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In Children-Athletes Who Played Chess, the State of the Muscle-Motor Apparatus and Muscle Mass

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Abstract The most perfect way to create tip top competitors is for them to take part in as it were numerous coaches, guardians, and children accept that perfect way wear from an early age and to play it year-round. In any case, developing prove to the opposite demonstrates that endeavors to specialize in wear may decrease openings for all children to take an interest in a differing year-round sports season and can lead to misplaced advancement of lifetime sports aptitudes. Early sports specialization may moreover decrease engine expertise improvement and continuous interest in recreations and sports as a way of life choice.

Keywords Injury prevention, Youth sports, Athletic performance, Neuromuscular training

In the Uzbekistan, nearly 72% of school-aged youth (69% of girls and 75% of boys aged 8 to 17 years) participate in at least 1 organized sport team or club. This equates to nearly 29 million youth playing organized sports. Similar growth in sports participation is increasing across the globe in children of all ages, 3, 10, 37 and it is recognized that sports participation has many benefits, including living a healthy lifestyle, having a positive self-image, and building social relationships. In combination with increased sport participation, it is now speculated that sports specialization including year-round sport-specific training, participation on multiple teams of the same sport, and focused participation in a single sport may be at an all-time high. In Uzbekistan, youth sports specialization with intense year-round training in a single sport may be potentially more common, with a recent report indicating that nearly 30% of young athletes were highly specialized from a sample of nearly 1200 young athletes. Factors such as the pursuit of scholarships or professional contracts or the intense desire for talent recognition by parents, coaches, or media appear to fuel interest in specializing in a single sport. Many coaches, parents, and children believe that the best way to develop elite athletes is to participate in only 1 sport from an early age and to play it virtually year-round.

Single-sport specialization was initially observed among athletes participating in individual sports such as gymnastics, swimming, diving, and figure skating in Eastern Europe. International Olympic sports like these are likely to have led to greater sports specialization, with selection processes that eventually went into primary school years in an attempt to identify future champions and begin specialized training for a better chance of success. Future champions' development plans included intensive, high-volume training and demanding coaching, which was frequently backed up by parental pressure to succeed. The relative success of these Olympic preparation programs, along with the promise of professional contracts, are likely to push young athletes around the world to narrow their concentration to a single sport at a younger age. Despite the fact that only 0.2 percent of the population.

This is why early sports specialization is contentious at the moment. There have been questions about when is the best time to start, as well as the risks and benefits of this form of physical activity. Côté and colleagues' Developmental Model of Sport Participation proposes a schema of multiple routes of involvement in sport, with the first two pathways of the schema prescribing early sampling as the foundation for sport participation (both elite and recreational). While pathway 3 shows how to achieve elite performance through early sport specialization, a recent evidence-based assessment found that, for most sports, extensive training in one activity at the expense of others should be avoided until middle or late adolescence to maximize achievement and reduce danger.

While pathway 3 shows how to achieve elite performance through early sport specialization, a recent evidence-based review found that, for most sports, intense training in one sport at the expense of others should be postponed until middle or late adolescence to maximize success and reduce

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injury and psychological stress. Sport specialization has been linked to overuse injuries, burnout, and social isolation, as well as the early abandonment of sports. Injury and dropout are possibly the greatest consequences of early sports specialization, followed by a sedentary lifestyle and an increased risk of obesity, all of which are compounded by a decreased love of physical activity in kids. Adulthood could have long-term implications as a result of this.

The goal of this review is to use existing research to develop evidence-based alternative tactics that can help all aspiring young athletes improve their health, fitness, and athletic performance. Adaptive sports can be a part of the rehabilitation, socializing, and integration of disabled people with musculoskeletal system lesions (POMA). Simultaneously, there is the issue of deciding on a certain adaptive sport. Powerlifting is the most established sports direction for people with musculoskeletal system defects.

This sport is given in one discipline - bench press - for disabled people with musculoskeletal system damage. According to the scientific and methodological literature, powerlifters gain maximum strength during training sessions, while speed-strength abilities receive a small percentage of activities. This method will only be useful in the early phases of sports training.

