

RESEARCH ARTICLE

The Multidimensional Sportspersonship Orientation Scale (MSOS-25) and the Interpersonal Reactivity Index (IRI) Cultural Adaptation in Kenya

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Abstract

In the course of our work so far, we have repeatedly emphasized and drew attention to the loss of morality and value in societies, which affects sport in all areas of life.

Today we are far from the original values of the sport and the ideals of Baron Coubertin, from fair play as a pure game. Perhaps the best in the sports segment is fraud, fur and doping scandals.

There are some attitude tests in the international literature to measure sportsmanship, fraud, fair play, which are internationally validated questionnaires and/or scales. Our present work is intended to present the first quantitative results of a comprehensive, larger-scale research.

In our study, the results of the Multidimensional Sportspersonship Orientation Scale (MSOS-25) (Vallerand, et.al, 1997) and the Interpersonal Reactivity Index (IRI) (Davis, 1983) are presented.

Research questions:

What significant differences can be detected between men and women on each subscale?

How do young people relate to sportspersonship and empathy?

Does school type and sport participation significantly influence this?

What is the relationship between each scale as a function of age?

Both questionnaires were completed by 1208-1208 people. 59% of the respondents studied in higher education and 41% in public education in primary or secondary schools. In terms of gender ratio, 46% were boys and 54% were girls. Only Kenyan state-funded institutions participated in the sample.

Based on the results, it can be said that the adaptation of the questionnaires was successful for MSOS-25, Cronbach alpha had a value of 0.742 and for the IRI test was 0.886. Age is not a differentiator factor for either questionnaire, however, gender and school type already show significant differences.

Keywords: MSOS-25, IRI, sportsmanship, fair play, empathy, cultural adaptation, Kenya.

1. Introduction

Our study are built around concepts such as empathy, fair play, and sportsmanship. Our research is carried out within the Kenyan education system, so we have

also tried to draw from this medium in the research history that is being analysed, not excluding athletes from students or faculty.

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Both families and actors in the education system have a major role to play in shaping the values and norms of the rising generation. The aim may be to act in the spirit of fair play in all areas of life and this should become an inner natural urge/instinct, thus embedded in the character of the young ones.

From the point of view of our work, the concept of fair play means at the same time acting along the rules as well as respecting the other party, ourselves, and the rules (here we mean not only the rules of the given sport but also the rules of ideas and norm system in societies). Undoubtedly, one of the best fields of all so far is (was) sports. Today, however, it is not the only mediating medium. (Hideg, 2018)

Although the concept of fair play is often confused with the concept of sportsmanship, these are two separate concepts, despite the fact that they have common points.

According to Zsolt (1983), a person who is sportsmanlike, presents written and unwritten moral rules, norms, does not deceive anyone, and does not use unfair means against others. According to Vallerand, Briere, Blanshard, and Provencher (1997), sportsmanship can be defined as respect for rules, referees, social norms and the opponent, commitment to the sport, and a relative lack of negative behaviours related to participation in sport.

Overall, the definition of fair play varies widely, but there is a common point in the definitions. The concept stems from sport, but it is not just a concept that is closely related to morality, empathy, sportsmanship, respect for others, but can also be understood as a philosophy. Today the concept and spirit of fair play is present in all areas of life.

Davis (1983) interpreted empathy as a measurable personality trait, and the integrative approach he takes to the concept of empathy is well reflected in the questionnaire developed for this purpose. The cognitive component (perspective-recording scale, which shows the individual's ability to take over the other person's point of view), the emotional component (empathic distress scale, which measures the feelings of distress generated in the observer as a result of the suffering of others), the emotional and behavioral form (empathic care scale, a concept that can often be found as synonymous with sympathy, since it includes feelings of compassion for the other person) appear in the subscales of the questionnaire. and the questionnaire includes the so-called fantasy subscale, which examines the aesthetic dimension and shows the ability of the individual to think of himself

or herself in an imaginary situation (this subscale is most like rola- playing).

2. Research Background

In their Karatas and Savas (2019) study, sports students from six Turkish universities were tested (n=949) in the 2017/2018 academic year with a 20-item version of MSOS.

Concerning the distribution of answers given to the scale questions, it has been determined that the reliability coefficient Cronbach's Alpha is 0.82. Analyzing the MSOS and sub-dimension mean scores of students by the variable of sex, it is observed that there is a significant difference between females and males in all sub-dimensions except for the first sub-dimension (Respect for social conventions) by the variable sex ($p < 0,05$). Studies were also carried out on age group, grade and sporting habits. It has also been ascertained that there are significant differences in the variables of sex, age and the grade studied in terms of the multidimensional sportspersonship orientation of students ($p < 0,05$). However, no significant difference was observed in the variables of the university studied and doing sports ($p > 0,05$).

