



# Ethiopia and Kenya at the Summer Olympic Games: Comparison of Performances

Zerihun Birhanu

(PhD) Bahir Dar University Sport Academy, Bahir Dar, Ethiopia

Phone: +251961014088

mail:birukzer04@gmail.com

## Abstract

Received in Sep. 2024 The purpose of this study was to compare the performance

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Ethiopian and Kenyan at the summer Olympic Games heretofore. The study has employed an empirical research design.

Two countries were selected purposively due to the historical competition that exists between them and their over dominance

of the rest of the world in endurance races. The data was collected through the internet from several sites. The number of sites

visited depends on the number of times each country has participated at the Summer Olympic Games. 15 sites were visited for Ethiopia and Kenya respectively.

The data collected was sorted into men and women. Percentages and mean and standard deviation were used to describe the performances of athletes from the two countries.

An independent sample t-test served as the statistical instrument for testing the hypotheses set out at .05 alpha levels. The results revealed, out of 124 total medals won by Kenya 88 (70.9%)

came through the men athletes and the women athletes contributed 36 (29.03%) medals. Ethiopia has a total of 34 medals won by men and women athletes. As a result, 34 medals (54.84%) were won by men athletes while the women contributed 28 medals (45.16%). On the other hand, the t-test result revealed a statistically significant difference in the medal count between Kenya (M=7.75, SD=4.70) and Ethiopia (M=4.13, SD=2.80) conditions  $t(29)=-2.62$   $p=.02$ . The results

## Keywords:

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Games,

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*for across country comparison of the performance of athletes in terms of total medal count revealed Ke (M=5.50, SD=3.16) significantly outperformed Ethio (M=2.27, SD=1.34) conditions  $t(29)=-3.66$   $p=.00$ . On the c hand, statistically non-significant difference was observe the women side between the two countries. Based on the r obtained, it was suggested that particular attention shoul paid at the Ethiopian side to work on the at developmentprogrammes in varied events broadly in ordi perform better in the future.*

## 1. Introduction

The Summer Olympic Games also known as the Games of the Olympiad, and often referred to as the Summer Olympics, is a major international multi-sport event normally held once every four years on leap years. The inaugural Games took place in 1896 in Athens, Greece, and the most recent Games were held in 2024 in Paris, Japan and the next Olympic Games are scheduled to be held in Los Angeles Jul 14, 2028 – Sun, Jul 30, 2028. The tradition of awarding medals began in 1904; in each Olympic event, gold medals are awarded for first place, silver for second place, and bronze for third place (The Summer Olympic Games, 2024)

The Summer Olympics have increased in scope from a 42-event competition programme

in 1896 with fewer than 250 male competitors from 14 nations, to 339 events in 2021 with 11,420 competitors (almost half of whom were women) from 206 nations. (The Summer Olympic Games, 2024)

Ethiopia and Kenya first participated at the Olympic Games in men team in 1956 at Melbourne. Kenyan was ahead of Ethiopia in participating at the Summer Olympic in women team. The Kenyan women team first participated in the 1968; Mexico Olympics while Ethiopian women team was at the Olympic village in 1992 at Barcelona. Both Ethiopia and Kenya has sent athletes to compete in Summer Olympic Games since then, except for the boycotted 1976, 1984 and 1988 for Ethiopia and the 1976 and 1980 Games for Kenya (Ethiopia at the Summer



Olympic Games, 2024; Kenya at the Summer Olympic Games, 2024).

## 2. Problem statement

Ethiopia and Kenya have been winning medals at the Summer Olympic Games so far. According to the IAAF (1964), Ethiopia has made the medals table at the Summer Olympic Games for the first time during its second appearance in 1960 Olympiad in Italy, Rome by the barefooted legend Abebe Bikila winning a Gold medal. Kenya also made its first medal during their third appearance at the summer Olympic Games in 1964 Japan, Tokyo with Bronze medal. Since then the two countries has continued to compete each other in the Olympic Games (Ethiopia at the Olympics, 2024; Kenya at the Olympics, 2024).

The two countries also made the 2024 Paris, France Summer Olympic Games medals table ranking 17<sup>th</sup> and 47<sup>th</sup> with 4 Gold, 2 silver, 5 Bronze and overall 11 medals and 1 Gold, 3 Silver, 0 Bronze and overall 4 medals for Kenya and Ethiopia respectively (Paris Medal Table, 2024).

Anido (2010) compared the performances of Ethiopia and Kenya at the summer Olympic Games held (1956-2008).

He found that, no significant difference between the two countries in the overall medal count. This study onwards, four Olympiads were held but no studies were conducted in consideration of these four Olympiads.

