANSWERS TO CHECK YOUR PROGRESS EXERCISES

Check Your Progress Exercise 1

1) A reflex is an involuntary and immediate movement in response to a stimulus. Primitive reflexes are important for the development of head control, muscle tone, sensory integration, and overall infant development. They help the newborn survive and adapt to the environment until more voluntary control over movements is established.

2) Write about the characteristic features of reflexes given below.

   a) As soon as any object touches the infant's cheek, she turns her head towards it and tries to take it in her mouth.

   b) When an object is placed in the infant's mouth (lips), she sucks on it automatically.

   c) Helps the infant in urination and bowel movements

   d) The infant tightly grasps any object placed in her palm.

Check Your Progress Exercise 2

1) a) Milestones include lifting the head, crawling, walking, climbing stairs, and more. Individual differences exist in the timing of these milestones, and the age range for achieving a particular skill is referred to as the norm of development. Deviations from this norm may indicate a need for further evaluation.

   b) Visual impairment can delay milestones as the child relies on other senses, such as touch and hearing, to explore and interact with the environment. Hand-eye coordination may be affected, leading to delays in both fine and gross motor skills.

UNIT 7 CONCEPT DEVELOPMENT DURING EARLY CHILDHOOD

Structure

7.1 INTRODUCTION

Cognitive development, also known as mental development, involves various processes such as discrimination, understanding cause-effect relationships, problem-solving, memory, imitation, reasoning, and concept formation. This development is crucial for children, especially those with visual impairments, who face unique challenges in acquiring and integrating information from their surroundings.

In this Unit, we will focus on the development of thinking abilities that takes place during the first six years of child's life. As you know, this is referred to as 'cognitive development'. You will also learn about how visual impairment may affect the child's cognitive development.

Objectives

After studying this Unit, you will be able to:

- explain the meaning of cognitive development and identify the processes involved in cognition;
- state what is meant by 'concepts';
- list some of the concepts that we form and explain the importance of developing concepts;
- explain how we form concepts; and
- describe the impact of visual impairment on concept development and the specific challenges faced by children with visual impairments.

7.2 THE MEANING OF COGNITIVE DEVELOPMENT

'Cognitive development' refers to the development of thought processes or thinking, right from the time that one is born. 'Cognition', or thinking, is concerned with how we come to know the world around us, how we receive and interpret information and how we represent the world around us in our minds. These thinking capabilities develop and change as we grow. Cognitive development is also referred to as 'Mental Development'.

Have you ever considered from what age do we begin to think? Is it when the child begins to talk that she begins to think? Does a one-month-old baby think? Can you give examples on the basis of your experiences with children that show that they are thinking? Write your answers in the space provided below:

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7.2 1 Processes Involved in Cognition

Thinking seems to be such a natural activity that we hardly reflect upon the mental processes that are involved in forming ideas about people, objects, events and situations. Let us reflect on **what are the various mental processes involved in thinking and, side by side, we will also examine whether infants and young children show these abilities and processes.**

1) We **discriminate** (differentiate) between tastes, colours, shapes, living and non-living things, edible and non-edible things... and the list can go on! Let us see whether the baby can discriminate. The infant can discriminate between what provides food and what does not. How can we say so, you may ask? Have you noticed that when the baby is really hungry, she refuses to suck on the pacifier nipple (which contains a sugary syrup) given to her and throws it out of her mouth after some time and will get satisfied only with the breast or bottle of milk.

2) We perform most of our actions with an **intention** and we know that our actions will **have an effect**; in other words, we **understand cause-effect relationships**. The infant also shows this ability. A six-month-old knows that if she strikes the bell hanging over her bed (cause), it will produce a sound (effect).

3) We **associate** certain emotions with certain experiences, people with a certain type of behaviour, weather with a particular month, and certain belongings with specific persons. You must have seen that a one-year-old baby gets upset when her father picks up the car keys but does not pick her up – this shows that she understands that he is going out of the

house but is not taking her along. She has associated the action of picking up the car keys with her father going out of the house.

4) We have the **ability to solve problems**. For example, when we think of an alternate way of handling a situation because the original solution no longer works, then we are doing problem-solving. When a nine-month-old child removes a cushion to get the toy which she knows is placed behind it, the infant is engaged in problem solving — she is solving the problem of reaching for the toy.

5) We **remember** information and events; **imitate** the actions or behaviour of others; **reason** about the cause of events; **understand relationships** between objects, experiences and feelings; think and reason about **hypothetical situations** (situations which do not exist at present but may exist in future) and **think in abstract terms** (think about ideas and concepts that do not exist physically). Thinking about hypothetical situations and abstract ideas emerges during adolescence. However, the abilities to remember, imitate, solve problems and understand relationships are evident from infancy onwards.

6) **We develop concepts**. Concepts are ways of organizing information. A concept develops out of the characteristics that are common to a group of objects, actions or thoughts. For example, the common aspect between a red shoe, a red pencil and a red flower is that they are all 'red'. Thus, we use the category 'red' to put these things together though otherwise they are all very different from each other. In this way we develop the concept of 'red'. We develop different kinds of concepts, such as of distance, solids and liquids, colours, seasons, beauty, bravery, etc. We have concepts of both concrete and abstract things — for example, beauty and bravery are abstract concepts. **Children begin to develop concepts from a young age but this ability develops rapidly after two years.**

7) **We use symbols to convey our thoughts. 'Symbolizing'** means representing an event, object, action, quality or concept by something else. For example, the symbol of the 'star' given by the teacher is used to indicate to the child that she has done good work. As such, there is no relation between star and good work, but we have created a relation by using this symbol to denote good work. When a three-year-old child pretends that a piece of cloth is a pretty shawl, she is using the cloth as a symbol for the shawl.

The words of a language are symbols that stand for actual events and objects. The word 'car' stands for the object 'car' because we have decided it to be so. There is no relation between the word 'car' and the actual car as such. We could have used any other word to refer to the object 'car'. In another language, the object 'car' is called by a different word. **The ability to use words as symbols is essential as words help us to create sentences and this helps us to talk about and refer to a large amount of information**. Imagine if we did not have words to explain what we mean, how difficult and time-consuming it would be to communicate through gestures or other ways. The infant speaks the first word around the first birthday, but is able to understand language much before that. A nine-month old baby, for example, responds to simple question such as, "Do you want this toy?" by moving her arms, or looking excited.

Drawing is also a type of symbol. A drawing represents our thoughts, our feelings and how we perceive a certain object or an event. Children begin to use scribbles to depict their thoughts between 2.5 to 3 years of age. If you ask them what they have drawn, they will give you an explanation even though what they have drawn has no actual resemblance to what they are saying it is. This does not matter – he point is that the child has an idea in mind when she makes a scribble and this scribble is her way of representing her idea. By and large, we can say that the ability to symbolize using language and drawing emerges around 2 years of age.

All these mental processes are part of our thinking and the study of cognitive development is the study of the development of these and other mental processes from the time the child is born.

The examples that are mentioned above show that infants understand what is happening around them and are forming an idea about the world. Thinking starts right from the time the child is born, but as the child grows, the nature of thinking changes and thought becomes more complex. Thus, as the child grows from one stage to the next, she not only acquires more information (quantitative change) but the **nature of her thinking changes as well.** (a qualitative change occurs in her thinking process).

Exploration leads to experimentation

Children with severe visual impairment may have delayed cognitive development, particularly with respect to concept formation. Since they face problems in obtaining visual information, they have difficulty in forming perception (i.e, understanding something based on information provided by our senses) about persons, things, objects and environment around them. They have to obtain the information through other sensory modalities auditory (hearing), tactile (touch), olfactory (smell), and taste and they may find it difficult to integrate their perceptual experiences obtained through these other sense organs into concepts. In the next Section, we will discuss in detail about the process of development of concepts, and how lack of vision affects this process.

7.3 WHAT ARE CONCEPTS?

In Sub-section 7.2.1, we introduced briefly what is meant by 'concepts'. Concept formation is the foundation of everything that we learn. Let us read in detail about how we develop concepts. This will help us to understand how visual impairment affects the process of concept development.

Forming a concept means to form an idea about objects, things, events and people so that one has a mental idea of what each looks like, how each is like or different from something, and what are the characteristics of each. As you read in Sub-section 7.2.1, a 'concept' is formed by identifying common aspects among things, events, people and situations, which are otherwise dissimilar. **Thus, a 'concept' represents some common features among a group of different objects or events.** For example, a child, a tiger cub, a tadpole and a chick are different from each other and appear unrelated. However, what is common to all of them is that they are young ones of a species. Thus, the concept 'young ones of a species' unify a child, a tiger cub, a tadpole and a chick.

We all form concepts in our day-to-day life as we come across objects and interact with people. We have concepts of big-small, animals-birds, rich-poor, living-nonliving, time, food, our body, as well as concepts related to social and emotional relationships such as family, country, world, friendship, love, justice and beauty. **Thus, concepts can range from concrete (such as colours and size) which we can see, to abstract (such as love, happiness and dislike) which can only be felt. Concepts help us in understanding things, people, and events around us.**

Children begin to form concepts as a result of interacting with their environment. The more concepts a child has, the greater is her understanding of things, people and events around her. Acquiring concepts is vital for the individual for day-to-day learning as our interactions with people are based on these.

7.3.1 How Do We Develop Concepts?

We can say that concept development involves the following steps:

- Experiencing something through our senses of touch, hearing, sight, smell, and taste is the starting point of the process of concept formation.

- Based on our perception (i.e., information from the senses) we form mental idea of things, persons, or events in our mind.
- The mind then analyses and ascertains what are the similarities and common features among these objects, events, people, and situations.
- After making such observations several times, we can form a general idea about the common properties among these objects. In other words, we form a concept.

We have given two examples of how a child may from a concept of 'red' and 'young ones of a species'. Let us take a third example to understand this process of concept formation. A child perceives a white horse for the first time and she is told that it is a horse. In this way the begins to develop a concept of horse. . In the beginning, her idea of a 'horse' is very specific in nature and the child relates the term 'horse' only to that horse which she has seen. Later, when she perceives a black or a brown horse, she may not call it a 'horse' at once. She asks again and comes to know that these are also 'horses'. She tries to compare the image of the 'horse' she is seeing now, with the image in her memory of the 'horse' she had seen earlier. By doing so, she can gradually identify the characteristics that different horses have in common. Thus, she can understand that an animal with certain features is a 'horse', even though the horses may vary in terms of colour and size. She begins to differentiate horses from other types of animals. In other words, she now begins to use the world 'horse' for a general class of animals based on the common properties found in the different 'horses'; she now can easily recognize an animal called 'horse' and understand it as being different from other animals. She now has a concept of 'horse'.

Experiencing something, through any of the five senses, is the first step in forming concepts.

7.4 IMPACT OF VISUAL IMPAIRMENT ON CONCEPT DEVELOPMENT IN CHILDREN

Does the process of concept development in children with visual impairment differ from that in the case of sighted children? How does the child with visual impairment form an idea (concept) about objects, people, and events?

The process of development of concepts in children with visual impairment takes place in the same manner as in the case of sighted children. The difference is that children with visual impairment form an idea based on the senses of smell, touch, hearing and taste, while the sighted primarily rely on the sense of vision. **Because of this the concepts they form about objects, people and events may be different from those of the sighted** For the sighted vision is the major mode of acquiring information about people, places, objects and events. Children with visual impairment are at a disadvantage as they live in the world of the sighted and must make use of the concepts created by the sighted, even though they may not understand all of the concepts completely. For example, a child with visual impairment has never seen a cloud. Her idea of a cloud is based on the description provided by the sighted. Neither can she touch a cloud. Her understanding of the concept of 'cloud' will be quite different from that of a sighted child. **Since children with visual impairment must rely on other senses, they tend to lag behind in the development of concepts if they have not been provided with suitable and stimulating experiences. They may also have difficulty in forming clear concepts.** Let us understand why this may be so.

A child with visual impairment, due to loss of vision, depends on the other senses for learning and developing concepts.

7.4.1 Lack of Incidental Learning

The sighted continuously look around wherever they are and continue to receive information from their sense of sight, even if they are not consciously planning to obtain information. Through such unplanned (incidental; by chance) and spontaneous scanning of their immediate environment, they form an idea about things around them and also develop an idea about the spatial relationship between one object and other objects. However, due to lack of vision, children with visual impairment miss out on many opportunities to learn concepts incidentally as they are not be able to spontaneously observe and interact with their world Read further to understand.

Touch, smell and taste are 'near' senses, by which we mean that these senses provide information to the child about things which are near and around the child. Further, the child has to make her own active effort to obtain information through these senses — she has to touch or smell or taste something. So learning through these senses is not spontaneous, while learning through vision is.

The sense of hearing is a 'distance' sense, like vision, and the child is able to receive information from a source further away. But in case of the sense of hearing, the child is dependent on sound being produced in the environment or people talking to her or each other. For vision to be active, there is no such dependency. Thus, **when the child uses hearing, touch, smell or taste to know about the world around her, incidental or spontaneous learning is limited.** For a child born without the ability to see, the other senses might not seem as strong because the child gets information through these senses only in bits and pieces. There is not a constant flow of information as happens in case of sense of vision. The input provided by the sense of hearing, touch, smell and taste is an intermittent (not continuous) input provided at intervals. For example, only when people talk will a child hear something. Only when the child touches something will the sense of touch get active. On the other hand, sight provides a constant stream of input, whether or not the person seeks the input.

So unless children with visual impairment are deliberately provided with meaningful experiences and opportunities to engage with real objects in a planned way that they can touch, hear, smell, and see (if they have any remaining vision), they will lag behind in developing concepts.

7.4.2 Difference between Using Sense of Touch and Sense of Sight In Forming Concepts

While one may say that the person with visual impairment uses the sense of touch to develop a concept, but there is a vast difference between using the sense of sight, and the sense of touch to form concepts. Can you say what this difference is? Read further to understand.

When we see something, we see the entire object, person, event or situation at once. Vision enables us to perceive objects in their totality and in context. Along with this, we receive additional information about objects through our other senses. Thus, we receive a variety of information all at the same time and we form an integrated and holistic idea or a concept about what we are seeing. But what happens when a person has to primarily (mainly) rely on the sense of touch?