Burgueño and Medina-Casaubón (2020) used the MSOS-25 test as part of an intervention program (where they took measurements before and after) involving 148 high school students who were randomized into an experimental group (n = 74), which received 16 basketball lessons under sport education conditions (SE), and a control group (n = 74), which received 16 basketball lessons following a traditional teaching (TT) approach. The results of this research reflect the significant improvement of four of the five sportsmanship orientations (i.e., respect for social conventions, respect for rules and officials, Respect for one's full commitment toward sport participation, and respect and concern for the opponents) outlined by Vallerand et al. after a SE season.

Özsari and Pepe (2021) also used the MSOS 20-question 4-underscal version on 95 athletes. In the study, depending on the gender variable of the candidate national athletes, in all sub-dimensions except for the "Respect and concern for the opponent" sub-dimension of the sportsmanship scale, the average values of female athletes were found to be higher than that of male athletes and this change was found to be statistically significant. In all sub-dimensions except respect for the opponent, the average values of younger athletes were found to be higher.

It was determined that the average values of high school athletes in the sub-dimension of “Respect for the rules and the officials” in sportsmanship tendency in the educational level variable of candidate national athletes were significantly higher than the average values of the athletes in the university group. It has been determined that there are significant differences in favor of athlete students at secondary education level in the sub-scale of Respect for the rules and the officials.

Sezen-Balcikanli (2012) studied professional athletes, footballers (n=130) with the 20-question version of MSOS and the Interpersonal Reactivity Index (IRI). Revealed that the subscales of fair play were positively correlated with those of sportspersonship orientation “Respect for social conventions” and “fantasy” were found to be positively correlated with each other (r=0.217; p<0.05). Likewise, “empathic concern” was positively associated with “respect for social conventions” (r=0.447; p<0.01). There is a significant relationship between “respect for social conventions” and “perspective taking” (r=0.249; p<0.01). “Respect for officials and rules”, another subscale of sportspersonship orientation scale, was found to be positively associated with “empathic concern” and “perspective taking” (r=0.365, p<0.01; r=0.197; p<0.05). When the correlation between the subscale of IRI and of MSOS is examined, it has become clear that the more empathic skills of football players develop, the more their sportspersonship orientation increases.

Further examining the international literature, we also found research on the application of the Interpersonal Reactivity Index. Murphy et al. (2018) studied their level of empathy, which can help combat bullying in elementary schools, involving 10 educators. Findings from the study show that teachers’ empathy levels are higher than average on the subscales for PT (Perspective-taking scale), EC (Empathic concern scale) and FS (Fantasy scale), while results on the PD (Personal distress) scale are on the lower end of the scale. With regard to the former three subscales, the scores suggest that overall teachers have levels of

empathy to be prepared to tackle bullying behaviour as their results suggest that they can take another’s perspective and feeling concern. The teachers’ low score on the PD subscale is necessary if teachers are to tackle bullying, as PD represents emotions that hinder helping others in stressful situations.

3. Matherial and Methods

The aim of the study is the cultural adaptation of two internationally validated indices/scales among Kenyan youth. The uniqueness of the study is to be the first to perform these tests in Kenya. The official language of Kenya, in addition to Swahili, is English (English is used in education and administration), so we did not need to do a translation, but a research team consisting of Kenyan educators and university lecturers reviewed the scale and index in terms of interpretability. As a result, we found that questionnaires can be queried into their original form.

Researcher questions:

What significant differences can be revealed between a man and a woman on each subscale?

How do young people relate to sportsmanship and empathy? Does the type odschool and sports play significantly influence this?

What is the relationship between each scale depending on age?

3.1 Measurements

In our study, we performed Kenyan cultural adaptations of two internationally validated indices/scales among primary school students, secondary school students and university students. The Multidimensional Sportspersonship Orientations Scale-MSOS-25 developed by Vallerand, Briere, Blanchard and Provencher (1997) and Interpersonal Reactivity Index-IRI developed by Davis (1983), were employed to explore the level of sportspersonship orientation and of empathy. The MSOS-25 scale consists of 25 questions and includes 5 subscales. Participants had to mark on a five-grade Likert scale how well each statement fit the individual. (1= doesn’t corresponds to me at all, 5= corresponds to me exactly). (Table 1.)