Therefore, from the literature point of view it has not been clear which of the two countries had performed better in terms of medal type, total number of medal count, event diversity and athlete variety so far at the Summer Olympic Games 2008 onwards. Therefore, in this study it was intended to compare the performances of the two countries in detail in terms of the aforementioned variables at the whole Summer Olympic Games held so far.

## 3. Objectives of the study

### 3.1. General objective:

This study was intended to compare the performance of Ethiopia and Kenya at the Summer Olympic Games.

### 3.2. Specific Objectives:

The study has the following specific objectives:

1. To compare the performance of Ethiopia and Kenya at the Summer

Olympic Games in terms of medal type and overall medal count.

2. To compare the performance of men athletes across country (Ethiopia and Kenya) at the summer Olympic Games in terms of medal type and overall medal count.
3. To evaluate across country (Ethiopia and Kenya) performances of women athletes at the Summer Olympic Games in terms of medal type and overall medal count.
4. To assess within country performance of men and women athletes at the summer Olympic Games in terms of medal type and overall medal count.
5. To compare athlete and event diversity of the two countries at the summer Olympic Games

#### 4. Hypothesis of the study

1. **H0:** There is no a statistically significant performance difference between Ethiopia and Kenya in terms of medal type and overall medal count.
2. **H0:** There is no a statistically significant performance difference

between Ethiopian and Kenyan men athletes in terms of medal type and overall medal count.

3. **H0:** There is no a statistically significant performance difference between Ethiopian and Kenyan women athletes in terms of medal type and overall medal count.
4. **H0:** There is no a statistically significant performance difference between Ethiopian men and women athletes in terms of medal type and overall medal count.
5. **H0:** There is no a statistically significant performance difference between Kenyan men and women athletes in terms of medal type and overall medal count.

#### 5. Scope of the study

The scope of the study is mainly bounded to the comparison of performances of Ethiopia and Kenya at the summer Olympic Games held **1956 – 2020** on the basis of number and type of medals won by men and women athletes in track and field.

**6. Significance of the study:** This study is significant for the following reasons:

It provides a research based evidence to clear the confusion about the performances of the two countries at the Summer Olympic Games.

It discloses performance differences between the two countries indicating their gaps, strengths and limitations in terms of the number of medals, types of medals, event diversity and athletes participation which is considered valuable inputs for different stakeholders; like the Ethiopian and Kenyan athletics federations, clubs, coaches and athletes of the two countries

It could also be used as a referencing document for anyone wishing to research in similar areas.

## 7. Methods

### 7.1. Design

The study is largely historical as it mainly focused on past performances of the two countries at the Summer Olympic Games. Hence the study was an empirical research design in its type.

### 7.2. Sampling

The two countries were selected purposively because; they are historically competent and

dominated the world in middle and long distances.

These two countries are found in the same location with almost similar geography and demography and similar cultural values which are contributing factors for better performance in middle and long distance events.

### 7.3. Source of data and Procedures of data collection

The data was collected through the internet. The researcher downloaded the data from several sites on the internet.

The number of sites visited for data collection depended on the number of times each country has been to the summer Olympic Games. For Kenya 15 sites and for Ethiopia 14 sites were visited for data collection.

### 7.4. Statistical analysis

The data collected was sorted into men and women. Percentage, mean and standard deviation were used to describe the performances of the athletes from the two countries.

The T-test served as the statistical instrument for testing the hypotheses set out at .05 alpha levels.

## 8. Results

**Table 1:** Total medal count of Ethiopian and Kenyan athletes at the Summer Olympic Games

|              | Country   |           |           |           |           |            |           |           |           |           |            |            |
|--------------|-----------|-----------|-----------|-----------|-----------|------------|-----------|-----------|-----------|-----------|------------|------------|
|              | Ethiopia  |           |           |           |           | Kenya      |           |           |           |           |            |            |
|              | Sex       |           | Sex       |           | Total (%) | Sex        |           | Sex       |           | Total (%) |            |            |
|              | Men       | Women     | Men       | Women     |           | Men        | Women     | Men       | Women     |           |            |            |
| N            | (%)       | N         | (%)       |           | N         | (%)        | N         | (%)       |           | N         | (%)        |            |
| Gold         | 14        | 58        | 10        | 42        | 24        | 100        | 29        | 74        | 10        | 26        | 39         | 100        |
| Silver       | 8         | 53        | 7         | 47        | 15        | 100        | 29        | 66        | 15        | 34        | 44         | 100        |
| Bronze       | 12        | 52        | 11        | 48        | 23        | 100        | 30        | 73        | 11        | 27        | 41         | 100        |
| <b>Total</b> | <b>34</b> | <b>55</b> | <b>28</b> | <b>45</b> | <b>62</b> | <b>100</b> | <b>88</b> | <b>71</b> | <b>36</b> | <b>29</b> | <b>124</b> | <b>100</b> |

Table 1 shows that, out of 124 medals won by Kenyan athletes 88 (71%) came through the men athletes. The women athletes contributed 36 medals (29%) of the total number of medals. Ethiopia has a total of 62 medals won by both their men and women athletes. As a

result, 34 medals (55%) were won by the men athletes while their women counterparts contributed 28 medals (45%). According to the result, the overall medal count for Kenyan athletes is larger than their Ethiopian counterparts.