- To understand this, **we must understand that touch can be of two kinds.** One is **synthetic touch** that refers to exploration of objects, small enough to be enclosed by one or more hands. However, objects that are large require analytic touch. **Analytic touch** involves touching the various parts of the object one after another, and then mentally putting together these separate parts to form a whole. In other words, they have to rely on sequential observation. For example, to form a concept of 'chair', a blind child will touch the seat of the chair, the legs and then the back, one after the other, and then integrate these separate perceptions in her mind to form a concept of 'chair'. Sometimes, the child may be able to touch only part of an object and from this limited information the child will imagine what the rest of the object may be like. Thus, awareness of the relationship between parts of the object, or between different objects occurs later and takes more time to develop.

  On the other hand, **the sighted child sees the chair at once and forms a concept about it immediately. Thus, the child with visual impairment takes a longer time to develop concepts, and sometimes the idea that the child forms about a particular object may not be entirely as the object actually is**.

- Besides, there are certain things that the child cannot even touch, such as the clouds, sun, or the moon. The idea that the child forms about these objects is based on what others tell her about these objects. **Hence for certain things, the understanding of a child with visual impairment will be very different from that of a child with vision since it is not based on actual experience.** Since the sense of touch and hearing cannot fully compensate for the sense of sight, children with visual impairment get somewhat reduced experiences. The lack of vision restricts their range and variety of experiences, and this can influence concept development adversely.

7.4.3 Hesitation in Exploring the Surroundings

A child without vision may not feel confident about exploring the **surroundings as she may feel a lack of control over the surroundings and**

her own movements, due to her inability to see what is present in the environment. The fear of the unknown may simply stop her from exploration. Lack of vision restricts the ability to move about and so restricts the range and variety of experiences and opportunities for developing social relationships. This will also adversely affect the development of concepts. The parents may also prevent and discourage the child from exploration because they are worried about the child's safety. **As a result, the child does not get enough concrete experiences about the world around her. Without concrete experiences, the child will not develop meaningful concepts and will not acquire the language to describe or think about them**.

7.4.4 Difference between Using Sense of Vision and Sense of Hearing to Form Concepts

As we discussed earlier, hearing is the only distance sense available to the infant with visual impairment. **But the following factors make learning through the sense of hearing challenging. Firstly,** the infant has no control over the presence or absence of sound in her environment. She does not know from where a sound will come. For example, if others speak she hears; if they do not speak, she has no stimulation.

Secondly, the child can hear things, but without being able to see where the sounds are coming from, the sound is just noise. When we hear something, we also look at the source of sound and that help us to understand the meaning of that sound. So the next time when the sound is made, we do not need to look at the sound source. When there is no visual verification, the sound is meaningless, i.e., it appears just as noise. Connections between objects and their sounds are often not made spontaneously. To create meaning from the sound the child has to explore the sound source through touch and hear a verbal explanation about it. It is only after the infant has a lot of experience touching things, moving around, and listening to sounds, that these 'noises' start to make sense. Then, the child can start to understand where a sound is coming from, what's making it, or why it's happening.

Thirdly, sound is not as powerful a motivator as sight, and it takes a while for the child to connect sounds with specific objects or events. It takes about a year for a child who cannot see to start reaching for things based on the sounds they make. The child usually does not start exploring their surroundings until they reach this milestone. For children who can see, things like colour, pattern and shape, often motivate them to touch and explore. But a child who cannot see does not have access to these visual cues and so they child does not engage in as much purposeful touch and exploration because their environment remains unfamiliar and uninteresting.

7.4.5 Challenges in Ear-Hand Coordination

As you know, exploration is a key part of learning and concept development. For instance, by touching, hearing and manipulating objects, children learn about their properties (such as texture, weight, shape) and functions. This hands-on exploration helps children form concepts about the world around them.

For the **s**ighted, hands and eyes work together to pick up objects and explore. This is called eye-hand co-ordination. **But for the child without vision, eye-hand coordination does not work; instead, ear-hand coordination must occur.** This coordination between hearing and gross and fine motor movements of the arms and hands, allows a baby to grasp and hold objects, and she fine-tunes these movements as she grows.

However, ear-hand coordination takes longer to develop and is achieved much later than normal eye-hand coordination. This means that the child might take longer to interact with and explore objects around her and develop concepts. **Infants with visual impairment begin to reach for objects based on sound cues only at around one year of age. The child with vision begins reaching for and exploring objects much earlier.**

7.4.6 Degree and Age of Onset of Visual Impairment

Concept development among children with visual impairment depends upon the degree of visual impairment, the age of the child when the impairment occurred, the degree of remaining vision and the extent to which the child is able to use it effectively. Children who are blind from birth find it more difficult to acquire concepts as compared to children who become blind after a few years of birth. This is because the children who lost vision after some years, had an opportunity to develop concepts and ideas on the basis of their sight, and they can use that understanding to develop new concepts after the loss of vision. Particularly, if the loss of vision occurred before the age of five years, the child with visual impairment may take a longer time to develop various concepts.

You should keep in mind that even a small degree of sight can help the child a lot in acquiring concepts. Children who have partial sight will be at an advantage in developing concepts as compared to blind children. Thus, you need to encourage the child to use her remaining vision. **We have described how to train the child to use her residual vision more effectively in Course 3 – BCD - 103.**

Thus the cognitive development of a child with visual impairment will depend on the degree of visual impairment, the age when loss of sight occurred, the motivation of the child and the deliberately planned experiences provided to her by the caregivers to explore the objects and people in her environment.

Check Your Progress Exercise 1

1) Answer the following questions briefly in the space provided below.

   a) From what age do children begin to think ?

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b) What is the term used to represent the development of thought processes or thinking?

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c) Give an example showing that infants can discriminate between things from the earliest days.

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d) What is the main mode of acquiring information for children with visual impairment?

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e) How does lack of vision impact concept development in children?

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7.5 SUMMING UP

- Cognitive development is concerned with how the child comes to know about her surroundings and how her thinking becomes more complex with time.
- Cognition involves many mental processes — learning, memory, symbolizing, concept formation, reasoning, discrimination, association, imitation and problem solving.
- While sighted children primarily rely on vision for incidental learning and concept formation, children with visual impairment must depend on their other senses, leading to unique challenges in cognitive development.
- Children with visual impairments may experience delays in concept formation and may require more deliberate and structured experiences to develop concepts.

- Factors such as the degree of visual impairment, the age at which the impairment occurred, and the child's motivation and environmental support significantly influence their cognitive development.

7.6 ANSWERS TO CHECK YOUR PROGRESS EXERCISES

Check Your Progress Exercise 1

1) Children begin to think right from the time they are born.
2) The term used is 'cognitive development' or 'mental development'.
3) An example is when a hungry infant refuses to such on a pacifier containing sugary syrup but seeks satisfaction only form the breast or bottle of milk.
4) The process involved is problem-solving, where the child finds an alternate way to handle a situation to achieve a goal.
5) The main mode of acquiring information for children with visual impairment is through the senses of smell, touch, hearing, and taste.
6) Lack of vision can lead to delayed concept development due to factors such as limited incidental learning, challenges in exploring surroundings, differences in using touch and hearing compared to sight to form concepts, degree of visual impairment and age of onset of the disabling condition.

UNIT 8 STAGES OF COGNITIVE DEVELOPMENT DURING EARLY CHILDHOOD

Structure

8.1 INTRODUCTION

In Unit 7, you have read about what is meant by cognitive development, what are concepts, the process of concept formation and how visual impairment affects the process of concept formation. You also read that thought develops from the time the child is born. However, the nature of thinking changes as the child grows.

In this Unit, you will study about the stages in development of thinking — in other words, about the stages in cognitive development. These stages of cognitive development are applicable to children with visual impairment as well. Visual impairment causes some delay in cognitive development, about which you will read in detail in this Unit. You will also read about some strategies to support the cognitive development of children with visual impairment.

Objectives

After studying this Unit, you will be able to:

- List the stages of cognitive development as outlined by Jean Piaget;
- Understand the processes of assimilation and accommodation in cognitive development;

- Explain the key characteristics of the sensorimotor and pre-operational stages of cognitive development;
- Identify the impact of visual impairment on cognitive development during these stages; and
- Discuss strategies to foster the cognitive development of children with visual impairment.

8.2 STAGES OF COGNITIVE DEVELOPMENT

The stages in cognitive development, from the time the child is born, till the stage of adolescence have been studied and described in detail by a Swiss psychologist, Jean Piaget. According to Piaget, children's cognitive development occurs in an orderly manner in a series of stages. Some children may be more advanced than others at particular ages, but the developmental sequence does not change. According to him, cognitive development proceeds through four stages:

— sensori-motor stage

— pre-operational stage

— concrete operational stage, and

— formal operations stage.

Piaget has provided detailed descriptions of each of these stages – however, we shall in this Course, study only about the first two stages.

Piaget has explained that the development of thinking takes place through two related processes of **assimilation** and **accommodation**.

- Assimilation of new information occurs when children try to make sense of new events by relating them (assimilating) to the information and concepts they have already developed.
- However, if the new information does not fit the already existing way of understanding and organizing the world, then the child modifies her existing patterns of thinking or accommodates her thinking to include the new understanding.
- The child attempts to maintain a balance **(equilibrium)** between assimilation and accommodation and in this process, her thinking develops.

For example, a child has seen a red rose and has formed an idea of what is a rose. Now she sees a white rose and immediately calls it a rose because she notices that it is the same as the red rose except in its colour. So the child has fitted new information into her existing knowledge base. In other words, the child has assimilated the new information into what knowledge the child already has. Of course the child has also expands her knowledge base to include the idea that roses can be white too, but the idea of what is a rose remains the same. In another case the child has seen tomatoes and knows they are red in colour. Then she comes across a fruit such as 'apple' which looks red like a tomato but is not the same in hardness and taste. So now the child is not able to fit the new information about the apple into her existing information about tomato. So now the child modifies her thinking and adds a new concept 'apple' to her thinking. In other words, now the child has accommodated her thinking according to the new information, since the new information was not fitting into her existing information. This is accommodation.

8.3 THE SENSORIMOTOR STAGE

The period from **birth till two years** of age is the period of sensorimotor stage of development. It is known as the sensorimotor stage of development since **during this period the infant understands the world through her senses and motor capacities (i.e., actions).** This means that the infant learns about people and things in the following ways:

— by doing some action on them – such as holding, banging, pulling etc.; and

— on the basis of how these objects, events and people appear to her (i.e., information from senses)

Let us understand how thinking develops in the first two years.

- The newborn child adapts to her environment in the earliest months of life through her reflex actions. These reflexes help her to survive and help in learning. You may be thinking how do reflexes help in learning. Let us understand this through the example of the sucking reflex. In Unit 7 you read the example of how the infant refuses to suck on the nipple which gives a sugary syrup (pacifier) because it does not satisfy her hunger; however the infant continues to suck on the mother's breast or the milk bottle because it satisfies her hunger. This means that the infant can discriminate (differentiate or identify) between food and non-food items, based on whether sucking on the item satisfies her hunger or not. **This is the beginnings of learning.**

- By two months of age, the infant **begins to show an interest in things around her** and starts reaching for them. She looks at things for longer periods of time.

- By three months she **begins to understand what the actions of others mean/indicate**. For example, by the specific gestures and actions that the mother makes, she knows that it is time for feeding. This also shows that **the infant remembers and that her memory is developing.**

- Between 4-8 months of age, the infant **begins to understand that her actions can have an effect** — for example, when she kicks, the ball moves; when she drops an object, it makes a noise. This is the beginning of understanding of cause-effect relationships.

- Before the age of 4 months, the infant believes that things she cannot see do not exist. You can see this when you hide a toy the baby is playing with. She may get confused or upset briefly but then she quickly forgets about it and gives up looking for it. However, between the age of 4 to 7 months, the infant begins understand that objects continue to exist then when not visible. Now if you take away the toy and hide it, the infant will continue to ask for it and will not stop crying till she gets it back. This means that she is developing **the idea of object permanence** – that is, the idea that objects continue to exist in the environment even if these are not visible to her.

- Between 8-12 months of age, the infant begins to **carry out actions with an intention**. This means that she has already planned an action before carrying it out. This means that she understands which action will have what effect and what action/actions will be appropriate in a given situation. She can also coordinate two or more actions to reach a goal. This **goal-directed behaviour** helps her in solving problems, such as removing the cushion to reach for the toy. Her action of removing the cushion will be called a planned action since before doing the action she realizes that this action will help her to get the toy.
- Between 12-18 months of age, the infant **tries out different ways of doing things. She experiments.** She changes and varies her actions to produce different results. You must have seen infants repeatedly throwing the toy to see how far it goes or throwing it from different heights to see the difference in the sound produced. In both these cases, the infant is changing her action to bring a change in the result. The ability to change (vary) actions also helps the infant to use **trial-and-error method** to get what she wants. In the process, she learns. We all use trial and error method and learn from it — for example, we think a particular solution would be appropriate and we try it out (this trying out is called a trial), but when it does not turn out to be alright (in other words, there is error), we change our solution and again try it out.
- Between 18-24 months of age, an important development takes place — **the infant begins to represent events, objects, and people mentally (in her mind).** This means she can form an idea or a picture about events, objects, and people in her mind. How does this help, you may be thinking? It is a very important development due to two reasons:
  - ✓ The child does not have to carry out an action each and every time to know what effect it will have. She can mentally plan her actions and judge what the result would be and then carry out the action which, according to her, is most suitable.
  - ✓ Mental representation also helps the child to judge what could have lead to a certain result. For example, if she sees a broken toy, she will be able to think of possible cause — it could have fallen down. She has not actually seen it falling but can imagine (mental activity) that it must have.

Mental representation is a necessary part of our daily life — we mentally plan our day, or the route we will take to school, or our holiday before we actually physically carry out these activities. The beginning of this ability appears by the end of infancy, as we have described above. This does not mean that the trial-and-error way of learning is replaced completely — we all use this even as adults but with mental representation, we have a more effective way of solving problems.

The above description of the child's thinking abilities shows that the infant is an intelligent thinking being. She is not able to talk or walk until the end of first year, but she displays her intelligence in many ways, right from the initial days.

