Assessment of Socio-Economic Status and Running Performance of Ethiopian Long and Middle-Distance Runners

Massresha Erago Gebregiorgis[1], Kishore Kumar C.K.[2]
[1]*PhD. Candidate of Department of PG Studies and Research in Physical Education and Sport Mangalore University-India and lecturer at the department of Sport Science and PG Studies in Dilla University-Ethiopia*
[2]*PhD. Head of the registrar of Mangalore University, Director of Physical Education Department of PG Studies and Research in Physical Education and Sport in Mangalore University-India*

***Abstract*— Middleand long-distance runners from East Africa are currently the dominant force in middleand long-distance running as well as track events at multiple Olympic Games. This research aimed to determine the relationship between the socioeconomic status of Ethiopian athletes and their running performance. The researcher employed a mixed-methods research design and convergent parallel research methodology was implemented. A purposive sampling technique was used to select the sample. The data was collected through a questionnaire from 166 samples, 98 males and 68 females, of which 83 were elite athletes and 83 were athletes' families. The researcher created the performance level frame of reference for Ethiopian athletes, and adapted Kppuswamy and BG. Prasad's socioeconomic status measurement scale to assess the socioeconomic status of Ethiopian athletes. This study found that athletes with low socioeconomic status had a high level of running performance, whereas athletes with the highest socioeconomic status had a low level of running performance and participation in long and middle-distance races. 85.5 percent of the Ethiopian athletes who participated in this study were world-class performers, including Olympic gold medalists, but they came from low-socioeconomic backgrounds. When they joined long distance training, Ethiopian long and middle-distance runners encountered economic difficulties. Ethiopian long and middle-distance runners joined formal running training with low socioeconomic status. The results of the study indicated that the success of Ethiopian athletes was due to overcoming economic problems in addition to training effects. The study concluded that the performance of Ethiopian athletes and their socioeconomic status are negatively correlated.**

Index Terms: **Socioeconomic Status, Athletics Performance, Altitude, Competition Level.**

ABBREVIATION

- **ELMD=Ethiopian Long And Middle Distance**
- **SES= Socio Economic Status**
- **INR = Indian Rupees**

1.INTRODUCTION

1.1 SOCIO-ECONOMIC STATUS

The European runners' loss of supremacy is not due to a decline in their running speed. The truth is that African runners are currently running faster. Ethiopian and Kenyan middle- and long-distance runners hold more than ninety percent of all world records and the top ten international rankings for middle- and long-distance running. The researcher question is: What factors contribute to African runners, primarily Ethiopians and Kenyans, becoming the best in the world? In general, athletics performance requires the integration of numerous factors (de Lira et al., 2014). One of the factors is socioeconomic status or family background of the athletes.

According to the objectives of their respective studies, various researchers have defined socioeconomic status differently. (Elmagd et al., 2016)((Sharma, 2015)(Konnur & Hoovanna, 2017)(((Bhatt & Waghmode, 2018),(Singh, 2017)(Farid, 2017)and define SES as the position of an individual or group within a hierarchical social structure. SES can be defined as "a person's position within a system of hierarchical social structure." ((Debnath & Kakkar,

2020) (Farid, 2017), (R kour Dr.surjit singh, 2014). A combination of factors, including occupation, education, income, wealth, and place of residence, determine SES. According to ((Verma & Verma, 2016)), socioeconomic status (SES) is a scientific construct used to classify the general population based on their access to collectively desired resources, such as material goods, money, power, friendship networks, healthcare, leisure time, and educational opportunities. Indicators of a person's or family's socioeconomic status (SES) are wealth and a steady income stream.

The aspects of SES play a vital role in an individual's performance in sports. An individual SES plays an important role in his or her achievements in every field of life. SES also has an influence on habitual physical activity. According to (Elmagd et al., 2016), SES is an economic and sociological combined total measure of a person's work experience and of an individual's or family's economic and social position in relation to others, based on income, education, and occupation.

On the basis of the aforementioned definitions by various researchers and Ethiopian societal norms, we can define socioeconomic status as follows: To define SES, we must form the frame of reference from which common definitions of the aforementioned studies are derived, and then compare Ethiopian living standards to global SES measurement scales. These aid us in accepting the definition. Individual or group's position within a social structure in terms of employment, education, income, wealth, and residential house standards, ethnicity, health insurance, saving habits, and saving mechanism are the focus of the aforementioned studies. Several of these SES variables do not apply in Ethiopia. Ethnicity, wealth, and health insurance are inapplicable as measuring variables; neither saving habits nor saving mechanisms are applicable in Ethiopia. According to the research data, their income fluctuates with the seasons. From the aforementioned perspectives, we can define SES as follows: SES is the position of an individual or group within a social structure in terms of the variables of employment status, educational status, income condition, occupational status, wealth, healthiness, residential house standards, and social participation status.

