



UNIT-IX PSYCHOLOGY & SPORTS

Content

- Definition & Importance of Psychology in Physical Education & Sports.
- Define & Differentiate between Growth & Development
- Developmental characteristics at Different Stage of Growth and Development
- Adolescent Problems & their Management

Learning Outcomes

At the end of the unit, students will be able to:

1. identify the role of Psychology in Physical Education and sports
2. correlate the psychological concepts with the sports and athlete specific situations
3. differentiate characteristics of growth and development at different stages.
4. determine the issues related to adolescent behaviour
5. recognise different management strategies for adolescent related issues

Discussion

Read the newspaper clipping given below regarding the role of Sports Psychology in an athlete's performance.

In a First, Psychologist on Tour with India's Women's Hockey Team

BENGALURU: In a much-appreciated move, the Sports Authority of India has assigned a psychologist to travel with the Indian women's hockey team as they head to Spain, and for subsequent matches.

A career in sports can be incredibly stressful, and not just because there's a pressure to perform. Players often experience homesickness, loneliness, the mental effects of incapacitating injuries, and the after tremors and competitive failure, to name a few. Unaddressed, these things could wreak havoc in a player's life.

A psychologist off the pitch can certainly work on improving group dynamics and addressing individual concerns. But a psychologist who's on the pitch can, in chief coach Sjoerd Marjine's words, "analyse how the group dynamics are when we play consecutive matches and how the players react to victory and defeat." This opportunity, which had been missing previously, can now provide a better understanding of the team and what issues to work on.

Discuss in your group

- Think of a sports team from your school/state/country.
- Are they confident of winning, and often win, over teams said to be stronger than them?
- Is the team repeatedly making the same mistakes/ losing constantly?
- Are athletes more at risk of mental health issues than the general public? Why/why not?
- Do all athletes have similar problems, or do they differ according to their age or gender?
- Based on the news clipping and your discussion above, can you think how a sports psychologist can help improve the performance of athletes?

Present your ideas to the class.



9.1.1 DEFINITION AND CONCEPT OF PSYCHOLOGY IN PHYSICAL EDUCATION AND SPORTS

Sportspersons often display different behaviour on the field. Let us consider the following cases.

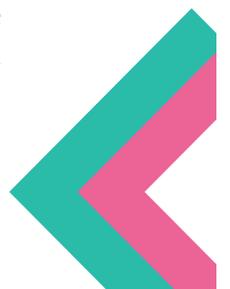
Case 1: Luis Suarez, an International soccer player, began his career in Europe with Groningen in Holland. In the career of this Barcelona striker there have been three biting incidents on the sports field. The first occurred while he played for Ajax Amsterdam in a game against PSV Eindhoven. Suarez bit midfielder Otman Bakkal. The second incident was when Suarez bit Branislav Ivanovic while playing for Liverpool against Chelsea in 2013. The third incident was when Suarez bit Giorgio Chiellini during the World Cup in Brazil in 2014 while Uruguay played Italy.

In his book, *Crossing the Line*, Suarez attempted to justify the action by saying, “The adrenaline levels in a game can be so high; the pulse is racing and sometimes the brain doesn’t keep up. The pressure mounts and there is no release valve..... I was frustrated because we were drawing what was a very important game, and we were on a bad run. I wanted to do everything right that day, and it felt as though I was doing everything wrong. The pent-up frustration and feeling that it was my fault reached a point where I couldn’t contain it anymore.”

Case 2: MS Dhoni, popularly known as Captain Cool, has always remained composed under pressure and carried India out of delicate situations single-handedly. Whether he was chasing or defending a total in a cricket match, Dhoni, unlike others, was usually seen to be cool and unflappable, concentrating on guiding his teammates to deal with pressure. Unlike the brash aggression of some of the other players, Dhoni did not lose his cool on the field. In an interview Dhoni revealed that he, too, experienced the same emotions as the other players -- frustration, anger, disappointment -but he rather focussed his energy into thinking what should be done. “Whatever the format may be, I get into the process of what can be done now, depending on the situation. In Test cricket, you get a slightly longer duration to chalk out your plan. In one-day cricket, you do have some time constraints and in T20s, everything happens very quickly. So the demands are very different,” Dhoni explained. “I would say I feel equally frustrated, angry and times, disappointed as well. But for me, none of these are very constructive and what is more important for me is that what needs to be done right now, that mostly matters. And once I get into that process of thinking I manage to handle my emotions in a much better way. I am like everyone else, but I tend to control my emotions better than others,” Dhoni added.

Sports are played by athletes, and athletes are only human. Like other humans, they are capable of great feats of courage, strength and heroism, just as they are prone to making mistakes. What, then, are the factors that lead to unrestrained aggression amongst some players, and restraint and exemplary behaviour in others? Is aggression caused due to intrinsic physiological factors? Or, is it due to psychological factors like mental stress? Is it the demand of the situation? Do you feel aggression and assertiveness can be gainfully channelised through training?

Games and sports have always occupied an important place in human life and have flourished in all cultures since times immemorial. However, even a non-trained





sportsperson, who is not involved in competitive sports, needs a psychological commitment to participate in regular physical exercise. It is this involvement keeps her/him physically and mentally healthy and helps her/him pursue day-to-day tasks with confidence. This sense of well-being and enhanced confidence provides the intrinsic motivation the the individual to participate in physical activity. Participation in sports also influences the culture of a society, and its influence can be seen in the individual's relation to society or vice versa. In the same way, psychology of a sportsperson can influence the society or social culture can influence the psychology of a sports person. Sports Psychology also attempts to define those factors which motivate not just an individual but also a social group. e.g., success of athletes from a particular area in a particular field of sport affects the psychology and interest of general masses in particular sports. People relate to the success and this works as motivation for exercise adherence for general masses. Thus, understanding the behaviour and mental process of people who participate in sports and physical exercise can answer questions like: "Is there any particular kind of sport or exercise which suits certain personality traits?" or "Does participation in sports and exercise influence the behaviour of an individual or a group?"

Extension Activity

Choose any two sports of your interest and complete the table below

Name of the Sports	International Competitions/ Medals won	Names of Athletes	Region they belong to	Factors that led to their success

Knowledge of psychology helps not just athletes achieve optimal performance but also addresses the needs, objectives and quality of action to achieve excellence and highest performance in any competition.

Let us first try and understand the meaning of the terms **sport** and **psychology**. The term **Sport** can be described as *physical activity for the purposes of recreation, health, competition and education*. The term **Psychology**, on the other hand, is derived from the Greek word *psyche* meaning *soul* and *logos* meaning *study*.

So, psychology was considered as *study of soul*. This concept was promoted by Greek philosophers under the branch of *Philosophy* as they believed that the soul was the essence of a person, and it decided how the individual behaved. It was during the late 19th century, that philosophers shifted their interest towards trying to understand how the body is influenced by what is "inside the body" – *the mind*, and by the events "outside the body" – *the environment*. They started inquiring about the link between



the body and the mind. Psychology, then, came to be explained as a *study of the mind*.

Do you know?

