## AWARDED ACCENT: THE INCIDENCE OF NATURALIZED MEDALS IN THE RIO 2016 OLYMPIC GAMES

SOTAQUE PREMIADO: A INCIDÊNCIA DE MEDALHAS NATURALIZADAS NOS JOGOS OLÍMPICOS RIO 2016 ç<br>\section*{ACENTO PREMIADO: LA INCIDENCIA DE MEDALLAS NATURALIZADAS} EN LOS JUEGOS OLÍMPICOS DE RÍO 2016 ç

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#### Abstract

The study aimed to describe the incidence of Olympic medalists naturalized at the Rio de Janeiro Olympic Games in 2016. It is a quantitative research of a descriptive nature. The results show that $6.6 \%$ of the medals were distributed to naturalized athletes, which corresponds to $6.9 \%$ of the total medal-winning athletes. The results also point out that most of the migratory flow of medalist athletes occurred from countries with lower economic performance to those with higher economic performance and from countries with lower Olympic performance to countries with higher Olympic performance. The conclusions indicate that the current context of naturalization of athletes tends to be more beneficial to countries with high economic and Olympic performance, as well as to countries with high economic performance, but without tradition in sport, being disadvantageous to countries with low economic performance.


Keywords: Sports. Human migration. Athletes. Medals.

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## 1 INTRODUCTION

Rio de Janeiro, 31st edition of the modern Olympic Games, a volleyball match begins on the sands of the Copacabana Arena; on one side a team from Qatar and on the other side a Spanish team. While the Spanish team is made up of two Spaniards, the Qatari team is made up of a Brazilian and a Senegalese. A few kilometers away from the beach in Rio, Slobodan Soro, Olympic medalist in London-2012 for Serbia, is preparing to participate in a water polo match, but this time his swimming cap will have a different color and he will belong to the Brazilian team. In another Olympic venue, more precisely at the Nilton Santos Stadium, far from the sand and water, Ruth Jebet, Kenyan by birth, wins the first gold medal in the history of... Bahrain.

The Rio-2016 Olympic and Paralympic Games ended a decade of major sporting events that took place in Brazil. The holding of the Pan and Parapan American Games (2007), Military World Games (2011) and the FIFA World Cup (2014) was not enough to meet the positive expectations of great success in organizing and hosting events of such magnitude in the world sports scene, and much has been discussed and will be discussed about the viability of the events and their legacies (BETTINE; GUTIERREZ; GRAEFF, 2018; CHEQUER; MARTINS; SILVA, 2019; PAES; AMARAL, 2017; SANTOS, 2017; SILVA et al., 2015). However, among the many themes involved during the preparation and implementation of the Olympic Games in Brazil, the one that made up the opening paragraph of this study stands out: the migration of athletes.

Despite the existence of some dissonant voices (JANSEN; ENGBERSEN, 2017; JANSEN; OONK; ENGBERSEN, 2018), much of the specialized literature indicates that labor migration is a consolidated and growing feature in globalized sport (ANDREFF, 2010; FAGGIANI et al., 2016; HOROWITZ; MCDANIEL, 2015), involving the displacement of coaches, assistants, administrative agents, sports scientists and, above all, athletes (ALMEIDA; RUBIO, 2018; PONTES et al., 2018).

Simiyu Njororai (2010) points out that sports geographers were at the forefront of studies on the migratory flows of athletes, followed by sociologists and social historians. Over time, studies on the migration of foreign athletes started to include different sports, such as athletics, baseball, cricket, ice hockey, rugby, American football and soccer. As Maguire (2007) points out, migrations are complex events that suffer different kinds of pressure, being a process shaped by the interaction of economic, political, historical, geographic, social and cultural factors.