1.2.SOCIOECONOMIC STATUS AND ATHLETICS PERFORMANCE

According to the findings of (Eime et al., 2015), the rates of participation in any and regular physical activity increased as socioeconomic status (SES) increased and decreased as remoteness increased. As remoteness increased and socioeconomic status decreased, participation in numerous team sports decreased. According to the findings of the study (Singh, 2017), SES had a positive impact on the athletic performance of non-achievers and achievers at the intercollegiate level for both men and women shooters.

(Breuer et al., 2010) both demographic variables such as age, gender, nationality, and ethnic background play a significant role in athletic performance. The SES and psychological factors play a crucial role in the skill development of football players, ensuring their playing ability and enhancing their performances to achieve the desired goal (Chandrasekaran and Anbanandan, 2010). On the SES effects of the overall participation of athletes with a high SES, a positive effect was observed on their physical fitness. There was a significant difference between high SES and low SES athletes in terms of physical fitness components (Kodli, 2016).

Independent of total body fat and objectively measured physical activity, Pavón et al. (2010) found a strong positive association between socioeconomic status and sport performance in European adolescents. According to research conducted by Jayanthi et al. (2018), the proportion of athletes participating in intensive year-round specialised sports training increased as socioeconomic status rose.

According to the findings of (Verma and Verma, 2016), the socioeconomic status of an athlete has a significant impact on the selection of sports discipline. Access to modern sports infrastructure, techniques, and psychological support can be used to solve the problem for a higher price. According to the findings of Sharma (2015), there was a significant difference in sport performance between rural and urban junior national level male weightlifters of high, medium, and low socioeconomic status. This research result on socioeconomic status had a positive impact on the athletic performance of junior national level male weightlifters, and urban junior national level male weightlifters with high, medium,

and low socioeconomic status outperformed their counterparts.

(Elmagd et al., 2016) demonstrated that there was a significant positive correlation between physical activity levels of students and mother education and family income, such that low SES students were more likely to exhibit low physical activity performance, whereas high SES students displayed high physical activity performance.

According to the findings of several studies, there is a positive correlation between the socioeconomic status of athletes and/or their families and their sport participation and performance level. The focus of the aforementioned researchers was on the effects of income on sport participation and access to sports equipment, rather than the performance of athletes. Athletics performance is the result of many combined variables, such as socioeconomic status; training altitude, working culture of sport task, nutrition, achievement motivation, role model effect, athletes' need for success and need to avoid failure are examples of sport performance variables. This study aimed to implement the results of previous research on the relationship between the performance of Ethiopian athletes and their socioeconomic status, and then demonstrate the socioeconomic status of Ethiopian athletes.

2.OBJECTIVE

The purpose of this study was to investigate the socioeconomic status and running performance of Ethiopian long and middle-distance runners. Specifically, the socioeconomic status effects on athletes' running performance, the economic problem when athletes joined athletics training, and Ethiopian athletes' international competition participation in comparison to their socioeconomic status were the main objectives of this study.

3. MATERIALS AND METHOD

This study population and the target population were characterized by complex family phenomena and interests requiring a combination of quantitative and qualitative approaches. For addressing family science topics, such as the socioeconomic status of families, a mixed-methods research design has great potential. In mixed methods research design, quantitative and qualitative data are collected, analyzed, and combined in a single study or series of studies.

3.1. SAMPLE LOCATION

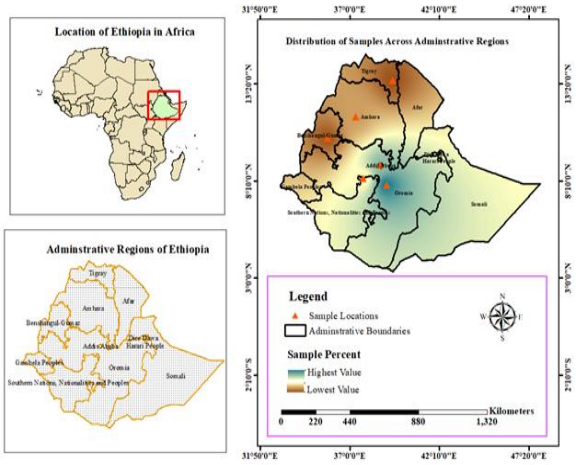

Figure 1. Sample location

3.2. RESEARCH METHOD

The researcher employed the Convergent Parallel research method, derived from the mixed method design. Obtaining harmonized and complementary data and simultaneously analyzing qualitative and quantitative data in a single phase was intended to provide the most comprehensive understanding of the research problem. The data sets were independently analyzed, and then the results were combined for the overall interpretation.

The researcher utilized primary and secondary data sources, as well as survey data collected from 166 samples using a variety of questionnaires. 68 were female and 98 were male, and 83 of the samples were elite athletes and athletes' families. This study focused on the socioeconomic status and athletic performance of Ethiopian longand middle-distance runners. Finally, the collected data are effectively presented and interpreted qualitatively and quantitatively. The qualitative data were transformed into quantitative data and analyzed with IBM SPSS 20-Version's Kruskal-Wallis independent test analysis methods. When analyzing the data, the researcher employed a nonparametric test method, as the data distribution was not normal and parametric tests could not be applied. The researcher has utilized the Kruskal independent hypothesis test method and the Kruskal-Wallis test analysis method, among other nonparametric test analyses. The variables of the study included more than two independent groups

with a single dependent group, so the Kruskal-Wallis test method was the preferred analysis technique. The reason for the use of other countries` the SES measurement scale is that competition standards of Ethiopian athletes are global, and their competitions are held in different countries around the world; therefore, their SES must use compared to other countries` athletes` SES, and the researcher must be used different countries SES measurement standards.

