

About the Application Possibilities of Ayurvedic Body Constitution Analysis in the Sports Selection

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Received: 04 Sep 2024; Accepted: 10 Oct 2024; Published: 18 Oct 2024

Citation: Soponyai János, Hegyi Gabriella. About the Application Possibilities of Ayurvedic Body Constitution Analysis in the Sports Selection. Japanese J Med Res. 2024; 2(1): 1-4.

ABSTRACT

In the process of selecting a type of sport, experts consider numerous factors, including an individual's physical attributes, endurance, coordination skills, and psychological inclinations towards regarding a particular type of a sport. One key element of the millennia-spanning Ayurvedic medicine is determining the basic body constitution, whose relevance and benefits extend beyond generations, various lifestyles, health conditions, and the competencies related to contemporary methods of sport selection. Each individual examined presents a unique, complex combination that includes characteristics of the body, metabolism, emotional tendencies, and many other factors determining their constitution. The purpose of this study is to present the possibilities inherent in the application of Ayurvedic body constitution analysis in the context of sport selection. Accurate determination of an individual's unique constitution enables those facing sport selection to choose a sport that most harmonizes with their physical and mental attributes, endurance, thereby maximizing the chances of success and minimizing the risk of later failures and injuries, as well as the waste of time and financial resources invested in development.

Keywords

Ayurveda, body type analysis, sport selection

Introduction

To be successful in a particular sport, we must carefully choose the sport. Accordingly, there are numerous factors to consider during the sport selection process that play a determinant role regarding a specific sport. The determination of the specific physical requirements needed for a certain sport based on the characteristics of human body composition, as well as the examination of the compatibility and relationships of body composition with the sport, falls within the scope of the sciences of sport anthropology and sport anthropometry. In the selection of sports, not only physical factors but also genetic predispositions, such as genotype, play an important role. Numerous gene variants present in the human body can influence sports performance, and their activity or expression may change because of exercise [1]. The classification and grouping of human body constitutions as a unified whole has long engaged researchers, dating back to the beginnings of historical times [10]. The Heath-Carter somatotyping method,

based on anthropometric data, categorizes the human body into three categories - ectomorph, mesomorph, and endomorph - where ectomorphy refers to a slender body type, mesomorphy to a proportionately muscular build, and endomorphy to a higher body fat ratio [3]. This classification approaches Ayurvedic body type analysis, but it does not provide nearly as much information for determining the fundamental body type as is needed for making the correct sport selection. This publication aims to draw the attention of sports professionals to the possibilities inherent in Ayurvedic body type analysis in terms of selecting the sport that best fits a particular personality.

Relevant Ayurvedic Principles

The Ayurveda is a complex, deeply spiritual, and holistic health system that emerged in India thousands of years ago, - imaging the fundamental workings of nature for humanity - based on the principles of balance and harmony. One of the essential principles of Ayurveda is the Panchamahabhuta principle, which states that the form-world that constitutes and surrounds us is made up of the five elements: Space, Air, Fire, Water, and Earth. Based on another

basic principle, the Tridosha principle, three forces governed the elements: Vata, Pitta, and Kapha dosha. The Vata dosha is responsible for the elements of Space and Air. The Pitta dosha is accountable for the Fire element and part of the Water element, while the Kapha dosha governs the Earth element and the other part of the Water element. The elements and the doshas that oversee them not only shape the gross, physical world but also determine and influence the quality and functioning of the human mind [5] [7]. The properties of the five elements are not far removed from modern scientific definitions of states of matter. The Earth element corresponds to the solid state, the Water element to the liquid state, and the Air element can be identified with the gaseous state. The Fire element provides the energy necessary for state changes, while the Space element provides the necessary space for these state changes to occur [7]. The doshas are forces, energies. Their task is to organize the elements under their responsibility. The fundamental body constitution of each person (Sanskrit: Prakriti) is determined by the ratio of the three doshas to each other. All three doshas are present in everyone, but one dosha will be dominant, with the other two related in varying proportions, making the body constitution unique. This is how a body type dominantly Vata, Pitta, or Kapha is created [2]. The Heath-Carter somatotyping method approaches this trinity, where the ectomorphic body type correlates with the predominantly Vata body type, the mesomorphic body type with the predominantly Pitta body type, and the endomorphic body type with the predominantly Kapha body type. However, the Ayurvedic body type definition goes beyond the somatotyping method. The doshas, while detailing the physical structure of the body, precisely delineate an individual's metabolism and optimal metabolic needs, fitness and its maintenance, cognitive abilities and potentials, mental, emotional, and disease predispositions, as well as the most beneficial spheres of activity and career path [4].

