DOI: 10.1590/1809-2950/20017628012021

ORIGINAL RESEARCH

Motor Competence Assessment – cultural adaptation for Brazil (MCA-BR)

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ABSTRACT | We adapted the Motor Competence Assessment (MCA) to Brazilian Portuguese. Two professionals proficient in Brazilian Portuguese independently translated the MCA into the Portuguese language (T1 and T2). Then, the translated version of consensus (TU) was generated. Two translators performed two back-translations in European Portuguese (BT1 and BT2) of the TU version. A new consensus process between translators and researchers resulted in a European Portuguese version (BTfinal), which was compared to the original version in search of possible semantic differences. A committee of experts, composed of a physical therapist and two physical educators to verify the content, reviewed the version of the instrument in Brazilian Portuguese (TU), called "*Avaliação da Competência Motora,*" which generated the second version of agreement (Tfinal). We sent the Tfinal to one of the authors of the original evaluation to verify the relevance of the Brazilian Portuguese version. After this step, 20 physical therapists and 20 physical educators verified the applicability of the evaluation model. The MCA was then culturally adapted for Brazil. It is a relevant instrument as it evaluates motor competence without age limit, and can assist in monitoring the motor development of individuals.

Keywords | Child Development; Movement; Child; Adolescent.

RESUMO | Adaptou-se para o português do Brasil o *Motor Competence Assessment* (MCA). Dois profissionais proficientes em português do Brasil traduziram, de forma independente, o MCA para a língua portuguesa (T1 e T2). Em seguida, gerou-se a versão traduzida de consenso (TU). Dois tradutores realizaram duas retroversões para português de Portugal (RT1 e RT2) da versão TU. Um novo processo de consenso entre tradutores e pesquisadores resultou em uma versão em português de Portugal (RTfinal), que foi comparada à versão original em busca de possíveis diferenças semânticas. A versão do instrumento em português do Brasil (TU), denominada "Avaliação da Competência Motora", foi revisada por uma comissão de especialistas composta por um fisioterapeuta e dois educadores físicos para verificação do conteúdo, o que gerou a segunda versão de concordância (Tfinal). A Tfinal foi encaminhada a um dos autores da avaliação original para verificar a pertinência da versão em português do Brasil. Após essa etapa, 20 fisioterapeutas e 20 educadores físicos verificaram a aplicabilidade da avaliação. O MCA foi, então, adaptado culturalmente para o Brasil, sendo um instrumento relevante dado que ele avalia a competência motora sem limite de idade, podendo auxiliar no acompanhamento do desenvolvimento motor de indivíduos.

Descritores | Desenvolvimento Infantil; Movimento; Criança; Adolescente.

RESUMEN | Se adaptó al portugués brasileño la *Motor Competence Assessment* (MCA). Dos profesionales con dominio del portugués brasileño tradujeron de forma independiente la MCA al portugués (T1 y T2). Luego, se generó una versión traducida por consenso (TU). Dos traductores realizaron dos retrotraducciones al portugués

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de Portugal (RT1 y RT2) de la versión TU. Un nuevo proceso de consenso entre traductores e investigadores dio como resultado una versión al portugués de Portugal (RTfinal), que se comparó con la versión original en busca de posibles diferencias semánticas. La versión del instrumento en portugués brasileño (TU), denominada "Evaluación de la Competencia Motora", fue revisada por un comité de especialistas compuesto por un fisioterapeuta y dos educadores físicos para verificar el contenido, lo que generó la segunda versión de acuerdo (Tfinal). La Tfinal fue enviada a uno de los autores de la evaluación original para verificar la relevancia de la versión al portugués brasileño. Luego, 20 fisioterapeutas y 20 educadores físicos verificaron la aplicabilidad de la evaluación. Así la MCA tuvo adaptación cultural para Brasil y resulta ser un instrumento relevante para evaluar la competencia motora sin límite de edad y ayudar en el seguimiento del desarrollo motor de los individuos.
Palabras clave | Desarrollo Infantil; Movimiento; Niño; Adolescente.

INTRODUCTION

Motor competence is defined as the ability of an individual to perform a variety of motor skills or actions, be they fine or gross[1], related to the development of fundamental motor skills (stability, locomotor, and manipulative skills)[2]. These skills allow the construction of the motor repertoire for the acquisition of more complex skills, necessary in games, sports, and other activities during childhood and adulthood[3]. Thus, motor competence, based on the theoretical model of Stodden et al.[4], is the key function for an active and healthy lifestyle.