**Table 2:** Across country group descriptive statistics in terms of medal type and overall medal count

|              | Country  | N  | Mean | SD   | SEM  |
|--------------|----------|----|------|------|------|
| Gold Medal   | Ethiopia | 15 | 1.60 | 1.24 | .32  |
|              | Kenya    | 16 | 2.44 | 2.03 | .51  |
| Silver Medal | Ethiopia | 15 | 1.00 | 1.13 | .29  |
|              | Kenya    | 16 | 2.75 | 1.88 | .47  |
| Bronze Medal | Ethiopia | 15 | 1.53 | 1.46 | .38  |
|              | Kenya    | 16 | 2.56 | 2.00 | .50  |
| TNMW         | Ethiopia | 15 | 4.13 | 2.80 | .72  |
|              | Kenya    | 16 | 7.75 | 4.71 | 1.18 |

TNMW=total number of medal won, SD=standard deviation, SEM= standard error mean In table 2 group descriptive statistics was conducted to show the performances of Kenya and Ethiopia in terms of medal type and overall medal count at the Summer Olympic Games



held so far. The result revealed that Kenya has won larger number of Gold (M=2.44, SD=2.03), Silver (M=2.75, SD=1.88), Bronze (M=2.56, SD=2.00) and total No of medals per appearance (M=7.75, SD=4.70) than Ethiopia

did Gold (M=1.60, SD=1.24), Silver (M=1.00, SD=1.13), Bronze (M=1.53, SD=1.46) and total number of medals per appearance (M=4.13, SD=2.80)

**Table 3:** Across country comparison of performances in terms of medal type and total medal count

|              |                             | Levene's Test for Equality of Variances |      | t-test for Equality of Means |       |                 |       |
|--------------|-----------------------------|---|------|------------------------------|-------|-----------------|-------|
|              |                             | F                                       | Sig. | t                            | df    | Sig. (2-tailed) | MD    |
| Gold Medal   | Equal variances assumed     | 4.35                                    | .05  | -1.37                        | 29    | .18             | -.84  |
|              | Equal variances not assumed |   |      | -1.39                        | 25.07 | .18             | -.84  |
| Silver Medal | Equal variances assumed     | 4.71                                    | .04  | -3.11                        | 29    | .00             | -1.8  |
|              | Equal variances not assumed |   |      | -3.16                        | 24.89 | .00             | -1.75 |
| Bronze Medal | Equal variances assumed     | .90                                     | .35  | -1.63                        | 29    | .11             | -1.03 |
|              | Equal variances not assumed |   |      | -1.65                        | 27.40 | .11             | -1.03 |
| TNMW         | Equal variances assumed     | 2.20                                    | .15  | -2.58                        | 29    | .02             | -3.62 |
|              | Equal variances not assumed |   |      | -2.62                        | 24.68 | .02             | -3.62 |

TNMW=total number of medal won, MD= mean difference

As can be seen in table 3, across country comparison of performance was made in terms of medal type and total medal count between Kenya and Ethiopia at the Summer Olympic Games held so far. The independent sample t-test revealed a statistically significant difference in the silver medal won by Kenya (M=2.75, SD=1.88 ) and Ethiopia (M=1.00, SD=1.13) conditions  $t(29)=-3.11$   $p=.00$ . Similarly, in terms of the total medal count a

statistically significant difference was observed between Kenya (M= 7.75, SD =4.71) and Ethiopia (M=4.13, SD=2.80) conditions  $t(29)=-2.62$   $p=.02$ . The results suggested that Kenya has performed better than Ethiopia in both silver and over all medal count. Conversely there was no statistically significant difference in Gold and Bronze medals won by the two countries.

