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GENETIC MARKERS OF ENDURANCE AND STRENGTH: IMPLICATIONS FOR TALENT IDENTIFICATION IN SPORTS

Alberto Torres

Instituto de Traumatología y Medicina Deportiva, Universidad de Valencia, Valencia, España

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ABSTRACT

The research aims to determine genetic markers related to endurance and strength. By better and early recognition of these gene markers, such training will be provided to these persons, which will help them become true athletes. But if these gene markers are identified at a better time, that person's talent will be wasted. The research is based on primary data analysis to determine the data used smart PLS software and generate results, including descriptive statistical analysis and the correlation coefficient, which also explains the smart PLS Algorithm model between them. The research study also determines the implications of talent identification in the sport. The critical implication of identifying gene markers is that it can help the personalized training of athletes. There are some sorts of training that coaches provide, but there are also some sorts of self-training that can be provided to oneself without the assistance of others. If there is timely identification of these genes, it will help athletes with personalized training programs. Overall, research found that there is a significant links between genetic markers of endurance and strength.

KEYWORDS: Genetic Markers (GM); Endurance (EE); Strength (SS); Talent Identification (TI); Sport (SS)

1. INTRODUCTION

Sometimes, every type of skill can never be learnt from the environment, but genetics plays a role in that particular trait in that person. We can never deny or underestimate the importance of genetics for a particular talent in someone. At the same time, we cannot say that everything is just because of genetics and that the environment does not play a has nt. Sometimes, we can

say that talent is genetic, but the adoption of that talent depends upon that person's environment. In this introduction, we will discuss which genetic Markers are related to endurance and strength in athletes (Šimonek & Židek, 2018). We will also discuss how these genetic markers can be used to identify talent early. As we know, every type of trait is associated with specific gene markers in the body. For example, any person's eye or gaur color is associated with genes, and the quality of leadership is also related to different genes. The first gene related to the talent of sports in terms of endurance and strength is the ACTN3 gene, which has the main impact on muscles to increase the endurance and strength of the body. As we know, muscle strength and endurance are the decisive factors that influence the performance of athletes. When the body's muscles are grown well, they will be able to bear more stress, and the body's endurance level will be increased(Pickering & Kiely, 2020). The other aspect of gene markers is that few genes are related to better cardiovascular function. As we know, cardiovascular function must be in better condition for athletes to increase the overall efficiency and endurance of the body (Meira et al., 2022; Nolan, Hosam, & Jean, 2022).

As the function of the heart is pumping blood, when there is better pumping of blood, there will be better oxygenation in the body, which will enhance the performance and endurance of the body. The ACE gene is the special gene related to better functioning of cardiovascular function. This gene will also enable the heart to work well under stress conditions. Various types of training are given to athletes to increase the endurance and strength of the body (Ahmetov, Egorova, Gabdrakhmanova, & Fedotovskaya, 2016). The high-altitude training is one of them to enhance the ability of body adaptation. When training is given at high altitudes, an athlete becomes habitual in bearing low oxygen pressure in the air, which helps increase the endurance level of muscles. At the same time, the number of red blood cells increases at high altitudes, which in turn helps in better endurance and strength of the body. This ability to adapt to high altitudes is also related to a gene named the EPAS1 gene. The other genes related to the body's strength are described as the body's power level in athletes, which is a mandatory factor for increasing the strength of the body. The strength of muscles is related to the power of muscles, and the ultimate power of muscles is related to muscle growth (Webborn et al., 2015). The growth of muscles, in turn, is related to the body's genetic makeup. The special gene that is related to the better power of muscles in athletes is the ACTN3 gene. As we know, the body's power is related to the power of skeletal muscles, so when there is better growth of these muscles, there will be betterment in the body in terms of endurance. The other gene related to better strength of skeletal muscles is the MSTN gene. The next decisive factor in the performance and endurance of athletes is the bone density of athletes(Pickering, Kiely, Grgic, Lucia, & Del Coso, 2019). As we know, bones have to bear pressure and stress for athletes to perform better and endure. So,

when there is better bone density, there will be better and more chances of winning in sports, but when there is poor Bone density, the bones will not be able to bear stress, and the risk of injuries will increase. Bone density is also related to genetic makeup in the body. One of the genes that is related to bone density is the VDR gene. These gene markers have important implications for talent identification in sports. The first and foremost implication is that these gene markers will help in the early identification of talent. When genetic testing is performed, we will get an idea about the presence or absence of genes related to athletes' endurance and strength (Costa et al., 2012; Varillas-Delgado, Morencos, et al., 2022).