Goal: a desired aim or outcome, something that you are trying to achieve

Motivation: the desire required to be successful; a driving force that makes you do something and decide how much effort to put in.

Intrinsic motivation: motivation that comes from simply doing the activity itself, rather than to gain external rewards or praise. Extrinsic motivation: motivating forces that come from outside the person and the activity, such as prizes, trophies, praise from others or fame.

Reward: something given to someone to recognise their achievement.

Incentive: something that motivates or encourages someone to do something.

Psychology as a scientific study of behaviour and mental processes has three important aspects to be discussed.

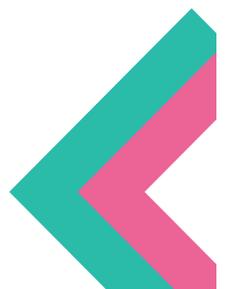
- Firstly, it is scientific in nature; this means it has a scientific approach to acquiring knowledge involving certain key values and standards which are universally accepted and reliable.
- Secondly, it is the study of behaviours which are observable actions and reactions.
- Thirdly, it also includes study of cognitive processes, which involve different aspects of mental life, like memory, reasoning, intelligence, attention etc.

In the modern context, psychology is a science about “*understanding of behaviour*”.

The European Federation of Sports Psychology defines it as “*the study of the psychological basis, processes and effects of sport.*”

Sport psychology, therefore, is an interdisciplinary science that draws on knowledge from the fields of Kinesiology (the scientific study of movement) and Psychology. It includes the study of the manner in which psychological factors affect performance and the way in which participation in sport and exercise affect psychological and physical factors. Sport psychology is used for team sports as well as individual fitness endeavors.

It was in 1925 that Coleman Griffith, often called the “Father of Sport Psychology”, set up the Athletic Research Laboratory at the University of Illinois. The field of Sport Psychology became an area of proficiency that uses psychological knowledge and skills to address performance and well-being of athletes, developmental and social aspects of sports participation, and systemic issues associated with sports settings and organizations. □ Sports Psychology is the study of psychological factors that affect the learning and performance of motor skills. Due to its important role in the enhancement of performance in the sports field, it is necessary for us to understand the broader meaning and scope of Sports Psychology.





According to the American Psychology Association (APA, 2009), the field of psychology focusses on two main areas:

- (a) helping athletes use psychological principles to achieve optimal mental health and to improve performance (performance enhancement) and,
- (b) understanding how participation in sport, exercise and physical activity affects an individual's psychological development, health and well-being throughout life.

9.1.2 DEFINITION OF SPORT PSYCHOLOGY

Exercise and Sports Psychology is the scientific study of the psychological factors that are associated with participation and performance in sport, exercise, and other types of physical activity.

APA (2009)



A field of study in which the principles of psychology are applied in a sports setting.

R Cox (2007)

Sports Psychology is concerned with the psychological foundations, processes and consequences of the psychological regulation of sport related activities of one or several persons acting as the subject(s) of the activity.



The European Federation of Sports Psychology (1996)

Sports Psychology is a science in which the principles of psychology are applied in a sport or exercise setting.

Richard. H. Cox (2012)

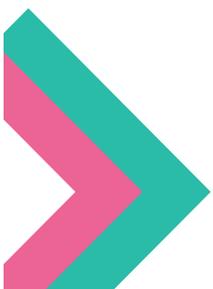
Sport and exercise psychology is the scientific study of people and their behaviours in sport and exercise activities and the practical application of that knowledge.

Weinberg and Gould (2011)

9.1.3 ROLE OF PSYCHOLOGY IN PHYSICAL EDUCATION AND SPORTS

The European Federation of Sport Psychology (1996) recognises three interrelated tasks for sport psychologists.

- **Research** – investigation into all aspects of the psychology of sport, both theoretical and applied.
- **Education** – teaching students, officials and athletes about sport psychology.
- **Application** – assessment of and intervention in psychological problems connected to sport. Sport psychology involves consulting to whole teams or counselling of individuals.





9.1.4 APPLICATION OF PSYCHOLOGY IN PHYSICAL EDUCATION AND SPORTS

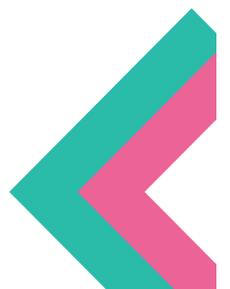
Many strategies and procedures are used to address problems faced by athletes and other sports participants. Some of the applications of psychological concepts and theories in physical education and sports are:

Cognitive and behavioural skills training for performance enhancement

Counselling and clinical interventions

Consultation and training

1. **Cognitive and behavioural skills training for performance enhancement** include
 - Concentration and attention control strategies
 - Goal setting
 - Imagery Training
 - Cognitive-behavioural self-regulation techniques
2. **Counselling and clinical interventions** include support for managing:
 - Athletic motivation
 - Over-training and burnout
 - Eating disorders and weight management
 - Substance abuse
 - Grief, depression, loss and suicide
 - Sexual identity issues
 - Aggression and violence
 - Athletic injury and rehabilitation
 - Career transitions and identity crises.
3. **Consultation and training** include
 - Team building Programmes for sports teams and organisations.
 - Sports organization consultations for behaviour economics





- Systems interventions with parents and families involved in youth sports participation
- Education of Physical Educators, Coaches and Trainers regarding role of interpersonal and leadership skills for talent development
- Education of Physical Education and sports professionals towards early identification and prevention of psychological difficulties.

9.1.5 IMPORTANCE OF PSYCHOLOGY IN SPORTS AND EXERCISE

A. Benefits of Exercise and Physical Activity:

- Physical Aspect:** (a) Exercise leads to improvement in physiological efficiency by conditioning the various systems in the body. It strengthens the cardiovascular and muscular systems and lowers the risk of many diseases. (b) It leads to anatomical growth and development. e.g., strong bones, lean body mass, strong muscular system. (c) Due to physiological and anatomical enhancement, there is improvement in motor performance. e.g., improved strength, speed and endurance.
- Cognitive Aspect:** The benefits of physical activity go beyond health and wellness of the body. Research suggests that physical activity positively impacts the brain and improves cognition, mood, attention, problem-solving abilities, strategic planning and academic achievement in students.
- Emotional Aspect:** Physical Activity provides positive feelings and counters negative moodstate, depression and anxiety because of increased engagement in recreational, health-related and competitive activities. Sports psychology enhances physiological capacities such as strength, speed, flexibility, etc. as motivation plays a major role in the enhancement of the physical capacity of sportspersons. Acute bouts or short duration of exercise are also beneficial, but chronic or regular exercise is required for maintaining long term benefits.

Extension Activity

1. Choose a sport or activity in which you regularly participate. Explain the motivational forces that have driven you when you have achieved your best.
2. Are the motivators you chose the same as for all your class mates? Why/why not?
3. Think of times when you have been anxious and nervous when facing a challenge. What strategies did you employ to overcome your anxiety? Do you think athletes utilize similar strategies? Why/why not?

Share your ideas with the class.