**Table4:** Group descriptive Statistics of the performances of men athletes across country

|              | Country  | N  | Mean | SD    | SEM  |
|--------------|----------|----|------|-------|------|
| Gold Medal   | Ethiopia | 15 | .93  | .884  | .228 |
|              | Kenya    | 16 | 1.81 | 1.424 | .356 |
| Silver Medal | Ethiopia | 15 | .53  | .640  | .165 |

|              |          |    |      |       |      |
|--------------|----------|----|------|-------|------|
| Bronze Medal | Kenya    | 16 | 1.81 | 1.424 | .356 |
|              | Ethiopia | 15 | .80  | .941  | .243 |
| TNMW         | Kenya    | 16 | 1.88 | 1.360 | .340 |
|              | Ethiopia | 15 | 2.27 | 1.335 | .345 |
|              | Kenya    | 16 | 5.50 | 3.162 | .791 |

TNMW=total number of medal won, SD=standard deviation, SEM= standard error mean

In table 4 group descriptive statistics was conducted to show across country performances of men athletes in terms of medal type and overall medal count at the Summer Olympic Games held so far. The result revealed that, in 15 and 16 Summer Olympic Games appearances for Ethiopia and Kenya respectively, Kenyan men athletes has won Gold (M=1.81, SD=1.42), Silver

(M=1.81, SD=1.42), Bronze (M=1.88, SD=1.36) and total No of medals per appearance (M=5.50, SD=3.16) than Ethiopian men athletes did Gold (M=.93, SD=.88), Silver (M=.53, SD=.64), Bronze (M=.80, SD=.94) and total number of medals per appearance (M=2.27, SD=1.34). The result suggests that Kenyan has performed better than Ethiopia in all the medal types and overall medal count.

**Table 5:** Across country performance comparison of Men athletes

|              |                             | Levene's Test for Equality of Variances |      | t-test for Equality of Means |       |                 |       |
|--------------|-----------------------------|---|------|------------------------------|-------|-----------------|-------|
|              |                             | F                                       | Sig. | t                            | df    | Sig. (2-tailed) | MD    |
| Gold Medal   | Equal variances assumed     | 2.89                                    | .10  | -2.05                        | 29    | .05             | -.88  |
|              | Equal variances not assumed |   |      | -2.08                        | 25.28 | .05             | -.88  |
| Silver Medal | Equal variances assumed     | 11.78                                   | .00  | -3.19                        | 29    | .00             | -1.28 |
|              | Equal variances not assumed |   |      | -3.26                        | 21.11 | .00             | -1.28 |
| Bronze Medal | Equal variances assumed     | .58                                     | .45  | -2.54                        | 29    | .02             | -1.08 |
|              | Equal variances not assumed |   |      | -2.57                        | 26.76 | .02             | -1.08 |
| TNMW         | Equal variances assumed     | 9.83                                    | .00  | -3.66                        | 29    | .00             | -3.23 |
|              | Equal variances not assumed |   |      | -3.75                        | 20.45 | .00             | -3.23 |

TNMW=total number of medal won, MD= mean difference

As can be seen in table 5, across country men athletes performance comparison was made in terms of medal type and total medal count at the Summer Olympic Games held so far. The

independent sample t- test revealed a statistically significant difference in the number of Gold medals won by Kenyan (M=1.81, SD=1.42) and Ethiopian (M=.93,



SD=.88) conditions  $t(29) = -2.05$   $p = 0.05$ , silver medals won by Kenyan men athletes ( $M = 1.81$ ,  $SD = 1.42$ ) and Ethiopian men athletes ( $M = .53$ ,  $SD = .64$ ) conditions  $t(29) = -3.19$   $p = .00$  and Bronze medals won by Kenya men athletes ( $M = 1.88$ ,  $SD = 1.36$ ) and Ethiopian men athletes ( $M = .80$ ,  $SD = .94$ ) conditions  $t(29) = -2.54$   $p = .02$ . Similarly, in terms of the total

medal count a statistically significant difference was observed between Kenyan men athletes ( $M = 5.50$ ,  $SD = 3.16$ ) and Ethiopian men athletes ( $M = 2.27$ ,  $SD = 1.34$ ) conditions  $t(29) = -3.66$   $p = .00$ . The results suggested that Kenya was performed better than Ethiopia in all medal types and over all medal count.

**Table 6:** Group descriptive statistics of the performances of women athletes across country

|              | Country  | N  | Mean | SD    | SEM  |
|--------------|----------|----|------|-------|------|
| Gold Medal   | Ethiopia | 9  | 1.11 | .928  | .309 |
|              | Kenya    | 13 | .77  | 1.235 | .343 |
| Silver Medal | Ethiopia | 9  | .78  | .667  | .222 |
|              | Kenya    | 13 | 1.15 | 1.281 | .355 |
| Bronze Medal | Ethiopia | 9  | 1.22 | 1.093 | .364 |
|              | Kenya    | 13 | .85  | 1.144 | .317 |
| TNMW         | Ethiopia | 9  | 3.11 | 1.616 | .539 |
|              | Kenya    | 13 | 2.77 | 3.086 | .856 |

TNMW=total number of medal won, SD=standard deviation, SEM= standard error mean

In table 6 group descriptive statistics was conducted to show across country performances of women athletes in terms of medal type and overall medal count at the Summer Olympic Games held so far.