The other implication of gene markers related to the endurance and strength of athletes is that they help athletes better develop talent. There is no doubt that talent develops better through proper training. Such training is mandatory to develop the strength and endurance factor in an athlete's body. When such training is provided by testing such gene markers, it will help athletes lead the development of talent in a better and more effective way. There is always a high risk of injury for athletes. These injuries can be fatal to the career life of athletes (Breitbach, Tug, & Simon, 2014). So, there should be suitable measures to prevent such injuries. The gene markers testing can effectively prevent any such injury by taking suitable measures. Ethical considerations are one of the important considerations related to gene marker testing (Varillas-Delgado, Del Coso, et al., 2022). All the data related to gene marker testing of any person must be kept secret and not be shared for illegal purposes. Such gene marker testing can be proven effective shortly (Jacob, Spiteri, Hart, & Anderton, 2018).

1.1 Research Objective

The main objective of this research is to understand the term gene markers related to the endurance and strength of athletes. This study has effectively explained how gene markers can be used for talent development in athletes.

2. Literature Review

Studies claim that in first-class donning cryptograms, the ID and advancement of prospective competitors toward particular ability avenues is vigorously dependent on true tangible, specialized, & strategic qualities and abstract mentor evaluations. In clarifying the job of hereditary indicators in physicality, present ability distinguishing proof conventions might essentially enhance — & eventually empower — designated means in insignificant ability avenues(Jacob et al., 2018). Researchers identified the effect of hereditary qualities on embryology & athletics execution, which is a very discussed survey viewpoint in athletics Science. The motivation behind the current review was to

exhaustively survey proof on the effect of hereditary qualities on perseverance & strength located practice execution to obviously decide the possible usefulness of DNA detection for recognizing athletics ability, improving preparation, or forestalling workout-associated wounds, & to introduce an outline of late examination that has endeavored to address the strategic problems tracked down in past examinations(Varillas-Delgado, Del Coso, et al., 2022). Researchers reveal that the motivation behind the ability to distinguish proof is the primeval conceivable choice of favorable competitors with the objective of deliberately expanding their true capacity. Regular and hereditary examinations uncover various systemic and specialized limits, & equals are summed up as far as the trial plans, the moment of experiment, mental abilities or characteristics and obscure collaborations among various factors. Generally, numerous lacks in the momentum ability survey definitely stand out enough to be noticed(Breitbach et al., 2014). The principal purpose of this examination was to address, interestingly, the investigation of hereditary variations in a few patrimonial outlies & their part in first class perseverance and expert soccer execution by contrasting the allomorphic and biogenetical incidences with the non-competitor populace. Hereditary dispersion in proficient competitors as respects perseverance (proficient bicyclists and first class sprinters) & expert soccer performers displays hereditary determination in such games corrections(Varillas-Delgado, Morencos, et al., 2022). Scholars investigate the degree of the hereditary impact on the creation of a brandishing victor & researchers depict problems which, as of now, hinder the usefulness of hereditary trial in recognizing subsequent world class entertainers. While hereditary trial can possibly aid the recognizable proof of subsequent gifted entertainers, hereditary trials ought to be joined with different devices to acquire an exact ID of such competitors inclined toward prevail in athletic.

The utilization of all out genetic constitution piles, made out of countless execution upgrading assortments, will probably be perhaps of the better methodology in the usage of hereditary data to distinguish ability in athletic(Pickering et al., 2019). Researchers reveal that high degree game appears to perform a characteristic Darwin phase. The maximum remarkable competitors seem to arise because of extrinsic impacts of essence as well as happenstance, to be specific, the possibility of rehearsing specific game wherein their abilities better suitable. Studies surveys the present status of information in regards to genetic hereditary impacts atop perseverance and brawn energy, as revealed by a few dual & Family dynamics. Just, presumably, to the incorrectness of the estimation methods and testing blunder, heritage gauges vary generally among review (Costa et al., 2012). Studies suggest that the overall agreement between game & workout hereditary qualities scientists is that hereditary trials have no part to perform in ability ID or the individualized remedy of preparing to augment execution. Designated buyers incorporate essentially mentors and guardians. Thusly, in the present status of information,

