Psychosexual Advantages of Physical Adaptation

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Abstract

Physical adaptation is a process by which an organism attempts to adjust successfully with the changes happening in the environment continuously. Organisms adapting effectively in this process have an advantage of long survivability. During the process of evolution, several physical (structural) changes happened in humans that gives them a reproductive advantage. This article discusses the specific physical adaptations that gives psychosexual advantages in human.

Keywords

Physical adaptation, structural adaptation, psychosexual advantages, evolution

Physical adaptation is the mechanism or process by which an organism adapts to its environment by undergoing structural modifications. The Merriam-Webster dictionary defines adaptation as “modification of an organism or its parts that makes it more fit for existence under the conditions of its environment.” Adaptation is a survival need. Organisms, who adapt quickly and effectively, evolve harmoniously. Adaptation is a continuous process, during which the organism interacts with the environment in an intricate manner. During the process of adaptation, the organism makes itself suitable for the environment for the survival. Adaptation may bring structural (physical) changes in the organism, alter the physiological processes, and installs certain new skills. Simultaneously, the organism also loses certain structures, functions as well as skills, that are of not much importance or hampers the process of adaptation. Environment is a continuously changing phenomenon. It puts the organism under pressure to change (adapt). The changes in the organism help it to survive and adjust to the environment. By virtue of this feature, an organism can bear undesirable and harsh condition of its surrounding environment. In short, adaptation is the evolutionary process whereby an organism becomes more able to live in its habitat. Broadly, adaptation among animals is of 3 types: structural (physical), behavioral, and physiological. Structural or physical adaptation brings modification in the physical features like body shape, skin as well as internal organs. Behavioral adaptation facilitates modifications in instinctual features (behavior to search for food and mate). Physiological adaptations often intend to restore the homeostasis in the body (through temperature regulation, maintaining ionic balance). This article focuses on various physical adaptations in human beings and their evolutionary significance.

Discussion: Specific Physical Adaptations in Humans

Descent of Larynx

Human beings have unique property to pronounce consonants and vowels. Larynx is also known as voice box. Larynx in human is lower than that of other higher primates. It aids in easy movement and provides more space for the tongue to move during speech production. Mobility of tongue allows it to produce highly coordinated motions and therefore we are able to produce consonants and vowels. The anatomical
changes in the larynx among the primates can be linked with the evolutionary process. The typical structure and position of larynx in humans also regulates the breath, which in turn helps in fluent speaking and production of long sentences. Descent of the larynx helps in proper voice modulation and enhances the ability to communicate. Sexual intimacy in humans needs lots of vocal communication and it may strengthen the sexual intimacy.

Adaptation of Human Hand

Among the primates, there is significant differences in the size, shape, orientation, and flexibility of the hands. Hand plays a crucial role in holding objects and movement of the individual. In humans, the hands are evolved in such a manner that it can be optimally used for precision grip (throwing grip) and power grip (clubbing grip). In the course of evolution, it was seen that individuals with best throwing and clubbing ability were more dominating, hence getting breeding advantages in the community. Evolutionary changes in the development of hand facilitates the process of holding and touching. Touching has a significant role during the process of sexual intimacy. It facilitates sexual arousal and pleasure. The structure and contour of human hand gives sexual advantages.

Adaptations for Reproductive Advantage

Mating or reproduction is key to survival of species. Human possess a variety of such physical modifications and traits that are unique and called as sexual ornaments. Several unique physical features in humans compared to other primates provide them certain reproductive advantages, which are concealed ovulation, skeleton variation in male and female, skin texture, distribution of hairs, extended female sexuality when not fertile, large visible breasts even when not lactating, hour glass shape of body in women, an inverted triangle-shaped upper body in men, large penis relative to body size even when not sexually aroused, hairless skin that reveals skin quality, full lips, and unique waist-hip ratio.

In females, ischial tuberosity is everted in comparison to males (who have inverted pelvis). Such skeletal variations help in proper development and progressive descent of fetus in human. Broad shoulders, heavy bones, and everted mandible angle signify male skeleton. Concealed ovulation aids in reproductive fitness in male and females. These physical features also attribute to attractiveness among males and females, which helps in selection of mates.

