Our Heritage

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Human Development Stages From Infancy to Late Adulthood: Case study

NEELAM KUMARI
DEPTT. OF HOME SCIENCE
Pt.Ugam Pandey College
Motihari,East Champaran

Abstract

Children's experiences in their earliest years affect how their brains work, the way they respond to stress, and their ability to form trusting relationships. During these years the brain undergoes its most dramatic growth, setting the stage for social and emotional development. Language blossoms, basic motor abilities form, thinking becomes more complex, and children begin to understand their own feelings and those of others.Development of the human body is the process of growth to maturity. The process begins with fertilization, where an egg released from the ovary of a female is penetrated by a sperm cell from a male. The resulting zygote develops through mitosis and cell differentiation, and the resulting embryo then implants in the uterus, where the embryo continues development through a fetal stage until birth. Further growth and development continues after birth, and includes both physical and psychological development, influenced by genetic, hormonal, environmental and other factors. This continues throughout life: through childhood and adolescence into adulthood.

Keywords:Adulthood, Human Development, Human Life Cycle, Healthy habits.

Introduction

Human development refers to the physical, cognitive, and psychosocial development of humans throughout the lifespan. What types of development are involved in each of these three domains, or areas, of life? Physical development involves growth and changes in the body and brain, the senses, motor skills, and health and wellness. Cognitive development involves learning, attention, memory, language, thinking, reasoning, and creativity. Psychosocial development involves emotions, personality, and social relationships. Many of us are familiar with the height and weight charts that pediatricians consult to estimate if babies, children, and teens are growing within normative ranges of physical development. We may also be aware of changes in children's fine and gross motor skills, as well as their increasing coordination, particularly in terms of playing sports. But we may not realize that physical development also involves brain

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development, which not only enables childhood motor coordination but also greater coordination between emotions and planning in adulthood, as our brains are not done developing in infancy or childhood. Physical development also includes puberty, sexual health, fertility, menopause, changes in our senses, and primary versus secondary aging. Healthy habits with nutrition and exercise are also important at every age and stage across the lifespan. If we watch and listen to infants and toddlers, we can't help but wonder how they learn so much so fast, particularly when it comes to language development. Then as we compare young children to those in middle childhood, there appear to be huge differences in their ability to think logically about the concrete world around them. Cognitive development includes mental processes, thinking, learning, and understanding, and it doesn't stop in childhood. Adolescents develop the ability to think logically about the abstract world (and may like to debate matters with adults as they exercise their new cognitive skills!). Moral reasoning develops further, as does practical intelligence—wisdom may develop with experience over time. Memory abilities and different forms of intelligence tend to change with age. Brain development and the brain's ability to change and compensate for losses is significant to cognitive functions across the lifespan, too. Development in this domain involves what's going on both psychologically and socially. Early on, the focus is on infants and caregivers, as temperament and attachment are significant. As the social world expands and the child grows psychologically, different types of play and interactions with other children and teachers become important. Psychosocial development involves emotions, personality, self-esteem, and relationships. Peers become more important for adolescents, who are exploring new roles and forming their own identities. Dating, romance, cohabitation, marriage, having children, and finding work or a career are all parts of the transition into adulthood. Psychosocial development continues across adulthood with similar (and some different) developmental issues of family, friends, parenting, romance, divorce, remarriage, blended families, caregiving for elders, becoming grandparents and great grandparents, retirement, new careers, coping with losses, and death and dying.

Principles of development

Development describes changes that might be complex and involve ability levels altering.

Development happens:

from head to toe – an infant will first be able to control their head, then develop control over their body to enable them to sit and finally have control over their legs and feet to allow them to crawl and eventually walkfrom the inside to the outside – an infant learns to control movements in their body first then in their arms and legs until, finally, they can control the small muscles in

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their fingers in the same sequence but at different ratesholistically – areas of development are dependent on and influence each other.

Development can be seen as a journey. As the journey progresses, children reach a number of key **milestones**. These are also referred to as **developmental norms** and describe the skills that infants, children and adolescents are expected to develop at particular ages or stages of their life. These norms include walking, talking or tying shoe laces. The four main areas of skills acquisition are:

1 physical – gross and fine motor skills

2 social development

3 emotional development

4 intellectual development and language skills.

Although children will pass through the same developmental stages, you should remember that every child is unique and develops at their own rate. Norms help professionals describe an average set of expectations. If a child develops faster than the norm it does not necessarily mean that the child is 'gifted'. Neither does it mean that there is something wrong if a child develops more slowly.Very few people experience their life in 'compartments' labelled 'physical', 'intellectual' 'emotional' or 'social'. Most people experience physical, intellectual, emotional and social development holistically. For instance, the development of a child's social skills is dependent upon the development of their intellectual and language skills. One developmental aspect cannot be assessed without looking as the other aspects. Developmental milestones provide a useful guide for professionals and enable them to recognise, monitor and take appropriate action if development is delayed in one or more of developmental areas.

