Mar Dionysius College Football Players' Somato Type Profile

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RTICLE INFO	ABSTRACT
	The study's objective was to evaluate the football players of Mar Dionysius College Pazhanji's somatotype features. It was hypothesized the Mar Dionysius College Pazhanji football players would have somatotype traits to meet the requirements of an ideal football player based on the material that was available in the field of study. A total of sixty male football players who represented college football camps were chosen at random as study subjects. They were between eighteen and twenty-five years old. Measurements were conducted using 17 anthropometric profiles that were recommended by the International Society of the Advancement of Kinanthropometry (ISAK) for somatotype assessment. To determine the state of somatotype components, descriptive statistics including mean, standard deviation, and frequency are computed. Based on the results obtained and within the specified constraints, the following conclusions were made. A greater number of Mar Dionysius College Pazhanji football players—24 in total—fit into the anticipated ectomorphic mesomorph body type group. The players at Mar Dionysius College Pazhanji virtually perfectly match their body type in terms of playing position. There are not many players who have the wrong body type or position.

INTRODUCTION

The human body is made to be physically active. It must be physically capable of running, jumping, climbing, and throwing in order to meet its demands and avoid the continual dangers to its survival. According to anthropologists, the "Flight or Fight" reaction is linked to the want to be proactive. Primitive people occasionally had to engage in combat with other predators or escape for their lives in order to find food. Either way, there was always a lot of spirited activity in response. Even our more recent ancestors had to engage in strenuous activity for the most of their typical day schedule. (Corbin, 1994)

A multitude of elements influence the calibre of excellence and exceptional performance. The amount of body fat percentage is one unique aspect among all, and it has piqued the curiosity of numerous sports scientists.

Somato type
A person's body type or physique is known as their somatotype. These days, the somatotype is seen to be the outward manifestation of the lifetime relationship between an individual's genotype and environment.

Endomorphy
It describes both relative leanness and relative fatness in different body types. In other words, the first component ratings are assessments of the degree of fatness, and they range from the lowest values on record to the highest values on record.

Mesomorphy
It speaks of the relative growth of the musculoskeletal system per unit of height. The assessment of musculoskeletal development, which ranges from the lowest to the highest degree ever recorded, makes up the second component rating. Lean body mass in relation to height can be used to determine the second component. If skeletal and muscle tissue are larger in relation to height, the component score will be higher than 4, and vice versa.

Ectomorphy

It speaks to the relative linearity of each person's anatomy. The height to weight ratio is mostly, but not exclusively, the basis for the third component rating. The third component rating and the height/weight ratio are strongly associated. In order for the high ends to observe elongation or linearity of the various body segments, they must be able to detect relative shortness of the various body segments at the low ends of their distribution. The first and second component's longitudinal distribution are rated according to their shape and degree.

Body Mass

Mass is the amount of matter that makes up the body. By measuring weight, or the force that a material exerts in a standard gravitational field, mass can be computed.

Hypothesis

The hypothesis was based on the body of research-related literature, which suggested that Mar Dionysius College football players would have somatotype traits that would make them good football players.

Methodology

Examining the somatotype traits of Mar Dionysius College football players was the aim of the study. It was hypothesised that Mar Dionysius College football players would have somatotype traits to meet the requirements of an ideal football player based on the material that was accessible in the field of study. A total of sixty male football players who represented College Football Camp were chosen at random as study subjects. They were in the 18–25 age bracket. Measurements were conducted using 17 anthropometric profiles that were recommended by the International Society of the Advancement of Kinanthropometry (ISAK) for somatotype assessment. (Skin fold measurement, Stretch stature (cm), Body mass (kg), Skin fold measurements for the triceps, subscapular, biceps, iliac crest, supraspinale, abdomen, front thigh, and medicinal calf with measurements in millimetres measures of the girthThe measurements of the arm girth are as follows: minimum (cm), maximum (cm), flexed and tensed (cm), waist (cm), gluteal (cm), and calf (cm).Measurement of Breadth, Humerous (cm) and Femur (cm) biepicondylar measurements. The state of somatotype components is determined through the calculation of descriptive statistics like mean, standard deviation, and frequency. Additionally, to ascertain how frequently each type lands in the designated playing positions.

Statistical Analysis of Data

The anthropometric measurement data were entered into the software that ISAK provided. The gathered data has been analysed using descriptive statistics including mean, standard deviation, and percentage of body fat. The data was analysed using SPSS 16 software.