- Social Interaction:** Exercise as an activity provides opportunity for people to participate in both group as well as individual exercise programmes. e.g., participating in a team event, group exercise programme or an individual activity in a social structure. Group Exercise experience is pleasurable for participants; hence it is good for mental health and social wellbeing. However, choice of individual exercise is preferable and beneficial for people low in self-esteem or suffering from anxiety related to body image and physical self-concept. In addition, spectators and fans at a match or sports activity also bond socially.



- v. **Distraction Ability:** Exercise provides opportunity for distraction from the current mood state. Acute dose or short duration of exercise is helpful in reducing anxiety through the distraction ability of exercise; regular exercise has long term benefits.

Art Integration – WRITING A STORY

Choose an Indian athlete who has won a medal in the International arena – Olympics, Paralympics or Special Olympics. Research and write the story of the athlete highlighting the factors that made her/him succeed.

B. Psychological Advantages of Sports Participation

- i. **Life skills:** Sports participation and competitions help to develop sense, sensitivity and sensibility among participants which helps them to approach and tackle the issues and challenges of life with positivity.
- ii. **Developmental aspects:** Sports participation experience provides opportunity among the participants to develop social relationships including making friends and enjoying team atmosphere; it also helps in developing a spirit of healthy competition.
- iii. **Behaviour modifications:** Sports participation increases perceived competence and self-efficacy. Positive sports experience enhances intrinsic motivation.
- iv. **Cognitive and Motor Skill acquisition:** Repeated training and playing sports helps in:
 - improving attention deficit disorder
 - developing memory
 - developing reasoning ability
 - developing decision making skills

C. Performance enhancement of athletes





Developing athletes for prolonged participation in sports with optimal performance is always possible through various cognitive and behavioural intervention techniques and other psychological skill training methods along with goal setting principles. This helps in developing and maintaining psychological aspects influencing sports performance which include

- self-confidence and self-efficacy
- intrinsic motivation
- aggression management
- anxiety and arousal control
- stress management
- psychological response to injury and rehabilitation
- team cohesion
- leadership and communication

D. Exercise adherence through psychological interventions

Regular exercise is an essential component for a healthier lifestyle and the concept of following a culture of exercise and physical activity throughout life is appreciated uniformly across the world. However, there may be still a large population whose exercise level must be low or some of those who have begun exercise, but may not continue for long, and many who may lose steam in between. Psychological theories and research understand the determinants of exercise adherence and non-adherence to help participants maintain a lifelong commitment to regular exercise, and may also be used to identify potential drop outs.

I. Tick the correct option.

1. Psychology as study of behaviour was defined by
 - i. JB Watson
 - ii. Plato
 - iii. Skinner
 - iv. Pavlov
2. Who known as father of experimental psychology?
 - i. Wilhelm Wundt
 - ii. John B Watson
 - iii. Richard H Cox
 - iv. Sigmund Freud

II. Answer the following questions briefly.

1. Define psychology?
2. Define sports psychology?

III. Answer the following questions in 150-200 words.

1. In what ways could knowledge of sports psychology benefit athletes?



**9.2.1 CONCEPTS OF GROWTH AND DEVELOPMENT**

Growth and development of human beings is a natural process which brings changes in mental, emotional, social, physical and moral aspects of life. Growth and development are complimentary to each other for human wellbeing. However, growth is structural and absolute in measure with limitations in progression, while development is functional and coordinate with various systems of the body through life. Growth and development are processes common to all, intimately linked with each other in time and space but practically independent of each other.

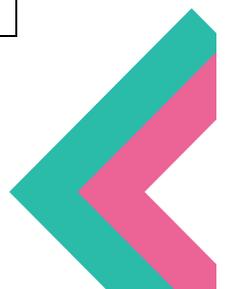
Both are, however, interrelated with genetic and environmental factors and modifications.

In Psychology, growth refers to the changes in physical aspects in terms of size and shape, whereas development is multi-dimensional in approach which refers to all types of changes.

Changes in height, weight, size of body, organs are referred to as growth, on the other hand, development refers to changes in behaviour, intellect, emotional or social aspects of life.

9.2.2 DIFFERENCE BETWEEN GROWTH AND DEVELOPMENT

Elements	Growth	Development
Meaning	Growth refers to change in size	Development refers to change in ability
Process	Growth is non-continuous and limited	Development is lifelong
Measure	Growth is quantifiable and measurable with objectivity	Development is qualitative in nature and subjective in assessment
Variables	Growth refers to increase in physical variables like height, weight etc.	Development refers to increase in skill and functions
Nature and Aspects	Growth is related to physical aspects	Development is related to mental, social, emotional aspects
Direction	Direction of growth can have positive or negative values	Direction of development is always positive
Progression	Growth is structural and absolute, can have spurts	Development is progressive and sequential
Learning influence	Growth is not affected by past or new learning	Development is affected by past and new learning and experiences





The term “Growth and Development” is many times used interchangeably in the field of Psychology and Sports, as also in various other areas like Education etc., as they are interrelated and are dependent on each other. It is essential to understand the difference between the two terms from various perspectives for holistic understanding of an individual and for wider opportunity to exploit the potentials of an individual. In physical education and sports, the term growth refers to change in quantity, size and shape of an object or individual e.g., height, weight etc. whereas the term development refers to change of quality in ability to perform, move, think, feel etc. In sport for example, quantitative change in height of an athlete refers to growth whereas change in the ability and performance skills or change in cognitive abilities and changes in emotional aspects are reflections of development. One of the major differences between growth and development is in its process – growth aspects are non-continuous and limited whereas development is a never ending and lifelong process. Most of the social, mental and emotional aspects are developmental in nature and are, therefore, progressive and sequential. Thinking ability, group cohesion, aggression control etc. are abilities and functions that are affected by past and new learning experiences and are considered as developmental elements. The term development applies to the changes that have a direction and hold definite relationship with what precedes it, and in turn, will determine what will come after. On the contrary, progress of growth elements is visible but may not be influenced by past or new learning.

9.2.3 CONCEPTS OF GROWTH AND DEVELOPMENT IN SPORTS AND PHYSICAL EDUCATION

Concerns

Physical educators and coaches need to be aware that children grow at different rates through varying stages of development. These stages are physical, emotional and mental and impact all areas of a child’s academic and athletic life. Sport readiness will vary from child to child and coaches need to be aware that it is not enough to assume every child reaches a certain stage of development at a given age.

Children who participate in Programmes that are beyond their developmental capabilities can suffer injury, discouragement and disappointment, leading to their giving up sports altogether. It may also result in their developing wrong techniques, thereby hindering technical skill advancements.

Extension Activity

Identify people who have participated in a variety of physical activity challenges — for example, rock climbing, skydiving or rafting. Interview or write to these people to find out how such challenges influenced their physical, social and emotional development.

- Which physical activity/activities did you find challenging?
- Why were they challenging to you?
- How did you prepare yourself to meet these challenges?
- Have you changed since participating in these activities? How?



- How have you benefited physically from these challenges?
- What were the social benefits, if any, of participating in these activities?
- What were the emotional benefits of participating in these activities?

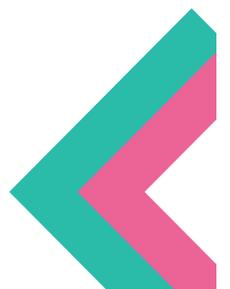
Share your findings with the class.