Physical development in infancy and early childhood

Two aspects of physical development are gross motor skills and fine motor skills.

Development of gross motor skills

Gross motor skills are movements that involve using the large muscles of the body. These skills allow children to control those body movements that require the use of large muscles in

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the legs, arms and the torso of the body. As soon as a baby is born, their gross motor skills begin to develop. Gross motor skills are essential for physical play for example playing 'tag', which involves running after friends, catching up with them, reaching out and touching someone. Everyday tasks like walking upstairs, running, jumping and throwing a ball, require the use of gross motor skills.

Development of fine motor skills

In contrast, fine motor skills are actions that require the use of smaller muscles in the hands, fingers and toes. These allow infants to pick things up using their finger and thumb, wriggle their toes in the sand and hold a crayon or small toy. Dressing and undressing, drawing, scribbling and stacking toys are other examples of fine motor skills.

Infancy (0–2 years)

Development milestones

Newborn babies are helpless when it comes to muscle coordination and control. They are unable to hold up their heads, roll over, sit up or use their hands to move objects deliberately. Developing both gross and motor skills allows increasing and more complex movement. By around the age of two, infants develop and use both gross and fine motor skills as they become more independent. For example, when playing with shape-sorting toys, they use gross motor skills to hold their body steady enough to grasp the shapes firmly and use fine motor skills to fit each shape in the correct slot. Table shows some developmental milestones for gross and fine motor skills for infants aged from birth to two years.

Table Gross and finemotor skills developmental milestones in infancy

Age	**Gross motor skills**	**Fine motor skills**
Newborn	Primitive reflexes such as grasp	Holds their thumbs tucked into their hands.
1 month	Lifts chin, some control of head.	Opens hands to grasp a finger.

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3 months	Can lift their head and chest when lying on front.	Can briefly grasp a rattle.
6 months	olls over, can sit up for a short time without support, kicks legs when held up.	Moves objects from hand to hand, can pick up dropped toys if they are in sight.
9–10 months	Crawls, begins to cruise (walking while holding on to objects).	Uses finger and thumb to hold a small object.
12–13 months	Stands alone, can walk without help.	Manipulates and places toys.
18 months	Climbs onto furniture.	Builds a short tower with blocks.
2 years	Propels a sit-on toy with their feet, throws a large ball.	Draws lines and circles, turns a page.
2 and a half years	Jumps from a low step, kicks a ball.	Uses a spoon and fork, builds a tower of 7–8 blocks.

Childhood (3–8 years)

Development of gross motor skills

Children's practical abilities associated with gross motor skills continue to develop. By the age of three, most children will be able to use pedals to ride a tricycle, run and balance on one foot for one second. By the age of four, children may be able to kick and throw a large ball. At five years, they can hop using each foot separately. By the age of six or seven a child may be able to skip and ride a bicycle. At eight years old they will have good strength and body coordination so that they can take part in many sports and activities.

Development of fine motor skills

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Fine motor skills are the ability to control and coordinate smaller movements and muscles such as the movement of hands and fingers. By the age of three, children should be able to control their movements enough to use a pencil to copy letters or build a tower with cubes. By the age of five, most children should be able to dress and undress on their own, including tying their own shoelaces. At eight years of age, they will have good control of their small muscles and be able to draw detailed pictures.

Adolescence (9–18 years)

During adolescence, males and females will experience a number of physical and growth changes.

Development of primary and secondary sexual characteristics

Puberty takes place over several years. It is a period of rapid change and growth and is experienced by both females and males. Table 1.3 shows some primary and secondary sexual characteristics for both sexes. Primary sexual characteristics relate to the changes and development of reproductive organs, while secondary characteristics are outward signs of development from a child into a man or woman

Early adulthood (19–45 years)

Physical strength peaks

Young adults are usually at the peak of their physical performance between the ages of 19 and 28. By this age, young adults have reached their full height and strength, and reaction time and manual dexterity are also at their peak. After this, age adults may gradually lose some strength and speed, although these changes are often unnoticed outside of competitive sport. Decline in physical capabilities may be exacerbated toward the end of this life stage if individuals have an unhealthy diet, do not take regular exercise and maintain an unhealthy lifestyle.

Exercise and a healthy diet can help to develop physical fitness and athletic skills into middle adulthood.

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Middle adulthood (46-65 years)

The menopause

Women are most fertile (able to conceive children) in their late teens and early twenties. The risk of miscarriage and pregnancy complications rises with age. Between 45 and 55 years of age fertility reduces and then comes to an end in a process called the menopause. It can take several years to complete.