Descriptive of somatotype scores of football players in Mar Dionysius College have been presented in table. 1

Table 1: DESCRIPTIVES OF SOMATOTYPE SCORES OF THE FOOTBALL PLAYERS

DESCRIPTIVE	SOMATOTYPE		
	Endomorph	Mesomorph	Ectomorph
Mean	2.38	4.42	2.53
Std. Deviation	0.29	0.87	0.56
Minimum	1.27	2.21	0.98
Maximum	3.21	6.10	4.65

Football players of Mar Dionysius College had a mean score on Endomorphy 2.38 ± 0.29, Mesomorphy 4.42 ± 0.87 and Ectomorphy 2.53 ± 0.56. The Endomorphic components of these ranged from 1.27 to 3.21. The Mesomorphic components of ranged from 2.21 to 6.10 and Ectomorphic components from 0.98 to 4.65. Comparison of somototype components of football players has been illustrated in fig.1.

Figure 1: COMPARISON OF SOMATOTYPE COMPONENTS OF MAR DIONYSIUS COLLEGE FOOTBALL PLAYERS
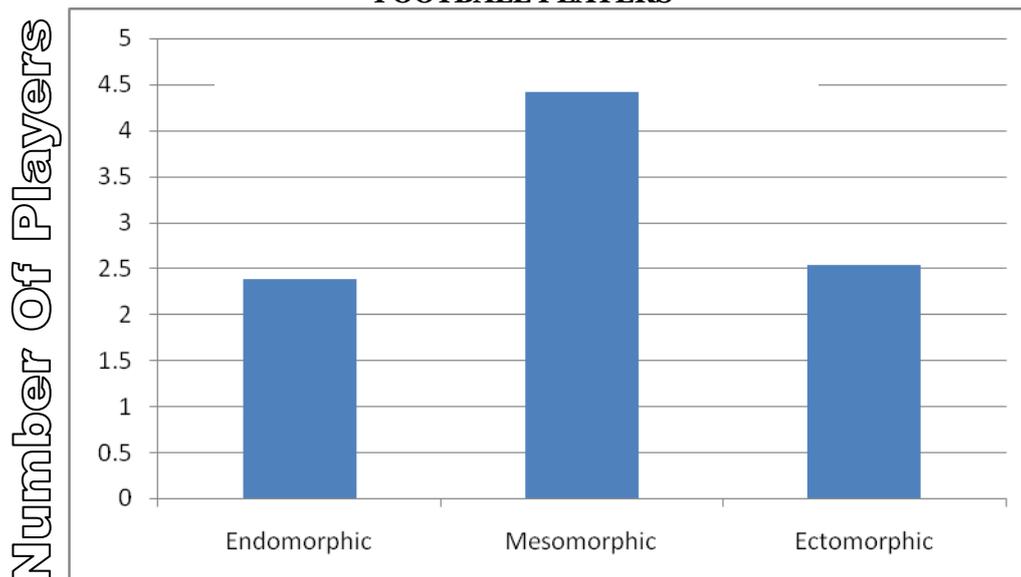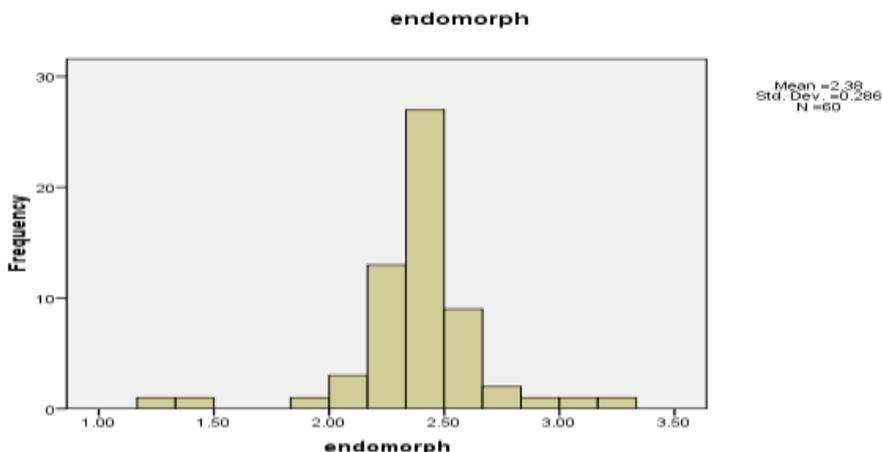

Frequency of endomorphic components of the Mar Dionysius College football players has been presented in table.2.