3.3. Data collection Method and Instrument

The researcher was used questionnaire to collect the necessary data. The researcher used primary and secondary source of data. The interpretation of the study based on compared and combined results from both qualitative and quantitative methods. A purposive sampling technique was implemented.

The data were collected from different Ethiopian regional states elite athletes and athletes' families.

3.3.1. Administration of Questionnaires

In the study, self-administered structured questionnaire was administered. With define the questionnaires used as an instrument to gather self-report information from respondents with a paper-and-pencil format. The utilization of structured questionnaires enhances the objectivity and support statistical analysis. The respondents responded to a series of pre-developed questions created by the researcher. The questionnaire for this present study contained pre-developed closed ended items and a rating scale with pre-determined response options of 5 rate likert-scale. The covering letter covered information about the nature of the research, the objectives of the study, ethical issues of the study, and the value of each question to rate and the value of the respondents' participation.

The questionnaire was developed and distributed to two distinct sample groups in order to collect socioeconomic status and performance-related data from Ethiopian elite athletes and athletes' families, respectively. This questionnaire was sent to Ethiopian elite athletes, Tokyo-2020 Olympic team athletes, athletes employed by various athletics clubs, trainees at various sport academies, and the families of various athletes. The researcher utilized primary and secondary data sources, as well as survey data collected from 166 samples using a variety of questionnaires. 68 were female and 98 were male, and 83 of were elite athletes, athletes from different clubs, members of the 2020 Tokyo Olympic team, and members of 83 different athletes' families. This study focused on the socioeconomic status and athletic performance of Ethiopian long and middle-distance runners. Finally, the collected data are effectively presented and interpreted qualitatively and quantitatively. The qualitative data were transformed into quantitative data and analyzed with IBM SPSS 20-Version's Kruskal-Wallis independent test analysis methods.

When analyzing the data, the researcher employed a nonparametric test method, as the data distribution has not normal distribution and parametric tests could not be applied. The researcher has utilized the Kruskal independent hypothesis test method and the Kruskal-Wallis test analysis method, among other nonparametric test analyses. The variables of the study included more than two independent groups with a single dependent group, so the Kruskal-Wallis test method was the preferred analysis technique.

4.RESULT AND DISCUSSION

4.1. Result

Even though this study is concerned with assessing the SES of Ethiopian longand middle-distance athletes, there is nosocioeconomic measurement scale in Ethiopia and adapting the other countries` SES measurement scale to assess Ethiopian athletes`, based on this, the researcher used the Indian socioeconomic status measurement scale as a reference, which was developed and revised by the two most widely used socioeconomic status measurement scales for classifying people by socioeconomic status, introduced by B.G. Prasad and Kuppuswamy-2021, with the B.G. Prasad scale being applicable to both rural and urban populations. This scale was used with Ethiopian athletes from rural and urban areas, indicating that it is appropriate for evaluating Ethiopian long and middle-distance runners. This B.G. Prasad socioeconomic status scale based on multiple parameters including education, occupation, income, and material possessions, has been used to determine socioeconomic status. The study utilized the scores for education level, occupation, and family income level as a whole.

No.	Level of Education of the Household Head	Score
1	Professional degree PhD. or above	7
2	Graduate or Postgraduate	6
3	Intermediate or post high school diploma	5
4	High school certificate	4
5	Middle school certificate	3
6	Primary school certificate	2
7	Illiterate	1

The level of education score table is compiled by BG. Prasad 2021 in order to assess the socioeconomic status of rural and urban Indian populations. The researchers' measurement scale has seven points, with respondents receiving between one and seven points based on their level of education. 1 point is awarded for illiteracy, 2 points for a primary school diploma, 3 points for a middle school diploma, 4 points for a high school diploma, 5 points for an intermediate or post-high school diploma, 6 points for a bachelor's or master's degree, and 7 points for a doctorate or higher. This is a determinant of socioeconomic status. variable measurement scale can be implemented to measure Ethiopian athletes` socioeconomic status.

Table 2, Ocupation Status of Ethiopian Athletes household

No.	Occupation of the household head	Score
1	Professional	10
2	Semiprofessional	6
3	Clerical, Shop owner, farmer	5
4	Skilled worker	4
5	Semi-skilled worker	3
6	Unskilled worker	2
7	Unemployed	1

The researcher adapted the survey data to reflect the occupation of the household head of Ethiopian athletes based on the reference table. The level of occupation score table is compiled by BG. Prasad 2021 to assess the socioeconomic status of rural and urban Indian populations using occupation status as a reference. The researchers' measurement scale consists of ten points, with respondents receiving between one and ten points based on their occupation level. 1 point is awarded for unemployment, 2 points for unskilled labour, 3 points for semiskilled labour, 4 points for skilled labour, 5 points for clerical, shop owner, and farmer, 6 points for semiprofessionals, and 10 points for professionals.

