

NAKSHALBARI COLLEGE
DEPT. OF PHY. EDUCATION

TOPIC- SPORTS PSYCHOLOGY

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SPORTS PSYCHOLOGY

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**GROWTH
AND
DEVELOPMENT
THROUGH
PHYSICAL
ACTIVITY**

GROWTH

The term growth is used in a limited way to refer to increase in size and weight, becoming larger and heavier. We speak of growth of muscles, growth of skeleton, growth of the brain, and growth of the body in general. Growth can be viewed as physical changes that occur from conception to maturity. Term growth is generally used to indicate a growing that causes increase and enlargement. The heart grows and becomes bigger, the bones become longer, thicker and heavier.

Meredith, an authority on physical growth, has defined growth as "the entire series of anatomical and physiological changes taking place between the beginning of the prenatal life and the death"

DEVELOPMENT

Development indicates that there is an advancement, more enfoldment, progressive changes, and a going forward to greater maturity. The term development means a progressive series of changes that occur in an orderly, predictable pattern as a result of maturation and experience.

Development refers to both qualitative and quantitative changes. It can be viewed as a progressive series of orderly, coherent changes. But it will not be appropriate to restrict the meaning of development only to the gains or additions. Indeed, the development is a complex process of integrating many structures and functions, involving both positive and negative changes gains and losses-occurring in every phase of life. Biologically, development does involve growth in early life. The simple model of most of the modern development means more development scholars.

- Jumping rope
- Playing on the playground
- Dancing
- Gymnastics
- Hiking
- Soccer
- Tag games

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Benefits from regular exercise or physical activity

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- Releases tension

1. Prenatal stage

The Zygote is a single cell. It is very small like a pin-head and remains so for the next 24 hours after which it begins to accelerate slowly. During the next two weeks it becomes attached to the uterine wall and this process is termed as embryo. This stage is marked by differentiation of mass cell into three layers, Ectoderm, Mesoderm and Endoderm.

The Ectoderm, or the outer layer, grows into skin, oral, nasal and anal passages, nervous system, eyes, ears, tooth and salivary glands.

Mesoderm, the middle layer, grows into skeletal, muscular and connective tissues, kidneys, uterus and part of urinary bladder vascular system, and blood.

Endoderm, the inner layer, develops into lining of digestive system and specialized cells of thyroid and parathyroid glands. At this stage the traces of various organs of the body start emerging.

Growth at this stage is quite rapid and after about six weeks time starts the foetus stage. During foetus stage, the pace of growth further accelerates with gains in weight, and the muscular and nervous systems grow rapidly. After about three months periods the child is able to make some movement-turning head, moving feet and wrist. By the fifth month sex organ start developing. Hair, eye lashes and eye brows appear on the head and face, lungs, kidneys and other organs start developing, and are ready by the seventh month.

There is no direct blood passage of blood cells into the foetal blood ninth month that placenta begins to break down and there is direct passage of some maternal blood into the child's blood stream.

2. Postnatal Stages

The period after the birth of the child till the severance of umbilical cord is called parturition stages. After this stage the child becomes completely detached or independent from the mother's body. At this stage muscle fibers are present but undeveloped. At birth the weight of the brain is one-eighth of the total body weight of the body. The stages of first two to four weeks after birth is called the Neonate stages. During this period the child's body organs start adapting to the new situations of life and the outer environment.

3. Babyhood or Infancy

This period extends up to the time child is two years old. During this period, more or less, the rate of growth of all the processes is orderly and is continuous. The weight and height of children of the same age may vary greatly but the pattern of growth is similar for all. The growth of body size is influenced by the hereditary and environmental factors. The bone development during this period follows the same general trends as growth in size. As the child grows up, the weight gain slowly becomes more due to increase in the bones baby is about 9 to 20 inches long. The male babies are generally a little longer than the female babies.

The parent/child relationships dominate the social world of the infants and it serves as a training ground for his social and emotional growth. By this time the child starts graduating from infancy and becomes ready for early childhood stage.

This is a period of self assertion, and the child begins to resist attempts to thwart his needs, or too much interference from adults with his activities.

