

TRANSLATION AND TRANSCULTURAL ADAPTATION OF THE INJURY REPORT FORM FOR RUGBY UNION

TRADUÇÃO E ADAPTAÇÃO TRANSCULTURAL DO INJURY REPORT FORM FOR RUGBY UNION

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ABSTRACT

Objective: To translate into Brazilian Portuguese and conduct the cross-cultural adaptation of the “Injury Report Form for Rugby Union” questionnaire. **Methods:** This is a cross-sectional study, level of evidence II, with following the steps: translation; synthesis; back-translation; review by a committee of experts and pre-final version; pre-test to verify comprehension; elaboration of the final version of the instrument and clinical application. **Results:** The two versions resulting from the translation and adaptation process did not show great differences. The pre-final version was filled by 23 male rugby players; three questions were not understood by 40%, 27% and 82.5% of the players, respectively, which required a new meeting with a multidisciplinary committee of experts. The modifications were made, requiring then a new application. The new version was filled by 25 male rugby players, aged 29.44 ± 5.90 years; of which 56% had complete higher education; finalizing the process of cross-cultural adaptation. **Conclusion:** The questionnaire “Formulário para Notificação/Avaliação de Lesão em Jogadores de Rugby” was translated and transculturally adapted into Brazilian Portuguese. **Level of Evidence II, Diagnostic Studies – Investigating a Diagnostic Test.**

Keywords: Physical Therapy Specialty. Athletic Injuries. Football. Validation Studies. Surveys and Questionnaires.

RESUMO

Objetivo: Traduzir para o português brasileiro e realizar adaptação transcultural do questionário “Injury Report Form for Rugby Union”. **Métodos:** Estudo transversal, nível de evidência II, etapas seguidas: tradução; síntese; retrotradução; revisão pelo comitê de especialistas e versão pré-final; pré-teste para verificar a compreensão; elaboração da versão final do instrumento e aplicação clínica. **Resultados:** No processo de tradução e adaptação as duas versões não apresentaram grandes diferenças entre si. A versão pré-final foi preenchida por 23 jogadores de rugby do sexo masculino, três questões não foram compreendidas por 40%, 27% e 82,5% dos jogadores, respectivamente, convocando-se nova reunião com o comitê multidisciplinar de especialistas. As modificações foram realizadas, sendo necessária nova aplicação. A nova versão foi preenchida por 25 jogadores de rugby do sexo masculino, com idade entre $29,44 \pm 5,90$ anos; sendo que 56% possuíam nível de escolaridade superior completo; finalizando o processo de adaptação transcultural. **Conclusão:** O questionário “Formulário para Notificação/Avaliação de Lesão em Jogadores de Rugby” foi traduzido e adaptado transculturalmente para o português brasileiro. **Nível de Evidência II, Estudos diagnósticos – Investigação de um exame para diagnóstico.**

Descritores: Fisioterapia. Traumatismos em Atletas. Futebol Americano. Estudo de Validação. Inquéritos e Questionários.

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INTRODUCTION

Rugby has a high incidence of injuries, especially in amateur teams since players often lack adequate physical preparation for the practice of the sport.¹ Rugby injuries are mostly musculoskeletal, reaching 626 injuries for every 1000 hours of play, 36.5% of these injuries occur on the lower limbs and 24.6% on the upper limbs and trunk.² Still, it has been reported that women suffer concussions at a 0.55 per 1000 hours of sport practice rate, whereas men suffer 4.73 concussions for every 1000 hours of play.³

The use of instruments translated and cross-culturally adapted into Brazilian Portuguese to assess injuries in rugby players is not found in the literature.^{2,4-8} In the international literature, the following methods have been reported as the most used to assess injuries in rugby players: “Injury Report Form for Rugby Union”; “Orchard Sports Injury Classification System”; “Standard injury report form (2002-2003 to 2012-2013)” and “an electronic player medical records system (Rugby Squad Medical, The Sports Office; 2013-2014 to 2014-2015)”.⁹

All authors declare no potential conflict of interest related to this article.

The study was conducted at Curitiba Rugby Clube.