no kid or youthful competitor ought to be presented to direct-to-consumer marketing hereditary examination to characterize or change preparing or for ability distinguishing proof pointed toward choosing talented youngsters or teenagers. Enormous scope cooperative ventures, can assist with fostering a more grounded logical establishment on such problems from now on (Webborn et al., 2015). The review targets making sense of the job of actual wellness examination and hereditary investigation after recognizing athletic gifts. Researchers speculated that utilizing actual wellness examinations won't carry the outcomes that would coordinate with the unique hereditary examination. The review demonstrate that the aftereffects of hereditary investigation didn't meet the one of the wellness trials. In view of the examination scholars suggested guardians and mentor's legitimate data regarding their kids' essentials for specific gathering of athletics, kind of brawn filament, oxidant limit, sustenance category, recovery, wound anticipation, wound powerlessness, & so on (Šimonek & Židek, 2018). Scholars suggest that hereditary variations might add to give first class competitor state. In any case, this doesn't imply that an individual with good hereditary qualities would turn into a boss on the grounds that numerous hereditary communications and epigenomic commitments combined with bewildering natural elements form the general aggregate.

The investigation of hereditary discrepancies connected to athletic execution could give experiences toward the capability of turning into a tip top perseverance or strength entertainer (Naureen et al., 2020). Studies elaborate that various information of hereditary relationship with execution & wound-associated aggregates have been distributed throughout the course of recent many years; such examinations have utilized fundamentally the competitor quality way to deal with recognize qualities that partner with world class execution or with variety in execution and additionally wound-associated characteristics. A portion of the world class competitor partners portrayed in the writing could do the trick, & mutually, such companions might be utilized for reproduction intentions (Wang et al., 2013). In this survey, scholars sum up the momentum state of the area, examining the ramifications of accessible information for the act of experts engaged with the game and proposing subsequent bearings for study. Researchers additionally examine subjects connected with the significance of ancestral contour portrayal of competitors, techniques for the recognizable proof of current discrepancies related with actual execution, the utilization of hereditary examination for anticipating cutthroat achievement, & how essential is the hereditary contour for the achievement competitors in rivalry (Guilherme, Tritto, North, Lancha Junior, & Artioli, 2014). Studies claim that current serious game has advanced such a lot of that competitors would take to incredible drastic courses of action to form oneself toward winners; medication has as well developed to the subject that numerous hereditary components have been distinguished to be related with

explicit sport characteristics, & hereditary changes are additionally conceivable. However, this area has gotten the creative mind of the two people in general & athlete, & subsequently the interested specialists ought to know about the possible issues and recent concerns associated with grasping hereditary qualities and assortments, hereditary examination & hereditary designing (John, Dhillon, & Dhillon, 2020). Scholars explain that the restriction of every person to play out a specified sort of activity relies upon the idea of the undertaking, & is impacted by various elements, involving brain science, climate and hereditary form. Hereditary qualities give helpful bits of knowledge, as game exhibitions might be at last characterized as a heritable characteristic. Moral and commonsense admonitions ought to be plainly underscored. The interpretation of a worthwhile Genotyping toward a top winners aggregate is as yet impacted by natural, mental and humanistic variables (Lippi, Longo, & Maffulli, 2010). Studies is centered around the audit of surveys searching for "up-and-comer qualities" and their connection with actual execution aggregates in world class competitors. Researchers want to fetch to pursuers what compels a few people succeed in certain games conditions, in view of variations in hereditary sites & indicators. Scholars trust that this study fetch few latest data and purify the information to the way that the course of ability distinguishing proof & a person sport capacity boost bringing about athletic achievement are emphatically connected with hereditary variations (Dias, Pereira, Negrão, & Krieger, 2007). Studies show that athletic execution is affected by a few variables involving hereditary powerlessness.