"I am your Mummy!"
Imitation is an indication of the child's ability to represent events in her mind

8.3.1 Impact of Visual Impairment on Development of Thought during Sensorimotor Period

Some of the ways in which visual impairment affect development during the sensorimotor period are as follows:

a) **Object Permanence**

   The sighted child uses vision to develop object permanence. When vision is impaired, the child has to reach for objects based only on sound input of the object. Consequently, children with visual impairment develop object permanence nearly one year later than sighted children.

b) **Cause and Effect Relationships**

   A child who cannot see might not want to do things because she cannot see what happens when she carries out an action. So her motivation to do anything is reduced. The child might not know that she can make things happen or if a pleasurable action is taking place, she can continue to make it happen. Thus, visual impairment can cause a delay in understanding cause and effect relationships.

c) **In general, the cognitive functioning of the child with visual impairment is slower to develop than that of the sighted child and**

the chief reason for this is the limitation in range of experiences due to lack of vision. Even a small degree of residual vision can play a very significant role in enabling cognitive development. .

8.4 THE PRE-OPERATIONAL STAGE

This period begins from two years of age and lasts till six to seven years. These are the years of early childhood (also called 'preschool years'), as you have read in Unit 1. As you have read above, by the end of the sensorimotor period, the child develops the ability of mentally representing events, objects and people and also begins to form concepts. The development of these abilities represents the transition from the stage of sensorimotor development to pre-operational stage of development. There are some characteristics features of a preschooler's thinking which makes this stage different from the stage before it (i.e., sensorimotor period) and the stage after it (i.e. concrete-operational period). Let us read about the cognitive abilities and the nature of thinking of the preschooler, her cognitive abilities and the concepts she develops in the following Sub-sections.

8.4.1 Development of Concepts

During this period, the child develops many concepts such as those of

— Space — over/under, up/ below, forward/backward

— Size — length, width, height-tall/short; broad/narrow; long/short

— Shape — circle, square and so on; three dimensional and two dimensional and shapes; regular and irregular shapes

— Time — day/night; morning/evening/afternoon; today/ tomorrow/ yesterday

— Distance — far/near

— Speed — fast/slow

— Colours

— Number — more/less; many/few; one/many, many/none, as many as/ more than/less than/equal to: one, two three and so on

— Area, Volume

— Weight—-heavy/light

— Living/nonliving

— Temperature —hot/cold/warm

— Plants

— Animals

— People

— Vehicles

— Festivals

In other words, **she begins to develop concepts of everything she sees in her environment.**

Of course, **the concepts take time to develop fully.** We give two examples to explain what we mean:

i) **Concept of Size:** Our concept of size includes the concept of relative size — that something can be bigger or smaller in relation to something else; we can also consider many objects in terms of their length and arrange these from the longest to the smallest. The three-year-old child begins by first forming an idea of 'long' and 'short' in relation to two objects. Around four years of age, she can understand longest and shortest when given three objects. However, even a six-year-old child is likely to get confused when you give her ten sticks and ask her to arrange these in increasing order of height. This is because she cannot consider many objects simultaneously and think of relative size. This ability will develop in middle childhood years.

ii) **Concept of Number:** Likewise, with respect to the concept of number, the child does not immediately develop the concept of quantity. A three-year-old child might be able to say number names till 10 or even 20, but if you ask her to pick up six stones from a pile, she is likely to make a mistake – she will either pick up more or less. If you have interacted with preschool children and asked them to count the number of beads in a string, you may have noticed that they say one number name and then touch two beads or they say a number name and do not touch any bead. This happens because they have not developed idea of one-to-one correspondence – that one number name represents one quantity only. So in order to learn to count correctly (in other words, develop a concept of quantity), she needs to first develop concepts of more and less, one and many, none and many, one-to-one correspondence, and know the number names in the correct order. Gradually she will learn to associate the written numerals with the number name (that 'five' is represented by the number '5'). After she is able to count correctly, she is able to understand more than, less than, equal to and then develop the understanding of addition and counting.

What we are explaining is that **the development of all concepts takes place in a sequential manner from simple to complex. The beginnings of this process can be seen during the preschool years. Concepts continue to evolve through the rest of our lives.**

8.4.2 Mental Representation and Symbolic Thinking

As explained in the above sections, mental representation is an integral part of our lives. It has been explained above how mental representation enables the child to mentally plan her actions which saves her the effort and time to try out an action each and every time. It also helps her to understand cause-and-effect relationships when either the cause or the effect is not visible. In our day-to-day life there are many instances when the cause and effect do not take place at the same time in one's presence and these have to be inferred.

Another important impact of mental representation is on the nature of the child's play. During infancy (in the sensorimotor period), the child's play is in terms of physical actions on objects – she kicks a toy, bangs it or throws it etc. **With the ability for mental representation, the child is able to engage in symbolic thinking.** Symbolic thinking means using an object or an action to represent something. For example, the symbol of a star means the work is good. The symbol of a plus sign means that there is a doctor's clinic nearby.

Being able to engage in symbolic thinking enables the child to play pretend games. She can now imagine that an object or an action or a person is something which it is not, such as she herself pretending to be a teacher or using a plastic box as a truck. This play is now possible because the child is able to represent in her mind that a particular action, event or object can be used to mean something else. You would have seen preschool-aged children engage in pretend play as doctors, farmers, parent, teacher, police and so on using a variety of play materials as stethoscope, or kitchen utensils or blackboard or guns. This is evidence of symbolic thinking.

Drawing is another outcome of the ability to mentally represent events and engage in symbolic thinking. Most children love to draw and if you ask them what their depictions mean they will tell you a detailed story.

Pretending that the stool is a moving 'train' shows the child's ability to think symbolically

8.4.3 Difficulty in Reversing Thought

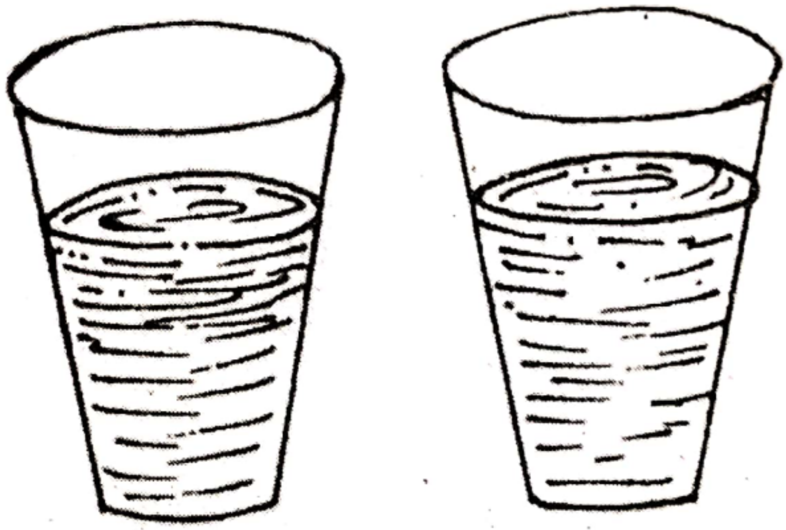
The nature of the preschooler's thinking is understood best when we understand the meaning of the term 'pre-operational'. The word 'operation' has a specific meaning in Piaget's description of cognitive development. The term 'operation' refers to mental action which is reversible. For example, we can mentally think of a ball of clay, and then we can mentally flatten this ball of clay into a flat circle (without actually doing so) and then roll it into a ball again. All the while we understand that the amount of clay remains the same no matter what its shape. Similarly, we can mentally pour water from a glass into another glass and then back into the earlier glass knowing that the amount of water remains the same. **So an 'operation' is a mental act in which objects are changed or transformed and can then be returned to their original states.**

Let us now read about some of the experiments done by Piaget with preschool children, to understand about the child's ability to reverse her thinking. These experiments are called conservation experiments.

Conservation means being able to understand that the amount of a particular substance remains the same even if its shape is changed (in other words, the area it occupies is changed) or if it is transferred from one container to another. If two glasses of equal width and length are taken, and water is poured in them to the same level and then in front of the child, water is poured from one of these glasses into a narrower glass, then the level of the water will rise higher in the narrow glass. Now, the preschooler is likely to believe that the water in the narrow glass is more because the height of the water in this glass is more. This means that the child is not able to show conservation of liquid. In the same way, the child will believe that when a ball of clay is flattened, the flattened piece of clay now has more clay. In other words, **the child is not able to conserve amount. This happens because the child is not mentally able to reverse the action –** she is not able to think that the water poured into the second glass can be poured back into the original glass; similarly she is not able to roll the flattened clay back into the ball of clay, which it was at the beginning.

It is seen that there are stages in learning to conserve:

- The first stage is when the child is not able to conserve at all. Three-to four-year-old children are most likely to be at this stage.
- In the second stage, the preschooler conserves in situations which are familiar to her but does not conserve in unknown situations. For example, a four-year-old child who helps his father in the daily business of making lemon soda, will probably not think that the quantity of soda increases when it is poured from the bottle into the glass. This is because he sees this happening daily.
- In the third stage, the child conserves every time, consistently. This happens after the stage of preoperational thinking is over, that is around 8-10 years of age.



Child is shown two identical glasses with equal amounts of water

Then, while the child watches, the water from one glass is poured into a third glass which is wider and shorter than the other two. In this glass the liquid obviously rises to a lower height.

8.4.4 Taking Another Person's Perspective

Communication and interaction is possible only when we consider the other person's perspective. **Taking another person's perspective means being able to see the situation form another person's point of view.** This ability develops gradually as the child's thinking develops. During the pre-operational period the child finds it difficult to see the events and the situation from the perspective of another person. They often assume that if they know something, others will know it too or if they can see something, others can see it too. This is because the child centres on (focuses on) one aspect of the situation and cannot understand or see (visualize) things from another person's perspective. If you hide a doll at a place where it is not visible to the child, but it is visible to another person standing at a different location in the room, the child is not able to make out that the other person is able to see the doll. The preschooler assumes that others see a situation as she does, and this quality of the child's thought has been called 'egocentrism'. However, we also need to remember that in some situations which are familiar to the child, the preschooler may be able to see the situation from another person's perspective very clearly.

8.4.5 Classification

Classification means making groups of objects on the basis of a property common to all the objects in the group. For example, in a collection of round beads of red and blue colour, putting the red beads in one group and blue beads in another. Or in a collection of leaves and flowers, putting the leaves in one group and flowers in another. Besides the above-mentioned descriptions of the nature of preschooler's thinking, the child's ability to **reason, understand cause-effect relationships and solve problems develops further during the pre-operational period.**

8.5 IMPACT OF VISUAL IMPAIRMENT ON THE DEVELOPMENT OF THOUGHT DURING THE PRE-OPERATIONAL PERIOD

Some of the ways in which visual impairment affects the development of thinking during the pre-operational period are as follows:

a) Mental Representation

For the sighted, the visual perception of the object helps to create a mental image of the object. This is called mental representation of the object or mental image of the object – in other words, we see the object in our mind even though it is not present before us. This is a very important ability and helps us to function in day-to-day life because you can understand that if we have to actually have all objects and people present before us in order to carry out any action, then how difficult it would be to carry out our day-to-day work. Our imagination is based on our ability for mental representation. Language is also a type of mental representation. We use a word to represent an object – once we associate the word and the object, we can imagine and talk about the object even when it is not present before us.

Most of us believe that mental images are formed only through the sense of sight and that formation of imagery is linked to visual perception. But mental images can also arise from the senses of hearing, touch and smell, which are the non-visual modalities. Children with visual impairment can generate mental images from touch (haptic) or auditory input. These non-visual inputs can help the individuals with visual impairment to create a variety of mental representations such as memory of objects they have touched and heard the sound of; spatial understanding (mental map) such as in which direction is the bedroom, the kitchen and the bathroom; numerical understanding such as how many objects make up a particular number and so on. These mental representations help them in mobility, study, work and all aspects of day-to-day living.

In general, children with visual impairment have the ability to form images in their minds as sighted children. But the mental representation formed by the individuals with visual impairment about a particular object will be different from mental representation about the object formed by the sighted.

Further, some mental representations may be difficult for children with visual impairment to form. For example, how does a visually impaired child estimate distance? In case an object (toy car) is kept at one foot away from the child with visual impairment, when you say, 'take the car which is kept one foot away in front of you', the child may not be able to estimate the distance and hence the child cannot extend the hand at one foot approximation. The child may extend hand well below one foot or show floppy hand movements. Whereas a sighted child can estimate the distance and take the object. Similarly, when we ask a 5-year-old blind child who is coming to school every day for three months to estimate the distance between school and home — which needs spatial ability (awareness of distance mentally) — the child cannot mentally understand the space whereas a sighted child can understand the space mentally due to visual perception which plays key role in imagery and mental representation.

Forming mental representations is challenging among children who are born blind. If a child lost vision some years after birth the child may find it easier to form mental representations as the child has formed some understanding about the world around her based on the sense of sight. The challenge to form mental representations can be overcome by teaching the child to efficiently use the intact non-visual sense modalities.

Another difficulty which children with visual impairment is that they find it difficult to actively change or work with these mental images. This means that while blind individuals can form and recall mental images, they might find it challenging to actively manipulate these images in their mind. Let us understand with an example also.

Imagine a person who is blind and has a mental image of a square. They can remember this image and know that a square has four equal sides and four right angles. This is like how a sighted person would remember a square. However, if they are asked to mentally "rotate" this square or imagine changing it into a triangle, they might find this task challenging. This is because it requires actively manipulating the mental image, which can be difficult without visual input. So, while they can form and recall the image of a square, actively changing that image is where the challenge arises.

b) Construct of World

We all form an idea of the world around us and vision is the main way in which we do so. You have read in detail in Unit 7 how the process of forming concepts and construct (idea) about objects is different in sighted children and those who have visual impairment. You have read about different types of touch – synthetic and analytic. Most objects are big and cannot be held in the hand and the child has to construct or build up an image of the objects by sequentially touching its components. They also use the sense of smell, taste and hearing. Hearing helps the child to understand what the object is and where it comes from. Smell becomes an indicator where she is — for example, if the smell comes from the kitchen, it means that one is in the kitchen. In older children smell may become important indicator such as whether the smell is that of a hospital/ pharmacy/ restaurant. The way the visually impaired child builds the image of world is different from sighted because sighted children use vision mainly to gather information. Therefore, the child constructs a reality that is different from that of the sighted child's. The construct of the world and the concepts of the children with visual impairment are in some ways more restricted than those of sighted children because their range and quality of experiences may be more restricted.