The result revealed that, in 9 and 13 Summer Olympic Games appearances for Ethiopia and Kenya respectively, Ethiopia won larger number of Gold, Bronze and total number of medals ( $M = 1.11$ ,  $SD = .93$ ), ( $M = 1.22$ ,  $SD = 1.09$ ) and ( $M = 3.11$ ,  $SD = 1.62$ ) respectively than Kenyan did ( $M = .77$ ,

$SD = 1.24$ ), ( $M = .85$ ,  $SD = 1.14$ ) and ( $M = 2.77$ ,  $SD = 3.09$ ) respectively for Gold, Bronze and Total number of medals per appearance. On the other hand Kenyan has won larger number of Silver medals per appearance ( $M = 1.15$ ,  $SD = 1.28$ ) than Ethiopian did ( $M = .78$ ,  $SD = .67$ ).

The result suggested that Ethiopian women athletes performed better than Kenyan counterparts in the number of Gold, Bronze and Overall medal count per appearance with

relatively less number of appearances at the Summer Olympic Games.

**Table 7:** Across country Performance comparison of women athletes

|              |                             | Levene's Test for Equality of Variances |                         | t-test for Equality of Means |       |                 |      |
|--------------|-----------------------------|---|-------------------------|------------------------------|-------|-----------------|------|
|              |                             | F                                       | Sig.                    | t                            | df    | Sig. (2-tailed) | MD   |
|              |                             | Gold Medal                              | Equal variances assumed | 3.04                         | .10   | .70             | 20   |
|              | Equal variances not assumed |   |                         | .74                          | 19.80 | .47             | .34  |
| Silver Medal | Equal variances assumed     | 7.91                                    | .01                     | -.80                         | 20    | .43             | -.38 |
|              | Equal variances not assumed |   |                         | -.90                         | 18.89 | .38             | -.38 |
| Bronze Medal | Equal variances assumed     | .00                                     | 1.00                    | .77                          | 20    | .45             | .38  |
|              | Equal variances not assumed |   |                         | .78                          | 17.88 | .45             | .38  |
| TNMW         | Equal variances assumed     | 12.82                                   | .00                     | .30                          | 20    | .77             | .34  |
|              | Equal variances not assumed |   |                         | .34                          | 18.93 | .74             | .34  |

TNMW=total number of medal won, MD= mean difference

As can be seen in table 7, across country performances comparison of women athletes was made in terms of medal type and total medal count at the Summer Olympic Games held so far.

The independent sample t- test revealed a statistically insignificant difference in the number of Gold medals won by Ethiopian (M=1.11, SD=.93) and Kenyan (M=.77, SD=1.24) conditions  $t(20) = .70$   $p=.49$ , Silver medals won by Ethiopian (M=.78, SD=.67) and Kenyan (M=1.15, SD=1.281) conditions  $t(20)=-$

.80,  $p=.43$ , Bronze medals Ethiopian (M=1.22, SD=1.09) and Kenyan (M=.85, SD=1.14) conditions  $t(20)=.77$ ,  $p=.45$  and Total number of medal count Ethiopia (M= 3.11, SD=1.62) and Kenya (M=2.77, SD=3.09) conditions  $t(20)=.30$ ,  $p=.77$ .

The result suggested that even though Ethiopian women athletes out performed Kenyan counterparts in the number of Gold, Silver, Bronze and Overall medal count per appearance with relatively less numbers of appearances the performance of women

athletes for these two countries was statistically comparable.

**Table 8:** Group descriptive statistics of the performances of Ethiopian athletes across sex

|                       | Sex   | N  | Mean | SD    | SEM  |
|-----------------------|-------|----|------|-------|------|
| Gold Medal            | Men   | 15 | .93  | .884  | .228 |
|                       | Women | 9  | 1.11 | .928  | .309 |
| Silver Medal          | Men   | 15 | .53  | .640  | .165 |
|                       | Women | 9  | .78  | .667  | .222 |
| Bronze Medal          | Men   | 15 | .80  | .941  | .243 |
|                       | Women | 9  | 1.22 | 1.093 | .364 |
| Total No of Medal Won | Men   | 15 | 2.27 | 1.335 | .345 |
|                       | Women | 9  | 3.11 | 1.616 | .539 |

SD=standard deviation, SEM= standard error mean

In table 8 within country group descriptive statistics was conducted to shows the performances of Ethiopian men and women athletes in terms of medal type and total number of medal count at the Summer Olympic Games held so far. The result revealed that, in 15 and 9 appearances of summer Olympic Games held so far for men and women respectively, women athletes outperformed in the number of Gold (M=1.11, SD=.93), Silver (M=.78, SD=.67), Bronze (M=1.22, SD=1.10) and total number of

medals per appearance (M=3.11, SD=1.62) than men athletes did Gold (M=.93, SD=.88), Silver (M=.53, SD=.64), Bronze (M=.80, SD=.94) and Total number of medals per appearance (M=2.27, SD=1.34) The result suggested that, even though women athletes started to participate at the summer Olympic Games lately; they have performed magnificently that lead them to over dominate men athletes whom start to participate at least 6 Olympic Games before the women athletes.