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Fuller et. al.¹⁰ prepared, from a meeting with several sports specialists, a form, the Injury Report Form for Rugby Union, in English, to standardize the notification of injuries resulting from the practice of rugby. Although some studies analyzed the injuries related to rugby practice, a validated questionnaire was not used.^{4-8,11,12} The methodology described in the international consensus of definitions and procedures for the registration of injuries resulting from the practice of rugby, which includes the Injury Report Form for Rugby Union, was applied during the 2007 Rugby World Cup, a championship with the participation of 626 athletes, showing that it is suitable for assessing incidence, severity, nature and causes of injuries both in training and competitions.¹³ The form has already been translated and cross-culturally adapted to European Portuguese, by Gomes and Neves,¹⁴ proving its clinical applicability in Portuguese-speaking countries.

In Brazil, some studies were conducted with Brazilian players, but the methods used were semi-structured questionnaires without previous validation,^{2,5} making it difficult for other researchers to reproduce them. Although the Injury Report Form for Rugby Union has already been translated and adapted into European Portuguese, we know the cultural differences between countries and the need for its cross-cultural adaptation into Brazilian Portuguese as well. Therefore, our study aims at translating the Injury Report Form for Rugby Union into Brazilian Portuguese and to cross-culturally adapt it for use in Brazilian rugby players.

MATERIALS AND METHODS

This is a cross-sectional observational analytical study of translation and cross-cultural adaptation of the Injury Report Form for Rugby Union questionnaire was carried out. Approval was given by the Research Ethics Committee of the Health Sciences Sector, CAAE: 71333317.5.0000.0102.

Translation and cross-cultural adaptation

To translate the form, authorization was obtained from the author Colin W. Fuller for the translation and validation of the Injury Report Form for Rugby Union.¹⁰

The translation and cultural adaptation of the questionnaire were carried out according to Guillemin et al.,¹⁵ which presents a set of standardized instructions to be performed in different stages: 1) translation; 2) synthesis; 3) back-translation; 4) expert committee: review and pre-final version; 5) pre-test, that is, the “pre-final” version (version 1) that was applied to 23 players; 6) analysis by the expert committee and the final version (version 2) of the instrument. These steps are described below:

- 1) Translation: Two Brazilian bilingual translators (Portuguese/English) independently translated the questionnaire into Brazilian Portuguese, one of whom was a professional translator in the health field, with prior knowledge of the objectives of the study, and the other an English-language teacher, to allow the identification of possible ambiguities. From this stage, we achieved two initial translations into Brazilian Portuguese.
- 2) Summary: The two translations were compared and analyzed in a meeting with the translators and researchers involved in the study. The meeting resulted in a combined version of the questionnaire in Portuguese from the two initial translations, comparing them to each other, reducing differences, preserving the cultural context of the Brazilian population and the original concepts of the instrument.
- 3) Back translation: Two other independent and qualified bilingual English teachers (original language of the Injury Report Form for Rugby Union) did the retro translation, that is, from the Brazilian Portuguese version they translated into English and found differences to the original material. The translators at this stage did not receive any information about the study or questionnaire they were working on. The translators were unaware of the original version of the Injury Report Form for Rugby Union and had no information about the form concepts.
- 4) Committee of experts: The minimum composition of the Committee included methodologists, health professionals, and language professionals. The two new versions were subjected to a committee of experts, composed of the four bilingual

translators who participated previously, together with three health professionals (a physical educator, a physiotherapist and a doctor), four professors and three students of the Physiotherapy undergraduate course from the Federal University of Paraná. The experts assessed the semantics, idioms, cultural and conceptual equivalences and subsequently identified and discussed the discrepancies. After consensus, they established a new Portuguese version of the Injury Report Form for Rugby Union (Injury Report Form for Rugby Union – Brasil versão 1).

Participants were invited to participate in the study through convenience, that is, those who were present on the day and time that the project team went to the rugby club. Interested volunteers were informed about the objectives and those who had time available and expressed interest in participating read and signed two copies of the informed consent form.

The participants filled the form at R. Pastor Manoel Virgínio de Souza, 1020 – Capão da Imbuia, Curitiba – PR, 82810-400, headquarters of Curitiba Rugby, before or after the matches, with the prior authorization of the coaches and the club board and supervised by the club's physiotherapist.

Players were asked to fill the form considering their last injury, except for question 7 (Referring to the diagnosis of the injury and its IDC), which would be completed later by a health professional. The pre-final version (version 1) was self-administered by 23 players and the final version (version 2) by 25 players. No player that was present refused to answer the questionnaire and no questionnaire was excluded due to lack of data. The data on age, education and anthropometric values were filled in by the players before the completion of the questionnaire. These data are presented in Tables 1 and 2.