The progression of sports results will thereafter be slowed by a huge number of particular activities. Some researchers in the field of sports training in powerlifting have concluded that improving sports results is mostly dependent on the harmonious combination of workouts for maximum strength and speed-strength abilities during the training process. Simultaneously, it is recommended that early in sports training, targeted development of speed-strength talents begin. The study's goal is to see how speed-strength abilities affect athletic performance in teenagers with POD who participate in powerlifting. In this regard, a training program for teenagers with PODA who participate in powerlifting has been designed, which includes the early development of speed-strength traits.

Basic education the workout was a fast-paced "bench press" on the bench. This workout is done in the same rhythm but with various weights. The essential criterion was to keep the barbell lifting rhythm and speed. The following rhythm was required: 1-1-2, where the first 1 represents the number of seconds required to lift the weight; the second 1 represents the number of seconds required to hold the weight at its highest point; and 2 represents the number of seconds required to return the bar to its original position.

Another disadvantage of early sports specialization is that youth are deprived of a diverse year-round sports season, which may result in the loss of lifetime sports skills development. These missed opportunities for pleasant, focused physical activity as children and adolescents are likely to contribute to current and long-term physical activity and health deficits. Sports specialization in youth, in particular, may result in a reduction in motor skill development. Reduced motor skill competence may arise as young athletes focus on the motor abilities required for their sport while neglecting to build motor skills through a diverse participation portfolio. As young athletes advance in their level of play, their options to participate in many sports continue to dwindle. Coach or parental pressure, scheduling issues and conflicts, or, finally, a loss of interest may all contribute to a reduction in involvement in other sports. Additional coaching pressures may exist to persuade a young athlete to specialize in a single sport, with the promise of increased chances in that discipline. If the cycle of sports specialization begins too early in a child's life, comprehensive motor skill development will be hindered, increasing the risk of future injury and potentially limiting the child's ability to achieve peak athletic performance. As a result, the goal of this analysis is to illustrate the potential dangers of early sports specialization, as well as alternate tactics for all young athletes looking to improve their performance.

The great athlete's family background of sporting accomplishment is one area where they stand out. Elite athletes are more likely to have a parent or sibling who has participated in collegiate or professional athletics than other students. Although genes play a part in athletics, children of athletes may receive additional support and motivation to participate in sports. Regardless, it's vital to note that encouraging a child to concentrate in a sport early in life will not make up for a lack of athletic genes or ensure success. Several other reasons, such as collegiate athletic scholarships, national and Olympic-level team selection, or professional contracts, are likely to drive children's ambition to achieve in sports. In many cases, the objectives are unclear.

The worry that if they do not specialize, they will not be able to compete at the next level of competition—the next age group of a club or the middle school or high school team—drives these youngsters (and their parents) to specialize. It can be difficult to persuade youngsters (and their parents) that sports variety is helpful, whether it is due to unrealistic goal setting or, more typically, youth simply wanting to "keep up" with their competing classmates.

Many parents believe that having their child specialize in a single sport at an early age will give them an advantage in achieving success. Tiger Woods' early introduction to golf, the extremely organized training to which he was exposed, and his eventual success in becoming possibly the finest golfer of his generation are all well-known examples of this. Furthermore, independent youth travel or select club teams are frequently seen as necessary for the development of outstanding skills and exposure to the recruiting process. Because the expected time commitment makes participation in other sports or activities logistically difficult, these programs may encourage early sport specialization from a training aspect.

The principle of purposeful practice has helped to develop early single-sport specialization. A highly structured exercise with the intentional purpose of improving performance is classified as deliberate practice. This theory asserts that "an individual's level of performance is closely connected to the amount of deliberate practice." Based on

studies of a limited number of chess champions and highly selected elite musicians whose success was attributed to extraordinarily large volumes of training in respective disciplines, the so-called "10 year/10,000 hour rule" was later developed. Early single-sport specialization (performing in certain sports at a young age before pubertal development is complete) is not a guarantee of success, according to athlete studies, and may even be detrimental to long-term success in some situations.