Several studies related to the migratory process of athletes were carried out in different countries and taking into account different social, economic and sporting contexts (AGERGAARD, 2017; BESNIER, 2015; CHIBA; EBIHARA; MORINO, 2001; DIMEO; RIBEIRO, 2009; MAGUIRE, 1996; MELO; ROCHA JUNIOR, 2012; REICHE; TINAZ, 2019; RIBEIRO et al., 2013; RUBIO, 2017; SHOR; YONAY, 2010; SOCA, 2012; TIESLER, 2016). However, as analyzed by Faggiani et al. (2016), there is still no single term in the literature to define this process of cultural transition on the part of the athletes, with the most common expressions being: migratory transition, migration and acculturation.

The main reasons that lead an athlete to migrate to other countries are related to financial issues, development and recognition in sport and opportunities
to expand experiences in other cultures (PONTES et al. 2018; RICHARDSON et al. 2012; SIMIYU NIJORORAI, 2010). Regarding the perspective of the countries that receive the athletes, the naturalization process provides advantages, such as increased revenue with advertising and sponsorship, media attraction for their winning nations, international prestige, sports awareness and improved sports performance (HOROWITZ; MCDANIEL, 2015).

Thus, despite the migration in sports being a phenomenon that occurs in different sports and sports leagues (basketball, hockey, baseball, handball and with more emphasis on soccer), several authors started to problematize the growing "muscle drain" in the environment of the Olympic Games (ANDREFF, 2010; SIMIYU NIJORORAI, 2010). As Horowitz and McDaniel (2015) point out, there are numerous cases of countries that facilitate naturalization processes and that openly "recruit" athletes to increase their medal count and therefore improve their ranking in the leaderboard of the Olympic Games.

According to Spiro (2012), there is no doubt that in the context of the Olympic Games there was an increase in cases of citizenship acquired on the basis of an instrumental perspective, that is, exclusively competition purposes, in which the link between the athlete and the country by which they are competing is tenuous or nonexistent. As the author points out, three main components interfere with the nationality regime in the Olympic Environment: the Olympic Charter, the rules of international sports federations and the laws related to naturalization.

According to Rule 41 of the Olympic Charter, a competitor must have the nationality of the country that they represent, being allowed to have more than one nationality. However, if an athlete competes for a particular country, they will have to wait for at least three years to be able to transfer their affiliation and thus compete for another nation. This period may be reduced or canceled if the International Olympic Committee (ICO), the Olympic Committees of the countries involved and the federation representing the athlete's sport reach an agreement (IOC, 2020).

However, although many sports incorporate the rules of the Olympic Charter, some, as football and basketball, adopt additional requirements. In these sports, an athlete who represents a country in some international competition after the age of 18 is, in the vast majority of cases, prevented from competing for other nationality. In ice hockey, for example, only an irrevocable transfer of nationality is allowed. In other sports, such as archery, field hockey, triathlon and pentathlon, in addition to fulfilling the transition periods imposed by the Olympic Charter, other requirements are needed, among them, the establishment of residence in the country in which one intends to affiliate (SPIRO, 2012).

Still according to Spiro (2012), the key to increased instrumental naturalization is a relaxation of countries in relation to the theme. If previously, especially in a Cold War context, the change of nationality could be seen as a betrayal, the modifications in the rules of citizenship contributed to a context in which an athlete can defend a flag other than its original homeland without the fear of retaliation previously experienced. In a similar way, Maguire (2007) points out that after the revolutions initiated in the late 1980s, there was an opening of Eastern Europe and, in this way, Hungarians,

Czechs, Slovenes, Romanians - and, later, Bosnians and Croatians - also began to be part of this process of migration and naturalization.

It is noteworthy that, currently, there are several naturalization processes in the sports environment. Some countries determine it based on place of birth (jus soli), while others on ancestry (jus sanguinis). However, it can also be acquired through the establishment of residence (jus domicilli) or marriage with a native citizen (jus matrimonii), among others (JANSEN; OONK; ENGBERSEN, 2018).

In addition to the factors already highlighted, another characteristic that influenced the increase in naturalization processes in the context of Olympic sport was the gradual replacement of amateur athletes by professional athletes. According to Rubio (2017), from the Olympic Games of the 1980s, especially the 1992 edition in Barcelona, there was a greater need for more specialized equipment and training regimes, inflating the cost of Olympic sport to a point where some federations and countries are still not able to afford it. On the other hand, in countries where sport management has become professionalized, the activity of athletes has created several jobs, attracting foreigners from different continents.