The child with visual impairment has limited ability to coordinate and organize elements into higher levels of abstraction, and to verify the information. The process of establishing concept-defining attributes and relationships is more problematic for the child with visual impairment and less accessible to guidance. The visually impaired child is continually involved in problem solving, but this process, which is essential to future development, is more difficult and less rewarding for him.

c) Form Constancy

Form Constancy is a visual perceptual skill that allows you to understand that a form, shape or an object stays the same even when it changes it size, position or is in a different environment. For example, you recognize that a bottle is the same bottle whether it is kept straight or it is placed diagonally or it is kept horizontally. It is a visual perceptual skill because you develop this understanding based on your sense of vision. Actually when the bottle is in different positions, it is at different angles and it casts a different image in your brain, but your brain learns to integrate all these images and see it as the same bottle. You do not think that it is a separate object each time you see it from a different angle.

Understanding form constancy is difficult for the visually impaired child. If they have touched an object in one position and the next time its position or angle is changed, they may find it difficult to recognize that it is the same object. Because of this they may find it difficult to use various play materials or carry out certain activities. The child needs many opportunities of touch various objects in different positions so that she can understand the idea of form constancy of the object.

d) Conservation

A child with visual impairment shows delays in conservation of substance, weight, volume, length and liquids. The chief reason for this is limitation in the range and quality of experiences. The caregivers and educators have to be aware of the need of providing deliberate and wide variety of experiences through the other senses so that the child can develop the ability to conserve.

e) Classification

Limited opportunities to explore objects and to understand similarities and differences between objects may cause children with visual impairment to make errors during classification. Concepts of same and different (which is the basis for classification) can evolve only if children identify the distinguishing variable on which to focus. Since they have to rely on the senses of touch and hearing, this takes time to develop.

8.6 FOSTERING DEVELOPMENT OF CONCEPTS IN CHILDREN WITH VISUAL IMPAIRMENT

Thus, when fostering development of concepts in children with visual impairment, you need to organize a wide variety of stimulating activities and experiences. Though factors like degree of impairment, age and motivation of the child influence concept development, the most important factor is the type of experiences and activities that you can provide to the child. The wider and richer the range of experiences, the better will be his development of concepts and understanding of the world around.

Children with visual impairment will also need guided exploration and explanations regarding what they are engaging with. Explanations provide the children with vocabulary associated with the experience, help the child to make sense of what they are experiencing and help them to connect their new learning with previous experiences. Such experiences help to develop children's understanding of new concepts, develop their language, and motivate them to explore their environment.

You will read about specific strategies and activities that you can use to foster cognitive development of children with visual impairment, in Course 3 – BCD -103.

Planning activities that enable children with visual impairment to touch objects helps them in concept development

Check Your Progress Exercise 1

1) Answer the following questions briefly in the space provided below.

   a) How does mental representation help the child?

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   b) What are the four stages of cognitive development according to Piaget?

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   c) What is assimilation in the context of cognitive development?

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   d) Give an example of accommodation in cognitive development.

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   e) What is the sensorimotor stage of development, and what characterizes this stage?

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   f) What are some characteristics of the pre-operational period in cognitive development?

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8.7 SUMMING UP

- Cognitive development delineates how children's thinking evolves through specific stages, starting from birth until adolescence.
- The sensorimotor stage, from birth to two years, is marked by infants understanding the world through their senses and motor actions. During this period, they develop crucial cognitive abilities like object permanence and cause-effect relationships.

- The pre-operational stage, from two to six/seven years, sees the emergence of symbolic thinking and the development of various concepts such as size, number, and classification.
- Visual impairment can delay cognitive development, particularly in understanding object permanence, cause-effect relationships, and classification.
- To support children with visual impairment, a range of stimulating and guided experiences are essential. These help bridge the gaps in concept development and enhance their understanding of the world.

8.8 ANSWERS TO CHECK YOUR PROGRESS EXERCISES

1) **Check Your Progress Exercise 1**

   a) Mental representation enables the child to:

   — mentally plan events. She does not have to carry out an action each and every time to know the effect it will have

   — judge the reason (course) of a result (effect)

   — play pretend games.

   b) The four stages of cognitive development according to Piaget are:

   - Sensori motor stage
   - Pre-operational stage
   - Concrete operational stage
   - Formal operations stage

   c) Assimilation occurs when children integrates new information into their existing knowledge and concepts by relating the new knowledge to what they already know.

   d) Accommodation happens when a child modifies existing thought patterns to incorporate new information that does not fit the current understanding. For example, a child learning about tomatoes being red and then accommodates her thinking when she comes across an 'apple', so as to create a new concept 'apple' which looks similar to a tomato but differs in taste and hardness.

   e) The sensorimotor stage occurs from birth to two years of age. During this stage, infants understand the world through their senses and motor actions. They learn by doing actions on objects and by perceiving information from their senses.

   f) The pre-operational period spans from two to six/seven years. During this period, children develop concepts and engage in symbolic thinking. However, since they cannot reverse a mental action, they find it difficult to conserve and take another person's perspective.

UNIT 9 LANGUAGE DEVELOPMENT DURING EARLY CHILDHOOD

Structure

9.1 INTRODUCTION

In this Unit, you will read about how language development takes place during the early years of childhood and the possible impact of visual impairment on this area of development.

Objectives

After studying this Unit, you will be able to:

- state the interrelationship of language and communication;
- explain the principles of oral language development;
- describe the milestones in language development during the first six years of life; and
- explain how visual impairment may impact language development of children during early years.

9.2 MEANING OF COMMUNICATION AND LANGUAGE

Communication is a natural way in which people exchange ideas, ask for something from someone, comment on what is happening around them and express their feelings. It is the exchange of a message between two or more people. We can communicate in a variety of ways. Language is one of the means of communication and, for most of us, it is the primary means of communication.

Language has two components — verbal and non-verbal. By **'verbal language'** we mean talking or speech (also called oral language). **'Non-verbal language'** includes written language and body language. We can also think of language in terms of four skills which we call 'language skills'. These are (1) Listening (2) Speaking (3) Reading and (4) Writing. The first two skills comprise 'oral language' and the last two skills comprise 'written language'.

Most of us use oral language and body language together to communicate what we are feeling and thinking. Body language refers to physical behaviours we use to express or convey information and communicate our feelings. Such behaviours include facial expressions, body posture (the way we stand and sit), gestures, eye movement, touch, and the use of space.

For example, suppose Reshma says to Mohini, "I am feeling sad." In this case, Reshma is sending a verbal message that is meaningful to both; Mohini understands what Reshma wants to convey to her; we can say they are communicating. Along with this, the unhappy look on Reshma's face, the way she stands with her shoulders drooping (in other words, her body language), further conveys her feelings. To take another example, when the mother says, "Meena, come HERE", the forceful way in which the mother says the word 'HERE', the mother's facial expression and body posture confirms that she is angry with Meena.

Oral language (listening and speaking) and body language develop spontaneously through observation and hearing others speak. As the child interacts with others, hears them talk and sees their gestures and expressions, the child learns oral language and body language. Written language has to be formally taught to the child and cannot be learnt by simply seeing others reading and writing.

Children with disabilities, especially those who have difficulty in speaking and hearing, use other non-verbal ways of communication such as sign language, lip reading, using pictures, finger spelling or use of the computer. **Sign language** is a language based on the use of gestures, where each gesture has a specific meaning and can be used to communicate with others who know the meaning of gestures. **Lip reading** refers to understanding words by seeing the movement of lips without hearing the words, **Finger spelling** means spelling words by using fingers. These alternate means of communication have to be taught formally to the child. **Total communication** means using a combination of methods to communicate. We need to remember that no method of communication is superior to any other.

9.2.1 Principles of Oral Language Development

Let us now understand some principles of oral language development. **These principles are true for all children learning any language and even for children with disabilities; however, a disability may affect the process of language acquisition.** Having understood the principles, you will read in Section 5.5 how visual impairment can affect the process of language learning.

1) As mentioned in the previous Sub-section, children develop oral language by seeing and hearing others speak. Children also acquire appropriate gestures, body postures and facial expressions by seeing and observing others as they speak. Children do not need to be taught to speak or use body language. **During the early years of childhood, the human brain can learn to speak any language without being taught formally**. The human brain can pick out rules of grammar from the talk children hear around them and children learn to speak correctly without having to be taught directly. **But the critical aspect is that the young child must be in an environment where the child has plenty of opportunities to hear language being used by others in a meaningful way and for a variety of purposes.** Only then will she be able to learn to speak and her language development will be age-appropriate.

2) While children imitate words and sentences they hear spoken around them, learning any language is not based on imitation. **Language development is in an active process and involves learning to use language for a variety of purposes by combining words and sentences in novel ways to create dialogues and sentences which one has not heard before**. In fact, we do not repeat the same sentence twice unless we consciously repeat it exactly as we said the first time. This shows that the speech of humans is very diverse.

3) **The language the child hears spoken most frequently around her, since birth, is the language the child acquires spontaneously and fluently without having to be taught directly or formally**. This is the child's **mother tongue**, also called **home language** or **first language**. A child can acquire two languages as mother tongues if the child is an environment where she hears two languages and picks up these languages spontaneously and fluently during infancy and early childhood.

   Second language needs to be taught formally. Second language is a language other than the mother tongue of the speaker, yet it is used as a language for public communication in the region or country. A second language is a language that is not the native language (mother tongue) of the speaker or is not used in the speaker's immediate environment (family or community); however, it is used in the larger environment around the child (for example, in school or at workplace). Second language is a language that the child learns in addition to his/her mother tongue. So, for example for a child living in West Bengal whose both parents are Bengali, Bengali is the mother tongue which the child learns spontaneously since birth by hearing her family, friends and people in the immediate community speak the language. English and Hindi will be the child's second language as the child learns these languages through formal instruction in school. If any of the parents speaks any other language with the child and the child acquires this language fluently without the need for formal instruction, then this language would also be the child's mother tongue.

4) **The more the opportunity children have of hearing and seeing others speak, of exploring the surroundings and experiencing events, the**

more well-developed their language will be. It is important to talk to babies from the earlier months of life because it gives them opportunity to discriminate speech sounds and this helps in their language development.

5) **The language development of children across the world takes place in stages and these stages occur in the same sequence and around approximately the same ages for all children,** no matter what language children may speak. This means that there is an age range within which a particular stage (also called 'milestone') is reached. For example, most infants produce sounds like 'ooooo', 'aaaaaaa' (which is called 'cooing)' in the 2^{nd} month of life, and this continues up to the 6^{th}month. But we need to understand that though cooing is a milestone for 2^{nd} month, it does not mean that all infants will begin to coo in the very first day of 2^{nd} month or even during the second month; some infants may begin cooing after two months but a majority will start to make cooing sounds from the second month onwards.

6) **At any stage, the child can understand more than she can speak**. Comprehension or understanding language is referred to as **receptive language** ('receptive' comes from the word 'receiving'). Speaking is referred to as production of language or **expressive language**. Children always understand language before they can speak it. You would have realized this from your own experience. A six-month old baby does not speak but begins understand simple sentences used by the caregivers during daily activities.

9.3 STAGES OF ORAL LANGAUGE DEVELOPMENT

The development of oral language occurs through the following stages which occur in a sequence.

9.3.1 Crying

This is the first form of the communication used by the child. It is inborn (innate) — this means that the child does not have to be taught to cry. This is the only sound the infant makes during the first month of birth. Crying is the only medium by which a newborn expresses her needs or discomfort. The infant's cry motivates the caregivers to attend to the baby.

The child's crying communicates a variety of needs — the child has a different type of a cry for different bodily states, like hunger, pain, or illness. A number of neurological disorders, which are difficult to detect in other ways, can be diagnosed on the basis of the rhythm and pitch of the infant's cries in the first few weeks of life.

9.3.2 Cooing

The second stage in the development of language is **'cooing'.** Children begin to coo by the second month. Cooing is a vowel-like sound such as "oo", "aaaaaa" produced by babies when they are contented or feeling happy. The production of this sound is innate (inborn) — this means that all children coo and we do not have to teach them to do so. When the infant coos, the parents respond by smiling, talking or imitating the sound and then they wait for the child to coo again. Thus, it almost seems that the infant and the parents are taking turns to 'talk'. This is the **beginning of turn-taking and early 'conversation**.' Turn taking is very important to maintain social interaction and we see its beginning now. Cooing decreases as the infant begins to babble and almost disappears by the time the child is about 8 months old.

9.3.3 Babbling

This is the third stage in the learning of language. Babbling is the sound produced by the child by combining a consonant and a vowel like da, ma or pa. The infant keeps repeating this combination, leading to sounds like "dadada", "mamama". This is called **babbling**. Children begin to babble around six months of age. Babbling sounds a bit like human speech. It is also innate (inborn) and two facts show this:

- All infants babble, unless there is some difficulty with their speech mechanism. Even an infant with hearing impairment (deafness) babbles though she is not able to hear any sound.
- The infant produces all the sounds contained in all human languages during the stage of babbling. Thus, the infant produces sounds used in the German or African languages even though she has not heard those sounds. This means that the production of these sounds is inborn and the infant has the capability to learn any language. However, the sounds that the child does not hear in her environment gradually begin to fade away. This shows the role of experience and environment in the learning of language. **It is a fact that we are born with the ability to learn any language in the world, but we learn only the languages that we get to hear**.

  While cooing and babbling, the child experiments with sounds by varying their pitch and loudness and produces new sounds. Infants babble more when adults attend to them or when adults imitate the sounds produced by the infant. When the adults repeat the infant's sounds, the child gets an opportunity to hear the adult version of her babbling sounds. **By eight months, the child attends to the speech of people around her and tries to interrupt the conversation of others by "joining in" with her babble**.

9.3.4 First Words

The next stage in language development is the speaking of the first word. Most children say the first words by the time they are one year old. But how do we know that what the child has been saying is a word? We know it is a word when we observe the following:

- the child uses the word regularly (consistently) to refer to the same object, action or person.
- the child uses that particular word to mean the same thing each time. In other words, she uses it consistently to refer to an object, action or quality. The words that the infant learns first are those that refer to everyday objects, events, people and actions. The child's first words can

be 'papa', 'mama', 'ball", "tata", 'bye', which are short words consisting of only one or two syllables.

By the age of 12 months, the infant understands about 50-100 words, though she speaks 3 to 10 words . The first words consist of nouns (names for mother and father, names of people, animals and things), action words (verbs — come, go, bye), and expressive words (no, namaste).

Sometimes, children also use a word to refer to things and actions for which they do not yet have words. When the child sees a similarity between a known object she can name and an object for which she does not yet have a name, she uses this word to refer to the new object. This is known as **over-extension**. For example, if the child is using the word "doggie" to refer to dog, she may also use it to refer to horse, cow and cat, until she knows the names for these animals.