- 5) Pre-test: in this step the Formulário para Notificação/Avaliação de Lesão em Jogadores de Rugby (version 1) was filled out by players from Curitiba Rugby. At the time of completion, the study team was present to clarify any doubts. The questions or items not understood by 20% or more of the interviewees were analyzed by the committee.
- 6) Analysis by the expert committee to discuss the results of the pre-test: Each player responded to the Formulário para Notificação/Avaliação de Lesão em Jogadores de Rugby (pre-final version – version 1). The questions about time in which the injury occurred and playing position at the time of the injury were not understood by 27% and 82.5% of the players, respectively. The committee of experts reviewed these questions in the Formulário para Notificação/Avaliação de Lesão em Jogadores de Rugby by editing it into version 2, in which alternatives were added in the question “Localização no campo no momento da lesão:” to help the players’ understanding, in addition to adding the questions: “Você entendeu o que foi perguntado?” (“Did you understand what was asked?”), “Se não, o que entendeu?” (“If not, what did you understand?”) and “Sugere alguma mudança?” (“Do you suggest any change?”) to assess the understanding of each question. The consolidation of the pre-final version considered the translations; back-translations; meetings of the committee of experts, translators and back-translators; the reports of the team that was in contact with the players who answered the questionnaire; and the percentages of players’ understanding the questions. These aspects were considered for the changes, being resolved with version 2 of the Formulário para Notificação/Avaliação de Lesão em Jogadores de Rugby (Appendix).

Sample size

The determination of the sample size followed the methodological indication proposed by Terwee et al.,¹⁶ who recommend the inclusion of four to ten participants for each question of the instrument to be translated. Since the Injury Report Form for Rugby Union consists of 12 questions, the minimum number of participants recommended would be 48.

Statistical analysis

The software Microsoft Excel, version 2010, was used for statistical analysis. The results are described in absolute frequency

and percentage, and the numerical variables were described as mean and standard deviation.

RESULTS

Translation and cross-cultural adaptation

In the process of translation into Brazilian Portuguese, the two versions (translator 1 and translator 2) did not differ significantly (Chart 1). There was consensus among the committee to choose different words, without changing the meaning of the sentence. The same happened with the back translation (back translation 1 and back translation 2 – Chart 2). The Formulário para Notificação/Avaliação de Lesão em Jogadores de Rugby (pre-final version 1) was self-administered by 23 male rugby players aged 25.9 ± 5.53

years, BMI $26.29 \pm 4.64 \text{ kg/m}^2$ and 57.1% declared education level as complete higher education and 42.8% as incomplete higher education. Some modifications were made in the pre-final version (version 1), as it was found that the questions about: game position; time of injury and location on the field at the time of the injury were not understood by 27% and 82.5% of the players who completed version 1 (Table 1), respectively. The questions were changed, with the consent of the multidisciplinary committee of specialists, and version 2 was created (Chart 3). Therefore, a new application was needed, which was self-administered by 25 male rugby players, aged 29.44 ± 5.9 years; BMI $29.46 \pm 4.32 \text{ Kg/m}^2$; 56% with complete higher education, 32% with incomplete higher education, 8% with complete high school education and 4% with incomplete high school education, completing the cross-cultural adaptation process (Table 2).

Chart 1. Modifications made at the translation consensus meeting.