4. Childhood

Childhood begins when the relative dependency of infancy is over and extends to the time when the child reaches sexual maturity. It approximately extends from the age of two to fourteen in case of girls and to fourteen in case of boys. During this long period, many physical and psychological changes take place. As social and cultural exposure of child at one age is quite different from the other during this long period to bifurcate this period in two stages ,early childhood and late childhood. Early childhood starts from second year and extends from sixth year till he become sexually mature i.e. enters the next phase, the adolescence. During the entire childhood growth proceeds at a more or less uniform rate with yearly weight increase (about two to three kilograms) and height centers of brains develop slowly, but progressively during years. This stage of development has been with in dealt with dealing "Growth and Development during Childhood"

5. Adolescence

This stage between childhood and adulthood is called adolescent period. This period of passage from childhood to adulthood is a time of dramatic physical, cognitive, and social changes. It is difficult to select suitable criteria for the beginning and the end of adolescence. Chronologically, the adolescent period is made up of persons from 13-14 to 18-19 years of ages; psychologically of those terminating a prolonged period of infancy to childhood; sociologically, of those who are trying to bridge the gap between dependent childhood and self sufficient adulthood. Webster's dictionary has defined adolescence as "the state or process of growing up from childhood to manhood or womanhood". Adolescence covers a long portion, roughly the second half of the period of development.

Primary sex characteristics are developed during this period. Girls enter this stage earlier than the boys. Puberty stage among the girls is between 10 to 14 years whereas in case of boys it is between 11-15 years.

Adolescence who are adjusting to their growth spurt and to the sexual maturation of their physical appearance

Motor ability or coordination shows continuous moderate improvement but this improvement more rapid in pre-pubescent and post -pubescent period.

The development of physical abilities during this period provide ample opportunities growth of mental abilities to deal with abstract matters more easily. The mind is undergoing its own metamorphosis.

The changes which occur during adolescence have important bearing on their social life. Partly because they become more mature physically and mentally, and partly because they are expected to seriously prepare themselves for adult role in near future. There is a great deal of change in social relations. Changing socio-cultural situations also have impact on the development of interest in adolescents. They participate more in decision making about their lives. This is also a period of more emotionally intimate relationships.

6. Adulthood

The period of infancy childhood and adolescence are all a preparation for entry into adult life. They are ready to face challenge of life. Physiologically the young adults are at their peak, and their strength, endurance, reaction time, perceptual abilities and sexual is also a period of effective cognitive functioning. During this period he has to decide and settle on a career direction. For most of the adults, the early period of adulthood is an exciting and productive time of life, a time for gaining expertise independence and confidence.

The marriage parenthood and other normal events of family life bring change in their life style and in their outlook towards social and personal commitments. The process of ageing is continually taking its toll, very slightly to be noticed at this stage, but by the time they reach forty years, gradual decline in the body and its capacities become noticeable. Intellectual abilities remain quite stable, rather show some gain.

During this period the intelligent and well educated persons make efforts to analyse and locate their poor habits and then make efforts for changing the same.

7. Old Age /Later Adulthood

Senior citizens, as commonly the older people are known, have played their innings with some happy moments and sad, some worth cherishing, some better forgotten. Renowned poet Browning has very aptly stated "**Grow old along with me! The best is yet to be, the last of life, for which the first was made**". With crossing over the sixties, physical, mental and intellectual decline is inevitable.

Old age does bring with it some losses and decline in functioning of human mechanism. Failing eyesight or hearing, slow reactions, occasional lapse of memory are part of the ageing process, but for many it is a period of continued growth and many satisfactions. Despite decline in physical and mental abilities, most of them maintain their characteristic personality traits, carry with them own unique abilities, funds of knowledge and cope up with the challenges of aging in a graceful manner.

Importance of physical activity for children

Children need to be active every day to promote their healthy growth and development. Kids who establish healthy lifestyle patterns at a young age will carry them - and their benefits - forward for the rest of their lives.



Physical activity can help kids cope with stress. It also promotes:

- Healthy growth and development
- Better self-esteem
- Stronger bones, muscles and joints
- Better posture and balance
- A stronger heart
- A healthier weight range
- Social interaction with friends
- Learning new skills while having fun
- Better focus and concentration during school

Ask if they want to be a part of a team or do an individual activity, enroll in a skill based or recreational class or do their activity with a friend or family member.