Table 2: FREQUENCY OF ENDOMORPHIC COMPONENTS OF MAR DIONYSIUS COLLEGE FOOTBALL PLAYERS

Scores	Frequency	Percent	Valid Percent	Cumulative Percent
1.27	1	1.7	1.7	1.7
1.46	1	1.7	1.7	3.3
1.89	1	1.7	1.7	5.0
2.1	2	3.3	3.3	8.3
2.14	1	1.7	1.7	10.0
2.23	7	11.7	11.7	21.7
2.26	2	3.3	3.3	25.0
2.31	1	1.7	1.7	26.7
2.32	1	1.7	1.7	28.3
2.33	2	3.3	3.3	31.7
2.34	1	1.7	1.7	33.3
2.35	2	3.3	3.3	36.7
2.36	4	6.7	6.7	43.3
2.37	4	6.7	6.7	50.0
2.39	5	8.3	8.3	58.3
2.44	3	5.0	5.0	63.3
2.46	3	5.0	5.0	68.3
2.47	1	1.7	1.7	70.0
2.49	4	6.7	6.7	76.7
2.51	4	6.7	6.7	83.3
2.53	1	1.7	1.7	85.0
2.56	4	6.7	6.7	91.7
2.78	2	3.3	3.3	95.0
2.89	1	1.7	1.7	96.7
3.1	1	1.7	1.7	98.3
3.21	1	1.7	1.7	100.0
Total	60	100	100	

The endomorphic components of the football players ranged from 1.27 to 3.21. More number of players (49out of 60) about 81% has fallen within the range of 2.23 to 2.56. Whenever 10% of players were with a very low fatness (ranged 1.27 to 2.14) and 9% of players had slightly higher range (2.78 to 3.21) fatness.
Histogram of the frequency of the endomophic components of Mar Dionysius College football players has been illustrated in fig.2.

Figure 2: HISTOGRAM OF THE FREQUENCY OF THE ENDOMORPHIC COMPONENTS OF MAR DIONYSIUS COLLEGE FOOTBALL PLAYERS

Frequency of mesomorphic components of Mar Dionysius College football players has been presented in table 3

Table 3: FREQUENCY OF MESOMORPHIC COMPONENTS OF MAR DIONYSIUS COLLEGE FOOTBALL PLAYERS

Scores	Frequency	Percent	Valid Percent	Cumulative Percent
2.21	1	1.7	1.7	1.7
2.33	1	1.7	1.7	3.3
2.46	1	1.7	1.7	5.0
2.73	1	1.7	1.7	6.7
2.8	1	1.7	1.7	8.3
3.23	1	1.7	1.7	10.0
3.55	1	1.7	1.7	11.7
3.61	1	1.7	1.7	13.3
3.68	2	3.3	3.3	16.7
3.76	1	1.7	1.7	18.3
3.91	4	6.7	6.7	25.0
3.92	1	1.7	1.7	26.7
3.98	1	1.7	1.7	28.3
4.09	3	5.0	5.0	33.3
4.1	2	3.3	3.3	36.7
4.14	1	1.7	1.7	38.3
4.22	2	3.3	3.3	41.7
4.29	1	1.7	1.7	43.3
4.32	1	1.7	1.7	45.0
4.35	2	3.3	3.3	48.3
4.44	1	1.7	1.7	50.0
4.47	2	3.3	3.3	53.3
4.51	3	5.0	5.0	58.3
4.82	4	6.7	6.7	65.0
4.89	1	1.7	1.7	66.7
4.93	3	5.0	5.0	71.7
4.96	1	1.7	1.7	73.3
5.02	1	1.7	1.7	75.0
5.12	3	5.0	5.0	80.0
5.15	3	5.0	5.0	85.0
5.26	1	1.7	1.7	86.7
5.34	2	3.3	3.3	90.0
5.39	1	1.7	1.7	91.7
5.66	1	1.7	1.7	93.3
5.73	1	1.7	1.7	95.0
5.79	1	1.7	1.7	96.7

6.07	1	1.7	1.7	98.3
6.1	1	1.7	1.7	100.0
Total	60	100.0	100.0	

The mesomorphic components of the football players ranged from 2.21 to 6.10. More number of players (31 out of 60) about 52% have fallen within the range of 4.10 to 5.20, whenever (8 out of 60) 13% have fallen within the range of 5.5.66 to 6.10 remaining (21 out of 60) 35% of the player one within the range of 2.21 to 3.90.

