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INFLUENCE OF CULTURE ON SPORTS ACHIEVEMENTS: THE CASE OF SPRINT RELAY TEAMS FROM JAPAN, BRAZIL, THE USA AND GREAT BRITAIN

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ABSTRACT

Purpose. Research outside sport psychology indicates that collectivist cultures positively influence group achievements. Because of this results of sports teams from collectivist cultures should be better than those of their counterparts from individualist cultures. This hypothesis was examined in two studies. Basic procedures. (1) In study I, 15 coaches, using the IC Interpersonal Assessment Inventory (ICIAI), enumerated characteristics that a perfect team member should possess. (2) In study II, individual results (achieved between 2001 and 2008) of four top Japanese and Brazilian athletes (collectivist cultures) and American and British (individualist cultures) were compared against the best 4 × 100 m relay results from these countries. Main findings. (1) In the coaches’ opinion players of team sports should definitely be more collectivist than individualist in relation to the values professed. (2) In the context of athlete’s potential, the Japanese and Brazilian relay teams achieved generally better results than their American and British counterparts. Conclusions. The obtained results show that collectivist cultures not only facilitate and favor the development of sports teams, but also enhance their performance.

Key words: sport, collectivism, individualism, track and field, 4 × 100 m relay

Introduction

The Individualism-Collectivism dimension (IC) is one of the most important theoretical constructs used for classification of cultures. Since Hofstede’s first reports [1], revealing differences in the approach to collectivist and individualist values among IBM employees in several countries, the IC has become an object of extensive analysis and research [2]. According to Triandis et al. [3], cross-cultural differences on the Individualism-Collectivism Interpersonal Assessment Inventory (ICIAI) are linked with the distinctness of relationships between “I”, “my own group” and “the strangers.” Collectivist cultures rely to a large degree on the effective functioning of groups, and individuals from these cultures try to maintain enduring relationships within their own group and feel emotionally tied with other group members. On the other hand, individuals from individualist cultures feature a high level of independence and strong feelings of autonomy within the group [3].

Results of different studies show the extreme usefulness of the IC as a measure explaining cross-cultural differences. The IC research has become one of the most interesting fields of modern intercultural psychology [2]. The review of studies below presents merely some issues of IC research.

A number of analyses showed that the IC dimension affected people’s behavior towards others. Yi and Park [4] revealed that subjects from collectivist cultures (Korea, Japan, China) are more disposed to cooperation than their counterparts from the United States or Canada. According to Hamilton et al. [5], Americans, more than the Japanese, pay close attention to the effort of individual group members rather than to the whole group itself.

Another factor which could be affected by culture is emotional expression. Matsumoto et al. [6] revealed that, unlike people from individualist countries, representatives of collectivist cultures accepted that one should not display negative emotions within one’s own group, but it was perfectly acceptable to express them towards strangers. On the other hand, Wallbott and Scherer [7] demonstrated that in a collectivist culture shame was felt for a shorter period of time and perceived less immoral than in individualist societies.

The IC construct can also have an impact on the ways of communication. Representatives of collectivist cultures are more sensitive to messages from other members of their own group [8].
Many studies have also concerned the impact of IC on human health. Triandis et al. [3] noted that people from the most individualistic societies were particularly vulnerable to cardiac diseases, which could be related to the fact that social relationships are a buffer zone protecting individuals from stress and nervous tension. This observation was also confirmed by Matsumoto and Fletcher [9], who showed that a high level of individualism was related to an increasing risk of death from cancer and heart disease, while a high level of collectivism ensues the risk of death from diseases of the vaso-cerebral system and respiratory system (since their research results relied on the study of GDP in different countries, the obtained results were not linked in any way to, for example, the accessibility and quality of public health services). Moreover, more suicide cases have been recorded in individualist than collectivist cultures [10].

The broadest research area related to the IC is concerned with the functioning of people in teams and organizations [11]. According to Hofstede [11], collectivist cultural values are more conducive to effective teamwork, enhance compliance with the rules within a group and preserve conformity in behaviors within the group. Moreover, in collectivist cultures harmony and conformity in work teams are valued more than in individualist cultures.