The results of the current review show a possible utilization of this hereditary forecast calculation in the games' area, which might work with the discovery of hereditarily gifted competitors, work on their preparation & meal propensities, also assist in the progress of states of being of beginners (De la Iglesia et al., 2020). Scholar studies reveal that wounds are a perplexing quality that may come from the communication of a few qualities. The point of this examination was to demonstrate at the connection among brawn execution associated qualities and abuse wound chance in tip top perseverance competitors, & to analyze the possibility of deciding a complete Genotyping mark that essentially corresponds with wound. Total genotype score investigation seems to relate with world class perseverance competitors at greater gamble for wound. Moreover, review might assist with fostering this as one possibility apparatus to assist with anticipating wound chance in this populace (Varillas-Delgado, Gutierrez-Hellín, & Maestro, 2023). Studies explain that athletics researchers & specialists in associated teaches obviously settled on the way that the degree of actual turn of events and interaction of variation to the efforts are because of the hereditary cosmetics of people. Causes like way of life, ecological collaborations and originate from various beginnings (identity) by Skin tone are additionally realities that can't be disregarded in uncovering the special modifications among individuals. Without a doubt,

competitors with a positive hereditary contour who collaborate with right preparing rehearses are bound to accomplish better execution degrees. Although, almost certainly, the potential blends of hereditary and natural considers that outcome world class execution be staying colossal and frequently flighty (Cerit, Dalip, & Yildirim, 2020). Researchers determined that world class brandishing execution consequence from the mix of multitudinous elements, which connect with each other in an ineffectively seen yet difficult way to form a capable competitor into a boss. Inside the area of athletics subject, first class execution is perceived become the consequence of the two preparation and hereditary elements. Generally, world class brandishing execution is the aftereffect of the collaboration among hereditary and preparing elements, along the outcome that the two ability ID and the executives frameworks to work with ideal preparation are essential to donning achievement (Tucker & Collins, 2012). Studies gives an outline of present information around here with unique spotlight on issues related with the ID of skilled teenagers. There is a developing understanding that customary divisional ability recognizable proof patterns are probably going to reject numerous, particularly recent developing, 'encouraging' youngsters from improvement programs because of the energetic and multi-layered essence of game ability (Vaeyens, Lenoir, Williams, & Philippaerts, 2008). Researchers suggest that complete Genotyping mark contemplates added substance impact of type species on foreseeing a perplexing characteristic like sport presentation. Scholars noticed contrasts in total genotype score appropriations in woman and macho gathering of competitors.

The type species with conceivably various impacts on the sport execution characteristics in woman and guys were portrayed (Pranckeviciene, Gineviciene, Jakaitiene, Januska, & Utkus, 2021). In this study researchers evaluate current cross skilled & enormous scope populace investigations of ability ID, give a thought of the latest mental indicators of execution, inspect the development of latest methodologies that endeavor to lessen predispositions in ability ID, & take a gander at the ascent in revenue in ability ID in citizens with disability athletic (Mann, Dehghansai, & Baker, 2017). Scholars examine the legitimacy and dependability of the trials and the cases assembled by straight to customer organizations, prior to introducing a scope of moral problems regarding youngster progenitor/watchman connections elevated by such trials, which researchers outline as far as maternal/gatekeeper obligations, kids' freedoms, and wellbeing. Scholars contend that more prominent moral accentuation should be placed on the progenitor choice on the prosperity on the kid proceeding, not on post facto legitimizations based on great and terrible results (Camporesi & McNamee, 2016). The purpose of this audit was to fundamentally evaluate the writing respecting the hereditary relationship with competitor state, actual execution, & wound chance in football. The goals were to give direction whereon hereditary indicators might actually be utilized as a

component of subsequent exercise in football & to give guidance for subsequent examination around here (Murtagh et al., 2023). Studies purpose was to explore the connection among athletics and hereditary qualities. Because of the improvements in Omics advances, around 185 hereditary indicators came to be recognized for the connection among athletics execution and qualities. Such qualities are communicated distinctively in digestion as per the attributes of athletics execution (Kahya & Taheri, 2024). Researcher studies reveal that the intersection of hereditary qualities and physicality uncovers a complicated exchange that impacts an individual's games capacity and preparing reaction. This examination dives toward the hereditary premise of brawn filament creation, cardio effectiveness, & the bigger scene of preparing variation. Basically, the implications of hereditary qualities in sports move past person execution and through moral, societal, & logical domains(Hussain, 2024).