9.2.4 APPLICATION OF PSYCHOLOGY IN AN ATHLETE'S GROWTH AND DEVELOPMENT

For the reasons given above, it is important to introduce sports to different age groups with equipment variations, length of time spent playing and practicing, avoidance of specialization and changing the focus of sports from competition to fun, and to create transition or developmental sports models to facilitate easy transition of athletes from recreational sports to professional sports without pushing them towards dropping out of sport altogether.

Therefore, it is essential to provide :

1. scientific knowledge of different developmental stages related to physical, cognitive, emotional, and social aspects to sports and physical education professionals.
2. facilitation of social and emotional growth to athletes through a supportive and positive sporting experience, which will encourage a lifelong participation in physical activity. The following aspects are important for consideration:
 - awareness about social influences acting on young athletes, both positive and negative e.g., drugs and alcohol.
 - tailor detailed explanations of tactics, skills and rationales to suit the age appropriate development of athletes.
 - Athlete support system to help build realistic and achievable goals during different stages of growth of development.
3. understanding about emotional outbursts due to frustration, when learning new skills, and hormonal mood swings during adolescence.
4. understanding about factors creating anxiety among adolescents that may negatively affect performance.
5. providing all athletes with responsibility and age appropriate leadership opportunities as student athletes mature. This can be achieved by
 - understanding athletes, recognising the importance of independence and personal responsibility and providing the same understanding to the athletes.
 - giving athletes opportunities to run part of practice sessions and participate in the decision-making process regarding team policies.





I. Tick the correct option.

1. Which of the following is an aspect of growth?
 - i. Intelligence
 - ii. Emotion
 - iii. Height
 - iv. Leadership
2. Growth refers to
 - i. change in emotion
 - ii. change in physiology
 - iii. change in ability
 - iv. change in maturity

II. Answer the following questions briefly.

1. Define Growth and Development?
2. Discuss the importance of Growth and Development in Sports?

III. Answer the following questions in 150-200 words.

1. Differentiate between Growth and Development?
2. Describe various elements of growth and development?.

9.3.1 CHARACTERISTICS OF GROWTH AND DEVELOPMENT

Growth and development are multidimensional requiring integration and coordination between the various aspects. To understand the growth and development of an individual, it is helpful to understand the four main areas of development.

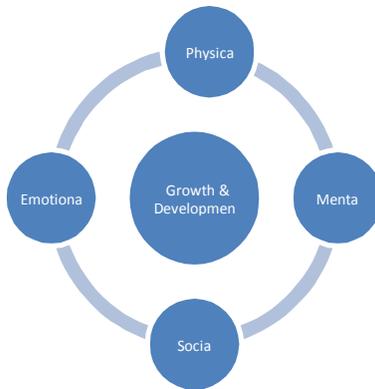


Figure-1: Schematic illustration of the interaction between the four main areas of development

S. No.	Areas of Growth and Development	Characteristics
1.	Physical	height and weight
2.	Mental	thinking and understanding
3.	Social	interacting with others
4.	Emotional	feelings and attitudes



As is illustrated in Figure 1, the overall development of an individual is influenced by a constant interaction between the four areas of development. Growth and development of an individual is the result of interaction between physical, mental, emotional as well as social aspects of development.

What is physical development?

Development of physical aspects includes of the various physiological changes occurring to an individual starting from birth till death. Measurement and assessment of physical aspects of development includes factors such as height, weight, strength, flexibility and other motor abilities. Changes in body composition due to change in age influences various other aspects of development. Most of the physical developments are quantifiable and measureable in terms of size, shape and weight, therefore have standard tools to assess them. With the change in age, there are observable changes in physical aspect which have a structure and pattern. Any deviation from the patterns of growth associated with that particular age group or gender can be identified and diagnosed and remedial measures can be applied. Various aspect of physical development may have stagnation after certain age, whereas spurts are also observable at particular stage of growth.

What is cognitive development?

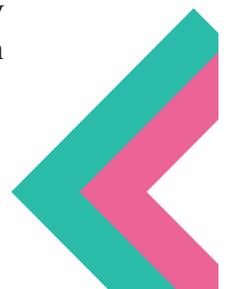
Cognitive, or its extended term mental development, is an essential aspect of an individual's development. It includes abilities such as memory, perception, language, information processing, and thinking which influence decision-making abilities. According to change in biological age, these abilities keep changing along with growth and maturation. There is a general pattern of mental development, but each individual develops their mental abilities in a unique pattern which is influenced by genetic factors, social environment and experience available to an individual during different stages of growth. The important aspect about cognitive aspect is that, all the abilities are inter-related and they develop as a unit.

What is social development?

Social development refers to the aspects wherein an individual interacts with the society and which results in development in various aspects of an individual at different stages of life. Social development is also the ability to communicate effectively with the members of the society and to observe societal norms of the community according to one's age group. Appropriate social behaviour consists of being able to get along with members of the society, as well as showing respect for societal rules and understanding one's roles and responsibilities. The development of social aspects are affected by various stages of growth, thus different varieties of social skills are reflected by individuals.

What is emotional development?

Emotion refers to responses consisting of physiological reactions and expressive behaviours which may be subjective in nature. Emotional development is part of a person's personality development and it refers to the ability to express and control one's emotions. It includes control over psycho-physiological reactions of the body with respect to the conditions, environment and situations surrounding them. From





childhood to old-age, individuals acquire new skills to manage feelings and emotions as it is highly affected by the environment and conditions around an individual. A wide variety of emotions are expressed by individuals at different stages of growth and display. Age and gender along with quality of emotional experiences are major factors affecting the emotional decisions an individual.

9.3.2 STAGES OF GROWTH AND DEVELOPMENT

Change is the one inevitable thing in life. Change could be visible, as in physical aspects, involving weight, height gain or muscle and fat mass reduction and increase etc., or it could be related to cognitive abilities, i.e., the ability to understand, the emotional ability to respond to different stimuli, or the ability related to social aspects and the capability to choose groups and individuals, or the ability to evaluate the moral aspects and to value and respect people and happenings with rationale regarding ethical and moral principles. These changes are commonly described according to various stages of development based on different age groups. If we observe the behaviour of people living around us, we see they are not similar in their behaviour. Most of the changes or differences are because everyone is in different stages of development. The developmental stages are considered to be temporary and consist of characteristics which are dominant at a particular stage. Individuals differ with respect to time and rate of development, but they are expected to attain these developments within their stages. Thus, these accomplishments become social expectations which are known as developmental milestones.

It is interesting to understand that certain milestones or characteristics are acquired easily whereas certain skills or milestones become difficult to acquire within a specific stage.

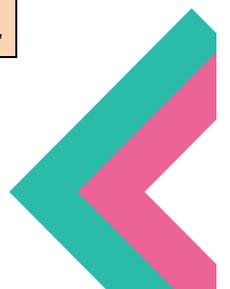
From the perspective of physical education and sports, these changes influence participation and performance in physical activities, exercise and sports. Therefore, a detailed understanding of the changes which occur at different age groups or different stages of growth and development is very essential and critical for optimal growth and development of an individual.