Thus, the relaxation ofnaturalizationnorms andthe process ofprofessionalization of Olympic sport are factors that have culminated in the increased interest of countries in improving their Olympic performance through naturalized athletes. Thus, it appears that incentives for nationality transfers seem to have increased as barriers were reduced, and, currently, several countries offer great financial incentives to their future athletes (SPIRO, 2012; RUBIO, 2016).

Specifically, regarding the migratory context of Olympic athletes in Brazil, Almeida and Rubio (2018) point out that until the Rio-2016 Olympic edition the country had been represented by 1,796 athletes, and, of these, 32 were born in other countries. However, in the Rio edition of the Games, the Brazilian team had a total of 23 athletes from other origins. This expressive increase is not exclusive to Brazil, being a trend observed in other nations, as it was possible to observe in London-2012 (ALMEIDA; RUBIO, 2018) and, it seems, it will also be possible to observe in the edition of the Games to be held in Qatar (ANDREFF, 2010; REICHE; TINAZ, 2019).

Thus, considering the lack of research exploring the impact of naturalizations on the sporting performance of countries in the Olympic Games (HOROWITZ; McDANIEL, 2015) and that analyze the performance of naturalized athletes (NASCIMENTO et al., 2020), this study has as a central objective to describe the incidence of medals won by naturalized athletes in the Rio-2016 Olympic Games.

In addition to the central objective, the following specific objectives were outlined: to point out which countries "exported"1 the most medals and which countries "imported" the most medals; to analyze the migratory flow of naturalized medalists in relation to the economic performance of the countries; to analyze the migratory flow of naturalized medalists in relation to the Olympic performance of the countries.

[^0]Finally, the important interdisciplinary role of this research is highlighted, given that understanding the migration of Olympic athletes can contribute not only to the knowledge of the sports field, but also to the debate involving economic, anthropological and social aspects about the migratory flow of highly qualified labor.

## 2 METHODOLOGY

The methodological perspective adopted in this study consists of a quantitative approach of a descriptive nature (RICHARDSON, 2012; SAMPIERI; COLLADO; LUCIO, 2013). It should be noted that, given its multifaceted nature, evaluating the change of nationality is far from being a simple exercise. To be able to map the Olympic migration patterns, the ideal is to analyze detailed biographical data of each athlete from all participating countries (JANSEN; OONK; ENGBERSEN, 2018). However, as Asis and Piper (2008) point out, limitations in data availability often confront labor migration researchers, and it is no different in the sports environment.

As pointed out by Horowitz \& McDaniel (2015) and Jansen \& Engbersen (2017), because the International Olympic Committee does not have an official database that includes the birthplaces of all athletes (a situation that raises questions about the reasons why such a relevant body does not keep such records), there is a need to resort to unofficial secondary research sources.

In order to achieve the objectives proposed in this study, a survey was first carried out based on data from the IOC official website (https://www.olympic.org) and on the official website of the Rio-2016 Olympic Games (https://www.rio2016. com.br) of all medals distributed in the Brazilian edition of the Games. Through an electronic spreadsheet, the medals distributed in all sports were cataloged, checking the athlete's full name, the country they competed for, the sport, the modality, the category, the type of competition (individual or team sports), gender and the type of medal won (gold, silver or bronze). In the case of team sports, the medals of all the athletes in the respective medal-winning teams were cataloged.

Once the cataloging phase of the Rio-2016 Games medals was finished, a survey of the birthplace of each athlete was carried out. This stage was accomplished through the crossing of data from the official websites of the IOC, the organizing committee of the Rio-2016 Games, the Olympic committees of each country, the international federations of each sport, independent databases, in addition to the official pages of the athletes and news related to the theme in different vehicles of sports media.