2.1 Smart PLS Algorithm Model

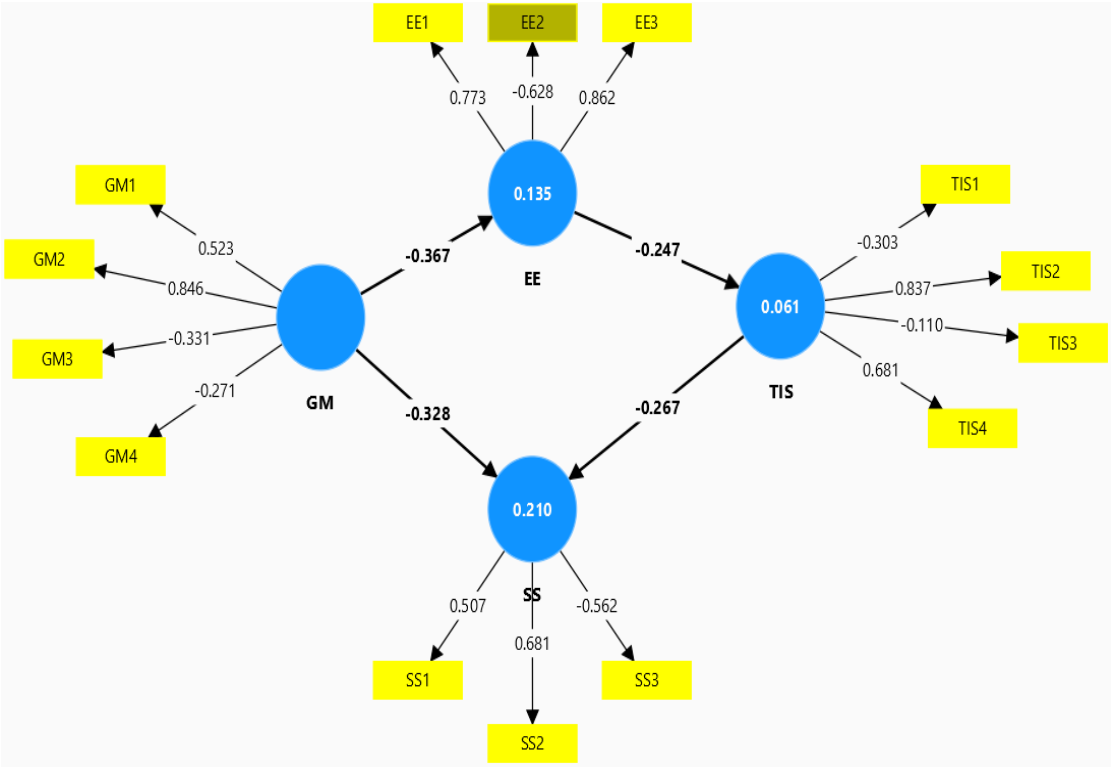

Figure 1: Smart PLS Algorithm Model

The above model of figure 1 represents that smart PLS Algorithm model in between GM, EE, SS and TIS the GM shows that 52%, 84%, 33% and 27% positive also significant link with each other. Similarly, the SS shows negative link with GM the EE shows that -0.247 negative but its 24% significantly level between them. the TIS describe that -0.303, 0.837, -0.110 and 0.681 its shows some negative and some positive link with them.

2.2 Descriptive Statistical Analysis

Table 1: Result of Descriptive Statistical Analysis

NAME	NO.	MEAN	MEDIAN	SCALE MIN	SCALE MAX	STANDARD DEVIATION	EXCESS KURTOSIS	SKEWNESS	CRAMÉR-VON MISES P VALUE
GM1	1	1.633	2.000	1.000	3.000	0.629	-0.603	0.490	0.000
GM2	2	1.449	1.000	1.000	3.000	0.574	-0.181	0.876	0.000
GM3	3	1.592	2.000	1.000	3.000	0.603	-0.589	0.496	0.000
GM4	4	1.592	2.000	1.000	3.000	0.603	-0.589	0.496	0.000
EE1	5	1.714	2.000	1.000	3.000	0.606	-0.545	0.243	0.000
EE2	6	1.633	2.000	1.000	3.000	0.629	-0.603	0.490	0.000
EE3	7	1.571	1.000	1.000	3.000	0.639	-0.477	0.692	0.000
SS1	8	1.551	1.000	1.000	3.000	0.641	-0.403	0.763	0.000
SS2	9	1.531	1.000	1.000	3.000	0.610	-0.404	0.716	0.000
SS3	10	1.673	2.000	1.000	3.000	0.682	-0.749	0.533	0.000
TIS1	11	1.816	2.000	1.000	3.000	0.747	-1.154	0.322	0.000
TIS2	12	1.939	2.000	1.000	4.000	0.740	-0.146	0.413	0.000
TIS3	13	1.776	2.000	1.000	3.000	0.736	-1.071	0.392	0.000
TIS4	14	1.571	2.000	1.000	3.000	0.606	-0.545	0.567	0.000