9.3.5 First Sentences

The child's vocabulary expands rapidly after this and by the age of 16 months, the toddler knows about 250 words and by the second year, most toddlers know about 300 words. This does not mean that all of these are spoken. As is true at all stages of language development, the toddler understands more words than she can speak. Speech comprehension is always ahead of speech production.

In the next stage of language development, the child begins to combine two words and use these as 'sentences'. Some two-word sentences may be: "mama come"; "more water".

An interesting feature of the child's one-word or two-word utterances is that they convey the meaning of a complete sentence. This simple one-word sentence is called a **'holophrase'** and the two-word sentences are called **'telegraphic speech'**. For example, if a child says "mamma" when she sees her mother, then she might mean: "That is my mamma" or "I want to go to mamma" or something else. We understand what the child means because we know the situation in which the child is saying the word (i.e., we know the context). Further, the gestures used by the child, the emotional tone and the rhythm of her babble and words help us to understand their meaning. Thus, **only one-word or two-words perform the function of a complete sentence and we understand the infant's meaning.**

9.3.6 Expansion of Vocabulary and Addition of Grammatical Forms

- Between two to three years of age, the child's vocabulary grows rapidly. The sentence structure also develops to include grammatical forms — like articles (a, an, the); conjunctions (and, between); possessives (mine, yours); and plurals which were earlier missing in telegraphic speech. By the third year a child knows about 900 words.
- By four years of age, the child's language is well-developed. They can, on average, use from 800 to 2000 words in their speech and can understand a much larger number of words. The child can participate in lengthy conversations. She asks a number of questions and knows that

we have to take turns while talking. Her language usage shows an understanding of past, present and future.

- Between the period of four to six years, children learn many more words and acquire a vocabulary that contains 12,000 to 14,000 words.
- At seven to nine years of age, children start understanding that words can have multiple meanings and enjoy jokes and riddles that are language based.

Crying

Different cryies for different body states like hunger, or pains

Cooing

Begins at 2^{nd} month	Vowel like sound (aaaaa, eeeeee, oooooo)

Babbling

Begins at 6^{th} month	Combination of Vowel and consonant (papapapapapa..., tatatatatata)

First Word

Begins around first year	Starts using a perticular word consisitently for a specific person or object

Sentence Formation

First and Second year	**Holophrase:** One word to convey meaning of a complete sentence	**Telegraphic Speech:** Two word sentences

Expansion of vocabulary; adding grammatical forms

Third Year onwards	Understands and speaks 3 or more word sentences	Adds grammatical forms

Fig. 9.1: Stages of Language Development During Early Childhood Years

- **Emergence of private speech** – By four years of age, the child begins to talk aloud to herself as she is performing actions. This speech reflects what the child is doing or what she plans to do; it reflects her thoughts and feelings. **This speech is called private speech and helps the child to regulate her behaviour**. For example, *Riya, a four- and- half- years-old child is playing with the doctor's kit, and her doll is her patient. She makes her doll sit on a chair and examines her doll. Along with this she narrates every action that she is doing like: "come dolly… we are going to play doctor-doctor today. I am doctor and you are my patient…now I am going to examine you….don't worry I will not give you any injection. Stop crying, let me check you, I will give you toffee after this.*"

  Gradually the private speech is not spoken out aloud but we use it throughout our life. You must have noticed that you talk with yourself internally as you think about something or reflect upon some action you want to take — this is private speech.

  Our language continues to develop and expand as we learn new words all through our lives and as the child's thinking develops. But for the purpose of this Course, we will conclude the discussion on language development at this stage.

Check Your Progress Exercise 1

1) Answer the following questions briefly in the space provided below.

   a) Explain the terms 'cooing' and babbling'.

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   b) How do we know what the child has been saying is a 'word'?

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   c) What is total communication?

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2) State whether the following statements are 'correct' or 'incorrect' in the brackets.

   a) It is important to talk to babies from the earliest months of life because it gives them practice to discriminate speech sounds and this helps in their language development. ( )

   b) The speech of humans is not diverse. ( )

   c) Turn-taking is crucial for social interactions. ( )

   d) The child's ability to take turns develops only after the second year. ( )

   e) Babbling is the earliest form of communication used by the child. ( )

   f) While cooing and babbling, the child experiments with sounds by varying their pitch and loudness and produces new sounds. ( )

   g) The child's utterance will be considered a word only when she uses it consistently to refer to an object, action or quality. ( )

   h) The gestures used by the child, the emotional tone and the rhythm of her babble and words help us to understand their meaning. ( )

   i) The words that the infant learns first are those that refer to everyday objects, events, people and actions. ( )

   j) The infant's single words do the work of an entire sentence. ( )

9.4 IMPACT OF VISUAL IMPAIRMENT ON LANGAUGE DEVELOPMENT

As you have read, language development involves acquiring the four language skills of (1) listening (2) speaking (3) reading, and (4) writing. The first step in language development is being able to listen to what is being said. **A child with visual impairment can acquire all these skills if her sense of hearing is normal. Nonetheless, visual impairment has an impact on the child's language development in multiple ways.** What is important is when the child lost the use of vision. The development of language will be influenced by whether the child was unable to see right from birth or did visual impairment happen after some months or years of birth.

While visual impairment does affect the language development of a baby, yet caregivers and educators can support the child to develop language as per the child's age by providing her a variety of meaningful experiences. In this section, you will first study about the impact of visual impairment on language development and then briefly about what the caregivers and educators can do to support the child's language development. The details about how to support the child to develop language have been discussed in Course 3 – BCD-103.

9.4.1 Oral Language Development from Birth to Two Years

As you have read in the earlier section, before children are able to speak words, they babble. A baby with visual impairment will also babble at the same time as sighted children, but after a while they will stop doing so as it interferes with their hearing. For children with visual impairment, hearing is a major sense through which they gain information about their surrounding and so it is important for them to hear. **Though the infant with visual impairment may babble and imitate sounds at the same time or even sooner than a sighted child, but they may show delay in producing words due to the following reasons:**

a) Infants as young as six months old begin to make connections between objects they see, and the verbal label (word) used to refer to objects and, in this way, begin to learn to identify objects by name. In the same way, children begin to make connections between people they see and the names used to refer to them and begin to identify people. The sighted child begins to understand words as these are usually accompanied by gestures or some form of visual input. For example, the mother will ask the baby, "Do you want a bottle?" and at the same time show the bottle to the baby. The baby learns to associate the word 'bottle' with what is seen. **Sighted children have many opportunities to casually observe (that is, spontaneously, without any special effort) and make connections between words, gestures and materials in their environment. This is not possible for the child with visual impairment.** Children who are blind, or have low vision from birth, will not be able to observe people, the gestures used by them, objects and events around them in the same way as the sighted and may not spontaneously be able to make connections between words and the people, objects or events these words represent. In a sense babies with visual impairment becomes isolated from the world around them. **This delays the development of language and special efforts have to be made by caregivers to help the child acquire language.**

b) Before babies starts talking and even after they start speaking words, they use other ways to communicate with others. They point to the things they want or they look in the direction of the object they want. **These are called pre-language indicators**. Babies learn these pre-language indicators by observing others and copying what others do. Vision helps to provides information about non-verbal communication, and this helps us understand the spoken words better. For example, when a person is happy and expresses happiness through words, we can also see the facial expression of the person and the smile. In other words, non-verbal communication helps to provide meaning to verbal communication. However, **a child with visual impairment misses out on this non-verbal input as they cannot see other people's body language. One of the outcomes of this is that they themselves do not develop appropriate non-verbal gestures and they do not get the additional non-verbal input to understand verbal communication**. The baby with visual impairment cannot see what others do and therefore does not copy their actions. The child does not imitate. They do not use facial expressions and body language as they are not aware of these. They will not point their fingers at something or wave goodbye unless they are specifically taught. The use of body language and facial expressions in children with visual impairment is limited.

c) The absence of sight and the limitations of mobility tend to limit the number of people the child interacts with. This means that the child may not receive verbal input from as many people as does a sighted child. This limited interaction hinders the development of effective communication skills — both verbal and non-verbal. And since the child does not develop adequate communication skills, it further reduces the chances of meaningful social interaction.

9.4.2 Oral Language Development from 2 -7 Years

a) Lack of Meaning in Spoken Language

All children repeat words and sentences that adults say. This is called **echolalia**. It is sometimes referred to as "parroting" or "echoing," and is a normal stage of language development in young children. Repeating of words, phrases, or sentences that children hear other people say may happen immediately after children hear these or at a later time. Sighted children stop echolalia after some time and they create their own sentences to express what they are thinking or what they want, by combining words in creative ways. This is the essence of language development of the human species. **The children with visual impairment continue to repeat the words and sentences of others for a much longer period. So, echolalia continues for a much longer time**.

Associated with echolalia is the aspect of verbalism. '**Verbalism**' means lack of meaning in the words used by the child with visual impairment. Children with visual impairment sometimes talk about people, objects, and events without understanding the concepts. They talk about items that they may never have been in contact with but have heard about in songs, rhymes or in the speech of others or have only experienced these events or objects in an incomplete way (fragmented fashion). Having a vocabulary or language without understanding is called 'verbalism'. **So, while children with visual impairment are speaking the words which make up the language, they do not grasp their meaning because they have not experienced what those words convey. Therefore, they also do not understand the meaning intended by the speaker**.

This happens because their own experience with people and objects around them is limited due to lack of vision. Their sensory experiences through the senses of hearing, touch and small are not as readily coded into language as the sensory experiences of the sighted, based on sense of vision. The child does not use her other senses as much (such as touch) to form an idea about objects. So since they do not have much to convey from their own experience, they accept the visually oriented descriptions of others, without actually exploring the objects themselves. Thus they repeat the language of others, which is about the experiences of those people, and develop an inaccurate understanding of environmental surroundings because it is based on borrowed descriptions. **If the child continues to build her knowledge on these borrowed descriptions of others, her idea about the world will continue to be inaccurate**.

So due to echolalia and verbalism, children with visual impairment repeat long, grammatically correct, sentences without understanding the meaning of the words they are saying. They store phrases and sentences in their memory and repeat these out of context. Up to 80 per cent of blind and children with visual impairment demonstrate echolalia and verbalism in their speech. While these are not desirable behaviours, yet we need to understand that the child does this to be included in social situations with the sighted children.

Because of the above reasons, the early language of the children with visual impairment does not seem to reflect their developing knowledge of the world, but rather it reflects their knowledge of the language of others.

b) Limited Use of Questions and Adjectives

At around four years of age, children start to ask questions such as 'Why', 'When', 'How' and 'Where'. The children with visual impairment start doing this much later. They tend not to ask questions to gain information. Their questions are mainly about asking for things to satisfy their personal needs like something to eat or drink, or they speak statements to describe current activities. They rarely use adjectives since a lot of adjectives involve understanding based on the sense of vision.

c) Difficulty in use of Personal Pronouns

The child with visual impairment also struggles with the use of personal pronouns I, me, mine. You will hear the child, speaking to you, saying, "You want to sit on my lap" when they want to sit on your lap. To correctly use the personal pronoun "I", a child must have established a sense of herself as separate from the environment. Since the development of self-concept in children with visual impairment is delayed, they tend to confuse the use of personal pronouns, and use the second and third personal pronouns (you, he. she, they) or use their own name to refer to themselves.

d) Delay in Pretend Play

Between the ages of two to seven years, children start to pretend play. This means that they begin to use an object to represent another. In order to be able to do so the child must be able to compare two objects on the basis of some property and then use that property as the basis of using one object for another. For example, when the child uses a stick as a pencil during pretend play, then the child has used the property of 'shape' to compare a stick and pencil. To take another example, a child might move a box around the room and say, "Grrr, grrr, my car is going over the bridge!" Here the rectangular/square shape of the box is being used to imagine it to be a car. **This use of objects to represent one**

another is based on the sense of vision. Vision supports the child to compare objects, understand their world, imagine and use language creatively.

If a child has a visual impairment then use of language for pretend play may be delayed, because they can not see what is happening around them.

e) **Delay in Vocabulary Related to Concepts**

During this period of two to seven years (preschool years) children start to understand concepts such as that of weight, size, time, speed and distance. They also begin to acquire vocabulary related to these concepts and how things relate to each other. However, for children with visual impairment, this learning may be delayed because they cannot see these concepts in action.

9.4.3 Development of Reading and Writing

As regards learning to read and write, the child will need to be taught either to use Braille for writing or use the computer for both reading and writing. The use of technology has brought in many possibilities for reading and writing which have been discussed in Course 3 – BCD-103. A blind child can read and write through the use of Braille. Braille is a system of communication developed by Louis Braille, after whom it has been named. It is a system in which raised dots are 'printed' on paper. The blind person feels these with the fingertips. A particular configuration of dots stand for a particular alphabet. The Braille alphabet consists of six dots which, when arranged in different ways, constitute the symbols from A to Z.

9.5 SUPPORTING THE DEVELOPMENT OF LANGUAGE

The description of the impact of visual impairment on the child's language development should not create a sense that the child's language development will always remain far behind that of the sighted child. The pace and quality of language development will depends on the inputs provided by the caregivers and teachers. With the right support, the children can develop concepts and the related vocabulary; it just takes a bit more time and patience.

As a parent/family member/teacher you need to foster language development of a child with visual impairment right from the beginning of infancy. The early years constitute a critical period for development of language, and yet this period often gets neglected in real life because of other pressures that the adults around the child are continuously facing. Language related activities need to be provided to the children with visual impairment even during school years and beyond.

Therefore, the parents, teachers and family members must make conscious attempts to enhance the comprehension as well as expression of language. Stimulating the language development of children with visual impairment includes fostering their listening and speaking skills, just as it does in the case of sighted children. **In Course 3 BCD -103 you will read about specific activities to support the development of these abilities.** You will also read about the learning of written language using the Braille technique, the use of computers for language learning, reading and writing.