Histogram of the frequency of the mesomorphic components of Mar Dionysius College football players has been illustrated in fig.3.

Figure 3: HISTOGRAM OF THE FREQUENCY OF THE MESOMORPHIC COMPONENTS OF MAR DIONYSIUS COLLEGE FOOTBALL PLAYERS
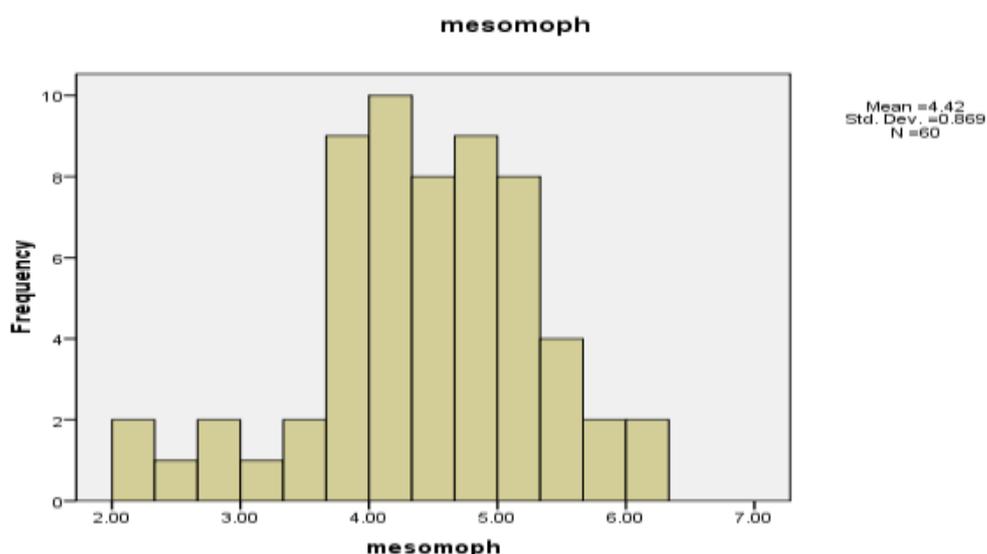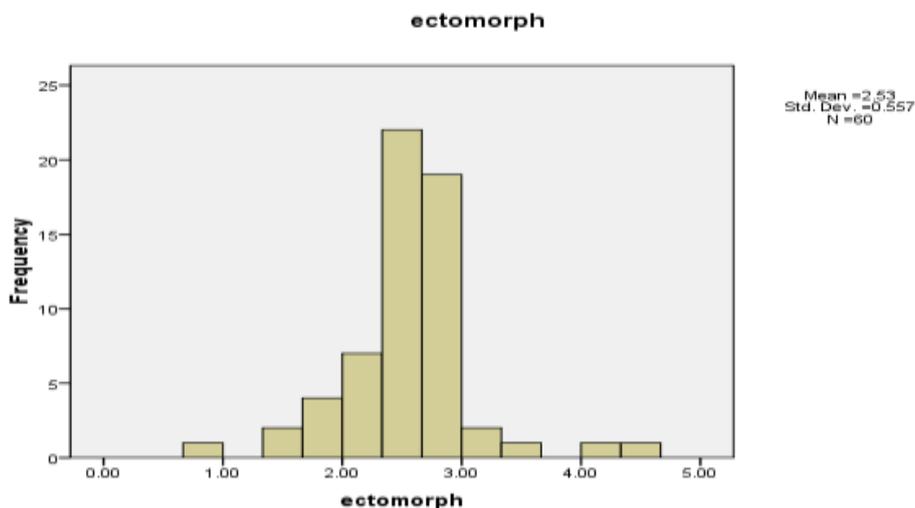

Figure 3

Frequency of Ectomorphic components of Mar Dionysius College football players has been presented in table 4.