The protocols for assessing motor competence existing in literature allow identifying possible motor delays and evaluating the effects of motor expressions by providing adequate information for future interventions[5]. There are quantitative, qualitative, and quantitative/qualitative protocols.

Among the quantitative protocols (product-oriented) are: Bruininks-Oseretsky Test of Motor Proficiency (BOTMP) and its reduced version, BOT-2[6]; both evaluate components of gross and fine motor skills such as manual control, manual and body coordination, strength and agility in the range of 4 and 14.5 years of age. The focus is to evaluate motor coordination, and not specifically motor competence. The Body Coordination Test for Children (*Körperkoordinationstest Für Kinder* – KTK)[7] assesses locomotor and stability skills in the 5-14 age group, but not manipulative skills. Stay in Step assesses stability, manipulative, locomotor, and speed skills only for the age group of 5 to 7 years[8]. Among the qualitative (process-oriented) protocols are Test of Gross Motor Development-1 (TGMD) and 2[9,10], which evaluate locomotor and manipulative skills in the age group of 3 to 10 years, but not stability skills. In 2017, the TGMD-3 version[11] was created with modifications to some items, in the locomotive subscale and ball skills (object/manipulative control) – but remains not assessing stability skills and maintains the age range. Finally, the quantitative/qualitative protocols: McCarron Assessment of Neuromuscular Development (MAND)[12] evaluates fine and gross skills, in the age group of 3.5 to 18 years, but not manipulative skills. There is also an absence of similarity between many tasks used with activities or sports that children and adolescents are familiar with. Movement Assessment Battery for Children (M-ABC-1)[13] assesses manual dexterity, stability, and manipulative skills, in the ages of 4 to 12 years; M-ABC-2[14] assesses manual dexterity, stability, and manipulative skills in the ages of 3 to 16 years, but does not assess locomotor skills.

Based on existing protocols to assess motor competence, Luz et al.[15], in Portugal, developed the motor competence model for Portuguese children and adolescents based on a structure divided into the domains of stability, locomotion, and manipulation, generating a battery of product-oriented evaluation tests, disregarding the age of development and with easy application, unlike other instruments.

In Brazil, we have the same evaluative disadvantages observed by Luz et al.[15] regarding motor competence. For this reason, this study aimed to culturally adapt the Motor Competence Assessment (MCA) model for Brazilian Portuguese.

METHODOLOGY

This study translated and culturally adapted to Brazilian Portuguese the Motor Competence Assessment model (MCA). The methodological procedure followed the internationally recommended steps: translation, translation synthesis, back-translation, expert committee analysis, pre-test, and final version[16,17].

The documentation, describing all the steps for translation and cultural adaptation, was sent to the author of the original evaluation model to ensure the adequacy

of the translation process. This study was preceded by the formal authorization of the authors of the original version of the MCA for translation and validation of the instrument into the Brazilian Portuguese.

The description of the motor competence assessment model and the instructions related to its application, present in the original European Portuguese version, were translated into Brazilian Portuguese in accordance with international recommendations. The translations were performed by two independent translators, and only one of them knew the purpose of the study, but did not know the evaluation model. These two translations into Brazilian Portuguese (T1 and T2) were merged into a single version (TU) after the consensus between the two translators and the researchers responsible.

After the translation of the model and its instructions, TU was back-translated (BT) into the original language by two other translators, who were unaware of the purposes of the study and followed the same rules as the initial translation. These two European Portuguese versions (BT1 and BT2) went through a new consensus process between translators and researchers, resulting in a Portuguese version (BTfinal), which was compared with the original version in search of possible semantic differences.

The version of the instrument in Brazilian Portuguese (TU) was reviewed by a committee of experts composed of a physical therapist and two physical educators, all individuals with more than 10 years of experience in their respective areas of activity, in addition to knowledge of both languages, to verify the validity of the content. For this review, the committee compared the Brazilian Portuguese version (TU), item by item, with the original European Portuguese version, analyzing the agreement between them and suggesting changes that could improve the translation. Each item was also assessed for relevance in the evaluation of the instrument content, verifying its equivalence. After this review, a second version was prepared for agreement, which was sent to one of the authors of the original evaluation model to verify the understanding of the Brazilian version of the MCA, reaching a final Brazilian version (Tfinal).

Figure 1 shows the flowchart that schematizes the translation process until Tfinal is obtained.