Here, we are listing three salient strategies that can help you to foster the language development of the child with visual impairment.

a) **Strategy 1**

Right from the earliest months, the infant should be exposed to as many things as possible and given the opportunity to touch and manipulate things. If the child is not provided with many hands-on and concrete experiences with real objects, opportunities for participating in events and interacting with people through the use of other senses, then the child will have difficulty in understanding what words mean; consequently, she will not be able to develop concepts and the related language, and will not have a foundation to build upon. For example, the child must get the opportunity to sit on a variety of types of chairs and to explore chairs from all angles so she may learn that all the different styles are still 'chair'. Forming this idea is called 'generalization' and it is important in terms of language development as it enables the child to group the objects of the world into categories.

b) **Strategy 2**

The caregiver should talk to the baby while carrying out any activity with her such as bathing, dressing and eating. Through her talk she should explain and describe what is happening during the activity and also describe the objects which form part of that activity. **The child will need to be deliberately and intentionally taught the connection between spoken language (words) and the people and objects these words refer to, by pairing (joining, associating) language with the specific objects/events/people.** It is necessary to directly intervene in the case of the child with visual impairment and teach the child words and their meaning. Unless the child is intentionally taught through direct experiences paired with language, there will be a delay in their language development. The first words for teaching the child can be verbs (things they can do), the names of people around them and names of commonly used objects, because these have meaning for the child.

c) **Strategy 3**

Another aspect that you need to keep in mind is to **involve the child in the full sequence of any activity** including activities of daily routine. This will provide the child with the understanding of the full sequence of the process. **Let us understand an example of a full sequenced experience**: For example if you have to give the child a glass of milk, then do not simply hand the child a glass of milk. Instead, create a full sequenced experience as follows: Walk with the child to the refrigerator, then take out the milk, then go the cupboard to get a glass, then to the table where the milk is poured into the glass, and after the milk has been drunk, take the glass to the sink. As you perform all these actions with the child, you have to talk about the action being done. So say, "Let us walk to the refrigerator where the milk is kept…. now you hold this packet of milk … let us now go to the cupboard to take the glass …." **This sequence where talk is accompanied with action (as opposed to always handing the child a glass of milk) helps the child to learn language in context of the experience and also helps the child learn that things do not automatically appear, and that there is an order to life**.

We have stated only a few strategies to support the language development of a child with visual impairment. You will read more about how to foster the child's language development in Course 3 – BCD - 103.

Check Your Progress Exercise 2

1) How does visual impairment impact the babbling stage of language development?

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2) What is the impact of visual impairment on development of non-verbal communication and pre-language indicators?

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3) Why do children with visual impairment demonstrate echolalia and verbalism for a longer period compared to sighted children?

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4) List the challenges children with visual impairment face in the development of language between the ages of 2 and 7 years?

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5) What are three salient strategies to foster the language development of a child with visual impairment?

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9.6 SUMMING UP

- Communication is a natural way through which people exchange ideas, ask for something from someone, comment on what is happening around them and express their feelings. It is the exchange of a message between two or more people.
- Language is the primary means of communication. We communicate with others by talking or writing, that is, through verbal (speech) and written language. Total communication means using a combination of methods to communicate. We need to remember that no method of communication is superior to any other.
- Children develop oral language by seeing and hearing others speak. While they imitate the words, they hear spoken around them, language is not just learnt by imitation. Acquiring language is a creative process, and largely involves combining words in novel ways to frame sentences which they have not heard. Children also acquire appropriate gestures, body postures and facial expressions by seeing and observing others as they speak.
- In the case of the visual impairment, the absence of sight and the limitations of mobility tend to limit children's direct experiences with objects events and people. This factor, in turn, tends to slow down their language development.
- To begin with, as with a sighted child, the child with visual impairment needs to develop auditory discrimination skills for language learning. 'Auditory discrimination' means being able to differentiate the various sounds as one listens to them and to be able to use them meaningfully. 'Auditory discrimination' skills can also be called 'listening skills'.
- Many children who are blind or visually impaired learn to talk by echoing or copying phrases or sentences spoken by other even if they do

not understand what these mean. They may echo what they just heard, or have delayed echolalia where they repeat language heard earlier in association with a particular subject or event.

- Having a vocabulary or language without understanding is called verbalism. It refers to talk about a topic without the concepts or understanding related to it. If the child is not provided with hands-on experiences, the child will have difficulty in developing concepts, and she will accept and repeat the spoken language of others. However, this will not give her a foundation of her own understanding of concepts and she will not have a base to build upon. This will cause delay in cognitive and language development.
- To support language development, expose the child to various experiences, encourage hands-on interactions, and provide deliberate, intentional teaching of words and their meanings. Talking to the child during daily activities and creating sequenced experiences with associated language can be beneficial.

9.7 ANSWERS TO CHECK YOUR PROGRESS EXERCISES

Check Your Progress Exercise 1

1) a) 'Cooing' and 'babbling' are early stages of a baby's language development. 'Cooing' is when a baby makes vowel sounds like "oooooo" and "aaaa", while 'babbling' is when a baby starts combining vowels and consonants, like "bababababa" or "dadadadada".

b) We know a child's utterance is a word when it is used consistently to refer to the same object or event, and it is used with intention in the correct context.

c) 'Total communication' is a method that uses all forms of communication such as signs, gestures, and spoken words to convey a message. It is about giving children multiple ways to express themselves.

2) a) correct
   b) Incorrect
   c) Correct
   d) Incorrect
   e) Incorrect
   f) Correct
   g) Correct
   h) Correct
   i) Correct
   j) Correct

Check Your Progress Exercise 2

1) The child begins to babble at the same time as sighted children but they may soon stop to babble as it interferes with their hearing.

2) Children with visual impairment miss out on non-verbal input as they cannot see others' body language, leading to a limited development of non-verbal gestures. They may not imitate actions, point to things, or use body language and facial expressions naturally.

3) Echolalia and verbalism continue for a longer period for children with visual impairment because their own experience with people and objects is limited. Since they do not have much to convey from their own experience, they accept the descriptions of others and repeat these leading to echolalia and verbalism.

4) The spoken language of the child may lack meaning, there may be delay in use of language for pretend play, limited use of questions and adjectives, difficulty in using personal pronouns, and delayed vocabulary related to concepts due to their inability to see and visually explore the environment.

5) a) Exposing the infant to a variety of experiences and hands-on interactions to promote generalization.

   b) Deliberately teaching the child the connection between spoken language and objects/events/people through direct experiences.

   c) Creating full sequenced experiences where talk is accompanied by action to help the child learn language in the context of experiences.

UNIT 10 SOCIO- EMOTIONAL DEVELOPMENT DURING EARLY CHILDHOOD

Structure

10.1 INTRODUCTION

As we have read in the Unit 1 of this Block, the term **'social development'** is used to describe the **aspects of development which are concerned with human interaction. 'Emotional development' refers to the abilities of individuals to experience, identify, express and regulate their emotions** in different settings. These two aspects of development are closely interlinked and they also affect each other to a great extent, therefore they are discussed under a common head **'social and emotional development'**. In this Unit, you will read about how development takes place in socio-emotional domain in the early years of childhood and the possible impact of visual impairment on development.

Objectives

After studying this Unit, you will be able to:

- describe how the infant develops attachment with the caregivers and its importance;
- explain the development of relationship with siblings and peers and the importance of friendships;
- describe the development of emotions during early childhood, specifically stranger and separation anxiety, sense of trust, autonomy and initiative;
- state how the self concept of the child evolves during early childhood;
- explain how visual impairment may influence socio-emotional development of children during the early years; and
- describe the different parenting styles and their impact on children.

10.2 THE EARLY RELATIONSHIPS AND DEVELOPMENT OF ATTACHMENT

You would have noticed that all infants get attached to their caregivers. How does this bond develop? One may say that this is natural. While that is right, what seems so natural actually develops as a result of daily contact, interaction and exchange that take place between the infant and the caregiver. The following description will clarify this.

It may seem surprising but the infant from the first day, shows behaviours that bring forth social and emotional responses from caregivers. At the same time, the adults display specific behaviours that cause the infant to be attracted towards them. Thus, both the caregivers and the children have natural and spontaneous ways of relating that help them to interact with each other and develop attachment. Can you think what these behaviours may be? Write your responses and compare them with our discussion which follows:

10.2.1 Behaviours of the Caregiver that Help in Developing Attachment

1) **Physical contact:** The caregivers pick up babies not only for providing care and attending to their needs but also just for pleasure! Infants have an inborn need for physical contact and when the caregivers pick up the child, this need is fulfilled.

2) **Motherese:** You may have noticed that we usually speak to infants in a special way using a special kind of speech, which we do not use with older children — even a three-year-old. This speech is called 'motherese'. We use simple words, short sentences, modulate our voice, use exaggerated expressions in our voice and produce sounds which have no meaning, such as clucking noises, but which attract the infant's attention. Even older children use such speech when interacting with the infant. Such speech delights the infant, and she responds by cooing and babbling.

3) **Smile:** The infant and the caregiver often smile at each other. Seeing the adults smile, the infant also coos and babbles. This helps in the development of mutual attachment.

4) **Mutual gazing:** The caregivers and infants look at each other (gaze) which sets up a communication between them. Initially, the infant is able to look at the caregiver only for a few seconds. Gradually, she is able to do so for a longer period. Mutual gazing (looking at each other) is one of the most important forms of socio-emotional interaction that establishes a bond between the caregiver and the infant.

5) **Exaggeration of facial expressions:** We speak in higher tones and make exaggerated facial expressions while interacting with the infant. This attracts the infant's attention towards us and helps her to learn to discriminate between various kinds of emotional expressions.

6) **Rhythmic movements:** The caregivers also make a lot of rhythmic movements when interacting with the infant. These include movements such as nodding the head, shaking it from side to side, rocking and swaying the child. These movements are soothing for the child and delight her.

7) **Play:** The caregivers also play simple games with the infant when she is a little older. Games such as peek-a-boo are common in all cultures. Through such interactions the child learns to take turns and communicate.

The baby responds to the behaviour of the caregivers by cooing, smiling and becoming calm. Therefore, the mother feels confident and capable of handling the baby well and this strengthens her feeling of competence.

10.2.2 Behaviours of the Infant that Help in Developing Attachment

Just as the caregivers communicate with the infant, the infant also initiates behaviours to make social contact. The infant cries when she is in discomfort, which brings the mother to her. She coos, babbles, smiles and gazes when interacting with the caregivers and these behaviours motivate the caregivers to increase their protective and caring behaviour towards her.

10.2.3 Development of Attachment

The behaviours described above occur repeatedly during the day as caregivers feed, bathe, soothe and clothe the infant, thus leading to development of attachment bond between them. Attachment is the development of the baby's first emotional bond with another human being. **Attachment is a two-way process, and the behaviour of the caregiver and the infant contribute towards it.** Typically, the first and probably most significant attachment is to the mother. It is usually the mother who takes care of the child. The infant usually develops the first social relationship with the mother.

It is important to emphasize that the attachment develops between the mother and the infant not just because the mother looks after the physical needs of the infant such as feeding, toileting and bathing. **Attachment develops because, in addition to taking physical care of the child, the mother also fulfils the child's needs for physical contact (by holding the child) and social stimulation (by smiling, talking and playing) and very importantly, the need for trust and love (emotional security).** When the infant receives love and nurturance as well as social stimulation and physical care from the caregiver, there is attachment between them.

We can know that the infant is attached to a particular person when **she tries to seek the person's attention and becomes upset when separated from her (separation anxiety). She approaches this person when feeling uncomfortable and feels confident to explore the surroundings in the presence of this person.** When older, the child behaves and works in ways that would get the approval and affection of the person with whom she has formed attachment (for most children these are the child's parents and other family members).

It is not that the development of the attachment bond occurs only between the mother and the infant. It also develops between the father and the infant, as well as other adults and siblings who interact and engage with the child. It usually happens that the father is out of the house for most part of the day, and the mother is the primary caregiver to the children. This does not mean that infants will not become attached to the father. Researchers have shown that it is not the amount of time spent with the infant that helps in the formation of the attachment bond but the quality of things that the adults do when they are with the child.

Activity 1: Talk to the mother of a newborn in your neighbourhood and record her experiences related to her child.

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10.2.4 Importance of Developing the Attachment Bond

Forming a secure attachment is a very crucial developmental task in the first year of life and plays a significant role in the child's early development.

- **It helps the child to develop a feeling of trust in people.** This feeling of trust forms the basis of all later relationships. An infant who is unable to develop a secure attachment develops a feeling of mistrust in the people around her. This can make it difficult for her to form relationships with others later in life.

- Developing a strong attachment to a protective caregiver is important as it influences the child's exploratory behaviour. Exploration is the basis of learning and leads to cognitive development. An infant who feels secure and emotionally strong, cries less, co-operates more with the caregivers, does not cling to the caregiver fearfully, is ready and comfortable to explore her surroundings, even if it contains somewhat frightening stimuli, and is able to regulate her negative emotions in times of stress and distress. This enables her to interact and engage with objects, events and people around her which leads to learning.

Love and affection is a pre-requisite for the healthy development of the children's brain, their self-confidence, capacity to thrive and their ability to form relationships as they go through life. Also, secure father-child attachment as well as the involvement of fathers in early intervention has been linked to reduced risk of negative outcomes in children. During the preschool years, a secure child is emotionally warm, socially mature, popular among peers, curious and self-reliant.

Sometimes the infant does not develop a secure attachment with the mother (caregiver) or may not develop attachment at all. Why does this happen? If the interaction with the mother (caregiver) is not warm and pleasant during feeding or at other times, the infant becomes anxious and irritable. When the above-mentioned behaviours of smiling, gazing and play do not take place during the routine of physical care, then though the physical needs of the infant are met, the emotional needs are not fulfilled. The infant may not be able to form attachment in such cases**. The quality of the caregiver-infant interaction, therefore, determines the strength of attachment bond between them.**

10.2.5 Impact of Visual Impairment on Development of the Attachment Bond

From the above discussion you must have understood that it is the quality of interaction between the infant and the caregiver that plays an important role in the development of the attachment bond between them. Vision is an important sensory channel that greatly helps to sustain interactions between a child and the caregivers. Eye-to-eye contact provides an immediate and spontaneous way to exchange affection, express and convey emotion as well as information about one's state and helps to sustain joint attention as each understands the clues being provided through body language. **When the baby is blind or has visual impairment, then this spontaneous and natural feedback between the child and the caregivers gets restricted.** It is often difficult for parents to give consistent feedback because babies with blindness or visual impairment do not respond with typical movements, facial expressions and do not provide eye contact, as most children with sight do. Children with visual impairment show a limited range of facial expressions, are less responsive, and initiate fewer interactions with their mothers as compared to the sighted infants. This child may also be fussy or anxious, unable to play independently, unresponsive to a parent's attempts to soothe, or fearful of being away from the parent. **Such behaviours pose a challenge in formation of a secure attachment bond.**

Separation anxiety is usually seen in sighted babies between the ages of six and nine months. The emergence of separation anxiety shows that the child has formed an attachment bond with the caregiver. **The emergence of separation anxiety is delayed among babies with visual impairment** until the age of 12 months. This means that the attachment bond takes longer to develop between the infant with visual impairment and their parents. In case of children with low vision, the remaining vision provides the infant opportunities to participate in interpersonal communication and formation of secure attachment may not be as delayed.