While there is no consensus in classification of different stages of growth and development, broadly speaking, the stages of human life span can be divided into:

- Infancy (birth to age 2)
- Childhood (2-11 years)
 - Early childhood (2 to 6 years)
 - Middle childhood (6 to 11 years)
- Adolescence (11 years to about 20 years)
- Adulthood (20-65 years)
 - Young Adulthood (20 to 40 years)
 - Middle Adulthood (40 to 65 years)
 - Late Adulthood (65 years and above)



Stages	Developmental milestones
Infancy : 0-2 yrs	<p>Physical: The child's body weight increases to almost triple the birth weight, and increase in height is about one-third during the first year alone. Growth of brain size is also rapid during first 18 months.</p> <p>Linguistics: Children start developing language ability and learn through their sense organs. They explore the world in their own ways and express their intellect by making various sounds like gurgling, cooing, etc.</p> <p>Social & Emotional: Expressing joy, anger, sadness is achieved by 6 months.</p> <p>Motor skills: The infant first controls his head and trunk, then lift his chest, sits upright, crawls, creeps, stands with help, stands holding some objects and starts walking.</p>
Early Childhood: 2-6yrs	<p>Physical: The child develops athletic appearance and loses baby chubbiness. Brain and head grow rapidly during this period.</p> <p>Cognitive: The child develops ability to classify objects, people and events. They are imaginative, animated and create their own hypothetical world. Psycho Social: He/She is able to express his/her feelings and emotions and communicate needs and feelings with others.</p> <p>Linguistic: The child develops the ability to speak in complete sentences. Motor skills: The child has better control of his/her physical movement and can have better coordination of body parts.</p>
Late Childhood (Pre-Adolescence) 6-11yrs	<p>Physical: There is an increase in strength as body parts become stronger.</p> <p>Cognitive: By this age children develop concrete thinking abilities, in which they develop ability to think logically and use mental operations to solve problems. However, they still lack abstract thinking ability.</p> <p>Psycho Social: The child develops gender identification and social comparison to identify themselves from others.</p> <p>Motor skills: They have developed the ability to use body parts with appropriate speed.</p>
Adolescence (11-20 years)	<p>Physical: Boys and girls develop height, weight, muscles and achieve maturity but in growth is in spurts. The onset of this stage is marked by the onset of puberty.</p> <p>Psycho Social: At this stage boys and girls are argumentative and they have a tendency to find fault with the authority figures. They are self-conscious and influenced by their peer</p>





	group. Cognitive: Boys and girls become innovative and take great interest in learning various skills. They also develop the ability of abstract thinking. Motor: They develop strength, speed, endurance, flexibility, coordination at a rapid rate.
Early Adulthood (20 -40)	By the time they reach adulthood, individuals are responsible, mature, self-supporting and well-integrated into society.
Middle Adulthood (40-65 years)	This period is characterised by strong social networking, relatively stable personality, and life is dominated by work and family.
Old Age (65 and above)	This period is marked by decline of health and faculties, and individuals often plan to retire. It is marked by inactiveness and people are prone to various physical limitations.

Infancy: This stage of infancy starts from the time child is born and extends till the age of two years. Physical aspects develop at a rapid rate, especially increase in body weight and height during this period and the infant gains three times its body weight during the first year alone. There is also a rapid growth in brain size during the first two years. According various research, the brain size of a two year old is found to attain 55% of its adult size, whereas at around six years of age, the child brain attains 90% of the adults size. An new born infant does have reflexes and sensory capacities to help him interact with the environment from the moment of birth. All healthy babies are born with certain reflexes, or inborn automatic responses to particular forms of stimulation. These reflexes are essential for survival and can the infants to survive until it is capable of more complex behaviours. Children at this stage start developing language ability and start learning through their sense organs and explore the world in their own ways. They also start expressing themselves by making various sounds like gurgling, cooing, etc and by smiling. Newly infants are found to be emotional, but during this stage they have no control over their emotions. When they attain the age of six months, they reflect psycho-social development through activities like expressing joy through laughter, or anger and sadness through crying. Motor development in infants is reflected through the initial control of head and trunk, followed by lifting their chest, sitting upright, crawling, creeping, standing with help and walking. By the age of two years, a child is able to walk up and down stairs and kicks aball.

Early Childhood: This (2-5 years) is the phase post-infancy, wherein changes inphysical appearance occur as the child loses the chubbiness associated with infancy. Brain develops rapidly and the child has better control over his/her physical movements along with improved coordination of his/her body parts. Psycho-social development involves development of feelings, emotions and the ability to communicate their needs and feelings with others. Cognitive ability develops rapidly and the child can count, name colours, and can also make few decisions on their own, such as choosing an outfit to wear. Basic time concepts and sequencing (e.g., before and after) are understood at this age group. They do start enjoying use of humour in



stories and are able to predict what next in the stories they listen. Because they can think symbolically, they enjoy pretend play and inventing elaborate characters and scenarios. Curiosity toward new and unknown is one of the reflective elements of mental development occurring during this stage of growth. According to Jean Piaget's theory on cognition, 2–3 year olds are described as egocentric, meaning that they do not have an awareness of others' points of view. Whereas, children between 3 and 5 years old can understand that, people have thoughts, feelings, and beliefs that can be different from their own. Cognitive abilities to classify objects, people or events are developed along with qualities of being imaginative, animated and creative by being in their own hypothetical world. They have a well-developed language ability and are able to say full sentences, and sing songs and recite rhymes from memory.

Late Childhood: Between 6-11 years, physical development can be seen in an increase in strength as the body becomes stronger. However, there are often fluctuations in physical development between children. One child can be in a completely different growth phase than another child who is the exact same age. The disparity in physical development may continue well into adolescence, when growth patterns even out. Physical growth and development supports motor development and the individual can train at appropriate speed and intensity. Psycho-social development plays a major role as child develop gender identification and initiates social comparisons to identify him/herself from others. Child develops cognitive abilities through development of ability to think logically and use mental operations to solve problems, but lacks abstract thinking.

Adolescence: Adolescence is an important stage of growth and development wherein an individual goes through a transition from childhood to adulthood due to which a large amount of physical, mental, social and emotional changes occur at a very rapid pace along with physical growth spurts. The term adolescence is derived from the Latin word *adolescere*, meaning to grow up. Adolescence is a transitional stage of physical and psychological development that generally occurs during the period from puberty to legal adulthood. While adolescence is marked with onset of puberty, it is usually associated with the teenage years. However, its onset may vary from individual to individual due to physical, psychological or cultural variations and may begin earlier and end later with individuals. Also, boys generally attain puberty around 12-13 years of age, whereas, girls attain puberty at a much younger age of 10-11 years. Boys indicate attainment of puberty through appearance of whiskers whereas in girls the onset of puberty is identified by the beginning of menstruation. Adolescent boys and girls develop height, weight, muscle mass and bones at a high rate of maturity but with growth spurts, due to which motor development is also rapid. Puberty occurs due to various hormonal changes during this stage of development. Hormones like testosterone among boys and oestrogen among girls are released during this stage for helping puberty development, and are closely associated with various emotional or psycho-social behaviours among both boys and girls. Adolescents tend to be more argumentative and have a tendency to find fault with the authority figures. Self-consciousness and increased influence of peer group are common scenarios during this stage of development. Aggression and depression are closely associated among adolescents leading to various issues of juvenile delinquencies which will be discussed in the later part of the chapter. Parents, school, and society have to play a positive role





and strengthen relationships for optimal development of adolescents. Since adolescence results in various changes in their appearance and abilities, adolescents develop various cognitive aspects like becoming more innovative and taking an interest in learning various skills with enhanced involvement. They develop abstract thinking ability wherein they start creating their own understanding of the world as they start accumulating knowledge through interaction and apply the learned concepts to new tasks.