After this stage, the Tfinal version was delivered to 20 physical therapists and 20 physical educators, with at least five years of experience in their respective areas, to verify the applicability of the translated and adapted MCA. The following aspects were analyzed: interpretation in relation to the task to be performed (instruction); recording the response of each item evaluated by the MCA; and getting the score obtained in each MCA task.

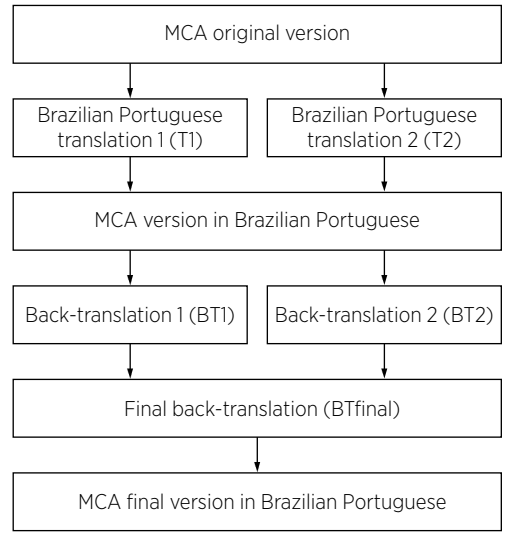

Figure 1. Flowchart of the MCA translation and adaptation process

INSTRUMENT

The MCA model developed by Luz et al.[15] consists of six quantitative tasks: two stability tasks, two locomotive tasks, and two manipulative tasks.

The *stability tasks* are: *lateral transfer* on platforms or transposition of platforms (TP)[7], which consists of the lateral transposition of two platforms during 20s; *lateral jumps* (LJ)[7], which consists of jumping laterally, with both feet, which must be held together, during 15s – as quickly as possible and from one side to another of a wooden beam (60cm long×4cm high×2cm wide) within a delimited area.

The *locomotive tasks* are: *Shuttle Run* (SHR)[18], which consists of carrying out a predetermined route (4×10m), combining the maximum speed of execution with the coordination of picking up, transporting, and placing a small-rounded block (10cm high, 5cm diameter) in a predetermined place; and *Standing Long Jump* (SLJ)[19], which consists of reaching the maximum distance in a long jump with the feet together.

Manipulative tasks are: *Throwing Speed* (TS)[4], which consists in throwing a ball over the shoulder, at the maximum possible speed, against a wall – without running, but with the possibility of one or two steps for a preparatory balance. *Kicking speed* (KS), which consists in kicking a soccer ball at the maximum possible speed, against a wall – kicking without running, but with the possibility of one or two steps for a preparatory balance.

After completing the six tasks, we estimated the standardized scores for each task. Then, we estimated the score for each category (stability, locomotor, and

manipulative) by the sum of the score of the two representative tasks in each category. Considering the nature of the task (SHR) (in seconds), the results are reversed, that is: we performed the subtraction, not the sum, of the tasks. Subsequently, we calculated the standardized scores by category, which are then transformed into t-scores. We estimated the total motor competence score based on the means of the z-scores of all categories and subsequently transformed into z-score; and then, finally, into t-scores. We emphasize that the explanation regarding the transformation into t-scores aims to make the results more perceptible to the readers. From obtaining the total score regarding motor competence, it is possible to identify and to classify the motor competence of the participants evaluated in low or high motor competence.

Participants

To verify the applicability of the translated and adapted instrument, 20 physical therapists and 20 physical educators with at least five years of experience in their respective areas participated in the study.

Data testing and analysis procedures

Each physical therapist and physical educator invited to test the MCA model evaluated each item of the instrument in relation to: description of the instructions; illustrations; description of obtaining the result/score in each task performed; and description of the total score, classifying them for the different aspects of the instrument in: adequate as it is; need to include some question/information; need to exclude some question/information; need to modify some question/information.

Based on the information received, we organized a database to systematize the revision of the Brazilian version of the MCA, taking due care that this revision did not modify the content of the instrument.

RESULTS

Translation of the MCA

After the translation, we named the instrument "*Avaliação da Competência Motora*" – but opted for the continued use of the English acronym, MCA, used in the original European Portuguese model, with the addition of the Brazilian abbreviation, "BR," immediately after: MCA-BR. We found no discrepancies between the items in the comparison between the Brazilian and Portuguese versions, carried out by the committee of experts.