Parents can provide support and guidance about how to start and how much activity a child needs each day. They need to feel motivated and enjoy their activities. Keeping an activity log can help them chart their progress, while praise and rewards for each small step achieved can help to keep them motivated.

Children should:

- Include a warm up and cool down as part of each activity session
- Drink water before, and after activities - and have water breaks during their activities
- Wear sunblock, a hat and sunglasses when outside in warmer weather
- Use the right size of protective equipment
- Start at a level that matches their current fitness level. Too much too soon can result in injury. Always play it safe

Canada's Physical Activity Guide to Healthy Active Living for Children tells us that three different types of activities promote healthy growth and development:

1. Endurance

Endurance or aerobic activities - activities that involve continuous movement of large muscle groups - increase heart rate, cause breathing to quicken, and make you work up a sweat. They are important for development of a healthy heart and lungs.

Endurance activities can be lots of fun - and they don't have to be competitive. Help your children choose the right activities for them. Here are a few examples:

- Shooting, in-line skating, skateboarding
- Swimming, skating, dancing, tennis, martial arts

- Hiking, jogging, skipping, playing tag, cycling, dodgeball
- Hockey, football, soccer, basketball
- Skiing, lacrosse, wall climbing

2. Flexibility

Activities that encourage children to bend, stretch and reach promote flexibility. Having adequate flexibility allows children to participate in daily activities without pain or restriction from their muscles or joints.

Being flexible promotes good posture, reduces muscle stiffness and soreness, increases relaxation and minimizes risk of injury

Flexibility Activities

- Active play on a playground
- Digging in the garden or at the beach, raking leaves
- Gymnastics, dancing, wall climbing
- Yoga, skipping, stretching routines

3. Strength

Working against a resistance helps children build stronger muscles. Adequate muscular strength allows kids to deal with the demands of daily life without excessive stress on their joints and muscles.

Activities that build strength promote strong bones, muscles and good posture, improve the ability to lift and manoeuvre objects and obstacles and enhance healthy growth and development.

Strength activities to promote strong bones and muscles include:

- Lifting and carrying things like groceries, garbage and garden waste
- Raking leaves, climbing stairs
- Gymnastics, doing sit-ups and push-ups
- Playground activities: monkey bars, climbing ladders, scaling poles
- Calisthenics using their own body weight as resistance or supervised weight training exercises using tubing, bands and hand weights.

Exercise and Children

Exercise is an important part of keeping children healthy. Encouraging healthy lifestyles in children and adolescents is important for when they grow older. Lifestyles that are learned in childhood are more likely to stay with the child into adulthood. Some changes in lifestyle can be harder to make the older the person becomes.



The best way to promote healthy lifestyles is for the whole family to become involved.

Establishing an exercise plan

A daily exercise program is a fun way to share physical activity with family and friends, while helping establish good heart-healthy habits. The following exercise guidelines for children can help you and your child plan activities:

- Children need at least 60 minutes of moderate to vigorous physical activity on most days for maintenance of good health and fitness and for healthy weight during growth.
- Parents are encouraged to limit children's screen time (TV, video, and computers) to less than two hours daily and replace these sedentary activities with activities that require more movement.

Even low-to-moderate intensity activities for as little as 30 minutes a day can be beneficial. These activities may include the following:

- Pleasure walking
- Climbing stairs
- Dancing
- Home exercise

Regular aerobic activity increases a child's capacity for exercise and plays a role in prevention of heart diseases and type 2 diabetes. Aerobic activities are continuous activities that cause the heart rate and breathing rate to increase. Aerobic exercise can also help to lower blood pressure. To prevent dehydration, encourage children to drink fluid regularly during physical activity and drink several glasses of water or other fluid after the physical activity is completed. Examples of vigorous activities may include the following:

- Brisk walking
- Running
- Swimming
- Cycling
- Roller skating

- Jumping rope
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- Soccer
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- Releases tension

- Improves the ability to fall asleep quickly and sleep well
- Improves self-image
- Helps manage stress
- Counters anxiety and depression
- Increases enthusiasm and optimism
- Increases muscle strength

Children and Physical Activity



The Importance of Movement and Physical Activity

For children, physical activity and movement enhances fitness, fosters growth and development, and helps teach them about their world. As teachers of young children, we know that most children are innately physically active. They learn as they move throughout their environment. In observing a group of young children at recess, we will most likely see them running, jumping, throwing, and kicking in this unstructured environment. It is what they do naturally...they enjoy active play! So why should we be concerned with "promoting" physical activity in children? Here's why.