Table 3, BG Prasad Monthly Income Measurement Scale January 2021

No.	*Monthly Income of Family*	*Score*
1	≥18229	12
2	9115-18229	10
3	6836-9114	6
4	4557-6835	4
5	2734-4556	3
6	921-2733	2
7	≤920	1

The BG. Prassad monthly income scale has 12 points based on the population's monthly income. 1 point is awarded for a monthly income of 920 INR or less, 2 points are awarded for a monthly income between 921 and 2733 INR, 3 points are awarded for a monthly income between 2734 and 4556, 4 points are awarded for a monthly income between 4557 and 6835 INR, 6 points are awarded for a monthly income between 6836 and 9114 INR, 10 points are awarded for a monthly income between 9115 and 18229, and 12 points are awarded for This measurement scale application for Ethiopian athletes and their families is based on the direct conversion of Ethiopian currency to Indian rupees.

Table 4, BG Prasad SES Class Measurement Scale January 2021

No.	*Socioeconomic Status Class*	*Total Score*
1	Upper Class	26-29
2	Upper Middle Class	16-25
3	Middle Class	11-15
4	Lower Middle Class	5-10
5	Lower Class	<5

The BG. Prassad socioeconomic status measurement scale is based on the scores from the aforementioned three tables, which are referred to as education level scores, occupation level scores, and monthly income scores. The BG Prasad SES total measurement scale contains 29 points and five SES levels. The socioeconomic status of the head of household is assigned a total of 29 points. The family is assigned to the correct socioeconomic class based on its total score, which was computed previously. The developer used different scores for the aforementioned socioeconomic class based on the three fundamental scores of Education, Occupation, and the total combined family income as shown in tables 1, 2, and 3. The five levels of SES are labelled

according to the points as follows: 5 points or less for the lower class SES, 5 to 10 points for the lower middle class of SES, 11 to 15 points for the middle class of SES, 16 to 25 points for the upper middle class of SES, and 26 to 29 points for the upper class of socioeconomic status.

Table 5, SES Class of Ethiopian athletes` families

SES Class	Frequency	Percent	Valid Percent	Cumulative Percent
Lower Class	33	39.8	39.8	39.8
Lower Middle Class	42	50.6	50.6	90.4
Middle Class	8	9.6	9.6	100.0
Total	83	100.0	100.0	

Table 5, result was Ethiopian athletes` SES backgrounds that showed 90.4% from low SES and 9.6% were come from middle class. There were no one came from higher class of SES.

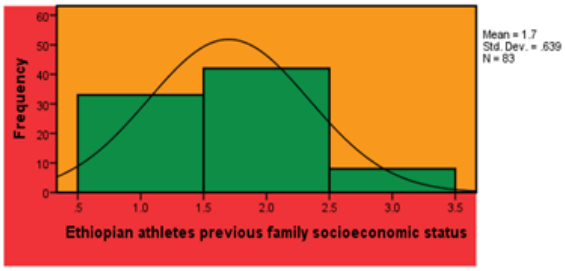

Figure 2. Ethiopian athletes SES

Table 6, Ethiopian athletes previous household head education level

Level		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Illiterate	30	36.1	36.1	36.1
	Primary School	20	24.1	24.1	60.2
	Middle school certificate	13	15.7	15.7	75.9
	High school certificate	11	13.3	13.3	89.2
	Intermediate or Post high school diploma	1	1.2	1.2	90.4
	Graduate or Postgraduate	8	9.6	9.6	100.0
	Total	83	100.0	100.0	

The table 6 result indicated the education level of Ethiopian athletes' household heads. More than 60 percent of the households have a primary school education or less, 15.7 percent have a middle-class certificate, and 13.3 percent have a high school certificate, according to the table data. 1,2 percent of households have an intermediate or post-high school diploma, and 9.6 percent have a bachelor's degree or higher. This clearly indicates the educational background of the families of Ethiopian athletes.

Table7. Ethiopian athletes` previous family household head occupation level

Level	Frequency	Percent	Valid Percent	Cumulative Percent
Unemployed	23	27.7	27.7	27.7
Unskilled worker	15	18.1	18.1	45.8
Semi-skilled worker	8	9.6	9.6	55.4
Skilled worker	13	15.7	15.7	71.1
Clerical, Shop owner, farmer	15	18.1	18.1	89.2
Semiprofessional	9	10.8	10.8	100.0
Total	83	100.0	100.0	

The occupation level of Ethiopian athletes' household heads is displayed in table 7. 18.1 percent of the households were unskilled workers, 9.6 percent were semiskilled workers, 15.7 percent were skilled workers, 18.1 percent were clerical, shop owner, and farmer, and 10.85 percent were semiprofessionals. This study clearly demonstrates that the occupational background of Ethiopian athletes' families does not include any professional athletes.