Considering that, for the IOC Olympic Charter, the athletes must represent the countries for which they are nationals (regardless of the existing connection) and that naturalization can be acquired in numerous ways (JANSEN; OONK; ENGBERSEN, 2018), this study used the countries of birth and the countries for which the athletes competed as parameters to analyze sport migration within the Olympic Games, given that they represent at least a physical assessment regarding the place of origin and representation by the athletes (HOROWITZ; MCDANIEL, 2015; JANSEN; ENGBERSEN, 2017; JANSEN; OONK; ENGBERSEN, 2018).

Thus, in order to structure the dataset to be analyzed, the medals won by athletes born in the same countries they were representing were classified as "native medals", while the medals won by athletes born in countries other than those for which they competed were classified as "naturalized medals".

As for the migration flow related to economic performance, the Gross Domestic Product (GDP) per capita of each medal-winning country was adopted as a parameter, according to data from the World Bank (https://data.worldbank.org). With regard to Olympic performance, the ranking, according to the IOC, of each country in the Rio2016 Olympic Games was adopted as a criterion.

## 3 PRESENTATION AND DISCUSSION OF THE DATA

Two thousand twenty-five medals distributed in the Rio-2016 Olympic Games were cataloged. Of the total medals, 135 , or $6.7 \%$, were awarded to athletes who competed for a country other than their home country. Of the 135 naturalized medals, 39 were gold, 43 silver and 53 bronze.

At the Rio-2016 Olympic Games, 1,857 athletes were awarded medals. Of this total, 128 athletes, that is, approximately $6.9 \%$, competed for a country other than their country of origin. This result corresponds to the highest absolute value and the highest percentage of naturalized medalist athletes if we consider the other editions of the Summer Olympic Games of the 21 st century, as shown in Table 1.

Table 1 - Naturalized medalist athletes between the 2004 and 2016 editions

| Year | Total of medalist athletes | Total of naturalized medalist athletes | Percentage |
| :---: | :---: | :---: | :---: |
| 2004 | 1840 | 116 | $6,3 \%$ |
| 2008 | 1874 | 92 | $4,9 \%$ |
| 2012 | 1770 | 120 | $6,8 \%$ |
| 2016 | 1857 | 128 | $6,9 \%$ |

Source: Adapted from Horowitz; McDaniel (2015).

It should be noted that each country has a different migration pattern that derives from a wide range of characteristics. However, as reflected by Jansen and Engbersen (2017), the higher frequency of migration of the workforce of highly qualified athletes (Olympic medalists) seems to be in line with what would be expected from immigration policies and visa programs in many countries that favor the migration of skilled labor.

With regard to the gender of the athletes, it was found that of the 135 naturalized medals, 83 were given to male athletes ( $61.4 \%$ ) and 52 to female athletes ( $38.6 \%$ ). Considering that the distribution of athletes participating in the Games was $54 \%$ for males and $46 \%$ for females, it can be seen that, in line with the Maguire (1996) and Pisani (2014), the results of the Rio de Janeiro Olympic Games indicate that the migratory flow in high-performance sport is still predominantly male.

It should be noted that this panorama does not follow the trend found in international migratory flows. Although female displacement is still invisibilized,
compared to men, currently international migration is mostly female, a possible consequence of the feminization of poverty and the great economic inequalities around the world (BERTOLDO, 2018). Thus, it is necessary that more studies deepen this contradiction, presenting the possible causes that lead the migratory flow in sport to still be predominantly male.

One of the possible causes may be related to the fact that many women rethink their sports careers when intending to become mothers, given that the difficulty of reconciling an intense training routine with parental obligations, as well as the uncertainty of institutional support, makes them prioritize one space over the other.

When we go into the distribution of naturalized medals among the countries, we see that the countries that "exported" the most medals were Russia, Ukraine and Cuba, followed by Armenia, the United States, the United Kingdom, Bosnia, Montenegro and Kenya, as can be seen in Table 2.