Administration of the translated and adapted version of the MCA

Regarding the description of the instructions of the Brazilian version of the MCA, 26 participants (65%) stated that the instructions were adequate; five (12.5%) suggested including some type of information in the description and nine (22.5%) suggested some modification in the wording of the instructions.

Regarding the illustrations, 35 participants (87.5%) stated that the illustrations are adequate and that they facilitate the understanding of the task, and five (13.5%) suggested including figures demonstrating the initial and final moment of the task. We inserted this suggestion in the Brazilian version.

Regarding the description of the results obtained in each task performed, 33 participants (82.5%) reported that the description was adequate, four (10%) suggested the inclusion of some type of information in the description and three (7.5%) suggested modifying the wording of the description. Thus, we introduced the score item.

Regarding the description of the final score, 28 participants (70%) indicated that the description of the score was adequate and 12 (30%) suggested adding information on obtaining the final score.

Based on the results obtained, we chose to modify the information shown in the description of the instructions of the tasks, inserting more illustrations in order to facilitate and to complement the understanding of the tasks description. We also verified the need to include extra information regarding the final score (Appendix A).

Chart 1 shows the adjustments in the instructions, according to the suggestions given by the participants.

Chart 1. Changes made in the Brazilian Portuguese version of the MCA, after being tested by physical therapists and physical educators

Task	Description of the instructions
Transposition of platforms (TP)	- the "lateral transfer of platform" name was removed - the dimensions of the platforms were specified: 25cm long, 25cm wide, and 2cm thick with four supports of 3.7cm high in the four corners. - keeping a minimum distance from the other platform
Lateral Jumps (LJ)	- jump over a wooden beam

(continues)

Chart 1. Continuation

Task	Description of the instructions
Shuttle Run (SHR)	- 10m traveled 4 times - pick up two small-rounded blocks (10cm in height, 5cm in diameter) and individually transport them to the start/finish line
Standing Long Jump	- feet together - jump as further as possible with the feet together, starting from the static position - starting line - distance reached with the jump
Throwing Speed	- distance of 170cm - participants aged 11 years or older
Kicking Speed	- participants aged 10 years or older

DISCUSSION

This study adapted the MCA instrument to Brazilian Portuguese in order to evaluate the motor competence of individuals.

The MCA was originally drafted and written in European Portuguese. For this reason, the presentation of the adapted version of the instrument to Brazilian Portuguese is necessary, since, despite being the same language, there are words with distinct meaning and some differences in grammatical construction and spelling, which can generate confusion of meaning for both those who apply and those who receive the instructions[20,21]. A group of professionals with experience in the field needs to use the model adapted in order to ensure the correct adaptation of the evaluation instrument[21]. In order to apply the MCA model to the Brazilian population, in addition to translation, we tested the instrument in terms of cultural equivalence, so that it could be understood and interpreted by the evaluators (Appendix A).

The motor competence model by Luz et al.[15], the MCA for Portuguese children and adolescents is based on a structure divided into domains: stability, locomotion, and manipulation. It is a battery of evaluation tests, product-oriented, that does not consider the age of development and evaluates individuals of both sexes, being easy to perform. The authors report that selecting only product-oriented tests guarantees an objective assessment, with good sensitivity to discriminate the level of motor competence over the ages. This model shows an excellent overall index of data adjustment, suggesting that it can be used to represent and to evaluate the motor competence of children until early adulthood in order to monitor motor development. Advantages that could be observed were: the use of motor tasks widely used previously in research as categories of motor competence; the parsimony of the model, unlike other models, which use several motor tasks; the use of quantitative measures focused on the final product, which allows a faster performance evaluation with a high level of reliability over time. Furthermore, the quantitative measures are discriminating sensitive between the level of competence in motor skills during childhood and early adulthood, and they are correlated with qualitative assessments of skills, all of which are aimed at the process. The time necessary to conduct the battery of tests is small, the result is immediate, that is, immediately after the application, it is possible to identify the motor skills of a child or an adult; it does not have the ceiling effect of the development age; it provides for the magnitude of the correlations between the factors, which allows for an overall score comprised of motor skills, in addition to the score for that category.

The use of MCA allows to identify the level of motor competence of children, adolescents and adults, as well as to observe in which fundamental motor skills the individual may have lower performance. This information is essential to trace an appropriate intervention for each individual. It also allows the follow-up of their development and the improvement of motor competence, as well as allowing to relate motor skills and the level of physical activity[22-25].