Adulthood: An adult is someone who is responsible, mature, self-supporting and well-integrated into society. Since all characteristics and attributes do not develop in all individuals at the same time and at the same rate, so to understand this stage better, its further divided into two sub- stages as “early adulthood” and “middle adulthood”. In early adulthood stage, development of physical health, strength and energy is at the peak and sensory and motor systems are at their peak. Physical characteristics are reflected through weight gain and height increase, whereas psychosocial development is reflected through family-oriented behaviours and commitment towards relationships. This stage is also marked with choices regarding career options, selection of lifestyle etc. Middle adulthood is a later stage reflecting gradual decline in physical abilities, efficiencies and motor components. Women in this stage go through various hormonal changes which results in menopause. This stage reflects relatively stable personality and strong social networking as are largely well-settled as responsible individuals and citizens.

Developmental Characteristics and Stages of Growth and Development: A Sports Model

In sports, an athlete’s growth and development at different stages of life is an essential component to be considered while planning training, selection of activity, grouping of athletes according to abilities etc.

The growth and development stages of athletes can be grouped into four categories:

- *below 9 years* Fun Phase
- *10-12 years* Foundation Phase
- *13-15 years* Formative Phase
- *16-19 years* Final Phase

By identifying and understanding the main characteristics of each of these developmental stages, athletes’ needs can be better taken care off.

Key Features

Fun Phase: Below 9

Elements	Physical	Motor Skill	Cognitive	Psycho-social
Characteristics	Slow but steady increase in height and weight	Learns basic motor skills	Short attention span.	Sensitive to criticism



Teaching/ Coaching Pedagogy	Add minimal physical conditioning	Plan fun-oriented activities to develop motor skills	Add variation and variety in drills	Create stress free atmosphere
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Foundation Phase: 10-12 years

Elements	Physical	Motor Skill	Cognitive	Psycho-social
Characteristics	Growth spurt and changes due to puberty	Motor skill development at different rate	Increased perception and Logical	<ul style="list-style-type: none"> • High Self-Confidence • Tendency to self-evaluate and compare one self with others
Teaching/ Coaching Pedagogy	Plan low intensity physical conditioning	Focus on skill refinement and development	Introduction of Small Sided Games (SSG); Allow guided discovery	Avoid winning and losing; Give positive feed backs

Formative Phase: 13-15 Years

Elements	Physical	Motor Skill	Cognitive	Psycho-social
Characteristics	Physical and hormonal changes	Increase in adaptation	Development of ability for abstract thinking	<ul style="list-style-type: none"> • Sensitive to peerpressure • High level of criticism • Self-centred
Teaching/ Coaching Pedagogy	Plan Training at match speed Add fitness component	<ul style="list-style-type: none"> • Practise in Real match situations • Add tactics and Strategy 	Schedule long and intense playing hours	Allow increased decision making



**Final Phase : 16-19 Years**

Elements	Physical	Motor Skill	Cognitive	Psycho-social
Characteristics	All round development (Automatic capacity). Specified gym drills prerequisite	Autonomic phase of skills acquisition	Abstract reasoning skills	<ul style="list-style-type: none"> • Emotional autonomy • Able to take positives/negatives
Teaching/ Coaching Pedagogy	Prepare for High intensity match- related drills	Develop Motor perceptual abilities; Develop tactical and actual game scenarios.	Involve and allow decision making during scheduling of training	Assign Individual roles and responsibilities

The phases may differ slightly between males and females as females tend to mature more quickly than males, thus reaching adolescence at an earlier age.

I. Tick the correct option.

- Infancy stage is for the age group
 - 2-6 years
 - 6-11 years
 - 11-20 years
 - 0-2 years
- Change in memory and perception are indicators of
 - social development
 - physical development
 - mental development
 - emotional development
- Peer interaction and relationship reflects
 - group dynamics
 - physical growth
 - moral values
 - emotional development

II. Answer the following questions briefly.

- Define concepts of Growth and Development?



2. Explain characteristics of Growth and Development?
3. Which type of activities can be undertaken in early childhood? Why?

III. Answer the following questions in 150-200 words.

1. Discuss the developmental characteristics of early childhood and their impact on learning.

9.4.1 ADOLESCENT PROBLEMS AND THEIR MANAGEMENT

Adolescence as defined by WHO includes individuals between the age group of 10-19 years, a period of transition from childhood to adulthood. It is marked by the onset of puberty, which now occurs earlier, on an average, than in the past. This age group is considered critical because it marks the developmental transition of an individual from childhood to adulthood, which involves physical, psychological, social and neuro developmental changes.

Raman is a 14-year-old who has just entered Class 9 in his Secondary School. He has noticed that his body is going through some physical changes. As a result, he has become self-conscious about his physical appearance. He has also begun taking measures to insure more privacy at home. For example, he locks the door every time he enters the bathroom, and he always takes his phone calls in his room with his door closed. He also values his relationships with his friends and has begun spending more time with them. He started valuing his freedom, thus gets aggressive or irritated with restrictions by family members on certain tasks. His parents understand the behaviour changes, thus creating space for him at home and listening to his thoughts and ideas. They involve him in sports and outdoor activities to channelize his energy. Raman's behaviour and physical changes are common during adolescence.

Adolescence stage is a critical time of life, when a child transforms into an independent individual, develops new relationships, enhance social skills and acquires behaviours which will be everlasting throughout life. Due to these various changes, adolescents need explicit attention and support to help them contribute positively to society.

Physical growth and development during adolescence is marked by changes in height and weight, body composition, skeletal mass, and sexual maturation. The biological changes during adolescence that occur due to the onset of puberty, mark the transition of the child into an adult. The growth spurt associated with puberty, which results in physical and hormonal changes is also marked by remarkable changes in energy levels, thus developing in the individual a strong recognition of personal identity, moral and ethical value sets, and a feeling of self-esteem. The hormonal changes are linked to the cognitive and psycho-social changes, wherein adolescents develop stronger reasoning skills, logical and moral thinking, and become more capable of abstract thinking and making rational judgements. This stage of adolescence surely creates opportunities for significant developments because of wide chronological age range, but it also creates space for dissatisfactions too, thus creating turbulence in the adolescent which can be reflected in behavioural as well as





emotional aspects. They are exposed to a variety of substance abuse like tobacco, drugs etc. They face greater risk of violence and can experience different types of emotional drainage leading to depression and suicide tendencies.