Table 8, Ethiopian athletes previous family household head income score

Rate		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less than 920	54	65.1	65.1	65.1
	921-2733	21	25.3	25.3	90.4
	2734-4556	5	6.0	6.0	96.4
	4557-6835	2	2.4	2.4	98.8
	9115-18229	1	1.2	1.2	100.0
	Total	83	100.0	100.0	

The results of Table 8 are used to calculate the socioeconomic status of Ethiopian athletes' families. Table 8 explains the monthly household income used to calculate the socioeconomic status of Ethiopian athletes' families. 65% of the households` monthly income were less than 920 INR, 25% of the families' monthly income were between 921 and 2733 INR, 6% of the families' monthly income were between 2734 and 4556 INR, 2.4% of them monthly income was between 4557 and 6835 INR, and 1.2% of the households' monthly income were between 9115 and 18229 INR.

ETHIOPIAN ATHLETES' RUNNING PERFORMANCE

Different levels of participation in long and middle-distance running competitions determine the performance of Ethiopian athletes. Their competition statuses are indicators of their level of performance, as all Ethiopian athletes progress through various

stages of competition and are employed by or affiliated with an athletics club, training center, or project-level training program. Lastly, based on their competition results, they will compete in various international longand middle-distance events. For the purpose of determining their level of participation, the researcher was provided with questions pertaining to the athletes' competition history. The researcher then labelled and developed a reference frame for the athletes' performance level based on the seven-point scale. The competition levels of Ethiopian athletes were as follows:

- Olympic level: 7 points
- Athletics world championship 5 point
- IAAF level and 5 points of each African level for the diamond league 4 point
- 2-point Ethiopian athletics club championship
- Ethiopian regional competition in athletics 1 point

The participation score at the project level was one point, and the total points were reduced to three groups based on their participation status results. These were 18 to 25 points for participation at a high level, 10 to 17 points for participation at a medium level, and 1 to 9 points for participation at a low level in long and middle-distance running competitions. The purpose of the researcher employing the aforementioned group of performance levels is to facilitate the interpretation of qualitative data into quantitative data and the correlation with socioeconomic status data. In addition, there are no quantitative data on the athletics performance level of Ethiopian athletes, which could serve as a reference point for other researchers conducting related research. Based on this factor, respondents provided the following table of long and middle-distance running performance data for Ethiopian athletes.

Table 9, Ethiopian Athletes Running Competition Participation Level Score

No.	TYPES OF COMPETITION	SCORE
1	Olympic level competition	7 points
2	World athletics championship	5 points
3	IAAF level and diamond league	5 points
4	African level	4 points
5	Ethiopian athletics club championship level	2 points
6	Ethiopian regional level athletics competition	1 point
7	Project level participation	1
TOTAL SCORE		25

- All participation = 25 points
- All, except Olympic = 18points
- All, except Olympic and World championship = 13 points
- All, except Olympic, World championship and IAAF/ Diamond league 8 points
- African level and below = 4 points
- Ethiopian club championship 2 points
- Regional competition or Project level participation = 1, Both =2 points

Table 10, Ethiopian Athletes Performance Data

Score of participation		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	4	4	4.8	4.8	4.8
	6	2	2.4	2.4	7.2
	8	6	7.2	7.2	14.5
	10	4	4.8	4.8	19.3
	13	7	8.4	8.4	27.7
	18	32	38.6	38.6	66.3
	23	2	2.4	2.4	68.7
	25	26	31.3	31.3	100.0
	Total	83	100.0	100.0	

The data in table 6 were used as a performance level reference standard because the study attempted to include Olympic and international competition participation at the highest level of athletics performance. This was because the athletes had been delegated to their national team on an international level and their points were greater than 18 and up to 25. 72.3 % of respondents demonstrated an exceptional level of running performance. 13.5 % of respondents performed at a medium level, while 14.5 % performed at a low level. This data distribution appeared as depicted in the graph 3.

Table 11, Ethiopian Athletes Level of Athletics Competition Participation

Level		Frequency	Percent	Valid Percent	Cumulative Percent
VALID	LOW LEVEL	12	14.5	14.5	14.5
	MEDIUM LEVEL	11	13.3	13.3	27.7
	HIGH LEVEL	60	72.3	72.3	100.0
	TOTAL	83	100.0	100.0	

Table 11 presents the results of Ethiopian athletes' participation in long- and middle-distance competitions based on the performance data of table 6, which served as the scoring standard for Ethiopian athletes' performance level. The table results indicated that 14.5% of Ethiopian athletes performed at a low level, 13.3% performed at an intermediate level, and 72.5% performed at a high level, based on the table 7, table 6, and table 5 performance standards, respectively.