Children today find themselves more often in "sedentary alternatives" (Epstein, et al, 1995). For example, children ride in a car or bus to school, have less physical education, watch more television, play more sedentary games such as computer games, and do not have as much freedom to play outside on their own. Consequently, there is mounting evidence that even our young children are becoming less physically active and more overweight and obese. Physical inactivity has contributed to the 100% increase in the prevalence of childhood obesity in the United States since 1980 (CDC, 2000). Childhood obesity should be of major concern for a number of reasons.

- Obesity in children is a major risk factor for a number of diseases (e.g. diabetes, hypertension, elevated blood cholesterol).
- Childhood obesity tends to lead to adult obesity.
- Adults who were obese as children have increased morbidity and mortality irrespective of adult weight.
- Overweight adolescents may suffer long-term social and economic discrimination (Boreham and Riddoch, 2001).

Besides reducing the risks associated with childhood obesity, physical activity is important for other reasons. Regular physical activity helps children build and maintain healthy bones, muscles, and joints; builds lean muscle and reduce fat; prevents or delays the development of high blood pressure; reduces feelings of depression and anxiety; and may, through its effect on mental health, increase students' capacity for learning.

With these facts in mind, it is imperative that we, as teachers, help reduce the amount of physical inactivity, by increasing the amount of physical activity opportunities that children have during the school day. Being physically active not

only provides important health benefits, but also provides children opportunities to learn through movement.

Integrating Physical Activity throughout the Curriculum

It has often been said, "Children learn through movement." In addition to the health benefits of physical activity, movement is an integral part of the young child's life and education, for it is through movement that children develop social, emotional, and cognitive skills. For young children, movement is a critical means of communication, expression, and learning. It is imperative that classroom teachers give children as many opportunities as possible to be physically active and to learn through movement.

A major thrust in curriculum development in schools today is the integration of subject content across the curriculum. Integration refers to the mutual relationship between subject matter. This suggests the building of relationships between all areas of study that make up the school curriculum. Integration of curriculum enhances learning by (Nichols, 1994):

- promoting understanding and reinforcing curriculum content in a variety of educational settings,
- encouraging students to transfer what is learned in one setting to new settings,
- increasing meaning of what has been learned by giving students the opportunity to see information in new relationships and to apply it in new situations, and, by
- Reinforcing curriculum content by more in-depth exposure to the material.

Teachers have many opportunities to use movement and physical activity within the regular classroom curriculum. Since children are interested in movement, these relationships may spark their interest as they work in math, language arts, science, social studies, health, and other subjects.

Classroom Integrated Lesson Ideas

One popular technique used to integrate subject areas and include physical activity is the Thematic Approach. In this approach, teachers overlap the content across the curriculum over a set period of time, while focusing on one theme such as the Winter Games. For example, students in Grade 1 might participate in the following integrated activities with a 2002 Winter Games theme:

Social Studies: Show children a map of the United States. Compare the geographical area, in which they live, to Salt Lake City, Utah, where the Winter Games are being held (distance from one another, size, weather, etc). Each day add a new fact about Utah, and a new fact about the Winter Games (e.g., how athletes get to the Winter Games, Winter Games events, medals, etc.) to the semantic map constructed on the first day.

Language Arts: Read the book "The Little Engine That Could " to the class. Compare the "little engine" with a Winter Games athlete. Discuss with the children how the Winter Games athletes have a dream, and how it takes hard work and determination to achieve a dream. Encourage the children to draw and then verbalize and act out their dreams, and what they might do to follow their dreams.

Physical Education: Children practice skills and concepts of pathways, space awareness, cardiovascular endurance - fitness, and striking with an



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