**Table 9:** Performance comparisons of Ethiopian athletes across sex

Levene's Test for  
Equality of  
Variances

t-test for Equality of Means

|              |                             | F   | Sig. | t     | df    | Sig.<br>(2-tailed) | MD   |
|--------------|-----------------------------|-----|------|-------|-------|--------------------|------|
| Gold Medal   | Equal variances assumed     | .00 | .99  | -.47  | 22    | .64                | -.18 |
|              | Equal variances not assumed |     |      | -.46  | 16.32 | .66                | -.18 |
| Silver Medal | Equal variances assumed     | .16 | .70  | -.89  | 22    | .38                | -.24 |
|              | Equal variances not assumed |     |      | -.88  | 16.42 | .39                | -.24 |
| Bronze Medal | Equal variances assumed     | .13 | .72  | -1.00 | 22    | .33                | -.42 |
|              | Equal variances not assumed |     |      | -.96  | 15.01 | .35                | -.42 |
| TNMW         | Equal variances assumed     | .44 | .52  | -1.39 | 22    | .18                | -.84 |
|              | Equal variances not assumed |     |      | -1.32 | 14.50 | .21                | -.84 |

TNMW=total number of medal won, MD= mean difference

As can be seen in table 9 within country across sex performance comparisons in terms of medal type and overall medal count at the Summer Olympic Games was conducted. An independent-samples t-test result revealed insignificant differences in the number of Gold, Silver, Bronze and Overall medals count won by Ethiopian men and women athletes.

**Table 10:** Group descriptive statistics of the performances of Kenyan athletes across sex

|              | Sex   | N  | Mean | SD   | SEM |
|--------------|-------|----|------|------|-----|
| Gold Medal   | Men   | 16 | 1.81 | 1.42 | .36 |
|              | Women | 13 | .77  | 1.24 | .34 |
| Silver Medal | Men   | 16 | 1.81 | 1.42 | .36 |
|              | Women | 13 | 1.15 | 1.28 | .36 |
| Bronze Medal | Men   | 16 | 1.88 | 1.36 | .34 |
|              | Women | 13 | .85  | 1.14 | .32 |
| TNMW         | Men   | 16 | 5.50 | 3.16 | .80 |
|              | Women | 13 | 2.77 | 3.09 | .86 |

SD=standard deviation, SEM= standard error mean

In table 10 within country group descriptive statistics was conducted to shows the performances of Kenyan men and women athletes in terms of medal type and Total number of medal count at the Summer Olympic Games held so far. The result revealed that, in 16 and 13 appearances of summer Olympic Games held so far for men and women respectively, men athletes outperformed in the number of Gold (M=1.81, SD=1.42), Silver (M=1.81, SD=1.42), Bronze (M=1.88, SD=1.36) and Total number of medals per appearance (M=5.50, SD=3.16) than women athletes did Gold (M=.77, SD=1.24), Silver (M=1.15, SD=1.28), Bronze (M=.85, SD=1.14) and Total number of medals per appearance (M=2.77, SD=3.09).

**Table 11:** Performance comparisons of Kenyan athletes across sex

|              |                             | Levene's Test for Equality of Variances |      | t-test for Equality of Means |       |                 |       |
|--------------|-----------------------------|---|------|------------------------------|-------|-----------------|-------|
|              |                             | F                                       | Sig. | t                            | df    | sig. (2-tailed) | MD    |
| Gold Medal   | Equal variances assumed     | .01                                     | .94  | 2.08                         | 27    | .05             | 1.043 |
|              | Equal variances not assumed |   |      | 2.11                         | 26.86 | .04             | 1.043 |
| Silver Medal | Equal variances assumed     | .18                                     | .68  | 1.30                         | 27    | .21             | .659  |
|              | Equal variances not assumed |   |      | 1.31                         | 26.68 | .20             | .659  |
| Bronze Medal | Equal variances assumed     | .18                                     | .68  | 2.17                         | 27    | .04             | 1.029 |
|              | Equal variances not assumed |   |      | 2.21                         | 26.95 | .04             | 1.029 |
| TNMW         | Equal variances assumed     | .18                                     | .68  | 2.34                         | 27    | .03             | 2.731 |
|              | Equal variances not assumed |   |      | 2.34                         | 26.04 | .03             | 2.731 |

