

Effects of Physical and Cognitive Ergonomics in Anthropometric Personality of Sports Students of Private and Government Schools: A Philosophical Review

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Abstract

To achieve goals in sports world there is requirement of plenty of factors. Among which hard exercise, proper exercise of physical strength as well as proper knowledge of particular sports, diet chart, development of every and each motor organ of sports person, anthropometric development, physical and cognitive ergonomics, proper training and coaching are important ones. Each and every factor has its own importance for athletes of government as well as private schools. These factors have different time stages in the development of sports persons, some needs at primary stage, some need at secondary stage, some at final stages and other one need at advanced stages. When whole development took place and it seems no chance of future improvement then the need of advanced stage factors seeks there. These advanced stage factors includes of physical and cognitive ergonomics as main part. In this article we will check how and why these physical and cognitive ergonomics plays different roles in personality of government and private school sports student's improvements. Why government school students needs cognitive ergonomics more than the physical ergonomics and in case of private schools there is need of physical ergonomics more than cognitive ergonomics. Also when we went further into individual parts of physical and cognitive ergonomics there we will found that some parts of physical ergonomics needed more than other parts of physical ergonomics for private schools sports students where as this condition is different for government schools sports students. Same case will be found in cognitive ergonomics for government and private schools sports students.

Keywords: Anthropometric, Ergonomics, Anthropas, Craniometry, Paleoanthropology, Phrenology, Physiognomy, Phylogeography, Cranio-facial, BMI- body mass index, Stadiometer, Knee clipper, Skinfold clippers, Infantometer, genuvalgum, Odecranon, Ilium.

Introduction

The importance of anthropometric aspect is bigger one in these days for students of different schools whether government or private. For full personal development of sports students in the schools, physical and cognitive ergonomics traits of anthropometric plays a key predominant role and that reflects in competitions within small short time period after training. As private and government schools have different type of environment of everything like their view of perception, power to memory, reasoning, motor response to a indication given, human anatomy, psychological and biomechanical characteristics etc. In this article we will see how and why these physical and cognitive ergonomics traits are different in government and private school sports persons. What type of exercise and work should be done on these two traits of anthropometric to improve the capability of sports students of schools? Which types of these traits are weaker and which type are stronger in each case of private as well as government schools students. And we check the scientific way, psychological way and physical ways through training and coaching to overcome these difficulties.

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Anthropometric means human measure. It comes from Greek word and anthropas. Or in other words we can say that it is the measurement of human individual that includes physical anthropology first centre point for its definition. Here we will see the definition, explanation of uses and the benefits of anthropometry. Now we will see the definition, explanation of uses, conditions of benefits, instructions of use for ergonomics. And then we will check different cases of physical ergonomics and cognitive ergonomics in sports field of private and government schools of India. To check the ergonomic traits in school sports students, first we will introduce the anthropometric definition, its parts and its importance. Anthropometry past covers and incorporates numerous ideas, both empirical and pseudo-science, such as craniometry, paleoanthropology, biological anthropology, phrenology, physiognomy, forensics, criminology, phylogeography, human existence, and cranio-facial definition. As well as the similarities between specific anthropometrics and personal identities, behavioral typology, appearance, cranial vault and brain capacity, among other variables covered under anthropometry.

At numerous instances in history, applications of anthropometry have ranged vastly—from accurate scientific description and epidemiological analysis to rationales for eugenics and openly racist social movements—and its points of problem had been numerous, diverse, and from time to time surprisingly unexpected. Anthropometric measures are the evolution of objective assessments of muscle, bone and fat tissue used for body synthesis surveys. The muscle and bone are already heavy of Government school sports students, so there needs advance muscle development with ergonomics techniques where as for private school sports students' first fat tissue burn is compulsory. So for fat tissue burn, special techniques of ergonomics required which includes machines training. Here also with help of clothing design, we can achieve targets. We will see here different pictures that show machines as well as clothes formed from ergonomics technique.



Figure 1&2 Ergonomics Machine Techniques That Improves Lower Waist and Back Extension Muscles



Figure 3&4 Shows Shorts And Kneecap Ergonomic Technique That Helps To Improve That And Knee Capacity of Sports Student.