Table 1. *The five subscales*

Subscale	Example
Respect for social conventions	If I lose, I congratulate the opponent, whoever it is.
Respect for the rules and the officials	I respect the rules. Or I obey the referee
Respect for one’s full commitment toward sport participation	I don’t give up even after making many mistakes
Respect and concern for the opponent	I help the opponent get up after a fall
Negative approach toward the pratice of sport	After a competition, I use excuses for a bad performance

The Interpersonal Reactivity Index (IRI) contains 28 statements that young people need to decide how well it suits them (0= doesn't describes me very well, 4= describe me very well). (Table 2.)

Table 2. IRI subscale

Subscale	Example
Fantasy scale (FS)	I really get involved with the feelings of the characters in a novel.
Empathic concern scale (ES)	I would describe myself as a pretty soft-hearted person.
Perspective-taking scale (PT)	I believe that there are two sides to every question and try to look at them both.
Personal distress scale (PD)	In emergency situations, I feel apprehensive and ill-at-ease.

For the two questionnaires, we examined their reliability using Cronbach's Alpha values. For MSOS, Cronbach's Alpha (α) is .742, and for IRI, it's .886. Based on the results, we found both scales to be valid in the Kenyan sample, the adaptation was successful. Further examining the Values of the Subscales Cronbach's Alpha (α) we can see the following. (Table 3.)

Table 3. Descriptive Statistic (Alphas, Means, Standard Deviations)

	(α)	M	St.D
Multidimensional Sportpersonship orientations scale- MSOS	0,742		
1. Respect for social convention	0,696	18,99	4,840
2. Respect for the rules and the official	0,676	19,98	4,788
3. Respect for one's full commitment	0,686	19,35	4,322
4. Respect and concern for the opponent	0,717	17,98	4,335
5. Negative approach toward the practice of sport	0,71	14,20	5,001
Interpersonal Reactivity Index- IRI	0,886		
1. Fantasy scale (FS)	0,694	1,73	1,466
2. Empathic concern scale (ES)	0,517	1,71	1,499
3. Perspective-taking scale (PT)	0,772	1,9	1,56
4. Personal distress scale (PD)	0,603	1,93	1,587

3.2 Participants

The study involved 1208 young people from three levels of Kenya's education system. Of those surveyed, 59% are university students, 16% are in secondary school and 25% are in primary school. In terms of gender ratio, 54% (653 people) are male and 46% (555 people) are female. Looking at their age, the youngest participant was 11 and the oldest was 50, with an average age of 21.15 years (SD=5.788). Our sample includes nearly 200 young people over the age of 25 who have not been excluded because of inequality in Kenya's society and education system. According to statistical data, 80% of the population can read and write, but on average young people leave school at the age of 11. In Kenya, a family always must decide whether to send their child to school, thereby investing money in the young person's future or going to work and taking money home. It is common to have 17-19-year-olds in the same class as 11-12 year olds. It is a regular, almost tendency for a child to be able to start school, but to drop out for a year or so because he has to go to work. If the family's financial situation stabilizes, you can continue schooling. As a result, the

acquisition of qualifications is significantly delayed in time, and this may even be accompanied by early childbearing (15-18 years old). Therefore, due to this cultural peculiarity, in our study, we will not sharply separate the three levels of the education system during adaptation, but we will examine the individual subscales on the age and type of school variables. It is characteristic of their sporting habits that 96% of the young people surveyed (1161 people) play sports, here we did not distinguish between school sports, recreational sports or competitive sports, regular physical activity was relevant for the study. The range of sports practiced is very wide, the most popular are football, athletics, netball, swimming. Due to Kenya's cultural, in this case more economic/infrastructural characteristics (regular power outages, difficult internet access, high lack of technical means), sampling took place both on paper and online at the same time. We were able to reach primary and secondary school students more easily with paper-based questionnaires. The university group was first involved in the research in an online form, but due to the shortness of the data collection time, we also

filled out questionnaires on paper. Sampling took place over 2 months.

3.3 Analysis of Data

The data in this study were analysed using the statistical program SPSS v.28.0 for Windows (SPSS Inc, Chicago, USA).

In addition to the descriptive statistics, a two-sample T- test, a One-Way ANOVA test, and Pearson’s correlation calculation were used. The significance level was set at 0.001 or 0.005. The analyses were conducted according to gender, age, type of school and sports habit variables. On the IRI, there were 7 items (3, 4, 7, 12, 13, 14, 15) inverted items, which was considered in statistical calculations.

4. Results

4.1 Multidimensional Sportpersonship Orientation Scale-25

The sexes were examined on each subscale using a two-sample T-test. A significant difference ($t(1203)4.654 < 0.001$) was found between the average values of the scale for the first subscale (“Respect for social convention”) (male $M=19.70$; female $M=18.41$) in favor of men. Thus, the men in the sample are more characterized by respect for social conventions than for women. The average values of the other subscales are not affected by the gender of the filler. (Figure 1.)