TNMW=total number of medal won, MD= mean difference

As can be seen in table 11 within country independent-samples t-test across sex was conducted to compare the types and overall number of medals won by Kenyan men and women athletes at the Summer Olympic Games held so far. The test revealed a statistically significant differences in the number of Gold medals men (M=1.81, SD=1.42), women (M=.77, SD=1.24)

conditions  $t(27)=2.08$ ,  $p=.05$ , Bronze men (M=1.88, SD=1.36) women (M=.85, SD=1.14) conditions  $t(27)=2.17$ ,  $p=.04$ , and Total number of medals per appearance men (M=5.50, SD=3.16) women (M=2.77, SD=3.09) conditions  $t(27)=2.34$ ,  $p=.03$ . But no statistically significant differences were observed in the number of silver medals won between men and women athletes.

**Table 12:** Medal to event ratio for Ethiopia and Kenya at the summer Olympic Games

| Country  | Number of events |       |       | Medals won |       |       | Medal to events R. |       |       |
|----------|------------------|-------|-------|------------|-------|-------|--------------------|-------|-------|
|          | Men              | Women | Total | Men        | Women | Total | Men                | Women | Total |
| Kenya    | 10               | 6     | 16    | 81         | 36    | 117   | 8.1                | 6.00  | 7.31  |
| Ethiopia | 4                | 5     | 9     | 34         | 28    | 62    | 8.5                | 5.6   | 6.89  |

Table 12 shows that, Kenyan men athletes have won 81 medals in 10 different events and collected 8.1 medals per event. Mean while their women counterparts have won 36 medals in 6 different events and won at least 6.00 medals per event. At the Ethiopian side men

athletes have won 34 overall medals in 4 events and collected at least 8.5 medals per event. The women athletes on the other hand won 28 overall medals in 5 events and collected an average of 5.6 medals per event.

**Table 13:** Medal to athlete ratio in athletics (**athlete diversity**)

| Country         | Number of Athletes |       |       | Medals won |       |       | Medals to Athletes R. |       |       |
|-----------------|--------------------|-------|-------|------------|-------|-------|-----------------------|-------|-------|
|                 | Men                | Women | Total | Men        | Women | Total | Men                   | Women | Total |
| <b>Kenya</b>    | 67                 | 25    | 92    | 81         | 36    | 117   | 1.21                  | 1.44  | 1.27  |
| <b>Ethiopia</b> | 23                 | 16    | 39    | 34         | 28    | 62    | 1.48                  | 1.75  | 1.72  |

Table 13 depicts that, Kenya has been represented in the medal table at the Summer Olympic Games held so far by 67 men who had collected 81 medals, 25 women who had collected 36 medals and totally 84 athletes collected a total number of 117 medals in track and field. Kenyan men athlete has won an average of 1.48 medals per head mean while women athletes have won 1.75 medals per head.

Ethiopia has been represented in the medal table at the Summer Olympic Games held so far by 23 men who had collected 34 medals, 16 women who has collected 28 medals and totally by 39 athletes with a total number of 62 medals in track and field. Ethiopian men athlete has won an average of 1.48 medals per head while women athletes have won 1.75 medals per head.

## 9. Discussion

The result of this study has revealed many aspects regarding the performance of Ethiopia and Kenya at the Summer Olympic Games. In the overall medal count the result revealed that, Kenya had collected larger number of medals i.e. 124 than Ethiopia which has collected 62. The result indicated statistically significant dominance of Kenyan in the number of silver and over all medal count while no significant difference was observed in the number of gold and bronze medals between the two countries. These result leads to the partial acceptance of the first null hypothesis.

Though, the performance of the two countries dominated over the rest world in endurance events, extracting the factors contributing for significant performance differences among these two countries at the Summer Olympic Games was not an easy task due to the fact that both countries share common aspects such as environmental advantage, somatotypical



characteristics and psychological motivation (Randal & Yannis, 2012). However, it could be suggested that the dominance of Kenya over Ethiopia could have been due to the differences in the number and quality of training infrastructures run by agents and retired athletes, the number of potential athletes joining the training camps (Noel, n.d.); which were found in a better status in Kenya and the number of local competition opportunities by which there are a minimum of 4 local major competitions per month in Kenya and less than 1 local but major competitions in Ethiopia (Athletics Kenya competition calendar 2023/2024, Ethiopian Athletics Federation competition calendar 2023/2024). Furthermore, the difference in number of appearances at the summer Olympic Games could also have been influenced the performance differences where Kenyan participated in 16 and 13 summer Olympic Games in men and women respectively, and Ethiopian were for about 15 and 9 times at the Summer Olympics Games in men and women respectively. (Ethiopia at the Olympics, 2024, Kenya at the Olympics, 2024)

Regarding the performance of male athletes across the two countries, the result revealed statistically significant dominance of Kenyan male athletes over Ethiopian counterparts in

both medal type and overall medal count  $p < .05$ . This result again leads to the rejection of the second null hypothesis. The dominance in the performance of Kenyan men athletes again could be coined to the reasons explained above which contributes to large number of male athletes participation those may come from a wider pool of better potential areas at the Kenyan side.