CONCLUSION

The MCA was culturally adapted for Brazil and will help physical therapists, physical educators, and any professionals who work in motor research, whether in early childhood education, schools or clinics, to follow the motor development of children, adolescents, and adults; to plan interventions aimed at fundamental motor skills and follow their evolution accurately, reliably, and in addition it is easily applied; to allow the creation of public policies aimed at precise guidelines and directed to the practice of physical and sports activities that provide a healthy lifestyle to individuals.

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APPENDIX

Appendix A: Brazilian Version of the Motor Competence Assessment (MCA-BR)

GENERAL INSTRUCTIONS

The complete MCA can be administered in approximately 10 to 15 minutes per participant, and the test time may vary according to the participant's age and the examiner's experience.

Demonstration and verbal explanation of each task must be done prior to its execution. Each participant must try each test before its actual administration. Motivational feedback can be given; however, verbal feedback on the performance of skills should be avoided. In the throwing/kicking tasks, participants are instructed to throw/kick the ball as fast as they can.

The MCA test battery is started by carrying out the stability, locomotive, and finally the manipulative tasks, in that order.

MATERIALS

- 02 wooden platforms (25cm long×25cm wide×2cm thick with four 3.7cm high supports at the corners)
- 01 wooden beam (60cm long×4cm high×2cm wide) screwed to a rectangular EVA surface (100cm long×60cm wide).
- 02 small rounded blocks (10cm high, 5cm in diameter)
- Duct tape
- 01 tennis ball (diameter: 6.5cm; weight: 57g)
- 01 baseball (diameter: 7.3cm; weight: 142g)
- 01 size 3 soccer ball (circumference: 62cm, weight: 350g).
- 01 size 4 soccer ball (circumference of 64cm, weight: 360g).
- 01 size 5 soccer ball (circumference of 68cm, weight: 410g).
- 01 speed radar or 01 cell phone with specific application to measure speed
- 01 measuring tape
- 01 timer/stopwatch

STABILITY TASKS

Task 1: Transposition of platforms (TP)[7]

In this task, the participant is instructed to transfer laterally onto the wooden platform (plate) (25cm long×25cm wide×2cm thick with four 3.7cm high supports at the corners) without placing their feet on the floor, using two laterally transposed platforms. The participant initially stands on a platform. The other platform is positioned on the floor besides him or her (right or left, as the participant prefers) maintaining a minimum distance from the other platform. When the examiner says "go," he or she must take the free platform with both hands, move it to the opposite side and transfer him or herself to it, repeating this action for 20 seconds as fast as possible. The task must be performed 2 times, with an interval of 2 minutes between attempts.

Scoring: The first point is counted when the participant places the platform on the floor (Figure 1d) and the second point when the two feet are placed on it (Figure 1e), and so on until the end of the 20 seconds. The final result

depends on the number of times the participant is able to transfer the platforms and move over to it during the 20 seconds. The best result of the two attempts will be recorded and considered for analysis (Figure 1a, 1b, 1c, 1d, 1e, 1f).