Early sports specialization does not appear to increase the odds of excelling to the elite level in sports, with the exception of a few sports such as gymnastics and figure skating. Only 0.14 percent of 35,000 highly qualified young athletes selected to train at Russian sports academies achieved high-level rank, according to a research. Similarly, only 0.3 percent of German athletes chosen to train at a young age rated among the top 10 international senior athletes after a seven-year research. Another research of top and near-elite athletes discovered that successful elite athletes specialized later in life and trained less during their formative years. The elite group, on the other hand, spent more time in late adolescence pursuing serious training than their near-elite friends. Vaeyens and colleagues59 examined the training records of 2004 Olympians and discovered that the average age at which they began participating in sports was 11.5 years. Furthermore, the age at which an athlete began training was adversely connected with the time difference between when the athlete first competed in an international championship.

They came to the conclusion that early, high-intensity, sport-specific training and early participation in sports talent programs are not required for international success. According to a survey of over 1500 German national athletes from all Olympic sports, those who reached the international level began training in their main sport at a younger age. This study also discovered that these athletes, on average, competed in two different sports previous to or concurrently with their main sport. These athletes also participated in other sports till they were older. Importantly, adolescent achievement did not predict senior achievement.

A study of National Collegiate Athletic Association (NCAA) Division 1 players at one university discovered that 70% did not concentrate in their sport until they were at least 12 years old, and 88 percent had played in more than one sport. When compared to students at the same university who were not NCAA players, these university athletes specialized at a younger age (mean, 15.4 vs 14.2 years). More than 40% of those surveyed had a parent who had competed at the university or professional level, implying that hereditary and environmental factors have a significant influence in long-term athletic success.

Overall, data from athlete populations show that only a small percentage of those who specialize in a sport at a young age go on to reach elite-level accomplishment. It's also worth noting that early success does not always imply long-term success, and early sport specialization can be a barrier to elite-level achievement in some circumstances. Athletes who became champions after very brief lengths of time spent training in their sport or who were part of talent crossover or talent "recycling" programs are also numerous. The existing findings support the concept of early sport diversification and recognize that deliberate practice is required but not sufficient for success in sports. There are a few sports where it is permitted.

Because peak performance usually occurs before full maturation, there are a few sports where it may be permissible to specialize during preadolescent phases. Previous research has revealed that elite rhythmic gymnastics performers specialized before the age of 12.

Individual sports such as tennis and numerous team sports are examples of middle-entry sports, which make up the vast majority of sports where specialization begins after the age of 12 (or during middle adolescence). Late-entry sports, such as endurance or timed event sports, generally include specialized training geared at late adolescence or full adulthood. In sports that are "measured," top athletes collected greater training hours only by the age of 21 when compared to nonelite athletes, and not during adolescence.

Young athletes are being exposed to sports training at an earlier age and specializing in one sport with the goal of achieving elite status. The ability to sample sports is critical for injury prevention. Young athletes are less likely to learn the underlying physical, psychological, and cognitive abilities necessary for long-term success in sport if they do not have the opportunity to "taste" diverse activities during their childhood.

Furthermore, because the grades for indicators of youth physical activity around the world are low/poor, there is widespread evidence of a physical inactivity crisis, modern-day youth are likely unprepared for the rigors of sports practice and competition. Furthermore, 44 percent of school administrators in the United States said they have reduced physical education and recess time to make more time for reading and mathematics. 8 Most children's only guaranteed opportunity to improve their physical literacy and practice a variety of sports—from field ball games to resistance training—is through physical education, which includes appropriate instruction and assessments.

Children who are not exposed to a variety of meaningful activities and sports during physical education may be more likely to specialize in one sport in order to exploit a narrow set of motor skills that leverage their personal movement confidence, experience early success, appease parents, and gain the support of their youth coaches. Physical education is an excellent "alternative" for a specialized athlete to gain physical literacy while also expanding their sports sampling opportunities.

Despite the growing number of young people participating in sports, the sedentary character of today's youth has resulted in a decreased level of motor skill competency and muscle fitness. In a large sample of school-aged children, competency in fundamental movement skills was found to be low, and there was a strong and consistent association between low proficiency in fundamental movement skills

and inadequate levels of cardiorespiratory fitness.