The Vata body constitution

The dominant Vata (Space, Air element; ectomorph) body, regardless of their height, has a fragile appearance (brown eyes; not light, dry skin; brown, sparse hair, creaky joints; rhapsodic digestion, tendency to flatulence; poor cold tolerance; labile nervous system, rambling thoughts and emotions) [9]. It is light, fast and flexible - it does not have a lot of muscle mass - which is beneficial in sports where speed and agility are key, such as running, gymnastics, table tennis, badminton, fencing, five-a-side, ball games that require intense movement. His/her mental qualities include enthusiasm, creativity, the ability to think and learn quickly, and superb communication skills. These features can be useful in sports that require it, e.g. team sports. They are more prone to injuries because of thin bones and dry, loose joints. Because of his/her thin body, he cannot store energy, resulting in fluctuating energy and endurance levels that need to be monitored constantly. Rapidly changing moods characterize him/her, which can easily shift from excitement to anxiety and depression. Without mental support and guidance, quickly emerge the distraction and fluctuating motivation. Left alone without support, under intense mental and physical stress, he/she is capable of complete mental and physical collapse.

The Pitta body constitution

The dominant Pitta constitution (Fire, Water element; mesomorph) has a proportionate physique, free from extremes, developed muscles, a decorative, medium physique (light, sensitive skin prone to redness; light hair and eyes; fast digestive system; profuse sweating; heat intolerance; powerful physique; decision-making ability, decisiveness, leadership skills, determination, will) [9]. His/her competitive nature determined attitude and stable focus enable strategic thinking and effective problem solving. In individual or team sports that require strength, intelligence and endurance, e.g. football, handball, ice hockey, kayak-canoe, martial arts, men's gymnastics participate with success. Intensive metabolism and high energy levels ensure rapid regeneration. He can make independent and good decisions; he can perform at a level corresponding to his/her knowledge, even under mental pressure. Besides this, the constant desire to win and the pursuit of success burn everything around him/her. Only victory is an acceptable result, so he is prone to excesses in his/her unbridled rage at failure. With his fiery and impulsive nature, he often gets him/herself into difficult situations.

The Kapha body constitution

The dominant Kapha constitution (Water, Earth element; endomorph) is a typically heavy, static rather than mobile, obese constitution (light skin, covered musculature, lubricated and stable joints, large and dark eyes, fleshy nose and ears, large teeth, thick coat, slow digestion, inactive, withdrawn, calm, affectionate, forgiving, reliable) [9]. He/she does not like to move, non-competitive personality, avoids activity and conflicts. From a sports professional point of view, the predominantly Kapha constitution is the least suitable for sports. They can achieve results in sports such as weightlifting, powerlifting, and shooting sports, where they can exploit their great strength, calmness, stability, and endurance, if they open to it or manage to engage in the activity. Typically, Kapha-dominant constitutions are not the most successful athletes.

The mixed body constitutions

As mentioned earlier (page 3), the three doshas are simultaneously present in everyone and everything. The dominant dosa is associated with a lesser and an even less characteristic dosa. This is how the basic - physical/mental - body shape is created, and the body shape analysis can precisely determine it. The mixed dosas create unique characteristics in a person, allowing the different needs of various sports to be matched with athletes possessing the appropriate physical/mental physique. These athletes can successfully develop the basic physical/mental competencies required by the sport under the guidance of a competent professional. The essence of athlete development involves transforming the basic genotype into a sport-specific phenotype, which can be maximized if the desired phenotype is coded in the genotype. Determining this requires using the most thorough genotyping method. According to the present situation, a complex genotype determination in all respects can be realized through the tool system of Ayurveda.

Current tools for choosing a sport

The aspects considered when selecting athletes vary by sport and include physical attributes, motor skills, the ability to learn

movements, as well as the psychological, mental, and cognitive qualities essential to the specific sport [8]. Genetic research plays an increasingly important role in the selection of sports, as the scientific community continuously strives to understand the genetic basis of sports performance. Studies in sports genomics have shown that certain genetic markers significantly influence factors such as the development of muscle mass, endurance, and speed. Utilizing the findings from sports anthropology and sports anthropometry, one can identify the sport that best suits an individual's somatotype. Sports psychology, as an interdisciplinary field, incorporates various psychological theories that play a significant role from the initial stage of choosing a sport, through the process of becoming an athlete, to preparing for competitions and ultimately concluding a sports career. Additionally, it aims to help athletes overcome mental obstacles, manage stress, and enhance performance, all of which contribute to athletic success and long-term psychological well-being [1].