The above results of table 1 represents that descriptive statistical analysis result demonstrate the mean values, median rates, the minimum values, the maximum value also that it explains the standard deviation and probability rates of each indicator included dependent and independent variables. The GM1,2,3 and 4 these factors considered that are independent variables. According to the result mean values are 1.633, 1.449, and 1.592, and all of them show positive average rates. Similarly, its standard deviation rate is 62%, 57%, 60% deviate from mean. According to the result overall probability value is 0.000 shows that 100% significant level between them. the skewness rate of GM1,2,3, and 4 is 49%, 87%, 49% respectively. The EE1,2, and 3 these factor plays as mediator role result shows that its mean value is 1.714, 1.633, 1.571 its shows that

positive average rate the standard deviation rate is 60%, 62% and 63% deviate from mean. The SS1,2, and 3 these are all consider as mediator variable result describe the average rate is 1.551, 1.531 and 1.673 these values shows that positive average rate the standard deviation rate is 61%, 68% and 64% respectively.

2.3 Correlation Coefficient

Table 2: Result of Correlation Coefficient

	GM1	GM2	GM3	GM4	EE1	EE2	EE3	SS1	SS2	SS3	TIS1	TIS2	TIS3	TIS4
GM1	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
GM2	0.061	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
GM3	-0.019	-0.119	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
GM4	-0.072	-0.178	-0.009	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
EE1	-0.222	-0.218	0.072	0.072	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
EE2	0.123	0.174	-0.180	-0.072	-0.329	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
EE3	-0.341	-0.199	0.023	-0.136	0.422	-0.392	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SS1	-0.105	-0.284	0.107	0.212	0.353	-0.207	0.128	1.000	0.000	0.000	0.000	0.000	0.000	0.000
SS2	-0.024	-0.214	-0.133	0.145	0.134	0.029	0.007	-0.017	1.000	0.000	0.000	0.000	0.000	0.000
SS3	0.006	0.218	-0.274	0.172	0.120	-0.232	0.007	-0.055	-0.025	1.000	0.000	0.000	0.000	0.000
TIS1	-0.057	0.002	0.151	0.015	0.200	-0.100	-0.165	0.126	0.035	-0.078	1.000	0.000	0.000	0.000
TIS2	0.127	0.113	0.264	-0.193	-0.085	-0.048	-0.315	-0.058	-0.290	0.163	-0.131	1.000	0.000	0.000
TIS3	0.086	-0.341	-0.023	-0.160	0.131	0.042	0.143	-0.127	0.084	-0.065	-0.186	0.237	1.000	0.000
TIS4	-0.092	0.260	0.191	0.080	-0.056	0.015	-0.211	0.083	-0.268	0.007	-0.039	0.260	-0.307	1.000

The above results of table 2 demonstrates that correlation analysis in between genetic markers and endurance also strength result shows that negative and positive interrelation between them.