Figure 3, Ethiopian athletes` athletics competition level

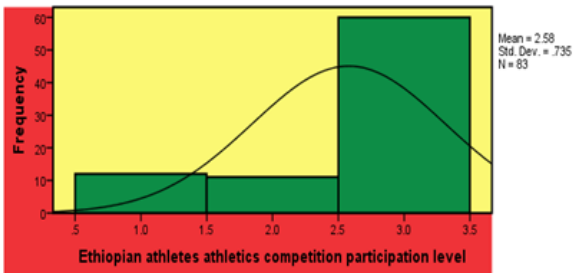

Figure 3 indicated that Ethiopian athletes` competition participation level derived from table 7 and the mean of the data was 2.58 that the highest result was 3 and the lower was1and then the mean value is found on the highest.

Fig. 4SES score relationship to performance level score

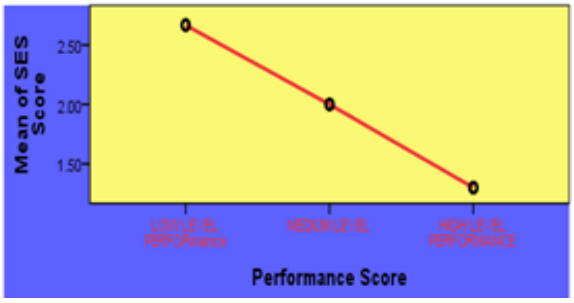

Table 12, Hypothesis Summary

Hypothesis Test Summary				
	Null Hypothesis	Test	Sig.	Decision
1	The distribution of Ethiopian athletes' previous family socioeconomic status is the same across categories of Ethiopian athletes' athletics competition participation level.	Independent-Samples Kruskal-Wallis Test	.672	Retain the null hypothesis.
2	The distribution of Ethiopian athletes' previous family household head education score is the same across categories of Ethiopian athletes' athletics competition participation level.	Independent-Samples Kruskal-Wallis Test	.496	Retain the null hypothesis.
3	The distribution of Ethiopian athletes' previous family household head occupation score is the same across categories of Ethiopian athletes' athletics competition participation level.	Independent-Samples Kruskal-Wallis Test	.515	Retain the null hypothesis.
4	The distribution of Ethiopian athletes' previous family household head income score is the same across categories of Ethiopian athletes' athletics competition participation level.	Independent-Samples Kruskal-Wallis Test	.181	Retain the null hypothesis.
Asymptotic significances are displayed. The significance level is .05.				

The above descriptive statistics results are not used to determine hypothesis test that to reject or accept as it is and the researcher used another test method called nonparametric test method. The reason to use nonparametric test was the data distribution, which was not normal. In from the data normality test result, the researcher was used Kruskal- Wallis test to summarize the hypothesis. The hypothesis test summary compared Ethiopian athletes' previous family socioeconomic status score, Ethiopian athletes' previous family household head education score, of Ethiopian athletes' previous family household head occupation score and Ethiopian athletes' previous family household head income score.

Table 13, Hypothesis Summary 2

Hypothesis Test Summary				
No.	Null Hypothesis	Test	Sig.	Decision
1	The distribution of Ethiopian athletes' previous family socioeconomic status is the same across categories of Ethiopian athletes' athletics competition participation level.	Independent-Samples Kruskal-Wallis Test	.672	Retain the null hypothesis.
Asymptotic significances are displayed. The significance level is .05.				

The researcher summarized the hypothesized relationship between the socioeconomic status score and the running performance score of Ethiopian athletes in order to accept or reject the hypothesis. The null hypothesis is accepted on the grounds that the socioeconomic status of Ethiopian long and middle-distance runners was low at the time they began long-distance training. And Ethiopian long and middle-distance runners' performance increased and their socioeconomic status decreased.

The null hypothesis was that the socioeconomic status of Ethiopian long- and middle-distance runners was inversely proportional to their running performance. This indicates that the socioeconomic status of Ethiopian athletes decreased as their performance increased and that their socioeconomic status decreased as their performance level increased.

Table 14, Kruskal -Wallis H Test Statistics

Test	Ethiopian athletes' previous family household head education score	Ethiopian athletes' previous family household head occupation score	Ethiopian athletes' previous family household head income score
Chi-Square	1.401	1.327	3.418
df	2	2	2
Asymp. Sig.	.496	.515	.181

The result of the Kruskal-Wallis test indicated that the value of the critical table with a confidence level of 95 percent, a significance level of 0.496, and two degrees of freedom was 5.9915, and that the H value for the first question on the preceding table was 1.4001. The critical table value is greater than the test value, as 5.9915 > 1.401. According to the test definition, the null hypothesis is accepted as the previous family household head education score results for Ethiopian athletes are inversely correlated with athletes' performance, and the three socioeconomic indicators variables are inversely correlated with Ethiopian athletes' running performance.

The same interpretation of Ethiopian athletes previous family household head occupation score result with 2 df, H value is 1.327 and the critical table value of 5.9915 with 0.515 significance level that the critical table value is greater than that of chi-square value called H value = 5.9915>1.327 and then the decision is the null hypothesis accepted as it was that again Ethiopian athletes family occupation support the family socioeconomic status and inversely correlates with the athletes` performance level.