Do you know?

Adolescent health
Coming of age: adolescent health



24 September 2018 -- The world now has more young people than ever before -- of the 7.2 billion people worldwide, over 3 billion are younger than 25 years, making up 42% of the world population. Around 1.2 billion of these young people are adolescents aged between 10 and 19 years. Adolescence is a critical time of life. It is a time when people become independent individuals, forge new relationships, develop social skills and learn behaviours that will last the rest of their lives. It can also be one of the most challenging periods. "Coming of age" examines these issues facing adolescents.

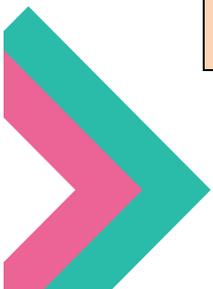
[Read "Coming of age"](#)



9.4.2 SUB-STAGE OF ADOLESCENCE

To understand the psycho-social and cognitive developments and concerns, it is suitable to review the three sub-stages or periods of adolescence presented by Ingersoll (1992) as early adolescence (10-14 years), middle adolescence (15-17 years), and late adolescence (18-21 years).

Psycho-social Processes and Substages of Adolescence				
Substage	Emotionally Related	Cognitively related	Socially related	Morally related
Early Adolescence	Adjustment to a new body image; adaptation to emerging sexuality	Concrete thinking; early moral concepts	Strong peer effect	Pre-conventional
Middle Adolescence	Establishment of emotional separation from parents	Emergence of abstract thinking, expansion of verbal abilities and conventional morality;	Increased health risk behaviour; sexual interests in peers; early	Conventionally moral





		adjustment to increased school demands	vocational plans	
Late Adolescence	Establishment of a personal sense of identity; further separation from Parents	Development of abstract, complex thinking; emergence of postconventional morality	Increased impulse control; emerging social autonomy; establishment of vocational capability	Post-conventional moral

Source: Adapted and reprinted from Ingersoll GM, Psychological and social development. In: McAnarney E. Textbook of adolescent medicine © 1992, with permission from Elsevier.

Extension Activity

Answer the following questions.

- How important is it for you to be accepted by your peers?
- What are some situations in which you have, or someone you know has, experienced peer pressure?
- Why do you think it's so difficult to withstand peer pressure?
- What would you do if one of your friends began pressuring you to do something you didn't want to do, or didn't approve?
- If someone were consistently trying to pressure you to do something you were uncomfortable with, would you consider that person a friend? Why or why not?
- Why do you think peer pressure is so often associated with negative behaviour?
- What are some ways to avoid negative peer pressure?
- Is there positive peer pressure?
- What are the ways in which friends could have a positive influence?

Share your views with the class.

Early Adolescence (10-14 yrs) is the initial stage wherein a child like Raman starts adjusting to the rapid body changes and adapts to sexual changes. This stage is very suitable for cognitive development, the child develops concrete thinking, and an ability to understand the perspective other than their own. They also fall short of problem-solving skills related to behaviour modifications. They develop early moral concepts about there being just no one right view, instead there can be different opinions regarding similar concerns. At this stage, a strong peer effect is also reflected through development of relationships among peer group/ friends and admiring celebrities.

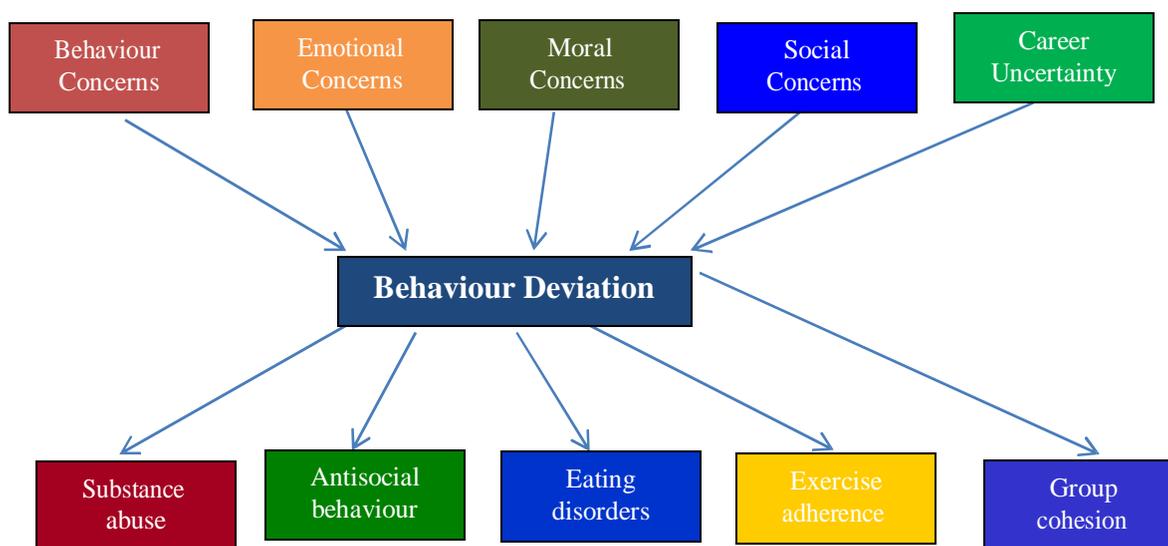




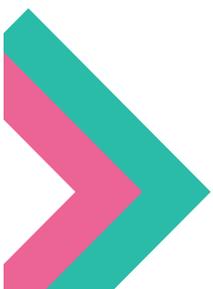
Middle adolescence (14-17 yrs) is the stage wherein puberty has passed, thus creating a consciousness in the adolescents about their physical appearance and sexual attractiveness. This stage is very critical, as it establishes emotional separation from the parents and a desire for being independent and need for space. This period is also marked by development of abstract thinking, ability to use verbal communication effectively, and development of conventional morality. With the development of conventional morals, importance of peer pressure and peer acceptance and approval increases. They start focusing on maintaining social order but will surely like to match their behaviour with their beliefs by trying the things which they consider as “bad”. Due to this, individuals in this age group are prone to engage in social problems including addiction to smoking, drug abuse and other health-risk behaviours.

Late adolescence (17-19 yrs) is the stage where the adolescent develops a personal sense of identity as the biological development concludes for most. Thus, he/she is now better able to cope with situations of peer group pressure, body imaging and behaviour impulses. They move on from concrete thinking to abstract thinking which prompts them to set their own moral guidelines without any need for social acceptance. This stage is also marked by increased behaviour control, consistency and stability leading to creating space for themselves within the society.

Adolescence Problems



Adolescence problems: When various problems like behaviour issues, emotional problems, moral dilemmas, social concerns along with career uncertainty combine together, they create behaviour deviations among the adolescents and raise concerns and problems among the society members at home, at school, in the sports teams etc. These behaviour deviations lead to problems such as substance abuse which have negative effects on health, developing of eating disorders leading to anorexia nervosa or bulimia nervosa, indulging in anti-social behaviour due to aggression and anxiety, non-adherence to outdoor activity, sports and exercise. The various types of concerns associated with adolescence at different stages are to be understood and supported by family, friends, teachers, coaches, relatives in accordance to the needs and demands of the individual. Any deviation in any of the mentioned aspects of the adolescent leads





to different types of problems which need appropriate understanding and management.