Table 2 - Countries that most exported naturalized medals in the Rio-2016 edition

| Country | Number of "naturalized medals" exported |
| :---: | :---: |
| Russia | 12 |
| Ukraine | 9 |
| Cuba | 7 |
| Armenia | 6 |
| United States | 6 |
| Great Britain | 6 |
| Germany | 4 |
| Bosnia | 4 |
| Montenegro | 4 |
| Kenya | 4 |
| South Africa | 3 |
| Australia | 3 |
| Kazakhstan | 3 |
| Croatia | 3 |
| France | 3 |
| Malawi | 3 |
| Kyrgyzstan | 3 |

Source: Prepared by the authors (2020)

Regarding the distribution among countries, there was a large number of naturalized medals exported by nations with less expression in high-performance sports, such as Ukraine, Armenia, Bosnia, Montenegro and South Africa. However, countries with great Olympic potential, such as Germany, Great Britain, the United States and Russia, are also among the biggest exporters of Olympic athletes to other nations.

Still in relation to nations, Table 3 presents the countries that most "imported" medals. The list shows Russia, Azerbaijan, the United States, Serbia, Australia, Great Britain, Germany, Spain, Canada, and Italy as the main importers.

Table 3 - Countries that most imported naturalized medals in the Rio-2016 edition

| Country | Number of imported medals |
| :---: | :---: |
| Russia | 17 |
| Azerbaijan | 13 |
| United States | 12 |
| Serbia | 12 |
| Australia | 11 |
| Great Britain | 11 |
| Germany | 9 |
| Spain | 6 |
| Canada | 5 |
| Italy | 5 |
| Kazakhstan | 5 |
| New Zealand | 4 |
| France | 4 |
| Turkey | 3 |
| Bahrain | 3 |
| Belarus | 2 |
| Switzerland | 2 |
|  | 2 |

Source: prepared by the authors (2020)

When analyzing the countries that imported the most naturalized medals, the prominence of countries with high performance in economic and Olympic aspects becomes clearer. With the exception of Azerbaijan and Serbia, all the other countries that appear among the top ten importers of naturalized medals are among the twenty largest economic powers in the world ${ }^{2}$ or among the top twenty at the Rio-2016 Olympic Games.

It is also important to highlight the fact that Russia, the United States, Great Britain and Germany are among the countries that most imported and exported medals. The high import rate can be explained by the attractiveness of nations, with high levels of economic and sporting performance. With regard to the level of exports, it is worth noting that in some sports the dispute for a place in the national Olympic teams is very fierce (PHELPS; ABRAHAMSON, 2009), which can also contribute to the naturalization of athletes who would no longer have space in the national teams of their countries of origin, but with a great possibility of performing in countries with less tradition in their specific sports. In this regard, Reiche and Tinaz (2019) point out that it is easier for a high-level athlete to qualify for international competitions when representing weaker sporting nations.

Still with regard to countries, another factor analyzed was the percentage of imported medals in relation to the total number of medals won by each nation. Table 4 presents the list of countries that won at least $10 \%$ of their medals with naturalized athletes.

[^1]Table 4 - Countries with the highest percentage of naturalized medals in the Rio-2016 edition

| Country | Percentage of medals won by athletes <br> from the country of origin | Percentage of imported <br> medals |
| :---: | :---: | :---: |
| Bahrain | $0.0 \%$ | $100.0 \%$ |
| United Arab Emirates | $0.0 \%$ | $100.0 \%$ |
| Moldova | $0.0 \%$ | $100.0 \%$ |
| Azerbaijan | $33.3 \%$ | $66.7 \%$ |
| Turkey | $62.5 \%$ | $37.5 \%$ |
| Kazakhstan | $76.5 \%$ | $23.5 \%$ |
| Serbia | $77.8 \%$ | $22.2 \%$ |
| Switzerland | $81.8 \%$ | $18.2 \%$ |
| Belarus | $83,3 \%$ | $16.7 \%$ |
| Russia | $85.2 \%$ | $14.8 \%$ |
| Greece | $85.7 \%$ | $14.3 \%$ |
| Australia | $86.6 \%$ | $13.4 \%$ |
| Spain | $86.7 \%$ | $13.3 \%$ |
| New Zealand | $88.9 \%$ | $11.1 \%$ |

Source: Prepared by the authors (2020)

Based on the analysis of the data, it is worth highlighting the cases of Bahrain, the United Arab Emirates and Moldova, which won medals only with athletes who were born in other nations. Thus, it is not possible to affirm that the migratory flow benefits only countries with great sporting potential, since without the inclusion of naturalized athletes, the aforementioned countries would not appear on the leaderboard of the Rio de Janeiro Olympic Games.