Here figure 1&2 shows machine ergonomics that helps private school sports students for lower waist, stomach muscle hardness and back extension muscle development, where as in government schools sports students this is not necessary because they already have these type muscle development and also not have need of burn fats present on body like of private school sports students. Whereas figure 3&4 have ergonomics equipments that requires for government school sports students because these students have very active bodily movements as they have daily activities in villages that made them very active. A very active sports students have probability of injures of muscle strains, so government school sports students haven't idea about sports in their initial training and in this way they needs these type of kneecaps and short to prevent from injury. The main elements of anthropometry are the height, weight, weight index (BMI), body circumference (midsection, hip and appendages) and the thickness of the head. These figures are important in the context of the fact that they apply to predictive tests for stoutness, which together present a danger to diseases such as coronary disease, obesity, diabetes mellitus, and others. There is extra usage as a measure of the welfare condition of school sports students of government as well as private schools and pregnant mothers. Anthropometric estimates can also be used as a benchmark for physical wellness and to measure wellness advancement. There are a few potential signs for anthropometric estimations. In youngsters, signs incorporate hindering, squandering, and being underweight. Hindering is when kids have a low stature for-age, squandering is a low weight-for-tallness, and underweight is a low weight-for-age. Mid-upper arm circuit (MUAC) is a reasonable estimation in kids or pregnant ladies as a marker of dietary status. BMI is another ordinarily utilized file of wholesome status and utilized as a measure of unhealthiness in kids and grown-ups. BMI is valuable to distinguish stoutness in sports and the seriousness of obesities. Anthropometric estimations are frequently additionally utilized as a major aspect of the assessment of wellness in competitors. There are many Equipment for measure it:-

1. Weight scale
2. Calibration weights
3. Box to sit on
4. Stadiometer
5. Knee caliper
6. Skinfold calipers
7. Tape measure
8. Infantometer to measure recumbent length

The specific procedure, for example, what side of the body to gauge and what decimal point to adjust to, can change starting with one examination then onto the next yet ought to stay uniform inside investigations.

Weight estimation ought to be in kilograms. To quantify newborn children or kids who can't remain solitary on the scale, first have a grown-up remain on the scale and zero the scale with the grown-up remaining on the scale. At that point hand the

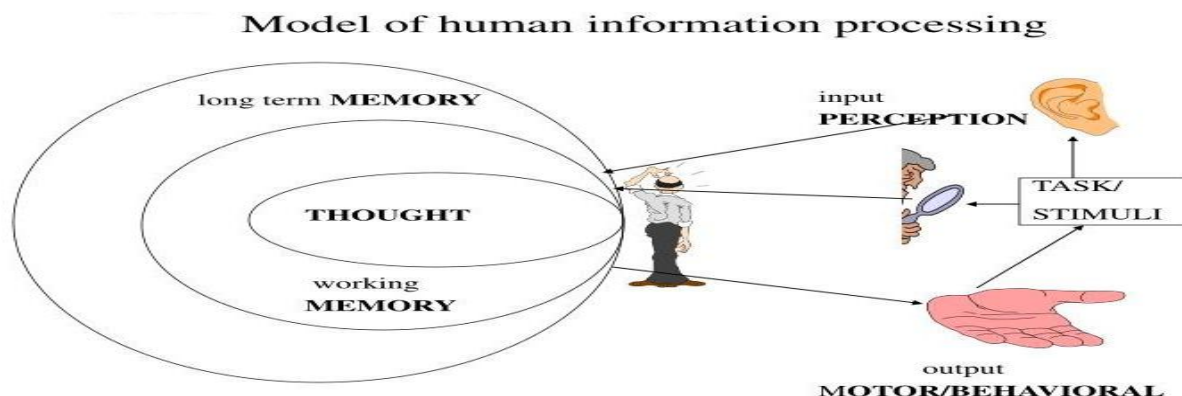
youngster to the grown-up to get a precise estimation of the kid. When estimating tallness, the patient should remain with their heels together and weight equally conveyed. In case of government school sports person students there may lack of minerals and vitamins which comes from fruits but that case is very low in private school students. As parents of private school students are mostly well educated and living in cities and they are well aware about it. So use of extracts of minerals and vitamins by ergonomic techniques can be well used by government school students of sports. In these days government disport tablets of multivitamins and minerals in government schools freely. Tolerant situating ought to be with the shoulder bones, backside, and heels on the stadiometer's vertical backboard. If not ready to have each of the three purposes of contact on the vertical backboard, the heels and posterior must touch the vertical backboard. Feet should confront outward at a 60-degree edge. On the off chance that the patient has genu valgum, separate the feet enough to abstain from covering of the knees, while keeping in touch between the knees. Arms ought to be freely hanging along the edges with palms confronting the thighs. The level bar of the stadiometer ought to be brought down until the hair is packed to the crown of the head. Expel any items on the head or hair that hinder the bar from compacting the hair to the degree of the crown of the head. To gauge upper leg length, have the patient situated with legs at a 90-degree edge. At that point, run the estimating tape from the inguinal wrinkle promptly distal to the ASIS to the proximal part of the patella.