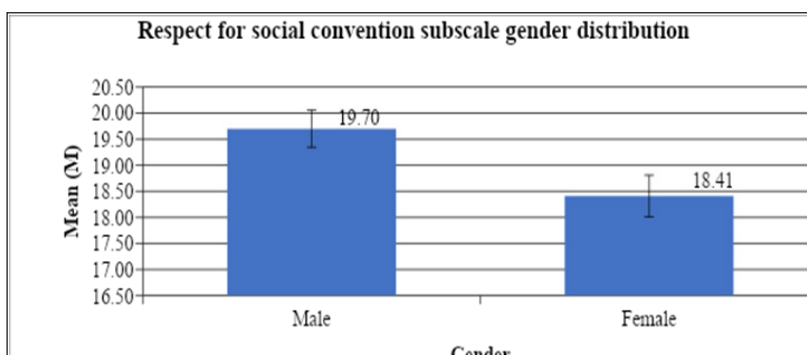


Figure 1. Respect for social convention subscale gender distribution

Our next study concerned sports habits for each subscale. Since young people had two choices to choose from, yes sports or no sports, we used the two-pattern T-test here as well. As with the study of gender, a significant difference ($t(1206)3,349 < 0,001$) was obtained at the first subscale. On the “Respect for social convention” subscale, those who play sports

scored higher ($M=19.08$) compared to those who did not ($M=16.68$). So those who regularly engage in some form of physical activity are statistically more committed to respecting social conventions. The average values of the other scales are not affected by whether the young person surveyed plays sports or not. (Figure 2.)

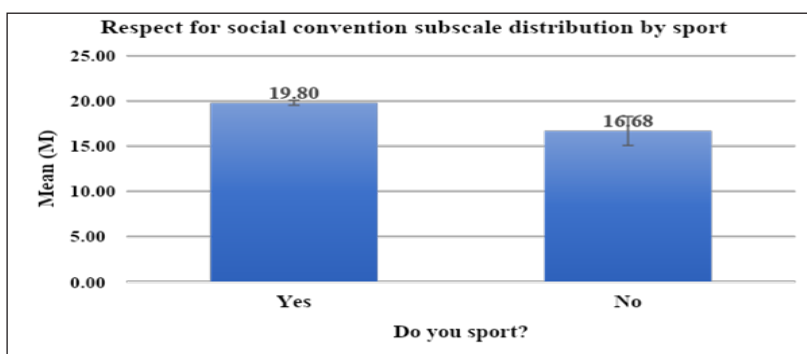


Figure 2. Respect for social convention subscale distribution by sport

We also looked at the scales for school types using the ANOVA trial. Here the relationship between the individual subscales and the type of school shows a more diverse picture. Our sample includes three types of schools for primary school students ($n=306$, $M=18.20$), secondary school students ($n=185$, $M=17.13$) and university students ($n=717$,

$M=19.81$). Here, four subscales show a significant difference in 1. (Respect for social convention- $F(2,1205)29,327 < 0,001$), 2. (Respect for the rules and the official- $F(2,1205)7,570 < 0,001$), 3. (Respect for one’s full commitment- $F(2,1205)17,572 < 0,001$), 5. (Negative approach toward the practice of sport- $F(2,1205)21,896 < 0,001$).

Based on the results, we can make the following findings:

The 1. (Respect for social convention), 2. (Respect for the rules and the official), 3. (Respect for one’s full commitment) on the subscale, undergraduates scored significantly higher than their younger peers.

The 5. (Negative approach toward the practice of sport) subscale, which measures acceptance of negative manifestations within sports, scored significantly higher among high school students. Based on this, it can be assumed that negative behavioral patterns associated with playing sports, such as criticizing the coach or not acknowledging mistakes, are more characteristic of this group. (high school)

The 1. (Respect for social convention)) on the subscale, the most significant difference is between college students and high school students, so college students are significantly better able to identify with social conventions and respect for them, such as acknowledging an opponent’s victory and congratulating and shaking hands.

The 2. (Respect for the rules and the official), and 3. (Respect for one’s full commitment) subscale, the most significant difference was between university students and secondary school students. The former (university students) are more characterized by compliance with the rules, efforts to achieve their own performance and result. (Figure 3.)