With regard to Bahrain specifically, it should be noted that, unlike the United Arab Emirates and Moldova³, the country did not have any athlete of its origin that won medals in Rio-2016. Furthermore, it is noteworthy that the two medals won by Bahrain came from athletes born in Kenya. Hypothetically, if these medals were not won by the Asian country but by the African country, the latter would rise two positions in the general ranking table, leaving the 15th position and moving up to the 13th, surpassing even Brazil (host country of the event).

Simiyu Njororai (2010) contextualized the phenomenon involving the migration of athletes from Kenya to other countries. As the author points out, the unbalanced nature of global wealth and corporate power has created a movement of sporting talent from clubs and nations that pay less to clubs and nations that pay more. In addition, he points out that the dominance of Kenyan athletes in medium- and longdistance running, combined with a shortage of talents, has created a migratory flow of sports labor from Africa to countries rich in oil but lacking in talent.

Kenya was among the ten countries that exported the most naturalized medals in the Rio-2016 Olympic Games, but still managed to get a good ranking in the medals leaderboard (15th place). However, as pointed out by Horowitz and McDaniel (2015), there are cases in which the nation is not recognized or counted in the medal

[^2]leaderboard, even with athletes from its origin winning competitions. Specifically in Rio-2016, this was the case of Bosnia, Ghana, Malawi, Montenegro, Kyrgyzstan, Senegal, Somalia, Turkmenistan and Uganda.

As for the analysis of the migratory flow of "naturalized medals", from an economic perspective, it was found that most of the athletes (72.59\%) and, therefore, of the medals, migrated from a country with lower economic performance to one with higher performance, as shown in Table 5.

Table 5 - Migration flow of naturalized medals in Rio-2016-economic performance

|  | Lower economic performance to <br> higher economic performance | Higher economic performance to lower <br> economic performance |
| :---: | :---: | :---: |
| Quantity | 98 | 37 |
| Percentage | $72.6 \%$ | $27.4 \%$ |

Source: Prepared by the authors (2020)

Thus, in line with Horowitz \& McDaniel (2015), the results of this study indicate that high-income nations with higher levels of GDP are more likely to attract foreign talents in sports. As in other markets, richer countries are considered more attractive to highly skilled labor.

Tertullian et al. (2018) analyzed the reasons and intentions for expatriation by volleyball players and demonstrated that the factor that most motivated the athletes' migration process was the search for a salary increase. For the study participants, the salary was decisive for accepting the expatriation process. Similar results were also observed in studies with other Olympic sports (PISANI, 2014; SIMIYU NJORORAI, 2010; TIESLER, 2016) and non-Olympic sports (DIMEO; RIBEIRO, 2009).

For Spiro (2012), it is important to point out that the growing practice of naturalizations (especially instrumental ones) provides a context of "muscle drain" from poor countries to rich countries, in addition to contributing to the consolidation of more flexible nationalization regimes that are very beneficial to richer countries.

With regard to the migratory flow of medals considering the sporting aspect, the data show that most of the athletes ( $62.2 \%$ ) migrated from a country with lower Olympic performance to a country with higher Olympic performance, as shown in Table 6.