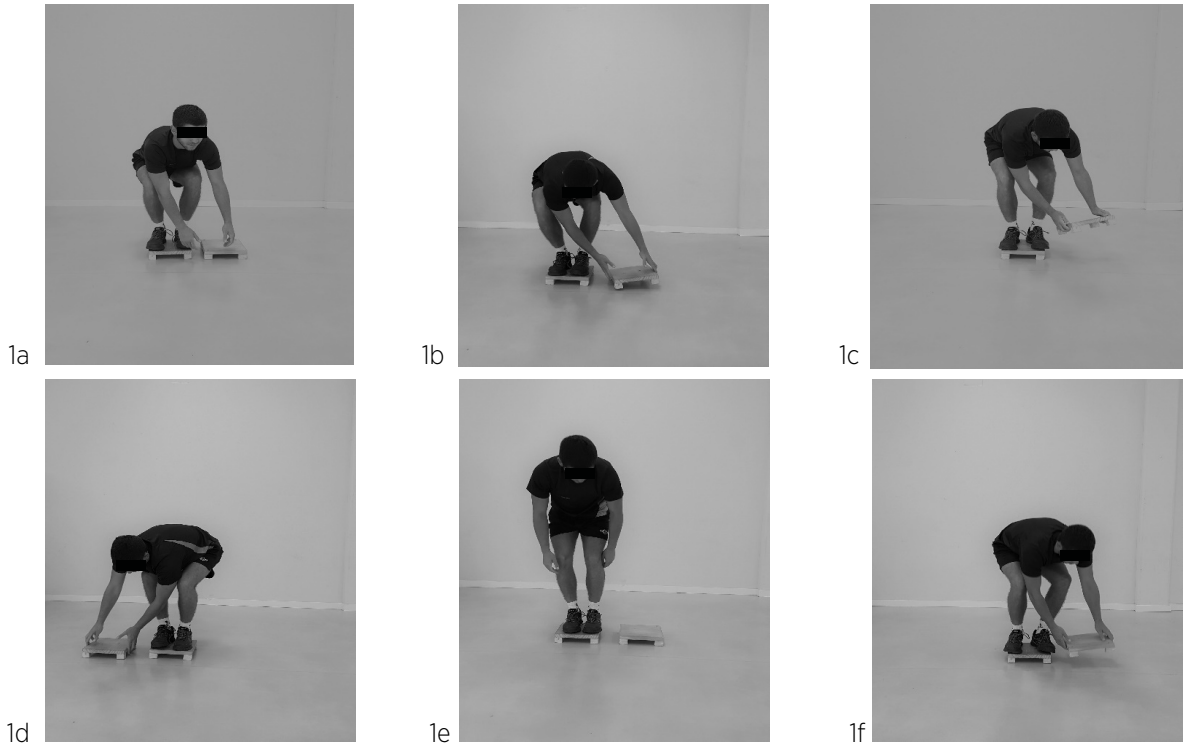

Figure 1. Representation of the execution of the task of transposing platforms (1a: initial position; 1b: taking the other platform; 1c and 1d: transposing the platform to the opposite side; 1d: transferring to the platform; 1e: taking the platform again).

Task 2: Lateral jumps (LJ)[7]

In this task, the participant is instructed to skip from side to side, with the two feet joined overcoming a small wooden beam (60cm long×4cm high×2cm wide) located in the middle of a rectangular surface (100cm long×60cm wide) as quickly as possible for 15 seconds. The task must be performed 2 times, with an interval of 2 minutes between attempts.

Scoring: Each correct jump, that is, with the two feet together without touching the rectangle and without stepping on the wooden beam, will be granted 1 point. The final result is given from the sum of the number of hops in the 15 seconds of the test run. The best result will be recorded and considered for analysis (Figure 2a, 2b and 2c).

Figure 2. Representation of the execution of the lateral jump task (2a: starting position; 2b and 2c: lateral jump with feet together).

LOCOMOTIVE TASKS

Task 3: Shuttle Run (SHR)[18]

The task consists of carrying out a predetermined 10-meter course four times, combining the maximum execution speed and the coordination of picking up two small round blocks (10cm high, 5cm in diameter) and transporting them to the start/finish line. The participant must position him or herself behind the line that marks the starting point and is instructed to run at maximum speed at a distance of 10 meters, four times, between the starting line (starting point) and the finishing line (end point) nonstop. The test starts with the words: "**Ready**! **Set! Go!"** Upon hearing the word "**Go**," the timer is started and the participant must run as quickly as possible towards the blocks, which are positioned behind the second line; he or she must take one of the blocks, 25cm apart from each other, return to the line (starting point) and place it on the floor after the line (regardless of position). Then, he or she must go back and take the second block, following the same procedure. The timer is stopped at the moment the participant crosses the start/finish line with the block in hand; it is not necessary to place the block on the ground. The task must be performed 2 times, with an interval of 2 minutes between attempts.

Scoring: the best time of the 2 attempts, that is, the shortest time, will be recorded and considered for analysis (Figure 3a, 3b, 3c, 3d, 3e).