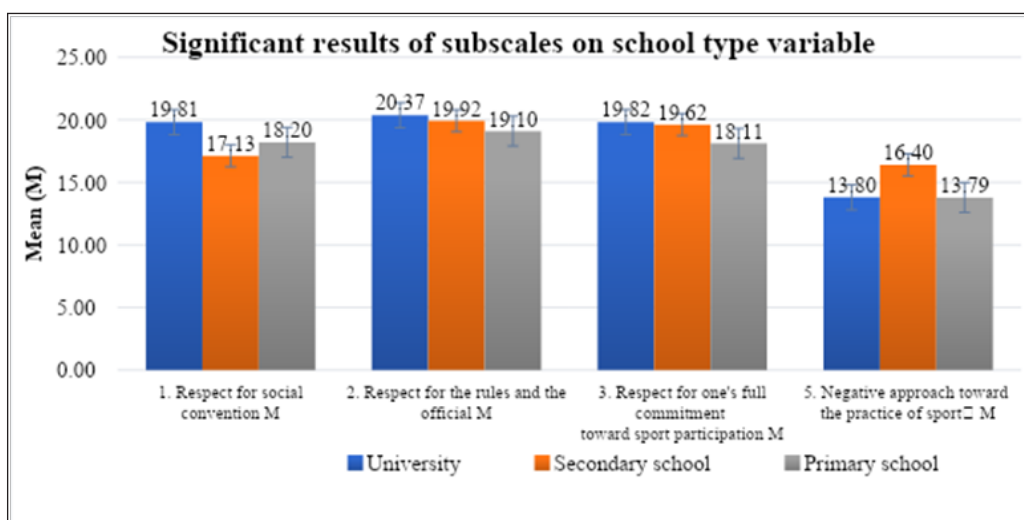


Figure 3. Significant results of subscales on school type variable

Finally, we also looked at the data in terms of age. Subscale 4. (Respect and concern for the opponent) showed a relationship with age at $p=0.05$ significance level. As a result of Pearson’s correlation calculation, we can conclude that the relationship is weak negative

($r= -0.060$), as age increases, the values of subscale 4. (Respect and concern for the opponent) decrease, so the older the interviewee the less important it will be for him, for example, to respect the opponent. (Figure4.)

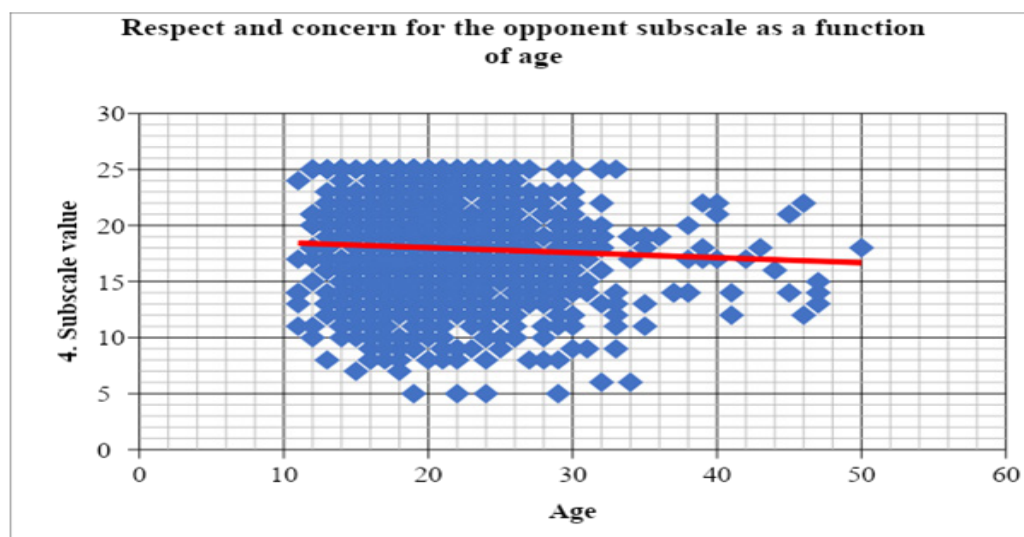


Figure 4. Respect and concern for the opponent subscale as a function of age

Further examining the relationships between the scales, we find that there is also a relationship between subscale 1. and subscale 2. ($r=0.438$), 3. ($r=0.388$), 4. ($r=0.466$) at a significance level of 0.01. So if the value of the first scale increases then the value of the others also increases. Those interviewed who respect social

conventions are most likely to respect the rules and officials, those involved in sports (coach, audience) and opponents. The relationship between subscales 1., 2. and 3. is positive medium, while between 1st and 3rd is positive weak but sure. (Figure 5.)