Other researchers examined secular trends in muscular fitness and found declines in bent-arm hang, sit-up performance, handgrip strength, shuttle run performance, and trunk flexibility in school-aged youth. 7, 57 Collectively, these findings highlight the need to improve the preparedness of modern day youth for the demands of sports training and competition to enhance their motor skills performance, improve their physical fitness, and reduce associated injury risks. Without directed movement practice and exposure to a variety of skill-building games and activities early in life, children are less likely to maximize their physical development and capitalize on their athletic abilities later in life.

Children should participate in a variety of sports with qualified youth coaches who have the expertise and abilities to organize and supervise age-related training and adjustments so that they can achieve long-term success as competitive athletes. To lay a firm foundation for future success, developmental sport programs must take into account the anatomical, physiological, and behavioral differences of children and adolescents, as well as their long-term physical development. 32, 38 Some children may develop advanced level or adult-level skills at a young age, leading to the development of adult-driven coaching concepts that are more appropriate for an older athlete.

Rather than improving their physical condition, improving their movement skill repertoire, and expanding their sporting knowledge, this may put them at risk for general and serious overuse injuries. When a child's weekly hours of sports activity surpass 28 and the total weekly hours exceed 48, intense training may result in injury. Because it limits the quantity of leisure and unstructured activity, specialized training may pose an independent risk of injury. Young athletes may be able to engage in equal levels of physical activity without increasing their risk of injury, but the distribution of physical activity is crucial. The ratio of weekly hours in organized sports to weekly hours in unorganized sports was determined in a study of approximately 1200 young athletes participating in a range of sports.

The ratio of weekly hours in organized sports to weekly hours in disorganized free play (sports training ratio) approached in a research of approximately 1200 teenage athletes in a range of sports. Young athletes who practice more than twice as much as they play are more likely to sustain a significant overuse injury.

These data seem to indicate that unstructured free play may potentially have a protective effect from serious overuse injury. While this needs to be further investigated, children may be able to self-regulate their own physical activity volumes prior to serious overuse injury versus adult-driven organized practices. Future evaluations of intensity and volume of organized training in young athletes should also include the ratio of organized to unorganized sports and physical activity participation.

In terms of physical conditioning during sports practice, because a considerable percentage of time is spent in sedentary or mild physical activities, youth sport practice and games may not provide enough moderate to vigorous physical activity to meet daily guidelines. Low levels of habitual physical activity increase injury risk during leisure-time physical activity, physical education, and sports, with the least active youngsters having the highest injury risk. 2 A child's engagement in sports should not begin with competition, but rather with conditioning and instructional practice sessions that address particular deficiencies. Policies and methods are currently needed to guarantee that youth are prepared for optimal participation in organized team sports and have the opportunity to improve their physical fitness.

Parents and educators should help provide opportunities for free unstructured play to improve motor skill development, and youth should be encouraged to participate in a variety of sports during their growing years to influence the development of diverse motor skills, according to the current evidence. Periods of intense training and specialized sport activities should be closely monitored for indicators of burnout, overuse injury, or potential performance decrements due to overtraining for those children who do choose to specialize in a single sport. Finally, evidence suggests that all adolescents should participate in periodized strength and conditioning (e.g., integrated neuromuscular training) to help them prepare for the rigors of competitive sport participation, and that youth who specialize in a single sport should schedule periods of rest.

Finally, evidence suggests that all youth should participate in periodized strength and conditioning (e.g., integrative neuromuscular training) to help them prepare for the demands of competitive sport participation, and that youth who specialize in a single sport should plan isolated and focused integrative neuromuscular training to improve diverse motor skill development and reduce injury risk factors.

The current evidence-based analysis backs up the idea that children should be encouraged to participate in a range of sports at levels that are appropriate for their abilities and interests in order to get the most out of sport's physical, psychological, and social benefits. 1 Children who specialize in a single sport early (before to maturation) may perform less age-appropriate sports skills, particularly if they do not engage in as much unstructured free play as their peers. Without the opportunity to participate in a variety of sports, children may not be able to properly develop neuromuscular patterns that protect them against injury. Alternatives to sports specialization, such as a variety of possibilities for motor skill development from childhood, along with structured integrative neuromuscular training, may help young athletes maximize their potential for success. Additional possibilities.

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