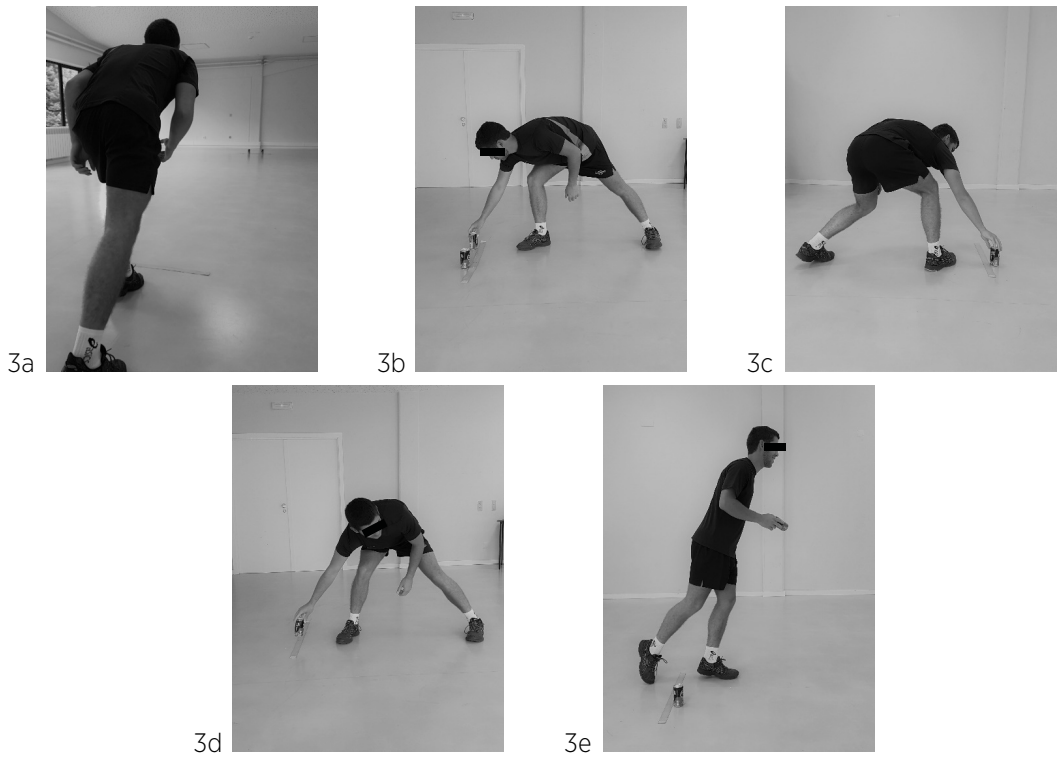

Figure 3. Representation of the execution of the Shuttle Run (SHR) task (3a: start of the 10m course, starting line; 3b: taking the first block on the second line; 3c: returning to the initial line and placing the first block; 3d: taking the second block on the second line; 3e: returning to the starting line, with the second block).

Task 4: Standing Long Jump (SLJ)[19]

The participant is instructed to perform the longest possible jump with the feet together, starting from the static position, being able to use the torso to gain momentum. The distance reached will be measured as the distance from the starting line to the position of the heel closest to the starting point after the jump. This distance is recorded in centimeters for each jump. The task must be performed three times.

Scoring: The longest distance covered in three attempts will be used for data analysis (Figure 4a, 4b, 4c and 4d).