Choosing a sport from a new perspective

People, in the vast majority, identify themselves with their bodies. In contrast, Ayurveda views humans as fundamentally independent, purposeful spiritual entities who do not identify with their bodies, perceiving the body as a consequence of current states of consciousness [9]. Consequently, from the Ayurvedic perspective, the unwavering presence of the triad of mental strength, health, and stability is the primary and most important criterion for human well-being. Today, the selection of sports typically relies on sports anthropometry and somatotyping, meaning that physical attributes primarily constitute the main criteria for selection. This approach is entirely acceptable and closely aligns with the prevailing materialistic worldview. However, its drawback is that it addresses the mental structures characterizing the athlete only in a secondary, tertiary, or even quaternary manner, and their effects on the individual's functioning. The process of sport selection seeks a body and creates a sport-specific physical phenotype during the development in the given sport. Then after establishing the expected phenotype, it attempts to build mental strength to accompany the prepared body, which will help the athlete navigate the various stressful states associated with struggles and efforts. Ideally, this approach works; however, there are known cases where mental strength fails to integrate with the sport-specific phenotype. Under pressure situations, the athlete's consciousness may collapse, rendering them incapable of producing, repeating, or improving stable results. It is well-known that in elite sports, physical, tactical, and technical abilities are nearly identical. The determining factor for who will emerge victorious lies in cognitive abilities and mental strength [1]. An overstretched consciousness results in an overstretched body, while an overstretched body can create overstretched states of consciousness. From the Ayurvedic perspective, the persistent or frequent influence of these states adversely affects the stability of an individual's physical and mental health, potentially leading to premature deterioration of both body and spirit. Maintaining balance is paramount to ensure that active sports do not destroy but rather harmonize both body and spirit. Following the principles of Ayurveda, which posits that humans are fundamentally spiritual beings, and that form is a

consequence of this, a new perspective must be adopted regarding the methodology of sport selection. The direction of the search must be reversed. In the process of sport selection, the primacy of the spirit should be taken as a basis, focusing primarily on mental and cognitive strength and abilities. The choice of sport is a subjective, emotional decision. Among children, the strongest criterion for sport selection is interest, which leaves sports opportunities well behind and talent [6]. Through Ayurvedic body type analysis, the mental-cognitive strength and abilities of the genotype, as well as the biological suitability of the body for a given sport, can be precisely and comprehensively determined. Due to its predictive nature, the analysis provides a clear picture of whether the subject will be able to achieve the desired phenotype during the development of the sport, that is, whether they will fulfill the hopes associated with the necessary mental strength and physical preparedness and load capacity for the given sport. Practically, this means that we are not seeking a "body" to which we will then build mental strength; rather, we are seeking mental strength to which we will build the "body." Following this principle, we are more likely to avoid the disappointments and failures arising from a lack of the mental and cognitive strength necessary for victory, especially when the body built with dedicated work to be sport-specific does not bring the desired result because of the lack of adequate mental control.

Research opportunities

The space opened by the new approach predicts the possibility of many new investigations, which can further strengthen the relevance of the proposal, or it can be established that the "Old" will not be the new "New" after all.

Case studies: Presentation of the relationship between Ayurvedic body composition analysis and the choice of sports supported by case studies, which provide concrete examples and data on the practical application and results of the theory.

Comparative analysis: A comparative analysis of traditional sports selection methods and the Ayurvedic approach, highlighting the advantages and limitations of each method.

An Interdisciplinary Approach: An explanation of the interdisciplinary relationships between Ayurvedic body composition analysis and other complementary disciplines that demonstrate how a holistic approach can contribute to improving the performance and well-being of athletes.

Prospective, observational study: A study to determine the extent to which Ayurvedic body composition analysis influences the choice of sports and sports performance in the long term. Hypothesis: The sports selected with the help of Ayurvedic body composition analysis are more suitable for the physical and mental abilities of individuals, which in the long term improves sports performance and reduces the risk of injuries.

Summary

The study was made with the aim of directing the attention of

sports professionals to the exploitation of the possibilities inherent in Ayurvedic body composition analysis, in the context of choosing the sport that best suits a given personality. It did not try to present specific data regarding Ayurvedic body composition analysis and its results but points out that the application of the millennia-old practice of Ayurveda in the choice of sports can open new ways for professionals who are receptive to building a successful, cost-effective sports careers burdened with minimized failures. By carrying out the proposed research, it is believed that exact and measurable data can be obtained, the statistical analysis of which can further strengthen the usefulness of the complexity of the Ayurvedic body composition analysis in the choice of sports.

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