The third analysis compared the athletes' family income score with family socioeconomic status and Ethiopian athletes' running performance level score. The results indicated that the critical table value with a 95 percent confidence level (0.050), 2 degrees of freedom, and a significance level of 0.217 was less than the H value of 3.418. The definition of the Kruskal-Wallis test leads to the acceptance of the null hypothesis, given that the income level score of Ethiopian athletes' families did not differ significantly from their socioeconomic status and was inversely proportional to their performance score; that is, family income level score was inversely proportional to athletes' performance.

In the final analysis, it was determined that the above three variables — education level, occupation level, and income level — directly affect the socioeconomic status of a family, such that if one variable increased, the other variable increased as well, and if one variable decreased, the other variable decreased as well. From the aforementioned perspectives, the researcher analyzed the main research hypothesis that as Ethiopian athletes' socioeconomic status increased, their athletic performance decreased, and as Ethiopian athletes' athletic performance increased, their socioeconomic status decreased. The related hypothesis test indicated that we should accept this hypothesis. The following table summarizes and analysis of the socioeconomic standing and performance level;

Table 15. Kruskal-Wallis Tests of SES and Running Performance

	Ethiopian athletes' athletics competition participation level
Chi-Square	.989
Df	2
Asymp. Sig.	.610

The Kruskal-Wallis test result revealed that Chi-Square had a value of 0.989 with 2 degrees of freedom and significance values of 0.610. The critical table result with a confidence level of 95 percent (0.050) and two degrees of freedom (df) was 5.9915, which was greater than the H value and led to the acceptance of the null hypothesis. The null hypothesis posited that socioeconomic status and running performance were inversely correlated, such that as socioeconomic status increased, running performance decreased and vice versa. This research finding served as a framework for other researchers to conduct critical research on the aforementioned topic.

5. DISCUSSION

Socioeconomic status is the position of an individual or group within a social structure in terms of employment status, educational status, income condition, wealth, healthiness, housing standards, and social participation status. This definition was derived from the definitions of various studies in order to establish a framework for common definitions based on a global socioeconomic status measurement variable. Most studies use an individual's or group's position within a social structure in terms of employment, education, income, wealth, residential house standards, savings behavior, health insurance, cast level, and other variables to define socioeconomic status. Some socioeconomic status variables are inapplicable in Ethiopia, such as cast of ethnicities, wealth conditions, (not about wealth) health insurance, saving habits and saving mechanism. This is because the way of life in Ethiopia differs from that of other countries, and rural and urban areas of Ethiopia were not comparable at the time of this study, even within the same state.

According to the research data collected from Ethiopian athletes, and athletes' families, their incomes are not constant and vary by season.

Several studies cited in the preceding section of the literature found a positive correlation between the socioeconomic status of athletes and/or their families and their sport participation and level of performance. Athletics performance is the result of many combined variables, such as socioeconomic status; training altitude, working culture of sport task, nutrition, achievement motivation, role model effect, athletes' need for success and need to avoid failure are examples of sport performance variables. This study result demonstrated that the relationship between the performance of Ethiopian athletes and their socioeconomic status was completely different from the results of other studies. The results of (Kodli, 2016), (Elmagd et al., 2016), (Hashemi et al., 2013), (Singh, 2017), (Pavón et al., 2010), (Eime et al., 2015), (Ali et al., 2012), and so many studies results support the above.

Based on the findings of this study, 85.5% of Ethiopian athletes who participated in the study were world-class athletes who also excelled in Ethiopia. Furthermore, they have participated in international long- and middle-distance running competitions, Olympic competition and won medals.

39.8 percent of Ethiopian athletes originated from families with a lower socioeconomic status, 50.6% from a lower middle socioeconomic background, and 9.6% from a middle socioeconomic background family. A total of 90.4% of elite Ethiopian long- and middle-distance runners hailed from families with a lower socioeconomic status.

The results of the study indicated that the success of Ethiopian athletes was due to overcoming economic obstacles in addition to training effects. The correlation between the performance of Ethiopian long and middle-distance runners and their socioeconomic background data resulted in an inverse relationship between the two variables. This means that as the socioeconomic status of Ethiopian athletes increased, their athletic performance will decrease, and as their socioeconomic status increases, so will decreased their athletic performance.

6. CONCLUSION

The study confirmed that as the performance of Ethiopian long- and middle-distance runners increased, their socioeconomic status decreased; as their performance decreased, their socioeconomic status increased; and as their performance remained unchanged, their socioeconomic status increased.

According to the findings of this study, no one came from a family with a high level of socioeconomic status, the athletes' highest level of socioeconomic status was middle class, and almost all Ethiopian athletes came from a socioeconomic background lower class. The socioeconomic status of long- and middle-distance runners from Ethiopia has positive effects on their running performance.

The findings of this study 85,5 % of Ethiopian athletes who participated in this study were high-level performers internationally as well as domestically; they have international and Olympic level long and middle-distance running competition participation, and medal history, including Olympic gold medalists; however, they came from a lower socioeconomic background and achieved running success. This study concluded that the performance of Ethiopian long- and middle-distance runners and their socioeconomic status are inversely proportional.