To gauge upper a safe distance, locate the predominant edge of the spine of the scapula. At that point, run the estimating tape down the focal point of the triceps to the olecranon. This type of measuring machines for anthropometric measurement needs for both sports students of private as well as government schools. Following estimating the upper a safe distance, the mid-purpose of the arm ought to be set apart in planning to gauge the mid-upper arm boundary. The patient stands upstanding with the arm hanging openly along the edge. The patient ought not to utilize the arm muscles. Estimating tape position ought to be around the mid-purpose of the arm without compacting the skin. For newborn children, measure head perimeter by setting the measuring tape over the eyebrows, over the ears, and over the occipital noticeable quality. Fix the estimating tape until there is a cozy fit.

To quantify midriff outline, patients should remain with the arms crossed on the contra lateral shoulders. Arrangement of the estimating tape ought to be cozily around the sidelong part of every llium at the mid-auxiliary line. There are a few skin fold destinations accessible for estimation. Some basic locales incorporate the biceps, triceps, iliac peak, thigh, calf, sub scapular, midsection, and chest. The specific strategy can differ, yet we will examine one technique utilizing the triceps for instance. For the triceps skin fold, get the skin 2 cm over the midpoint of the correct upper arm with the thumb and pointer to make a skinfold, at that point place the calipers at the midpoint. The remainder of the normal destinations can be estimated likewise by getting the skin 2 cm away from the estimating site. The BMI estimation is the weight in kilograms, partitioned by the tallness in meters squared.

Ergonomics is the way toward planning or orchestrating working environments, items and frameworks with the goal that they fit the individuals who use them. A great many people have known about ergonomics and think it is something to do with seating or with the plan of vehicle controls and instruments – and it is... yet it is a great deal more. Ergonomics applies to the structure of whatever includes individuals – workspaces, sports and recreation, wellbeing and security. Ergonomics (or 'human variables' as it is alluded to in North America) is a part of science that means to find out about human capacities and confinements, and afterward apply this figuring out how to improve individuals' connection with items, frameworks and conditions.

There are different BMI index of sports students of Government and private schools. Government schools students needs less attention to attain perfect BMI index because they have already fit physical body, whereas for private schools due to habit of unusual fatty-fried food they have not good BMI index. For line up the private school students BMI index under perfect control, there is need of ergonomics physical exercise machines. These machines are mostly found in gyms of cities. In these days the parks of cities also equipped with open gym style machines. From these indicators, it is clearly shown that private school students need more emphasis on physical economics techniques. Now we will define the cognitive ergonomics trait in government and private school sports students. It is the automatic processing of learning. Here we will see with Venn diagram that shoes cognitive ergonomics.



ACTIVITIES OF THE COGNITIVE SYSTEM

PERCEPTION:

- complex sensorial processes
- primary images containing all information about the concrete features
- of objects and phenomena
- that act direct action upon the sensory systems
(visual, acoustic, kinesthetic, olfactory, gustatory).

MEMORY:

- ability to remember, recognize and recall
- information is encoded, stored and retrieved.
- active: structuring, constructive and creative psychic mechanism.

THOUGHT: the process of information processing in working memory.

As in cities and the students of private schools have good mental ability, they have created mind so they easily caught up the basics of sports easily. In cities the private school students have full facilities like of video games on laptops, Android phones, televisions etc. So by playing online games they developed proper understanding to use motor organs with the necessary conditions. Whereas due to lack of these types of facilities the government school students of villages have not developed much advanced understanding for frequent Association of a stimulus with response produce a production having a relatively autonomous status in sports field. Cognitive ergonomics have mainly three parts perception, memory and thought. Their related activities are shown in above figures. For private and city school sports students there are also options of availability of coaching, where they put emphasis on every aspect for improving sports skills with cognitive ergonomics. They have all type of instruments. They play recorded videos and with that cover all the problematic part of their skill on playground, where as this is not in case of government school students because they have not such type of facilities in villages. So here the final result comes out that both the physical and cognitive ergonomics have different sports students, we have only about the cases to implement the individual

ergonomic techniques and make out pure sports persons from the sports students of Government and private schools.

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