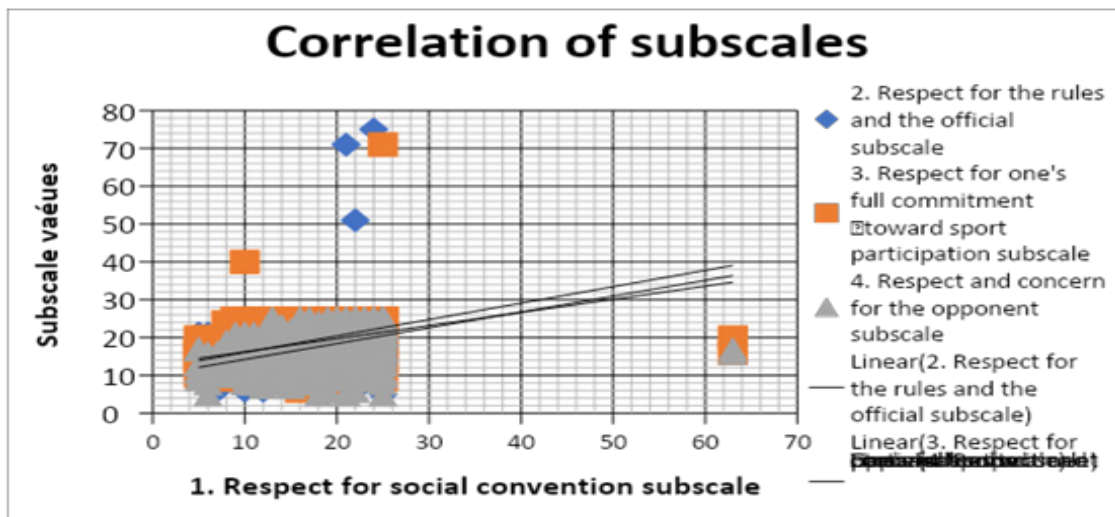


Figure 5. Correlation of subscales

4.2 Interpersonal Reactivity Index

The sexes were also examined on each subscale using a two-sample T-test. A significant difference ($t(1203)-4.667 < 0.001$ and $t(1203)-3.353 < 0.001$) was found between the average values of the scale for subscale 1. (Fantasy) and subscale 4. (Personal distres). In both cases, a significant difference can be detected

in favor of women (male $M=11.67$; female $M=13.37$ and male $M=11.40$; female $M=12.49$). So, it is more characteristic of the women in the sample that they are able to put themselves in an imaginary situation and, seeing the suffering of others, tend to feel distress. The average values of the other subscales are not affected by the gender of the filler. (Figure 6.)

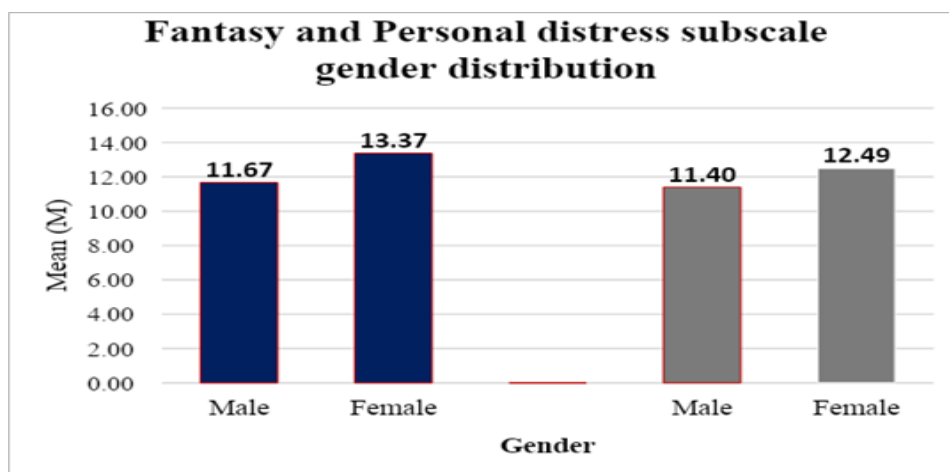


Figure 6. Fantasy and personal distress subscale gender distribution

Our next study concerned sports habits for each subscale. Since young people had two choices to choose from, yes sports or no sports, we used the two-pattern T-test here as well. As with the study of gender, we found a significant difference ($t(1207)-3,379 < 0,001$) in the 3rd century. Perspective taking subscale. On the subscale, those who do not play sports ($M=18.92$) achieved a higher value compared

to those who do ($M=13.99$). So, those who do not perform any physical activity are more characteristic of spontaneously assessing and understanding the psychological points of view of others during everyday life. The average values of the other scales are not affected by whether the young person surveyed plays sports or not. (Figure 7.)