Very few works have been devoted to the influence of IC on the functioning of athletes. McCutcheon and Ashe [12] examined the relationship between athletes’ IC dimension and their level of satisfaction from participation in team sports. Kernan and Greenfield [13] proved that the level of IC and other indices of cultural distinctiveness among members of female basketball teams affected the quality of cooperation and the number of conflicts within a sports team. This is most likely associated with the fact that players of different origin evaluate and interpret developments in a sport team differently due to different IC values accepted by them [13]. Hartenian [14] wanted to know whether team skills could be linked to the IC values accepted by employees, and whether these skills were affected by the employees’ earlier sports careers. Her results confirmed the significant role of IC in the development of teamwork skills; however, they failed to reveal any correlations between these skills and an earlier sports career. The study did not specify, however, the subjects’ sports level and whether they had been former individual or team athletes.

There have been no studies providing data on the influence of IC on athletes’ sports results. In the light of presented studies it may seem that due to their specificity collectivist cultures are conducive to creation of more valuable sports teams to a greater extent than individualist cultures. Therefore, sports results achieved by sports teams from collectivist cultures should be better than the results of their counterparts from individualist cultures (in the context of the team’s specific capabilities).

Material and methods

Study I

Study I used the IC Interpersonal Assessment Inventory (ICIAI) translated into Polish. The ICIAI developed by Matsumoto et al. [15] enables evaluation of the individualism vs. collectivism levels as well as subjects’ perception of IC values. The ICIAI has been applied in different intercultural [6, 16] and intra-group studies [17]. The original ICIAI questionnaire includes items related to interacting with people in four different types of relationships: family, close friends, colleagues and strangers [15]. In the present study the scope of the inventory was limited to the values accepted by subjects in their relationship with colleagues only.

The study sample consisted of fifteen coaches of different team sports (volleyball, soccer, basketball) at different sports levels (junior, youth, collegiate and professional leagues). The coaches were asked to rate the ICIAI questionnaire items to create a psychological profile of the ideal team player (in their respective sports). The control group included forty students (20 males and 20 females) of various majors, mostly from the University of Wrocław, who were asked to carry out their self-assessment using the inventory.

Results

Study I

The obtained results are the means of rating answers (from 0 – Not at all important to 6 – Very important) to all ICIAI items. The “ideal team player” profile created by the coaches featured a higher result \( M = 4.84, SD = 0.45 \) than the profile of an average student \( M = 3.39, SD = 1.22 \); \( p < 0.0001 \), Student’s t-test for independent variables. Thus the “ideal team player” in the coaches’ opinion displayed a significantly higher level of collectivism than an average student.
Table 1. Comparison of results of top four sprinters from the USA, Great Britain (GBR), Brazil (BRA) and Japan (JPN) with the best results of 4 × 100 m relay teams from these countries in the years 2001–2008