The correlation between the performance of Ethiopian long- and middle-distance runners and their socioeconomic background data resulted in an inverse relationship between the two variables. This means that as the socioeconomic status of Ethiopian athletes improves, their athletic performance will decrease, and as their socioeconomic status increase, so will decrease their athletic performance.

The number of Ethiopian long- and middle-distance runners with a low socioeconomic status who participated in formal running training was insufficient to bolster the above results regarding the socioeconomic status of Ethiopian athletes and performance-related issues. Through sports, African Americans can attain both economic and social success. (Harrison, Azzarito and Burden, 2004).

REFERENCE

[1] Ali, M. et al. (2012) “Relationship between social-economic status of family and adolescents student sport participation,” Annals of Biological Research, 3(8), pp. 4012–4016.

[2] Bhatt, A. and Waghmode, P. A. (2018) "ABSTRACT :," 2331(48514), pp. 5–7.
[3] Breuer, C. et al. (2010) "Socio-economic patterns of sport demand and ageing," European Review of Aging and Physical Activity, 7(2), pp. 61–70. doi: 10.1007/s11556-010-0066-5.
[4] Chandrasekaran, S. and Anbanandan, A. (2010) "A study of socio economic status and psychological factors potentiates the playing ability among low and high performers of state level football players," 1(12), pp. 22–28.
[5] Debnath, D. J. and Kakkar, R. (2020) "Modified bg prasad socio-economic classification, updated – 2020," Indian Journal of Community Health, 32(1), pp. 124–125. doi: 10.47203/ijch.2020.v32i01.024.
[6] Eime, R. M. et al. (2015) "Participation in sport and physical activity: Associations with socio-economic status and geographical remoteness Health behavior, health promotion and society," BMC Public Health, 15(1), pp. 1–12. doi: 10.1186/s12889-015-1796-0.
[7] Elmagd, M. A. et al. (2016) "The effect of socio-economic status on the effective students' participation in physical activity: A cross sectional study from Ras Alkhaimah Medical and Health Sciences University-UAE," International Journal of Physical Education, Sports and Health IJPESH, 369(32), pp. 151–155. Available at: www.kheljournal.com.
[8] Farid, A. B. (2017) "Socio-Economic status difference between football and cricket players of Punjab," 4(4), pp. 211–213.
[9] Hamilton, B. (2000) "East African running dominance : what is behind it ?," pp. 391–394.
[10] Harrison, L., Azzarito, L. and Burden, J. (2004) "Perceptions of athletic superiority: A view from the other side," Race Ethnicity and Education, 7(2), pp. 149–166. doi: 10.1080/1361332042000234277.
[11] Hashemi, M. et al. (2013) "The Comparison of Socio-economic Status of Families and Social Support of Parents for the Physical Exercises of Their Children," Procedia - Social and Behavioral Sciences, 82, pp. 375–379. doi: 10.1016/j.sbspro.2013.06.278.
[12] Jayanthi, N. A. et al. (2018) "Socioeconomic Factors for Sports Specialization and Injury in Youth Athletes," Sports Health, 10(4). doi: 10.1177/1941738118778510.
[13] Kodli, U. (2016) "The effect of socio-economic status on the physical fitness of sports persons of bidar taluka," 3(3), pp. 569–572.
[14] Konnur, R. G. and Hoovanna, S. (2017) "Influence of socio-economic status on mental health of sports women," 2(6), pp. 111–113.
[15] de Lira, C. A. B. et al. (2014) "Genetic aspects of athletic performance: the African runners phenomenon," Open Access Journal of Sports Medicine, p. 123. doi: 10.2147/oajsm.s61361.
[16] Pavón, D. J. et al. (2010) "Socioeconomic status influences physical fitness in European adolescents independently of body fat and physical activity: The Helena study," Nutricion Hospitalaria, 25(2), pp. 311–316. doi: 10.3305/nh.2010.25.2.4596.
[17] R kour Dr.surjit singh (2014) "Socio-Economic Status of Cricket and Hockey Players of Jammu & Kashmir," International Journal of Behavioral Social and Movement Sciences, 03(02), pp. 120–125.
[18] Sharma, R. (2015) "Effect of socioeconomic status on sport performance of national level junior weightlifters," International Journal of Applied Research, 1(5), pp. 212–214.
[19] Singh, J. (2017) "Socioeconomic Status Effect on Sport Performance of Non Achiever and Achiever Shooters .," 7(3), pp. 59–65.
[20] Vancini, R. L., Pesquero, J. B., Fachina, R. J., dos Santos Andrade, M., Borin, J. P., Montagner, P. C., & de Lira, C. A. B. (2014). Genetic aspects of athletic performance: the African runners phenomenon. Open access journal of sports medicine, 5, 123.
[21] Verma, S. and Verma, R. (2016) "Sports by Choice or by Socio-Economic Status," Research Journal of Physical Education Sciences, 4(3), pp. 0–11.