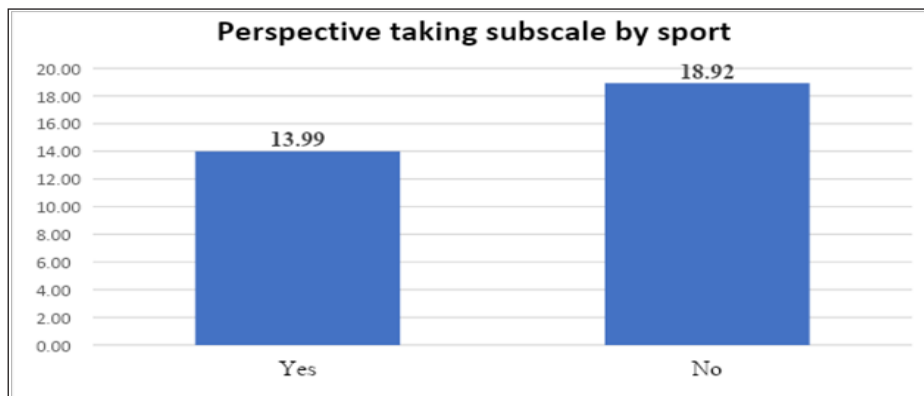


Figure 7. Perspective taking subscale by sport

We also looked at the scales for school types using the ANOVA trial. Here the relationship between the individual subscales and the type of school shows a more diverse picture. Our sample includes three types of schools: primary school students (n=306, M=12.32), high school students (n=185, M=17.78)

and university students (n=717, M=11.33). Here, a significant difference can be detected on all four subscales in 1. (Fantasy $F(2,1205)87,187 <0,001$), 2. (Empathic concern $F(2,1205)58,199 <0,001$), 3. (Perspective talking $F(2,1205)45,094 <0,001$), 5. (Personal distress $F(2,1205)66,725 <0,001$). (Figure 8.)

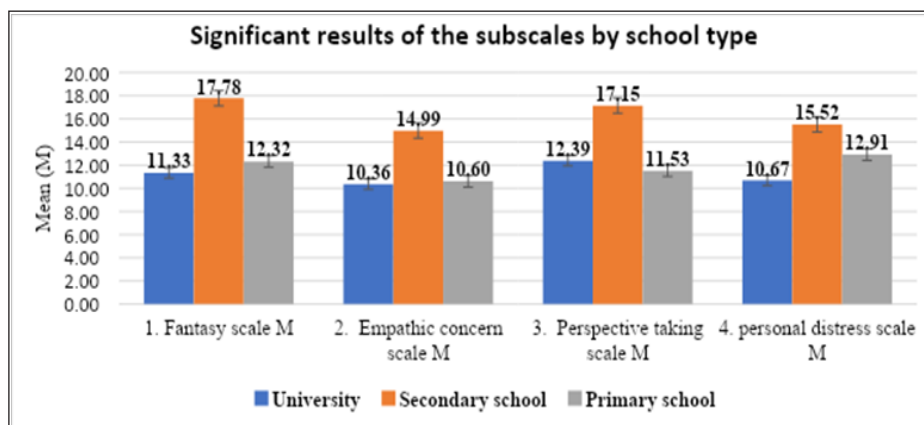


Figure 8. Significant results of the subscales by school type

Based on the results, we can make the following findings:

The 1. (Fantasy), 2. (Empathic concern), 3. (Perspective talking), 4. on the (Personal distress) subscale, secondary school students scored significantly higher than their university or primary school peers, so based on this, you can assume that they have higher empathy compared to their peers.

The 1. (Fantasy), 2. (Empathic concern), and 4. (Personal distress) subscale is the most significant difference between secondary school and university students, so high school students are significantly better able to indulge in fictional situations (e.g.: reading in a book, seeing on film) and their empathic concern is higher (empathic concern scale) e.g.: they consider themselves soft-hearted, they feel protected towards those who are hurt) they feel distress more often when they see the suffering of others.

The 3. subscale (Perspective talking), the most

significant difference was between middle and primary school students. Primary school students are less likely to imagine themselves in the psychological perspective of others (if they mock someone, I imagine themselves in their place).

Finally, we also looked at the data in terms of age. All four subscales showed relationships at $p=0.01$ significance levels in relation to age, but these are weak almost negligible negative correlation relationships ($r=0.128-0.195$). So, with age, the sense of empathy decreases. Further examining the relationships between the scales, we found that there is also a marked strong relationship between subscale 1. and subscale 2. ($r=0.747$), 3 ($r=0.788$), 4. ($r=0.729$) with a significant level of 0.01. So if the value of the first scale increases then the value of the others also increases. Interviewees who are characterized by rich fantasy are characterized by the ability to empathize with others, to take on their psychologic point of view and to provoke distress for the suffering of others.

5. Conclusion

In our work, we have set ourselves the goal of performing cultural adaptations of two internationally validated index/scales among Kenyan youth. Based on the results presented, the adaptation was successful, so we can be the first to publish the results of these tests in Kenya. In our study, we looked for answers to the following questions:

What significant differences can be revealed between a man and a woman on each subscale?