Table 4: FREQUENCY OF ECTOMORPHIC COMPONENTS OF MAR DIONYSIUS COLLEGE FOOTBALL PLAYERS

Scores	Frequency	Percent	Valid Percent	Cumulative Percent
0.98	1	1.7	1.7	1.7
1.43	1	1.7	1.7	3.3
1.54	1	1.7	1.7	5.0
1.84	1	1.7	1.7	6.7
1.86	1	1.7	1.7	8.3
1.87	1	1.7	1.7	10.0
1.88	1	1.7	1.7	11.7
2.08	1	1.7	1.7	13.3
2.12	3	5.0	5.0	18.3
2.14	1	1.7	1.7	20.0
2.16	1	1.7	1.7	21.7
2.19	1	1.7	1.7	23.3
2.36	5	8.3	8.3	31.7
2.41	2	3.3	3.3	35.0
2.45	3	5.0	5.0	40.0
2.46	3	5.0	5.0	45.0
2.51	1	1.7	1.7	46.7
2.54	2	3.3	3.3	50.0
2.55	3	5.0	5.0	55.0
2.56	1	1.7	1.7	56.7

2.65	2	3.3	3.3	60.0
2.69	1	1.7	1.7	61.7
2.7	4	6.7	6.7	68.3
2.72	7	11.7	11.7	80.0
2.74	1	1.7	1.7	81.7
2.8	3	5.0	5.0	86.7
2.81	1	1.7	1.7	88.3
2.84	1	1.7	1.7	90.0
2.91	1	1.7	1.7	91.7
3.27	2	3.3	3.3	95.0
3.61	1	1.7	1.7	96.7
4.22	1	1.7	1.7	98.3
4.65	1	1.7	1.7	100.0
Total	60	100.0	100.0	

The Ectomorphic components of the football players ranged from 0.98 to 4.65. More number of players (38 out of 60) about 63.3% has fallen within the range of 1.80 to 2.70. 11.7% of players are in the range of 0.99 to 1.90. 25.0% of players are in the range of 2.72 to 4.65.

Histogram of the frequency of the ectomorphic components of Mar Dionysius College football players has been illustrated in fig 4.

Frequency of body type of different position players of Mar Dionysius College football players has been presented in table 5.

Table 5: FREQUENCY OF BODY TYPES OF DIFFERENT POSITION PLAYERS OF MAR DIONYSIUS COLLEGE

Somato type	Forwards	Midfielders	Defenders	Goal keepers	Total
Endomorphic Mesomorph	5	6	10	01	22
Ectomorphic Mesomorph	5	14	04	01	24
Mesomorphic Ectomorph	5	03	02	01	11
Mesomorphic Endomorph	-	-	01	-	01
Balanced Mesomorph	-	01	01	-	02

From table 5 it is observed that the endomorphic mesomorph of the players are distributed as, forwards (five), Mid fielders (six), defenders(ten) and goal keepers (one). The Ectomorphic mesomorph of players are distributed as forwards (five), midfielders (fourteen), defenders (four), and goal keepers (one). The

Mesomorphic Ectomorph of the players are distributed as forwards (five). Midfielders (three), defenders (two) and goal keeper (one). The mesomorphic Endomorph of players is distributed as forwards (zero), Midfielders (zero) defenders (one) and goal keepers (zero). The balanced mesomorph of players are distributed as, forwards (zero), midfielders (one), defenders (one) and goal keepers (zero).

Histogram of the frequency of body types of different position players of Mar Dionysius College football players has been illustrated in fig. 5.

Figure 5: FREQUENCY OF BODY TYPES OF DIFFERENT POSITION PLAYERS OF MAR DIONYSIUS COLLEGE
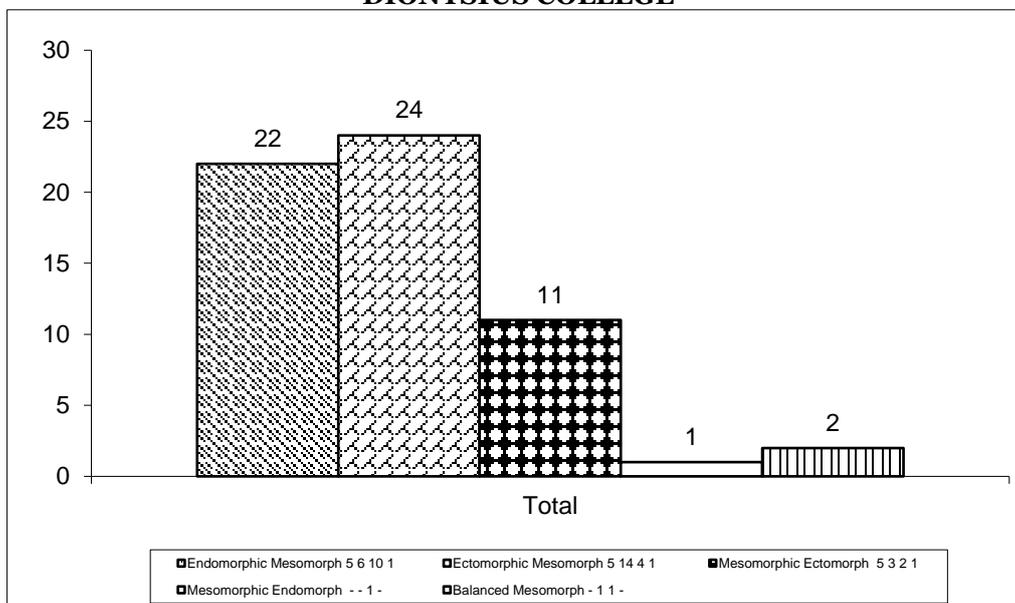
Discussion of Finding & Conclusion