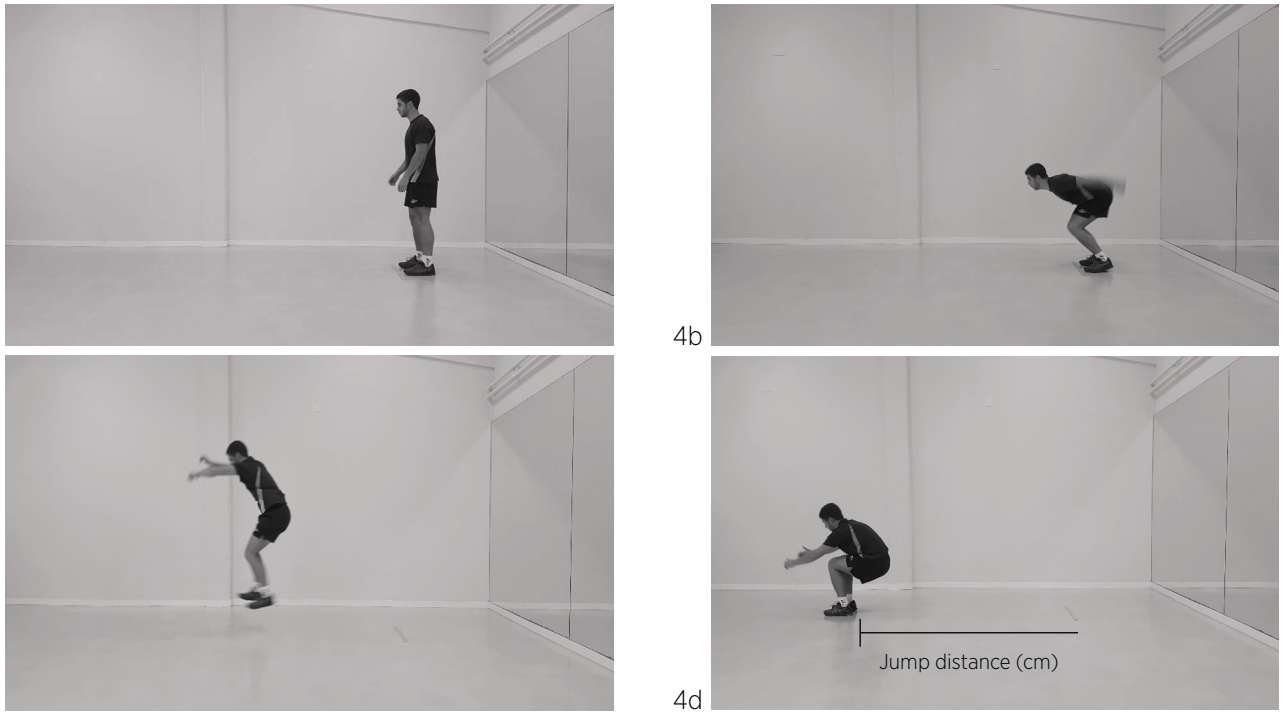

Figure 4. Representation of the jump task with the feet together (4a: start position; 4b: start of jump; 4c: jump; 4d: end of jump)

MANIPULATIVE TASKS

Task 5: Throwing speed[4]

The participant is instructed to throw a ball on a wall with maximum strength. The throwing technique is over the shoulder, from the static standing position, that is, there is no preparatory run to throw the ball, but there is a possibility of a preparatory balance (one or two steps). The participant must stand on a demarcated line at a distance of 6 meters from the wall. In the middle of the wall, 170cm from the floor, a cross (40 cm×40 cm) marks the intended target (the target is only to help direct the action). All attempts made towards the wall with correct movement are counted (throw over the shoulder, and forward, not down). For participants between 3 and 10 years of age, a tennis ball is used (diameter: 6.5cm; weight: 57g). For participants from 11 years of age onwards, a baseball is used (diameter: 7.3cm; weight: 142g). The speed of each shot attempt will be measured in m/s with a speed radar (for example, a Pro II STALKER radar gun; or by a mobile application, for example: Speed Gun), placed on the side of the dominant hand of the participant, close to the line on the floor, above shoulder level and facing the target wall. The task must be performed three times.

Scoring: the highest maximum speed value of the three attempts will be recorded and considered for analysis (Figures 5a and 5b).

Figure 5. Representation of the throwing task (5a: starting position; 5b: start of the throw; 5c: throw)

Task 6: Kicking speed

The participant is instructed to kick a soccer ball against a wall with maximum speed from the static standing position, that is, there is no preparatory run to throw the ball, but there is the possibility of a preparatory balance (one or two steps) . The participant must stand on a demarcated line at a distance of 6 meters from the wall. For participants between 3 and 8 years of age, a size 3 soccer ball (circumference: 62cm, weight: 350g) was used. For participants aged 9 and 10, a size 4 soccer ball (64cm circumference, weight: 360g) was used. For participants from 10 years of age onwards, a size 5 soccer ball (circumference of 68cm, weight: 410g) was used. The peak velocity of the ball must be measured in m/s with a speed radar (for example, a Pro II STALKER radar gun) placed on the participant's dominant foot side, close to the line 1m from the floor and in front to the target wall. The task must be carried out three times.

Score: the highest maximum speed value of the 3 attempts will be recorded and considered for analysis (Figure 6a, 6b, 6c).

6a  6b  6c 

Figure 6. Representation of the execution of the kicking task (6a: starting position; 6b: preparation with 1 or 2 steps allowed; 6c: kick)

OBTAINING SCORES

After performing the six tasks, the z-score is calculated for each task. Afterwards, the z-scores of the two tasks of the same category are added together, and the z-score for each category is obtained (stability, locomotor and manipulative). For the locomotive category, such as in the Shuttle Run (SHR), the shorter the time, the better the result; as such, the z-score of this task will be inverted. To calculate the total score of motor competence (MC score) the z-score of the three categories was added and the mean z-score was calculated. After calculating the mean, the total z-score (MC score) is obtained and converted to t-score, using the formula t-score=(z-score×10)+50.

From the MC score, it is possible to identify and classify the motor competence of the participants as either low or high motor competence.