In the multidimensional Sportpersonship Orientation Scale, we found a significant difference in favor of men in the case of the “Respect for social conventional” subscale, so men are more likely to adhere to social conventions than women. Karatas and Savas (2019), on the other hand, (although they took the fifth (negative subscale) out of the test, found that they found a significant difference in favor of women on each of the subscales, except for subscale 1 (“Respect for social conventional”).

This result is consistent with the investigation of Özsari and Pepe, who also performed the MSOS-20 variant. In their case, women also showed significantly higher values on three subscales except for the “Respect and concern for the opponent” subscale.

The Kenyan results showed that of all the subscales, only the subscale “Respect for social conventional” showed a significant difference and that, in contrast to other research, in favor of men, it can be explained by the fact that Kenya is a society based on traditions, initially based on 40 tribes, and adherence to traditions and adherence to social conventions is considered a primary value. Looking at gender differences in the Interpersonal Reactivity Index, we found significant differences in favor of women in two of the four subscales, “Fantasy” and “Personal distress.” So, women in the Kenyan sample will be more characterized by being able to put themselves in an imaginary situation and feel distress when they see the suffering of others.

How do young people relate to sportsmanship and empathy? Does the type of school and sports play significantly influence this?

In the case of the Multidimensional Sportpersonship Orientation Scale, the Kenyan sample showed a significant difference in favour of the young athletes on the first subscale (Respect for social convention). The opposite result of Karatas and Savas (2019) is

the result of this result. On the same subscale, non-athletic young people achieved significantly higher results compared to their fellow athletes. With their conclusion that sports habits have no effect on sportsmanship, we disagree since our study showed a link between sports habit and sportsmanship, although only on a subscale.

Looking further at the Kenyan results of the MSOS-25 scale, we can also see that the type of school (primary school, secondary school, university) shows a significant difference in four subscales, so sportsmanship is affected by the level of education at which the Kenyan youth surveyed is studying. More characteristic of university students is the observance of social conventions, compliance with the rules and respect for the commitment of others. And high school students will be characterized by acceptance of negative behavioural patterns. Contrary to our results, in the study of Özsari and Pepe (2021), high school students scored higher on the subscale “Respect for the rules and the officials” for school types.

As in the study of the IRI, as in the study of gender, we found a significant difference, in the 3. Perspective taking subscale. On the subscale, those who do not play sports achieved a higher value compared to those who do. So, those who do not perform any physical activity are more characteristic of spontaneously assessing and understanding the psychological points of view of others in the course of everyday life, have a higher sense of empathy. Our study of all four subscales on the school type variable yielded significant results, so it can be clearly stated that the type of school has an impact on empathy and its level. Kenyan youth surveyed scored significantly higher on all four sub-scales, so it can be concluded that they have the greatest sense of empathy among the university and primary school students surveyed.

This may also be due to the inequality of opportunities within the Kenyan education system. Young people who attend high school have experienced a great deal of disadvantage and can appreciate it, as well as the opportunity to learn. For primary school and university students, our previous statement was also true (5-10 years ago), it is difficult to get to primary school and stay in it, which is primarily due to financial reasons, since not every family can afford to have a child in a theoretically free education. But it is also difficult to get into higher education, which is why young people are motivated to learn. Today, our experience is not these primary school students and university students

are characterized in many cases by disinterest and do not see learning, the acquisition of knowledge as a way out to ascend.

What is the relationship between each scale and age?

From the results of the MSOS-25 scale, we can conclude that a subscale showed a significant association with a weak negative relationship with age, that as age increases, respect for the other party or care becomes less and less important, along with sportspersonship. Our results are the same as those of Karatas and Savas (2019) although they found a significant association on several subscales, our finding matches with age the importance of sportspersonship, respect for the other party, rules decrease. From the results of Özsari and Pepe (2021), we can draw a similar conclusion. In their case, except for the Respect for opponent subscale, younger respondents scored significantly higher.

Analyzing the age variable, we can make similar findings to the IRI results as in the previous ones although there is a weak relationship between subscales and age they are significant and it can be said that as age increases, the sense of empathy decreases. Here we would refer to Sezen-Balcikanli's (2012) study of the relationship between MSOS and IRI. Based on his results, it can be concluded that a higher sense of empathy leads to a more sportsmanlike behavior among the athletes studied.

Our present study contains the first results of a comprehensive study. Currently, the examined index/scale is being validated in Hungary. We plan to publish a comparative analysis soon, complemented by a broader literature background and research history.

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8. References

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