The menopause involves:

1. gradual ending of menstruation (or stopping having periods) and a large reduction of fertile eggs in the ovaries
2. an increase in the production of hormones called gonadotropins that try to stimulate egg production, which can cause irritability, hot flushes and night sweats
3. a reduction in the sex hormones (oestrogen and progesterone) produced by a woman's ovaries, resulting in some shrinkage of sexual organs and sometimes a reduction in sexual interest
4. associated problems such as osteoporosis, which can be caused by a reduction in the production of sex hormones.

For some women, the general hormonal changes, especially reduction in oestrogen levels experienced during the perimenopause and menopause, can lead to mood changes, depression and anxiety. This can make a woman feel that she is on an emotional roller coaster. Some women experience overwhelming sadness that they are no longer able to have children and this

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can affect their self-image of being a 'desirable' woman. Self-esteem and self-image can become low, which may impact on self-confidence and on quality of life during this transitional stage of the lifespan.

Later adulthood (65-plus years)

Predicting your life course becomes more difficult in the later life stages. Where 'old age' was once deemed to be from 65 years of age until the end of one's life, as **lifeexpectancy** has risen, people's ideas of what is 'old' are also changing.

Changes in life expectancy for males and females over the last 100 years (based onOffice for National Statistics data)

In round figures, 120 years is often accepted as the maximum lifespan for a human being. Britain's oldest living person in 2015 was Gladys Hooper from Ryde, Isle of Wight. Mrs Hooper celebrated her 113th birthday in January 2016.

A2 Intellectual development across the life stages

During their lifespan, an individual develops useful ways of thinking and learning. Intellectual and cognitive development refers to how individuals organise their ideas and make sense of the world in which they live. There are five important aspects associated with intellectual development.

1. Language development, which is essential for organising thoughts and to share and express ideas. It is also important for clarification.
2. Problem solving is an important skill that is required both to work things out and to make predictions about what might happen.
3. Memory is required for storing, recalling and retrieving information.
4. Moral development allows for reasoning and making choices, and informs the individual how to act in particular situations and how to act towards self and others.
5. abstract thoughts and creative thinking are essential for thinking and discussing situations and events that cannot be observed.

Intellectual and language skills in infancy and early childhood

The brain grows very rapidly during the first few years of life. During this time children learn all sorts of new skills and abilities. For example, in early infancy and childhood, there is a rapid growth in language and intellectual skills. Young children have an ability both to understand and to use language, for example a 12-month-old baby saying her first words, a two-year-old child naming parts of his body and a five-year-old constructing complex

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sentences.Over an individual's lifespan, their brain grows at an amazing rate. At birth, a baby's brain is about 30 per cent of the size of an adult's brain. By the age of two, the child's brain has increased to approximately 80 per cent of the size of an adult's brain.Speech and language are essential skills needed to communicate with others. Language development begins before birth and develops rapidly (see Table 1.5). From the age of two months, most babies will be 'cooing', and, by six months old, they will be responding by making 'babbling' noises. The fastest learning takes place for most children between the ages of two and five. By the time a child has reached the age of seven, they have learned the basics of vocabulary, grammar and sentence formation.

A3 Emotional development across the life stages

Emotional development is the way an individual begins to feel about and value themselves and other people. This forms the basis of **emotional literacy** and **empathy**. Emotional development begins with **attachments** which an infant forms totheir main caregiver. If a child forms a strong attachment to their main caregiver, it can help to ensure a positive **self-image** and good **self-esteem**. Table 1.8 shows the key features of emotional development throughout the lifespan.

A4 Social development across the life stages

When considering social development across the lifespan, it is important to be aware of the great difference between generations and the cultural variations in the way in which individuals will experience social relationships during the course of their lives.Social development involves learning how to interact socially with other individuals in the family and society in general. Social development provides the opportunities and skills that enable people to develop relationships. Not all individuals will experience social

The stages of play, in infancy and early childhood

Children learn and practise basic social skills through play. They develop a sense of self, learn to interact with other children, how to make friends and how to role play.

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Jean Piaget highlighted the importance of play for learning and development. When infants play independently it is known as solo play. It starts in infancy and is common at this life stage because they have limited social, cognitive, and physical skills. Solo play provides infants with a variety of learning opportunities, in particular the chance to explore the environment at their own pace. It can help infants to focus their attention, become self-reliant, learn by making mistakes and increase their self-esteem.

Parallel play

Between the ages of two and three, infants move from solo play to playing alongside other children. They have not yet developed the sharing and turn-taking skills required for group or co-operative play. Although infants are engaged in similar activities such as water or sand play, there will be little interaction as each infant will be engrossed in their own independent activity, which is not influenced or shared with others. However, although infants may appear not to interact with other infants and older children, they do show an interest in what other children are doing and still like to be in the presence of adults and other children.