| Year | Country | Runner 1 time (s) | Runner 2 time (s) | Runner 3 time (s) | Runner 4 time (s) | Total of the runners’ times (s) | Relay team time (s) | Time difference (s) |
|------|---------|------------------|------------------|------------------|------------------|-------------------------------|--------------------|-------------------|
| 2001 | USA     | 9.84             | 9.94             | 9.97             | 9.99             | 39.74                         | 38.35              | 1.39              |
|      | GBR     | 9.87             | 10.09            | 10.13            | 10.30            | 40.39                         | 38.72              | 1.67              |
|      | BRA     | 10.17            | 10.20            | 10.26            | 10.35            | 40.98                         | 38.44              | 2.54              |
|      | JPN     | 10.02            | 10.31            | 10.35            | 10.47            | 41.15                         | 38.67              | 2.48              |
| 2002 | USA     | 9.78             | 9.89             | 9.95             | 9.95             | 39.56                         | 37.95              | 1.61              |
|      | GBR     | 9.87             | 10.04            | 10.11            | 10.13            | 40.15                         | 38.19              | 1.96              |
|      | BRA     | 10.19            | 10.20            | 10.28            | 10.31            | 40.98                         | 38.58              | 2.40              |
|      | JPN     | 10.05            | 10.05            | 10.13            | 10.24            | 40.47                         | 38.90              | 1.57              |
| 2003 | USA     | 9.94             | 9.97             | 9.97             | 9.99             | 39.87                         | 37.77              | 2.10              |
|      | GBR     | 10.03            | 10.07            | 10.08            | 10.17            | 40.35                         | 38.60              | 1.75              |
|      | BRA     | 10.20            | 10.21            | 10.23            | 10.25            | 40.89                         | 38.26              | 2.63              |
|      | JPN     | 10.03            | 10.22            | 10.23            | 10.23            | 40.71                         | 38.77              | 1.94              |
| 2004 | USA     | 9.85             | 9.87             | 9.88             | 9.95             | 39.55                         | 37.92              | 1.63              |
|      | GBR     | 10.12            | 10.12            | 10.21            | 10.26            | 40.71                         | 38.07              | 2.64              |
|      | BRA     | 10.13            | 10.15            | 10.18            | 10.21            | 40.67                         | 38.62              | 2.05              |
|      | JPN     | 10.09            | 10.10            | 10.21            | 10.29            | 40.69                         | 38.35              | 2.34              |
| 2005 | USA     | 9.88             | 9.94             | 9.99             | 10.01            | 39.28                         | 38.48              | 1.34              |
|      | GBR     | 10.08            | 10.13            | 10.13            | 10.22            | 40.56                         | 38.27              | 2.29              |
|      | BRA     | 10.17            | 10.25            | 10.27            | 10.29            | 40.98                         | 38.92              | 2.06              |
|      | JPN     | 10.15            | 10.27            | 10.29            | 10.29            | 41.00                         | 38.46              | 2.54              |
| 2006 | USA     | 9.77             | 9.84             | 9.91             | 9.94             | 39.46                         | 37.59              | 1.87              |
|      | GBR     | 10.07            | 10.16            | 10.16            | 10.19            | 40.58                         | 38.77              | 1.81              |
|      | BRA     | 10.22            | 10.23            | 10.30            | 10.45            | 41.20                         | 39.03              | 2.17              |
|      | JPN     | 10.25            | 10.26            | 10.28            | 10.31            | 41.10                         | 38.87              | 2.23              |
| 2007 | USA     | 9.84             | 9.93             | 9.96             | 10.01            | 39.74                         | 37.78              | 1.96              |
|      | GBR     | 10.06            | 10.10            | 10.13            | 10.14            | 40.43                         | 37.90              | 2.53              |
|      | BRA     | 10.14            | 10.28            | 10.31            | 10.34            | 41.07                         | 37.99              | 3.08              |
|      | JPN     | 10.14            | 10.15            | 10.23            | 10.39            | 40.91                         | 38.03              | 2.88              |
| 2008 | USA     | 9.96             | 10.05            | 10.05            | 10.06            | 40.12                         | 38.72              | 1.40              |
|      | GBR     | 10.11            | 10.18            | 10.20            | 10.31            | 40.80                         | 39.46              | 1.34              |
|      | BRA     | 10.19            | 10.22            | 10.26            | 10.28            | 40.94                         | 38.94              | 2.00              |
|      | JPN     | 10.17            | 10.29            | 10.50            | 10.58            | 41.74                         | 38.94              | 2.60              |

Material and methods

Study II

Study II compared the total time of four top 4 × 100 m relay sprinters from Japan, Brazil, the USA and Great Britain with the best results of sprint relay teams from these countries in the years 2001–2008 (Tab. 1). The analysis of results was made separately for each year. The individual and relay team results were taken from international top lists from the IAAF webpage. Some results were taken from respective national lists. The 2008 results came from the track and field championships from May 20, 2008.

The selected players’ countries of origin had to satisfy the following criteria: (1) availability of research data determining a given country as a collectivist or individualist culture; (2) the level of sprint races in a given country (to ensure the inclusion of a few sprinters on the official IAAF top lists); (3) exclusion of African runners resident in the USA or Europe (whose partici-
pation in the study could have profoundly affected the questionnaire answers [13], making it impossible to establish their IC level. In consideration of the above restrictions, teams from four countries were selected for the study: Japan and Brazil (collectivist cultures) and the USA and Great Britain (individualist cultures). It should also be noted that in researchers’ opinion the Japanese culture is more collectivist than Brazilian culture; whereas the American culture is more individualist than British culture [11].

Four top individual 100 m results of sprinters from the selected countries were taken for analysis. They were always four different runners, however, not necessarily members of a relay team under study. Like in the official IAAF lists, the running times recorded in the conditions of heavy wind were rejected. In the case of American teams also the results of collegiate relay teams and USA B or USA Red/Blue/White were taken into consideration (providing all the team members were U.S. citizens). In the case of the other countries the top results were always achieved by the respective national relay teams.