The problems associated with adolescence due to behaviour deviations can be many, but a few major issues along with their management are discussed below.

1. **Substance abuse** is one of the major concerns among the adolescence. It is behaviour that is neither ethical nor socially acceptable. Drugs have addictive properties, and have lethal effects on health. Alcoholism, smoking, drugs etc attract the adolescence age group due to peer pressure and various other factors.

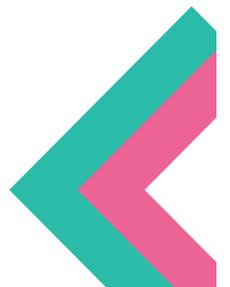
Management: The issues related to intervention include a combination of cognitive and behaviour techniques.

- The **cognitive techniques** include expression of concern for individuals by coaches and parents, setting limits on unacceptable behaviour and developing behaviour policies for class, team or group.
 - The **behaviour techniques** include involvement of peer for transfer of accepted behaviours, engagement of individuals during free time through participation in sports, exercise, recreation or any outdoor or indoor activities for constructive modification.
2. **Eating Disorders** are the result of various psychological aspects like anxiety, depression etc. due to which the adolescent develops eating disorders like
 - a. **Anorexia nervosa** which is reflected in bizarre eating patterns and habits like unusual starvation due to social or physique anxiety for weight loss
 - b. **Bulimia Nervosa** which is presented by binge eating patterns due to depression and other psychological fluctuations.

Eating disorders can be found among addicted exercisers when they stop exercising, start dieting and develop anorexia or bulimia due to depression, and in females especially, who develop consciousness towards physical appearance and sexual appearance.

Management: These issues concerned with eating disorders can be managed through two essential processes

- **Diet Awareness** is essential towards management of eating disorders. It can be done through promotion of awareness about dietary habits among the adolescents at various levels including at school, home, residential organizations and at community events involving adolescents.
 - **Promotion of Fitness:** Physique and physical appearance have no substitute other than exercise and physical activity along with a healthy diet pattern. Promotion of fitness activities and participation in sports or outdoor activities need to be facilitated at all levels of community interaction opportunities.
3. **Anti-Social Behaviour** is a prominent pattern reflected among the adolescents due to the psychological turbulence happening along with sudden spurts of physical changes during adolescence when not adequately supported by the





community and associated members. Issues of aggression have a larger impact on the adolescent due to change in cognition abilities.

Management:

Catharsis: Aggression can be regulated through fulfilment or discharge of negative feelings, or catharsis. Individuals should be given an opportunity to speak and express their emotions, as suppressing of emotions and provision of opportunities for adolescents to share their thoughts along with their peer group.

Circular Effect: Aggression has a circular effect, as one act of aggression leads to another. Therefore, there is a need to break the circle so that it is not repeated again. Ideal recommended style to break the circle is through positive reinforcement.

Management:

- Break the violence cycle as soon as frustration is reflected i.e., aggressive behaviour of seniors is reflected on juniors or of one player on another.
- Provide space for players to speak and express their opinion and the manager/coach must listen to it positively.

4. **Exercise Adherence:** With the growth in physical aspects and development in social, mental, cognitive aspects in adolescence, energy channelization is essential for cohesive development. Participation in outdoor and indoor activity along with participation in sports and exercise is essential for lifelong learning towards wellness. Dropout rate from participation of sports and exercise is a common reflection among the adolescence. The general reasons identified for the dropouts are:

a) **Intrapersonal Constraints:**

- (i) Lack of fun and enjoyment or getting bored;
- (ii) Low perceptions of physical competence;
- (iii) Low intrinsic motivation and high stress level;
- (iv) Negative feelings towards team or coach;
- (v) Anxiety and nervousness due to excessive criticism.

b) **Interpersonal Constraints:**

- (i) Family or peer pressure;
- (ii) Social priorities;
- (iii) Excessive alternate opportunities;

c) **Structural Constraints:**

- (i) Time available for training;
- (ii) Sports related injuries;
- (iii) Financial feasibility;
- (iv) Insufficient facilities and infrastructure;
- (v) Overuse/Burnout;



Adherence Management: Support of family, teachers, coaches, trainers is essential towards helping adolescence towards exercise adherence as an essential component towards life.

Adoption	Maintenance
<ul style="list-style-type: none"> • Access to facility and time • Self-motivation • Social influence • Self-efficacy • Behaviour coping skills 	<ul style="list-style-type: none"> • Knowledge about importance of healthy life style, exercise and sports • Positive attitude towards exercise and sports • Confidence to succeed in vigorous exercise Programme/sport

Group Cohesion: Belonging to a peer group is a key need for an adolescent, which can be dynamic in both structure as well as process. Group cohesiveness and its norms help to facilitate the group to achieve more than individuals would be able to on their own. The purpose of a group is towards bringing a change along with providing support and insight into either the individual, the group as a whole, or the environment. Working in groups may well encounter internal problems and conflict at certain stages, but with effecting group functioning strategies, they provide a positive and supportive environment to develop and learn new interpersonal skills. *Teams* are special kinds of groups, members of teams often have complementary skills and are committed to a common goal or purpose and they are mutually accountable for their activities. In teams, there is a positive synergy attained through the coordinated efforts of the members.

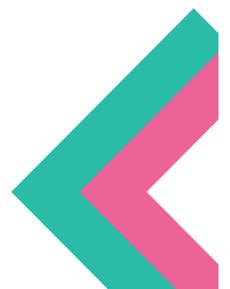
Group Management:

a. Goal Setting

- i. Set teams goals and take pride in their accomplishment.
- ii. Each player must be aware of their roles and make them believe it is important
- iii. Take time to learn something personal about an individual

b. Avoid formation of cliques

- i. Promote regular meetings and interactions
- ii. Positive encouragement on losing and avoiding public punishment
- iii. Avoid personal prejudice or scape goats usage
- iv. Provide equal opportunity
- v. Focus on maximum transparency
- vi. Develop team drills and activities to promote team cooperation
- vii. Highlight areas of success even during failure.





I. Tick the correct option.

1. Rajita regularly binges on large meals. She then makes herself vomit and follows up with two hours of exercise. Rajita is most likely suffering from which eating disorder?
 - i. Toxaemia
 - ii. Obesity
 - iii. Bulimianervosa
 - iv. Anorexianervosa
2. Which of the following is the age group for Early Adolescence?
 - i. 6-9 yrs
 - ii. 10-14 yrs
 - iii. 14-17 yrs
 - iv. 17-19 yrs
3. Which one of the following is NOT a problem related to adolescence?
 - i. Eating Disorder
 - ii. Substance Abuse
 - iii. Anti Social Behaviour
 - iv. Lack of Language development

II. Answer the following questions briefly.

1. Define Adolescence as per WHO?
2. Explain the different stages of adolescence?
3. List some of the problems of adolescence.

III. Answer the following questions briefly.

1. Describe various adolescence problems? How can they be managed?

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