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Co-operative play

Between the ages of three and eight, children begin to widen their social network group and form relationships with their peers and other adults. By the age of three, a child has become more co-operative in their play, helped by their language development. For example, moving away from having temper tantrums if they cannot get their own way, playing together with other children, sharing toys and taking turns in games. By the age of seven, most children have established a number of important friendships and others may refer to one friend as their 'best friend'.Play is essential for communication skills, negotiating roles and beginning to appreciate the feelings of other children. By responding to their peers' feelings, children learn to be more co-operative in their play.

Developing relationships with others

Friendship between young children is very different from friendship between older children, adolescents or adults. Young children tend to form relationships based on play. They quickly fall out with each other and just as quickly make up. Relationships for older children, adolescents and adults are more complex and may involve much more than friendship. This may require new skills. Just as children grow and develop in an observable sequence, the ability to develop relationships also tends to follow a pattern. As children mature and start to think beyond their own needs and are able to see the world from other people's viewpoints, they become able to develop meaningful relationships.

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The development of independence through the life stages Infancy and childhood

In infancy, young children are totally dependent on others for their care but, towards the end of this life stage, they begin to assert their need to become independent and attempt to do more for themselves. This comes with increased skills and abilities in dressing and feeding themselves. In early childhood, although still very dependent on parents and carers, they are widening their experience – starting school and joining clubs and activities outside the home. Children gradually become less reliant on close family and start to make their own decisions. Initially, these may be limited to activities, food choices or which clothes to wear but, by the time they reach the end of this life stage, they will have developed clear likes and dislikes.

Peer influence in adolescence

In adolescence, young people begin to question their sense of identity, and who they are, and begin to see themselves as separate and independent from their family. Young people may begin to question their family's values and become influenced by peer group norms and values. Peer influence can lead a young person to question choices and decisions that have been made on their behalf. Young people can learn from real-life experiences about the consequences of making good or poor choices.

Starting employment

Between the ages of 16 and 18, many young people begin to make important decisions about their career options. Young people need to be realistic and empowered to make informed choices about their future career prospects. Starting employment is an important transition and is effectively the first step into an adult world as their status changes from learner to employed worker. It is important to adapt from the rules and routines of a school/college/university day to the policies and procedures of the workplace. The financial independence associated with starting employment is also a step towards full independence. Managing finances, from reading a wage slip, opening a bank account to developing budgeting skills are all important aspects of becoming independent.

Leaving home

There is a clear relationship between leaving home, independence and adulthood. Independence means different things to different people but moving out of the family home is an important step in the process. t some stage in their early twenties, many young people decide to leave their family home. lthough many now stay at home longer, because they are studying, unable to work or can not afford to live independently. Leaving the parental home

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represents a major transitional event, which is more complex than simply changing address. It could mean making certain sacrifices such as a lower standard of living. While this allows for a new level of independence and self-reliance, juggling household chores with work and managing household bills require young adults to develop a new set of skills.

Starting a family

The new status and responsibilities associated with starting a family may be an important aspect of developing independence. eveloping parenting skills and becoming part of a new family unit can provide a sense of identity and a feeling of achievement. Becoming a parent is a major life change and the transition requires lifestyle changes and sometimes financial difficulties. New parents must put the needs of the new baby before their own, which can involve making sacrifices. For instance, a parent may choose to put their career on hold or change working patterns and this can impact on financial and emotional independence. Although family members may be able to offer support, the ultimate responsibility is with the new parents. Parenting can be hard work, making demands on both time and energy.

Conclusion

Infancy, typically the first year of life, is the first important stage of human development. Many physical milestones occur during this stage as an infant gains control over its body. However, infants must rely on others to meet most of their needs. They learn to trust other people as needs are met. They need to feel this security in order to properly develop both physically and emotionally. Like your puppy, an infant needs to be loved and nurtured. As you met the needs of your puppy, he/she learned to trust and bond with you while he/she also developed physically. The next stage of human development is childhood, during which children start to explore and develop a sense of independence. Eventually, children learn to make their own decisions and they discover that their actions have consequences. As they learn and grow, they develop a sense of self. Children need to be nurtured so that they develop self-confidence instead self-esteem issues. Achieving a healthy level of self-confidence helps children stay motivated to achieve. A child also needs guidance as they begin to test out new skills and gain confidence in their decision-making.During childhood, children begin to develop a sense of self and independence, and this process continues in the next stage of human development. During adolescence, young men and women are primarily concerned with finding their identity and expressing who they are in the world. Puberty causes many physical changes to take place, and adolescents must adapt to their changing bodies. All of these changes can make adolescence a confusing and stressful period. As adolescents try to find their place, they may experiment with different roles and make attempts to separate from authority figures. They are getting used to their bodies and trying to find out where they belong. They may try out different hairstyles and hobbies in an attempt to create an image of themselves they're comfortable with.

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