Table 6 - Migration flow of naturalized medals in Rio-2016-Olympic performance

|  | Lower Olympic performance to higher <br> economic performance | Higher Olympic performance for <br> lower Olympic performance |
| :---: | :---: | :---: |
| Quantity | 84 | 51 |
| Percentage | $62.2 \%$ | $37.8 \%$ |

Source: Prepared by the authors (2020)

It was observed that the data from the Rio-2016 Olympic Games corroborate studies that point to the search for opportunities in nations that allow the full development of athletes, contributing to an improvement in performance and, therefore, in the
results achieved in the Olympic Games (HOROWITZ; MCDANIEL, 2015; MAGUIRE; PEARTON, 2000; MELO; ROCHA JUNIOR, 2012; RIBEIRO et al., 2013; SOCA, 2012; SPIRO, 2012). Thus, naturalization can be explained by the low rate of development in sport by the exporting country and the great desire for international prestige by the athlete and the importing country.

However, the migratory flow of medals from countries with the highest Olympic performance to countries with lower Olympic performance cannot be neglected. As demonstrated by Spiro (2012), this process can occur as one of the main alternatives to countries with little tradition in sport to appear in the Olympic scenario.

In this regard, it is worth highlighting the situation of Azerbaijan. Despite not being an economic and Olympic power, the country was the second that most imported medals in Rio-2016, having $66.7 \%$ of its achievements won by athletes from other origins. And this context is not limited only to Olympic sports, given that in the Futsal World Cup held between September and October 2016, for example, the Azeri team reached the quarter-finals (an outstanding result for the country) counting on its squad with six athletes of Brazilian origin ${ }^{4}$.

Finally, it is worth considering that, despite having become easier, the naturalization process did not eliminate the difficulties faced by athletes. Even in the case of expatriation, when the athlete maintains their nationality, the migratory process can cause discomfort and insecurity (TERTULIANO et al., 2018). As pointed out by Rubio (2016), the displacement caused by the need for conditions for the development of a sports career culminates in a process of adaptation, socialization and acculturation that is often difficult to assimilate. For the athlete who moves between countries, especially those who become naturalized, the process can be enhanced, involving aggravating factors such as prejudice and discrimination.

## 4 FINAL CONSIDERATIONS

This research aimed to describe the incidence of naturalized Olympic medalists in the Rio de Janeiro Olympic Games in 2016. We carried out a survey of all the medals distributed in the Rio edition of the Games and an analysis of the naturalization of athletes between participating countries and of the migratory flow as a result of the economic and sporting performance of the nations.

It was found that of the 2,025 medals distributed, 135 were won by naturalized athletes, representing $6.7 \%$ of the total. Of the 1,875 medal-winning athletes, 128 are immigrants, representing approximately $6.9 \%$ of the total. It was found that the percentage of medal winners who are immigrants is greater than the percentage of the world's population of migrants.

Russia, Ukraine, Cuba, Armenia, United States, United Kingdom, Bosnia, Montenegro and Kenya were the countries that most exported medals. On the other hand, Russia, Azerbaijan, United States, Serbia, Australia, Great Britain, Germany, Spain, Canada and Italy were the countries that imported the most. The results also

[^3]show that the migratory flow of naturalized athletes occurred mostly from countries with worse economic and Olympic performance to countries with better economic and Olympic performance.

As limitations of the study, the need to use unofficial data is highlighted, given the lack of an official database containing information about the birthplaces of the athletes. As Jansen \& Engbersen (2017) and Jansen, Oonk \& Engbersen (2018) point out, it would be extremely important for scientific research that the organizations involved (IOC, international Olympic committees and international federations) initiate a retroactive process of registering naturalizations, including information about the time and reasons for the changes of nationality, as well as the citizenship status of each athlete.

Despite such limitations, this study proved to be valid in its descriptive objective of contextualizing the current panorama of naturalizations in the Summer Olympic Games. Through the results found, it is possible to conclude that the migration process of athletes tends to be an opportunity to strengthen and expand hegemony for the great economic and sporting powers, while for the great economic powers, but underdeveloped in sport, an opportunity to enter the Olympic circuit. As for economically poor countries, the migratory flow presents itself as a major competitive disadvantage.