Male-female bonding (intimacy, trust, psychological attachment) get strengthened by this adaptation. Infidelity and infanticide have been reduced by such adaptive change. Proper care and upbringing of newborn is mutuality done by parents that also strengthen male-female bonding in human as compared to other higher primates. Human beings are blessed with such gesturing and expressive face with body movements that can influence and attract others. These physical adaptations or what these modifications are called as sexual ornaments serve as sexually selected indicators of fitness. These are naturally evolved and help human beings to maintain their race.

Adaptations Related to Sperm Competition

Sperm competition has been an important selective feature during human evolution. Studies have shown that the human penis is comparably larger than that of monogamous primates, as are the testicles, which are also somewhat larger in comparison to body size. It has been found in researches that facultative polyandry (female sexual infidelity) would have been the most common reason for the simultaneous presence of live sperm from two or more men in the reproductive tracts of an ancestral female. Evidence support that masturbation in males may cause decline in the sperm count in the postmasturbation ejaculate during copulation; however, there is no reduction in viable sperms in the female genital tract after copulation, which is a form of adaptation to increase the fitness of the sperm. Orgasm in females and the time of ejaculation by the partner (male) also determines the sperm retention, and hence the sperm competition.

Exercise, Structural Adaptation, and Sexual Performance

It is a well-known fact that exercise improves both physical and psychological health. Exercise (muscular training) produces both structural as well as functional (physiological) adaptations. Dynamic muscular training causes hypertrophy of the skeletal muscles and cardiac muscles, which is not reported with static muscular training. The adaptations are intended to meet the changing demand.

Acute exercise is associated with transient changes in body parameters as increased blood flow, muscle tension, and metabolic rate. So, it has been observed that improvement in physiological sexual desire following acute exercise appears to be aided by increase in sympathetic nervous system activity and endocrine factors. Overall, it’s all effect of chemicals neurotransmitters or commonly read as happy hormones.

On the other hand, chronic exercise facilitates long-lasting effects that ultimately improve physical performance. An individual who exercises daily or follows it as a routine enhances reproductive fitness indirectly by preserving autonomic flexibility, which is reflected by stable cardiovascular parameters and emotional well-being of an individual. Positive body fitness enhances sexual well-being of an individual.

Other Structural Adaptations in Human Beings

Evidence supports that exposure to high altitude subjects the individual to experience hypoxia, which may in turn reduces the area of type I and II skeletal muscle fiber areas.
skeletal framework of an individual undergoes sequence of changes during the lifetime. During puberty, the skeleton differentiates in a gender specific manner. There occurs periosteal expansion without endocortical contraction among the boys in comparison to girls. These changes are intended to deal with additional loadings.18

**Sexual Desires and Physical Adaptation**

In literature, “sexual desire” often refers to “Libido” or “sexual drive.” Sexual desire is the need to have sex. Sexual desire is determined by certain biological (genetic, neurochemical, hormonal), psychological (personality, life experiences, mood state, impulsivity), as well as sociocultural (cultural values, parenting, peer influence, availability, and accessibility to drugs) factors. There is variation in the level of sexual desire among individual to individual in same culture as well as across cultures. Similarly, the sexual desire of an individual also varies from time to time. Of the several factors that determine sexual desire, body image is an important one.19 Physical attractiveness of a potential partner may play a role in mate selection.20 In the process of evolution, the body shape has been evolved significantly to become more attractive for their potential partners. Better structural

![Figure 1. Physical Adaptations in Human for Psychosexual Advantages](image-url)
adaptation in terms of shape might be responsible for more attractiveness, more arousing, and sexually appealing for the potential partner, hence more sexually desirable. The physical features (adaptations that happened over a period of time), catch the attention of the potential mate (who is in search of a partner) and produce sexual desire, hence referred as sexual ornament. Individuals with better physical adaptation and having the sexual ornaments often have reproductive advantage than others.9

Conclusion

Physical adaptation is a very unique feature among all animals including human beings that helps in survival of the species and existence over generations (Figure 1). Desirable and favorable features get selected and evolved over long period of time. Survival of fittest theory concept explains the virtue of these traits. Survival and longevity of a race depends on the reproductive (sexual) advantages that the race carries during the process of evolution. Optimal use of the advantageous skills may facilitate sustainment of function in that specific domain. So, understanding of the sexually advantageous skills during the evolutionary process may help the researchers and clinicians to retain the positive sexual functioning in humans.

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