At the women side even though Kenyan had been at the Olympic Games before Ethiopia in 6 Olympiads and won large number of medals, the performance of the two countries revealed statistically comparable  $p > .05$ . This result leads to the acceptance of the third null hypothesis.

Ethiopian male athletes were at the Olympic stage before women athletes in at least 6 Olympiads. However, within country comparison of performances of male and female athletes for Ethiopia, the result revealed statistically insignificant/comparable performances in both medal type and overall medal count  $p > .05$  which leads to the acceptance of the forth null hypotheses.

Even though, Ethiopian women athletes start to participate at the Olympic Games lately, compared with their men counterparts, they

had shown magnificent performance and narrowed the gap with men athletes in the medal type and overall medal count. The reason for comparable performances of Ethiopian men and women athletes while the men athletes had an advanced participation in at least 6 Olympiads could be due to an increased and better participation opportunity created and which is increasing time to time at the women side and the stagnant status of participation, and a heightened competition that existed at the male side. Moreover, the training culture of athletes could have also been contributed for lesser performance at the men side i.e. usually women athletes favored to follow the footsteps of men athletes or men athletes usually serves women athletes as a pace maker. This minimizes the training pace for men athletes and increases the training pace for women athletes which give them an advantage.

At the Kenyan side male athletes significantly outperformed female athletes in terms of both medal type and overall medal count  $p < .05$ . The result leads to the rejection of the fifth null hypothesis which states “There is no a statistically significant performance difference between Kenyan men and women athletes in terms of medal type and overall medal count at the summer Olympic Games”. The

performance difference could be counted to the larger number of male athletes participation compared to that of female athletes and their advanced participation in at least 3 Olympiads than women athletes. Regarding event and athletes’ diversity, the result of this study revealed Kenya has a better history in participating in diversified events and number of athletes’ participation in track and field and other sports (boxing). Kenya was in the medal list at the summer Olympic Games track and field competitions in 10 different track and field events in men (400m, 400m hurdle, 4x400m relay, 800m, 1500m, 3000mSc, 5000m, 10000m marathon and Javelin throw) and in 6 different track events in women (800m, 1500m, 3000mSc, 5000m, 10000m and marathon). Whereas, Ethiopia has a lesser participation history in the number of athletes and event diversity registered in the medal table of the Summer Olympic Games held so far than Kenya. Ethiopia was in the medal list in only 4 track events in men (3,000mSc, 5000m, 10,000m and Marathon) and in only 5 track events in women (1,500m, 3,000mSc, 5,000m, 10,000m and Marathon). This result discloses that, Kenya has a better experience in athlete development in a variety of events in track and field than Ethiopia. Which means Kenyan were able to produce new athletes at

every Olympic Games and gradually increased the number of events they participate than Ethiopia where similar faces represent the country for multiple times with events limited in the track and long distances at the summer Olympic Games.

## 10. Conclusion

The following conclusions were made based on the results obtained regarding the performance of Kenya and Ethiopia at the Summer Olympic Games.

1. The performance of Kenya in both medal types and over all medal count found to be better than Ethiopia.
2. The performance of Kenyan male athletes in medal types and overall medal counts was found to be better than Ethiopian male counterparts. However, the performance of women athletes across the two countries was found to be comparable.
3. The performance of Ethiopian male and female athletes was found to be comparable, but at the Kenyan side male athletes outperformed their women counterparts.
4. Kenya was better than Ethiopia in diversified event and athlete participation at the Summer Olympic Games.

## 11. Recommendation

From the conclusions drawn it was recommended that:

In order to enhance the overall performance of Ethiopia as a potential country for athletics, the national federation should take the responsibility to work on athlete development programs broadly and in diversified events. More specifically, the national and regional federations should take the responsibility to establish additional training sites in potential areas and provide professional support for the existing one. Moreover, increasing the number of potential athletes in the training sites, enhancing the number of local competition opportunities, and more importantly emphasising the development of quality training facilities may help enhance performances.

On the other hand the training modalities should also be well considered and it should be devised in the way that men athletes train together/with competent athletes who are in similar performance levels in order to enhance their motivation, competition and performance. Hence, particular attention should be given to work on male athletes of Ethiopia and on female athletes of the two countries.

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