2.4 Theoretical Implications

A few important theories that are related to sportsmanship explain that sportsmanship can be learned from the environment. But there are also other theories that suggest that there are inherited factors that are responsible for talent in athletes. Now, medical Science has reached a conclusion that the trait of sportsmanship is the sum of learned from the environment and inherited from parents. The medical Science proved that there are some important genetic Markers which are reason of endurance and strength in athletes. Genetic Markers are set of some specific sequence of DNA which is responsible for any particular trait in any individuals. There are many important implications of genetic Markers of Endurance and Strength for talent identification in athletes which are described below:

2.4.1 Prediction of talent before time, nutrition and recovery, and performance enhancement

The prediction of talent is necessary in athletes because talent is truly identified, it can help in providing better training and environment to those individuals who have inherited talent in them. We know that every type of trait is related to some kind of genetic Markers in any individual. If these genetic Markers are studied timely, the possible trait of that individual can be predicted before time. The same is true the in Case of athletes, if those genetic Markers that are related to endurance and strength can easily be analyzed, the talent of sportsmanship can be predicted before time. We know that endurance and strength are the two basic needs of any sport. When athletes are able to endure pressure and stress, they will be able to perform well in every kind of sport. Biomolecular studies have also this problem very easily. The biomolecular analysis provided us with information about these genetic Markers. There is only a need for timely identification of these genetic Markers so that talent can be identified easily in athletes. The other important implication of genetic Markers of Endurance and Strength for talent identification in athletes is the aspect of nutrition and recovery. We all know that the State of physical and mental health is dependent upon the nutrition that we take. The nutritional Strategies in athletes are different as compared to nutritional Strategies for layman. The reason is that in athletes, nutrition must be properly balanced and according to need. There should be the correct proportion of each biomolecule in nutrition to ensure proper physical and mental health. If we know about the talent of the athlete by genetic Markers, we can provide such nutrition to these individuals which can help them in maintaining normal physical and mental health. So, we can say that genetic Markers help us maintain the nutrition of athletes as well. The other important implication of genetic Markers of Endurance and Strength for talent identification is performance enhancement of these individuals. It is evident that when talent is identified before time, there will be better Physical and mental training of athletes related to aspects of

sports. All of these provided training will help in improving the performance of athletes. It is not wrong to say that these individuals will have a combination of environmental and inherited factors that will help in the enhancement of performance. These implications are the true evidence of the importance of genetic Markers for enhancing the performance of athletes.

2.4.2 Personalized training, monitoring the response of training, identifying different kinds of genetic variants related to athletic performance

The aspect of personalized training is very important for athletes because medical Science proves that there is the factor of individual differences present among athletes. All the athletes cannot respond to the same training to the same level. There are some athletes who show peak response in less time when they are given some training. But on the other side, there are some athletes who need more time to give a positive response to training. If the genetic Markers are identified timely, there will be a training system according to the needs of athletes. Such a personalized system of training will help in the enhancement of the performance of athletes in a better and more effective way. Such a personalized training system will be based on the aspect of individual differences among athletes. The other important implication of genetic Markers of Endurance and Strength for talent identification of athletes is the aspect of monitoring response to specific training for athletes. As we know the training system for athletes is based upon the system of feedback. In the system of feedback, proper consideration of response to training is done to know about the probability of effectiveness of training for athletes.

2.4.3 Enhancing the process of athlete selection and injury assessments

The process of athlete selection is quite important and lengthy. After the selection of athletes, various trainings are provided to these athletes so that they can perform well in sports. So, if we have standard genetic Markers of Endurance and Strength for talent identification in athletes, it will make the process of selection of athletes easy. Moreover, the lengthy and time-consuming training processes will not be wasted as well. The other important implication of genetic Markers of Endurance and Strength for talent identification in athletes is the injury assessments in athletes. When genetic Markers are studied well, there will also be an idea of risk of injury assessments in athletes which can be helpful in taking preventive measures.

3. Conclusion

When genetic Markers are studied and identified timely, proper training is provided to these athletes as well, then the next step is to see feedback on that training system in athletes. This implication of genetic Markers will help to give consistent training sessions to athletes according to their needs. The other

important implication of the genetic Markers of Endurance and Strength for talent identification in athletes is the study of different genetic variants that are associated with performance in athletes. As we know the process of changes and evolution takes place from time to time so there is also the introduction of different genetic variants that are related to endurance and Performance of athletes. When genetic Markers are studied well, we will also get an option to study other different variants that are related to the performance of athletes. All these implications proved that genetic Markers will be proved an effective way for talent identification in athletes. The research study based on primary data analysis overall research concluded that direct and significant link between them. After an overview of these aspects of the important implications of genetic Markers of Endurance and Strength for talent identification in athletes, we may conclude that genetic Markers help in Talent Identification in athletes in many ways.

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