The mesomorphic component is a marker of the body's muscle and is closely linked to the storage and use of energy. It is thought that an ideal athletic body will have more mesomorphic elements. Football players at the highest level are anticipated to have this body type, known as an ecotomorphic mesomorph, which combines the dominance of ectomorphy (linearity) with mesomorphy (musculature).The results (table 1) clearly show that football players' mesomorphy mean score was 4.42 ± 0.87, while their ectomorphy mean score was 2.53 ± 0.56 and their endomorphic (fatness) component mean score was 2.38 ± 0.29.

Table 2's frequency of endomorphic components for football players reveals that 81% of subjects fall between 1.27 to 3.21, which is thought to be the range where most athletes have the least amount of body fat. Merely 10% of participants exhibited extremely low fat content (1.27 to 2.14). The range of fat components was marginally higher in 9% of the athletes. From 2.78 to 3.21).

Table 3 presents the frequency of mesomorphic components of football players. It indicates that approximately 52% of players have 4.10 to 5.20 components, which is deemed sufficient for Mar Dionysius College players' musculative development. Strength training and a healthy diet can help to further enhance the muscular body, leading to increased performance. A somewhat higher level of muscularity was demonstrated by 13% of players (5.5.66 to 6.10). Of the mesomorphic components, 35% of players were at the lowest data (2.21 to 3.90). In order for these players to continue playing the game more effectively, they should pay special attention to building their muscles through a healthy diet and exercise regimen.

Table 4 displays the frequency of ectomorphic components for football players. It indicates that around 63.33% of players fall between 1.80 and 2.70, and 25.0% fall between 2.72 and 4.65. 11.Sixty-six percent of players with low ectomorphic components also require some focus in their training to enhance their physical appearance.

Table 5 makes it clear that a greater proportion of Mar Dionysius College football players—24—fall into the predicted ectomorphic mesomorph body type group, with the endomorphic mesomorph group coming in second with 22 numbers. This group can be readily transformed into the anticipated ectomorphic mesomorph by training modifications. There are eleven players who fit the description of mesomorphic ectomorph. In order to change their body type to the anticipated ectomorphic mesomorph, this group likewise needs additional care. There is only one player who fits the description of a mesomorphic endomorph. Two mesomorphs that are in balance exist

Additional classifications are developed based on the roles that various bodily types play. Football players from the coastal region have a variety of body types, but the frequency of ecotomorphic mesomorph, or ideal body type, is highest among forwards. Both the mesomorphic ectomorph (5 numbers) and the endomorphic mesomorph (5 numbers) are thought to be convertible to the ideal type with diet and exercise modifications.

The majority of midfielders (n=14) fall into the ideal group and close category of endomorphic mesomorph (6 numbers), mesomorphic ectomorph (3 numbers), and balanced mesomorph (1 number).

Defenders are discovered to be ectomorphic mesomorph types with extra numbers (10 numbers), which is perfect for them. Four numbers belong to the ectomorphic mesomorph, two to the mesomorphic ectomorph, and one to each of the balanced mesomorph and mesomorphic endomorph. In play scenarios, defenders' positions call for greater fattiness, and endomorphic mesomorph types can be effective defenders. The sample group's three goal keepers are also found to fall into the ideal and near categories, which are easily transformed into the ideal group with the right instruction. Given that most football players fall into the closest category and have an optimum somatotype.

Based on the results obtained and within the specified constraints, the following conclusions were made. A greater number of Mar Dionysius College Pazhanji football players—24 in total—fit into the anticipated ectomorphic mesomorph body type group. The players at Mar Dionysius College Pazhanji virtually perfectly match their body type in terms of playing position. There are not many players who have the wrong body type or position.

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