As pointed out by Horowitz \& McDaniel (2015), nations with greater economic and sporting power have shown themselves capable of taking advantage of the various motivations for migration to attract athletes with great Olympic potential. If the destination country offers better financial and training conditions, more opportunities to compete at a high level, as well as the chance to create a better life outside of sports, the appeal is so great that it makes the country of origin very vulnerable to the exodus of their top athletes.

Thus, it is important to raise questions in new opportunities about public policies for high-performance sport. Considering the facilitation of the process of naturalization of athletes by some nations, it is possible that the investment made in the training and development of athletes does not materialize in future results for the training country. Furthermore, in future research, it is recommended to go deeper into the causes that lead to the migratory flow in sport to be predominantly male. New studies may still be carried out in order to analyze the incidence of naturalized medals and trends in the migratory flow of athletes in different Olympic modalities.

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Resumo: O objetivo do estudo foi descrever a incidência de medalhistas olímpicos naturalizados nos Jogos Olímpicos do Rio de Janeiro em 2016. Trata-se de uma pesquisa quantitativa de natureza descritiva. Os resultados demonstram que 6,7\% das medalhas foram distribuídas para atletas naturalizados, o que corresponde a 6,9\% do total de atletas vencedores de medalhas. Os resultados apontam ainda que a maior parte do fluxo migratório de atletas medalhistas ocorreu de países de menor desempenho econômico para os de maior desempenho econômico e de países de menor desempenho olímpico para países de maior desempenho olímpico. As conclusões indicam que o atual contexto de naturalização de atletas tende a ser mais benéfico aos países de grande desempenho econômico e olímpico, bem como aos países de grande desempenho econômico, mas sem tradição no esporte, sendo desvantajoso aos países de baixo desempenho econômico.

Palavras chave: Esportes. Migração humana. Atletas. Medalhas.

Resumen: El objetivo Del estúdio fue describir La incidencia de medallistas olímpicos naturalizados en los Juegos Olímpicos de Río de Janeiro en 2016. Es una investigación cuantitativa de carácter descriptivo. Los resultados muestran que el $6,6 \%$ de lãs medallas se distribuyeron a deportistas naturalizados, lo que corresponde al 6,9\% del total de deportistas medallistas. Los resultados también señalan que La mayor parte Del flujo migratorio de atletas medallistas ocurrió desde países con menor desempeño económico hacia aquellos com mayor desempeño económico y desde países con menor desempeño olímpico hacia países com mayor desempeño olímpico. Las conclusiones indican que el contexto actual de naturalización de deportistastiende a ser más beneficioso para países con alto rendimiento económico y olímpico, así como para países con alto rendimiento económico, pero sin tradiciónenel deporte, siendo desventajoso para países con bajo rendimiento económico.

Palabras clave: Deportes. Migración humana. Desportista. Medallas.

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## CONFLICT OF INTERESTS

The authors have declared that this work involves no conflict of interest.

## AUTHORS' CONTRIBUTIONS

Diogo Bonin Maoski: Conceptualization, investigation, writing.
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## RESEARCH ETHICS

This research project followed the Scientific Research Integrity Guide of the Federal University of Rio Grande do Sul.

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## EDITORIAL RESPONSIBILITY

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[^0]:    1 The terms medal importers and exporters will be used in a similar way as proposed by Oettl; Agrawal (2008), Horowitz ; McDaniel (2015) and Jansen; Engbersen (2017).

[^1]:    2 Considering the Gross Domestic Product per capita for the year 2016 according to the World Bank.

[^2]:    3 Despite the exclusivity of naturalized medals, the United Arab Emirates and Moldova had athletes from their respective origins winning competitions for other nations.

[^3]:    4 DILASCIO, Flávio. Futsal globalizado: Mundial terá 25 brasileiros defendendo outros países. GE:Futsal, 7 set. 2016. Available at: http://globoesporte.globo.com/eventos/futsal/noticia/2016/09/futsal-globalizado-mundial-tera-25-brasileiros-defendendo-outros-paises.html. Accessed on: Aug. 1st, 2020.