- **How can the parents bond with a baby with visual impairment?**

The above discussion should not give you the impression that it is difficult for the parents and the child with visual impairment to form a bond of affection with each other. The parents can reduce the risk of delayed attachment, if they encourage and respond to the baby's interactive behaviours consistently by focusing on the other senses of the baby. Let us understand what we mean by this.

Though the baby cannot make eye contact with her parents, she is responsive to touch, sound, taste and smell. These senses will help the infant to learn to recognize the people in her environment. In case of children who have low vision, even this limited vision can be used for maintaining eye to eye contact. Parents' role is important in nurturing the child. If parents can provide a loving and nurturing environment for their child with visual impairment and if they are a steady and reliable presence in the child's life, then parents would be helping the child to have a great start in life.

Above all, the right attitude on part of the caregivers helps the infant with visual impairment to feel secure and emotionally strong, making her comfortable to explore her surroundings.

10.3 EXPANDING RELATIONSHIPS

After development of these first strong bonds of attachment, **the infant gradually starts forming more relationships with other people in the family.** If the child goes to a day care centre where she receives appropriate social stimulation (through interaction, play and talk with adults in the day care centre), she develops bonds of attachment with them as well.

It is important for the educators in early childhood centres and preschools to have an awareness of the unique needs of children with visual impairment. They have to support the children to develop positive self-image, appropriate code of dressing, self-care skills for increased independence, mobility skills and good interpersonal communication, and appropriate behaviours. The child needs to be supported to interact with peers and adults in the school and have productive community experiences.

A warm relationship helps the child to develop trust and bond with caregiver during early childhood

10.4 RELATIONSHIP WITH SIBLINGS

Siblings influence each other's development. As they play together, confide and share their toys and books with each other, a positive relationship develops between the siblings which provides emotional support and nurturance. The older sibling sets standards of behaviour which the younger one can follow. However, in sibling relationships there is also the possibility of conflict, competition, domination, rivalry and jealousy. The situation needs to be handled sensitively by the parents.

As far as relationships of children with visual impairment with their siblings with intact vision is concerned, it is generally observed that the siblings play a protective role as well as an assistive role. They are likely to help their sibling with visual impairment in moving around, they may modify their games so that their sibling can also join the game. However, there may be negative emotions as well. The siblings may express their dissatisfaction over parents not paying much attention towards them as a lot of the time of the parents is spent on taking care of their child with visual impairment. But if the parents have positive outlook towards children with visual impairment, their siblings too begin to understand that the child needs additional attention, and they begin to display maturity, self-control and altruistic behaviour at an early age. Parents also expect their child with intact vision to take responsibility of their sibling with visual impairment in the future. In order to make this happen, they must create a positive and nurturing environment for all their children so that a positive bond among all the siblings can be created.

Learning to trust one's brother

10.5 PEER RELATIONSHIPS

As the child grows older, she starts forming relationships outside her home and makes friends as she interacts and plays with children of her age. The early friendships are temporary — they get formed quickly and break quickly as well. As the child grows, the interactions between children become more sustained. Older preschoolers play with each other in a cooperative manner. They may also show preference for certain children in their group.

Parents and teachers collaborate to support children to play with each other

10.5.1 Importance of Friendships

Friendship with children of similar age group is equally important for children with visual impairment too.

a) Friendship at every age is important as this provide emotional security. During childhood, friends do things together that they would not do with adults.

b) Friends get to learn many things together.

c) Being with friends helps children to learn skills and abilities, including social-emotional, communication and physical skills.

d) Friends set standards for each other against which they can judge themselves.

e) The interaction with friends helps the child in knowing things from the point of view of others, thus fostering her cognitive and social development.

f) The child learns the importance of sharing and cooperation.

g) The child learns which behaviours are appropriate and which behaviours must be changed.

10.5.2 Promoting Friendship among Preschoolers

Playing together is one chief way of forming friendships. Playing with others can help children with visual disability to have fun and feel included, supported and cared for, leading to enhanced self-esteem. The child may have hesitation in playing with others and may need support to interact with others. Children with blindness or low vision often need deliberate help in developing skills for creating strong peer relationships. Equally, children without disabilities have to be sensitized towards children with disabilities so that they accept a child with disability in their midst. The preschool years are all about learning to be a friend. In fact, much of the preschool curriculum is devoted to supporting the development of skills for interacting with peers.

10.6 INFLUENCE OF TEACHERS

The teachers are a major influence in the school. Like the parents, they too set limits, make demands, and communicate values and foster development of children. They are powerful role models and significantly influence the child's development. Children imitate the behaviour of teachers they like. The teacher's expectations also influence the child's performance, achievement, motivation, self-esteem and behaviour.

The behaviour of teachers at school makes the children with visual impairment ready for the world outside their home, as in early years of life, school is the place where children spent most of their time other than home. The experiences that children with visual impairment have in school are very significant because children analyze their abilities on the basis of what they can do or cannot do. Hence, if the teachers create a stimulating environment for learning, and safe environment for the children to express themselves, the development of children is fostered in all areas. No doubt that teaching children with visual impairment is a challenging task, but involvement of other senses and a strategically planned curriculum can help the teachers to make the children with visual impairment realize their true potential.

Check Your Progress Exercise 1

Answer the following questions briefly in the space provided below.

1) List in the space provided below six behaviours of caregivers that help in attracting the infant's attention and lead to development of attachment.

   a) ……………………………………………………………………

   b) ……………………………………………………………………

   c) ……………………………………………………………………

   d) ……………………………………………………………………

   e) ……………………………………………………………………

   f) ……………………………………………………………………

2) Read the following statements carefully and indicate in the brackets whether these are correct or incorrect.

   a) We do not exaggerate our facial expressions while talking to the infant. ( )

   b) Rhythmic motions are not soothing to the baby. ( )

   c) Adults as well as children tend to use "baby talk" when talking with infants. ( )

   d) Looking at the different expressions on the caregiver's face, the infant learns to discriminate various emotions and to understand when the adult is intending to maintain, end or avoid a social interaction. ( )

   e) The mutual gazing of mother and child is the most powerful means of establishing contact. ( )

10.7 DEVELOPMENT OF EMOTIONS

Infants experience joy, distress, anger and rage. Gradually, emotions get differentiated into happiness, interest, excitement, sadness, dejection and fear. Around six months of age, the child shows fear of strangers and may get upset and begin to cry when they approach her. **This is called stranger anxiety.** This fear develops when the infant becomes attached with the parents. Once attached, the infants become fearful of unfamiliar faces. This fear is at its maximum intensity around eight to twelve months of age and disappears between 15-18 months of age. However, Infants differ in the extent to which they show this fear of strangers.

A little after the infant develops stranger anxiety, she develops **separation anxiety** — the fear of being separated from caregivers to whom she is attached. Infants may get distressed when the caregivers are out of sight. This fear is at its maximum intensity around 12 to 18 months of age and disappears around 20-24 months of age. Infants differ in the extent to which they show separation anxiety.

As the child interacts with more people during the preschool years, she develops feelings of sympathy, empathy (feeling the same emotions as experienced by the other person) and begins to show helping, caring, co-operative and sharing behaviour (also called altruistic behaviour). The child also develops feelings of anger and aggression. These emotions are seen when children play with each other.

You have read above that the first year of life are critical for the child to develop feelings of trust in the caregivers. **The next two or three years (age 1 to age 3) are critical for developing a sense of autonomy.** 'Autonomy' means being able to make one's own choices — to do something or to not do it, to choose a particular activity, to go where one wants. Developing autonomy is important as it determines the extent to which one feels that one's situation in life and the events that happen to one are under one's influence or control. If the child is given the freedom to explore, the child develops a confidence in her abilities. If the child repeatedly experiences restrictions and negative evaluations of herself, it can lead to feelings of **shame and doubt in her abilities**.

During preschool years, the increase in mobility and speech enables the child to have some control over events and experiences. The child wants to try out new things and activities and is eager to take initiative. The children's arguments with parents are often about wanting to do things by themselves. They will try to do the more difficult tasks — jump over a bush, put together a jigsaw puzzle and venture into the park alone. They are eager to accept the guidance of adults and to learn to make plans for their activity. Now the caregiver can channelize the child's energy, enthusiasm and initiative towards more specific goals. When the child meets with success in her initiatives, she develops confidence and a sense of self-esteem. **Children need to be allowed to take initiative.** Sometimes children in their enthusiasm to try out new things and go too far. Then the parents may punish the child or restrict her activity. When parents frequently punish the child, **she may develop a sense of guilt**. She may feel that her actions are always wrong and displeasing. When parents restrict her all the time, she loses initiative. She is then likely to do only what she is ordered to do, rather than choosing activities on her own. Such an attitude would be negative for the child's development.

10.7.1 Impact of Visual Impairment on Emotional Development

Emotional development mainly depends on communication and social interaction. Since a child with visual impairment may face a challenge in these aspects, it can cause difficulty in emotional development and the child may appear to be less mature. The child's emotional development is shaped by a range of factors including the child's personality, family support, the attitudes of the members of the school and society and the extent of the child's degree of impairment. **The more chances the child has to be with children of the same age group in school and community, the better will be the child's socio-emotional development.**

Children have to be taught to recognize their emotions, differentiate among the emotions and express the emotions in an acceptable way which is not harmful for others. Such a child would be considered emotionally competent. Developing emotional competency is important as it is related to positive social and academic outcomes. Children's emotional development must be stimulated. For this the adults must themselves first learn to regulate their own emotions and express these in an appropriate manner. To make children emotionally competent they have to be provided opportunities to practice emotional regulation strategies so that they can adaptively regulate their emotions. Allow children to experience emotions and provide support for the big emotions. This means that the first task of the adult is to acknowledge and accept the emotions being experienced by the child, convey a sense of understanding and empathize with the child, giving the child the acknowledgement that that no emotion is too small to be recognized.

In general, we can say that parents and caregivers themselves should explain or show the qualities they want the children to develop, not use punishment to discipline the child, and instead, appeal to the child's sense of right and wrong. This combination of socialization practices will have a positive impact on children and help them to grow up happily and to develop desirable qualities.

10.8 DEVELOPMENT OF SELF-CONCEPT

All the interactions that children have with people around them, help them to form an idea about their own self and to develop a self-concept. What do we mean by 'self-concept?' The idea or the concept that we have of ourselves is our self-concept. If you were to ask yourself the question "Who am I?" and "what kind of person am I?", the answer you would get is your sense of self or the self-concept. **Self-concept is a description of oneself.** It is the totality of a person's experiences, qualities, what we consider ourselves as capable of doing, ideas, thoughts and feelings with regard to oneself. It is the characteristic way in which we define ourselves. It is a set of attitudes individuals hold about them and motivates us to act. It is our self-image.

An important aspect of the self-concept is self-esteem. **Self-esteem** refers to our judgment of ourselves according to the standards we have set for ourselves. **It is one's evaluation of oneself.** It is our sense of how worthy we are in our own eyes. As adults we are so familiar with our thoughts, feelings, attitudes, the opinion we have of ourselves and ways of responding to situations that it may seem to us that we are born with an idea of who we are! This is not so. **Our self-concept is created as we interact with others and as we handle events and situations**. In general, we can say that a child develops a positive and high self-concept when the following are available to the child:

- opportunities to explore her environment and do things for herself — in other words, when she is given autonomy and allowed to take initiative
- receives praise and positive feedback about her behaviour and actions from parents and other caregivers
- experiences success in her activities.

Developing a positive self-concept is important as it gives the child the confidence and strength to face and cope with new challenges in one's personal and social life, at home, in the school and later at the workplace. Our self-concept motivates our behaviour. If we think we can do something, we act in ways that enables us to that thing. If we think we cannot do something, our actions and behaviours then tend to lack the force and conviction needed to do that thing. It is seen that when parents use firm and affectionate style of parenting, it helps the child to develop positive self-esteem. In section 10.9, you will understand the features of this parenting style.

Repeated and unfair criticism, lack of opportunities to try out new activities or do things on one's own and too many meaningless restrictions may lead the child to develop negative feelings about herself, leading to low self-esteem and low self-concept.

10.8.1 Impact of Visual Impairment on the Development of Self-concept

The eye is very important sensory organ, and accounts for a very large percentage of the total information's available to a person through one's senses. The child with visual impairment is hesitant to explore because of the fear of the unknown, and overprotective parents may further discourage this exploration. Without concrete experiences, the child will not develop meaningful concepts or the language to describe or think about them. This leads to a diminished control over the environment, leading to a high degree of dependence on a sighted person to negotiate and function in her environment. Diminshed sense of independence leads to lowered self-concept.

The degree to which one's body is found serviceable and reliable for oneself, as well as attractive to others, influences the content of self-concept. A child with visual impairment may face a lot of difficulty in carrying out tasks of daily living independently. She may also need help in making friends, playing and learning. **This dependency can make the child feel poorly about herself and is likely to create low self-esteem in the child, leading to low self-concept.** The child can only control her inner world but repeated experiences of lack of ability to control and manage the external environment can lead to fears, and negative thinking, causing the child to withdraw into herself and lessen the need for social interaction. If the attitude of the family members and the community is not supportive and they do not make efforts to include her in the typical daily routine of the family, the child will experience social and physical isolation, which may create psychological difficulties for the child and influence her personality. Adjusting in today's fast changing world is a challenge even for people without disabilities; the presence of a disability increases the challenge for the individual.

According to one estimate it has been found that that nearly one-third of the youth with visual impairment have lower self-concept as compared to their peers without visual impairment, on a number of dimensions. It is very important for the children with visual impairment to develop a positive self-concept as it helps them to cope and overcome the consequences of a disability. It gives an individual a positive outlook on life, satisfaction and commitment.

There are two main ways through which the child can be helped to enhance her self-concept. One is through individual counselling where the child with visual impairment could be helped to explore ways of correcting her irrational thinking, distorted feelings and unacceptable behaviours, which will increase the chances of her being accepted by others, leading to positive impact on her self-concept. The second is acceptance by the family and community of the persons with disabilities; and the recognition by others of them as worthy individuals who have a unique set of personality characteristics, skills, abilities and competencies that make them as special as any other person. Acceptance enables people to develop relationships with others, yet maintain healthy boundaries of individuality within themselves.