Results

Study II

The differences between the best results of relay teams from the USA, Great Britain, Brazil and Japan were compared with the potential capabilities of runners from a given country, according to the formula: Runner 1 time + Runner 2 time + Runner 3 time + Runner 4 time – the time of the best relay team (Tab. 1). The differences (mean values for the years 2001–2008) were: USA (M = 1.66, SD = 0.29), Great Britain (M = 2.0, SD = 0.45), Brazil (M = 2.37, SD = 0.37) and Japan (M = 2.34, SD = 0.44).

The analysis of the above mean values revealed statistically significant differences between the results of U.S. and Brazil relay teams (p < 0.001), and the U.S. and Japan relay teams (p < 0.01). No statistically significant differences were noted between the results of the British and Brazilian (p = 0.09) and Japanese relay teams (p = 0.14). The total times of the Japanese and Brazilian relay teams (M = 2.35, SD = 0.39) turned out to be significantly better than the times of the U.S. and British teams (M = 1.83, SD = 0.4, p < 0.001).

Discussion

The studies were aimed to show that a given type of culture (collectivist or individualist) can have an impact on the sports results of athletes from this culture. The results presented indicate that, due to their specificity, collectivist cultures, to a greater extent than individualist cultures, are more conducive to the development of valuable sports teams. According to sports team coaches an ideal team player should hold onto collectivist values. Moreover, the analyzed 4 × 100 m relay results show that the times attained by relay teams from collectivist cultures are relatively better than by teams from individualist cultures. The results of the British relay teams were not significantly worse than the results of the Brazilian and Japanese teams. However, it should be remembered that the amount of analysed data (mean eight times from the years 2001–2008) makes it difficult to achieve statistically significant differences (there are no earlier data in the IAAF statistical database).

The question of why the runners from collectivist cultures can achieve better results in relay races than their counterparts from individualist cultures (in the context of specific abilities of a team, whose result depends on the individual predispositions of all the team members) is still an open one. One of the hypotheses assumes that athletes from individualist cultures may value their personal achievements above the overall team success, which can be reflected in their negligence of elements of relay training, for instance, exchanging the baton, etc.

The above study took into account four top results of runners during a given season. They were not necessarily the results attained by the members of the relay teams under study. In the author’s opinion, this should not be regarded as a drawback. Non-participation of the top runners in their national relay team can be related to the aforementioned IC dimension of a given culture. Runners can decline their membership in a relay team as they can consider it to be less important than their individual achievements. They might also be excluded by the national relay coach due to their specific psychological traits which may be a hindrance to the overall team effort. A factor which can also exclude the top athletes from running as members of a relay team can be sports injuries. This, however, should not affect the general pattern of achieved results. In individualist cultures (USA, Britain) an injury sustained by a member of a re-
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lay team is not a factor which lowers its quality, since he or she can be easily replaced by an equally well-qualified substitute runner.

There are many factors affecting the results of particular relay teams. The relatively good results of Polish teams confirm the general assumption of this study that other important factors, for instance traditions of a given sport in a particular country, can also have an effect on the sports achievements of the country’s athletes. On the other hand, it is commonly assumed that the Polish society is more collectivist than individualist [18]. Thus the relatively good results of the Polish relay teams can also confirm the aforementioned hypothesis.

The research on the IC dimension has also produced a number of IC analytical tools. At present these tools enable not only the measurement of intercultural differences but also assessment of the IC level in individuals. Oyserman et al. [19] made a review of several studies which involved different IC scales at the individual level. Therefore a number of instruments exist which allow evaluation of individual IC levels. These tools can be potentially applied in the process of selection of athletes with desired collectivist profiles for sports teams. Such an application could be very interesting from the cognitive standpoint. The top players fulfilling different functions in a sports team might possess different characteristics on the IC scale. One can speculate whether, for instance, a defensive midfielder on a soccer team should be a collectivist, while a forward should possess individualist traits. Further research in this area may bring some interesting results.

The studies presented have certain limitations. The general assumption that Asian cultures feature a higher level of collectivism, while the Western cultures are more individualist is somewhat problematic. There have been a few reliable studies whose results seem to contradict the ones presented above [20], or whose interpretation is not uniform [21]. Moreover, the results of the present study concern one sport only, and the study sample was relatively small (on the other hand, the analyzed results were achieved by the runners over the period of eight years). These limitations should be taken into account in any discussion of the results presented.

Conclusions

The obtained results show that a collectivist culture is more conducive to the development of sports teams and achievement of team success. Due to the prototypicality of the above research as well as relatively small amount of data for analysis the suggested hypothesis still requires further examination.

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