10.9 PARENTS' CHILD REARING PRACTICES AND PARENTING STYLES

How children are brought up has a great influence on their personality. Children learn appropriate behaviour as a result of direct teaching by parents and other significant people around them with whom they interact on regular basis like family members, siblings and teachers. They also learn these behaviours indirectly by observing others in the home and community. **This process by which children acquire behaviours, skills, values, beliefs, and standards that are considered characteristic, appropriate and desirable in their culture is known as 'socialization'.** The goals of socialization vary from one culture to another and even from one family to another. The methods parents use to socialize the child towards appropriate behaviours and away from inappropriate behaviours are called **child-rearing practices. These are also referred to as 'parenting style**'. Parenting style refers to the typical ways that parents think, feel and behave as regards child-rearing. Parents use different child rearing practices. Broadly we can say that parenting is influenced by two dimensions named as 'responsiveness' and 'demandingness'. Let us understand what we mean by these dimensions and their impact on parenting styles.

Responsiveness: Responsiveness means how parents respond to their children's actions. Parents differ with respect to the amount of warmth, feelings of love and affection they show for the child. Some parents display lots of affection towards their children and express a great deal of warmth. On the other hand, some parents are less expressive, and they rarely display affection towards their children and rarely communicate to children that they are valued or loved.

Demandingness: Demandingness means how parents want their children to behave. Like responsiveness, parents also vary in terms of demandingness and they impose rules accordingly. Parents who are high on demandingness tend to create a lot of rules for their children and they want their children to obey those rules unquestionably. They are highly critical of their children and they give very less freedom to their children. They actively monitor their children's behaviour to ensure that rules they have set up are followed. Parents who are low on demandingness make fewer demands and allow children considerable freedom to pursue their interests and make their own decisions.

These two dimensions combine to yield four different parenting styles as shown in the diagram below. These are discussed further.

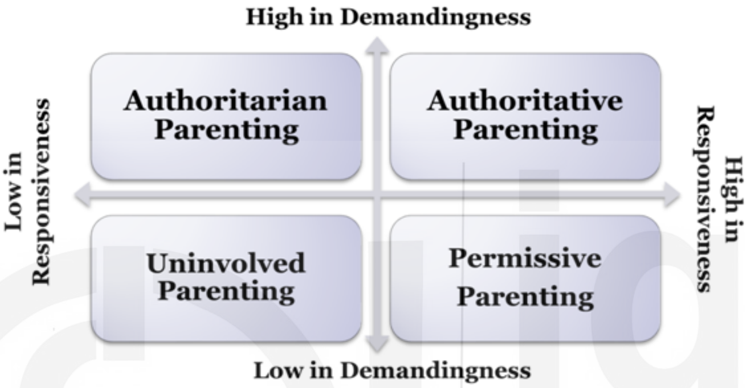


Fig. 10.1: Dimensions and types of parenting styles

10.9.1 Authoritarian Parenting (Hostile, Rigid and Inflexible Parenting Style)

These parents are low on responsiveness and high on demandingness. Let us understand the features of this style of parenting.

- The foremost characteristic of these parents is that they view themselves as those who are in authority and they are highly controlling (i.e. demanding) of the child's behaviour. They set the rules and demand that the children obey them unquestioningly. They are rigid about the rules they have set and do not explain the reasons for the rules. They are not willing to adopt or modify these rules according to the situation. They value obedience and discourage independent behaviour, questioning and exploration. They frequently criticize the child's ideas, decisions and choice of friends. The child is not encouraged to have a viewpoint of her own and is not allowed to think and act on her own. For example, they will set the rule about when the child can play, and for how long. Further, they do not communicate the reason for their rules and decisions to the child. Instead, they use their authority and love withdrawal techniques to inculcate desirable social behaviour. They may use yelling, criticizing, commanding and also force and physical punishment to make the child obey.

- In terms of responsiveness, these parents are less warm and affectionate, and low in acceptance and involvement. They seldom praise the child.

- They have very high expectations from the child that do not fit the child's developing capacities. Some authoritarian parents may even be openly hostile and rejecting. **In short, it is a very restrictive style of parenting**.

Impact on Children: It has been seen that children of such parents are generally discontented, unhappy and anxious. Due to high level of control by parents, some children may become subdued, timid, dependent, lacking interest in exploration, unable to take on challenging tasks and show signs of loneliness; while others may react to the parents' behaviour by showing a high level of aggression. When faced with frustrating situations, they respond with hostility and use force when they do not get their own way, because that is what they have seen their parents do. They may also have difficulty in forming relations with peers and do not get along well with them. Since the children are seldom encouraged to try out things, they tend to have a lower self-esteem and self-reliance as compared to other children. Their self-expression and independence is suppressed. The children may do less well in school. High degree of control and rejection by parents in many cases leads to problem behaviours such as bullying, anxiety, eating disorders and depression. As teenagers these children may engage in anti-social acts.

10.9.2 Authoritative Parenting (Affectionate, Firm but Flexible Parenting Style)

These parents are high on responsiveness and high on demandingness but they are also reasonable towards children's feelings. Let us understand the features of this style of parenting.

- Such parents are accepting of the child, warm, loving and supportive of the child's efforts and accomplishments. They often praise the child. They are involved with the child, show enthusiasm in the child's activities, respond sensitively to her feelings, and show empathy and compassion. They usually put the child's needs over their own. They understand their child's personality characteristics and points of view. In other words, they are high on the dimension of acceptance and involvement. They establish an enjoyable and emotionally fulfilling parent-child relationship.
- Such parents lay down rules, and make it clear to the child that these have to be obeyed and what may be the consequences of disobeying. At the same time, they explain the reasons for the rules. For example, they may form the rule that the child can play for an hour only. But they allow the child to decide what will be the exact time she wants to play or what she will play. Further, as the child grows, they allow the child to make decisions in areas where the child is ready to make decisions. Before formulating rules and arriving at decisions, they often ask children about their views and desires and encourage discussion. They listen to children's objections. This will give the child the feeling that she is saying something that is worthwhile and that her opinions are important. So the child also becomes willing to listen to parents. Such an atmosphere reflects a high level of warmth and good communication between the parents and the child. The child feels that it is easy for her to

express her true feelings to her parents. In other words, these parents are reasonable in their demandingness.

- Authoritative parents demand and expect mature behaviour from the child and set high standards of achievement for her. But along with this, their demands from the child are reasonable and in keeping with her abilities. When the parents' expectations of the child are reasonable, the child is able to meet the parents' standards and derives a sense of competence from this. This feeling of confidence carries over to other situations. So the important point is realistic expectations. Unrealistic demands will lower the child's self-esteem as she can never fulfil them.

Impact on Children: Such a parenting style – loving, accepting, firm and yet flexible with reasonable expectations and autonomy granting – shows positive outcomes for children in social, emotional and intellectual domains. It encourages flexibility in thought and action, fosters independence and self-reliance in children. Children have high self-control, they show mature behaviour earlier, have higher self-esteem, show more generosity, are sensitive towards others, co-operative and are less aggressive. They are friendly, get along well with peers and have high social skills. They are more willing to try out new things and explore – a trait that is associated with creativity. They remain happier and positive in outlook, persist at tasks instead of giving up, perform better in school compared to other children and show few behaviour problems. **Authoritative parenting style leads to desirable outcomes in children.**

10.9.3 Permissive Parenting (Affectionate but Lenient Parenting Style)

These parents are high on responsiveness and low on demandingness. Let us understand the features of this parenting style.

- These parents are high on expressing warmth and love, They are lax (lenient) in disciplining. They very rarely exert any form of control on children's behaviour. They do not impose firm rules and consistent discipline. They very rarely exert any form of control on children's behaviour. They make very few demands from their children and allow children to function on their own. They give children all the freedom to do as they want. There are almost no rules for children and the parents do not demand much from them. In fact, children make their own rules and take decisions even though they are not yet capable of doing so. For example, children will decide what food they want to eat, when and how frequently. Parents rarely demand that the child behave in a mature manner.

- Children in these families have the freedom to do as they want and have few responsibilities.

Impact on Children: Children of such parents have been found to be the least mature, independent or self-reliant. They tend to be disobedient, rebellious, and impulsive. They are not likely to take on responsibility and may be immature in their behaviour with peers. They are overly demanding and lack the willingness to adjust. They show high levels of aggression, since the parents do not make efforts to control the child's aggression; and as teenagers and adults they are more likely to engage in anti-social acts. These children show poorer academic achievement and find it difficult to persist and complete challenging tasks.

10.9.4 Uninvolved Parenting (Neglect in Parenting)

These parents are low in responsiveness as well as demandingness. Let us understand the features of this parenting styles.

- These are parents who neglect their children. They are not interested in their children and do not bother about them. They do not show much warmth and love. In other words, they are low on acceptance and low on involvement.
- They do not control the child's behaviour and do not expect mature behaviour. There are no rules for social behaviour. They do not provide guidance about choices that children should make and do not monitor what the child is doing and her activities.
- Such parents are themselves emotionally detached and depressed or so overwhelmed by their own life stress that they have little time or energy for children. At its extreme form, such parents may totally neglect their children.

Impact on Children: This sort of parenting style is associated with the most negative influence on children's personality. Children of such parents show disturbances in all areas of development. Even as young children they are high on aggression and show extreme behaviours like temper tantrums. They find it difficult to form relationships with peers, both in childhood and adulthood. They lack social skills of relating to others and do not display leadership skills. These children tend to be low on self-esteem. In fact, they may show anti-social behaviour in adolescence and adulthood. They are also not highly motivated to achieve and do not try hard for success.

Activity 2

Think about the parenting techniques used by your parents and write about how it impacted your

1) Self-concept

   …………………………………………………………………………………

   …………………………………………………………………………………

   …………………………………………………………………………………

   …………………………………………………………………………………

   …………………………………………………………………………………

2) Personality

   …………………………………………………………………………………

   …………………………………………………………………………………

   …………………………………………………………………………………

   …………………………………………………………………………………

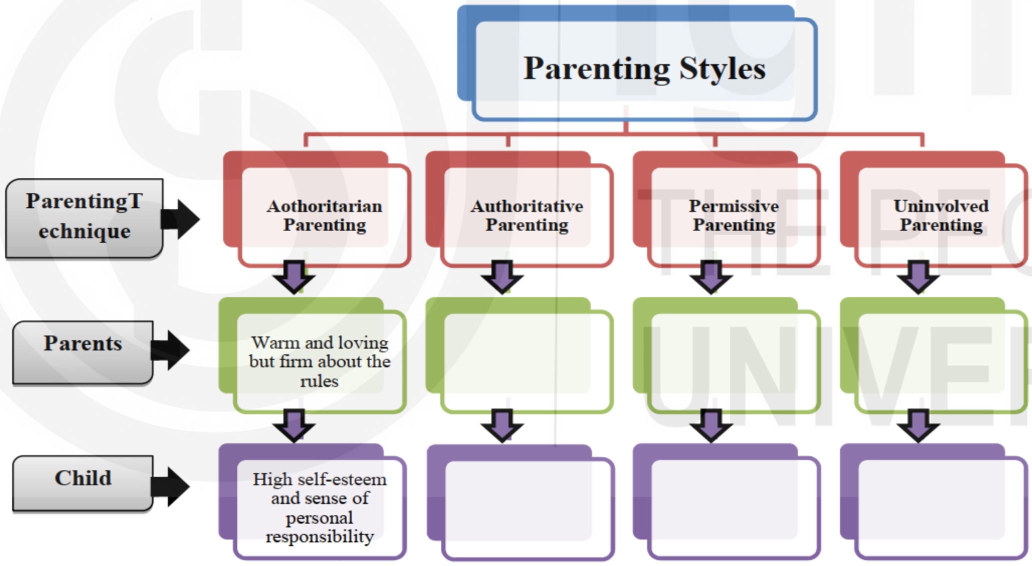
Which is the Most Appropriate parenting Style?

If we compare all four parenting styles, we can say that authoritative parenting style appears to be the best for children's development.

While we have stated that a particular parenting style leads to certain specific personality characteristics in children, it must be remembered that we have only mentioned generalities. The outcomes we have described with each parenting style are the most likely outcomes, but they are not the only ones. The behaviour of the parents is just one of the many factors that affects the child's behaviour. The child is also influenced by the people she meets outside the family. If the parents are hostile but others are supportive and warm, the child's personality may develop positively. It is also possible that each parent uses a different parenting style. If one of the parents is restrictive, highly controlling of the child's behaviour and not affectionate while the other parent is flexible and affectionate, it will have a different impact on the child than when both the parents are restrictive and not affectionate.

Check Your Progress Exercise 2

1) Different parenting styles are mentioned in the following figure. Briefly state how the parents behaviour in each parenting style impacts the child, in the related boxes.



10.10 SUMMING UP

- The infant needs care and nurturance if she is to survive. She effectively elicits care from adults. She is able to communicate and interact with them. It may be a little difficult to believe but the infant has a collection of behaviours that helps her to attract the attention of adults. She gazes, smiles, babbles, imitates and cries — all of which evoke adult response. Through daily interactions during feeding, bathing, playing and talking, an emotional bond forms between the mother and the child, which is called attachment.

- This attachment of the infant to her primary caregiver is her first emotional relationship and it has an important role to play in the child's personality development. An infant who forms a secure attachment with the mother, trusts people and forms other attachments.

- Children with visual impairment may have difficulty in carrying out activities that are expected of their age, as their disability may restrict development of skills such as communication, motor skills, social skills and functional academics.
- Parenting style has a major impact on the child's socio-emotional development. Generally parenting styles can be broadly classified into Authoritative, Authoritarian, Permissive and Uninvolved on the basis of the degree of 'demandingness' and ''responsiveness' used by parents.
- Authoritative parenting style appears to be the best for children's development in most of the cultures.

10.11 ANSWERS TO CHECK YOUR PROGRESS EXERCISES

Check Your Progress Exercise 1

1) a) Speech
   b) Smiling
   c) Gazing
   d) Facial expressions
   e) Movements and rhythms
   f) Physical contact

2) a) Incorrect.
   b) Correct
   c) Correct
   d) Correct
   e) Correct

Check Your Progress Exercise 2

1)