Initial questions in English	Translation into Brazilian Portuguese	Final version in Brazilian Portuguese (after the consensus meeting)
1A Date of injury	T1: Data da lesão T2: Data da lesão	Data da lesão
1B Time of injury (during match)	T1: Horário da lesão (durante partida) T2: Momento da lesão (durante a partida)	Horário da lesão (Tempo de jogo):
2 Date of return to full participation	T1: Data de retorno à participação plena T2: Data de retorno para participação efetiva	Data de retorno à participação plena
3 Playing position at the time of injury	T1: Posição do jogo no momento da lesão T2: Posição no jogo no momento da lesão	Posição no jogo no momento da lesão
4 Injured body part: Head/face; neck/cervical spine; sternum/ribs/upper back; abdomen; low back; sacrum/pelvis; shoulder/clavicle; upper arm; elbow; forearm; wrist; hand/finger/thumb; hip/groin; anterior thigh; posterior thigh; knee; lower leg/Achilles tendon; ankle/foot/toe.	T1: Parte do corpo lesionada: cabeça/rosto; pescoço/coluna cervical/externo/costela/parte superior do dorso; abdômen; região lombar; sacro/pélvis; ombro/clavícula; braço; cotovelo; antebraço; pulso; mão/dedo/polegar; quadril/virilha; coxa anterior; coxa posterior; joelho; perna inferior/tendão de Aquiles; tornozelo; pé/dedo do pé. T2: Parte do corpo lesada: cabeça/face; Pescoço/coluna cervical; Esterno/costelas/coluna torácica; Abdômen; Coluna lombar; Sacro/pelve; Ombro/clavícula; braço; cotovelo; antebraço; punho; mão/dedo/polegar; quadril/virilha; região anterior (frente) da coxa; região posterior (posterior) da coxa; joelho; perna/tendão Aquiles (calcanear); tornozelo; pé/dedo do pé.	Parte do corpo lesionada: cabeça/rosto; pescoço/coluna cervical; esterno/costelas/coluna torácica; abdômen; coluna lombar; sacro/pelve; ombro/clavícula; braço; cotovelo; antebraço; punho; mão/dedo/polegar; quadril/virilha; região anterior da coxa; região posterior da coxa; joelho; perna/tendão de Aquiles; tornozelo; pé/dedo do pé; outro.
5 Side of body injured:	T1: Lado do corpo lesionado T2: Lado do corpo acometido pela lesão	Lado do corpo lesionado
6 Type of injury: concussion (with or without loss of consciousness); structural brain injury; spinal cord/compression/transsection; fracture; other bone injury; dislocation/subluxation; sprain/ligament injury; lesion of meniscus, cartilage or disc; muscle rupture/strain/tear/cramps; tendon injury/rupture/tendinopathy/bursitis; haematoma/contusion/bruise; abrasion; laceration; nerve injury; dental injury; visceral injury; other injury (please specify).	T1: Tipo de lesão: concussão (com ou sem perda de consciência); lesão cerebral estrutural; compressão/transsecção da medula espinhal; fratura; outra lesão óssea; deslocamento/subluxação; distensão/lesão de ligamento; Lesão de menisco, cartilagem ou disco; ruptura/distensão/laceração de músculo/câimbra; lesão/ruptura de tendão/tendinopatia/bursite; hematoma/contusão/arranhão; abrasão; laceração; lesão de nervo; lesão dentária; lesão visceral; outra lesão (especifique); T2: Tipo da lesão: concussão (com ou sem perda de consciência); lesão estrutural do cérebro; compressão da medula espinhal/lesão completa da medula espinhal; fratura; outra lesão óssea; luxação/ subluxação; entorse/lesão ligamentar; lesão de meniscos/cartilagem ou disco; lesão muscular/distensão/ruptura fibras musculares/câimbras; lesão tendínea/ ruptura tendão/tendinopatia/bursite; edema/contusão/hematoma; escoriação; ferida; lesão nervosa; lesão nos dentes; lesão nas vísceras; outra lesão (por favor especifique):	Tipo de lesão: concussão (com ou sem perda de consciência); lesão cerebral; compressão da medula espinhal/lesão completa da medula espinhal; fratura; outra lesão óssea; luxação/ subluxação; entorse/lesão ligamentar; lesão de menisco/ cartilagem ou disco; ruptura/distensão/ laceração muscular/câimbras; lesão/ruptura de tendão/tendinopatia/bursite; contusão/ edema/hematoma; escoriação; corte/ferida; lesão de nervo; lesão nos dentes; lesão nas vísceras; outra lesão (especifique):.
7 Diagnosis of injury (text or code)	T1: Diagnóstico de lesão (texto ou código); T2: Diagnóstico da lesão (código da doença, CID).	Diagnóstico da lesão (código ou descrição da doença):
8 Has the player had a previous injury at the same site (i.e. this injury is a recurrence)? Yes/no. If YES, specify date of player's return to full	T1: O jogador já teve uma lesão anterior do mesmo tipo no mesmo local (ou seja, esta lesão é uma recorrência)? Não; sim. Em caso positivo, especifique a data de retorno do jogador à participação plena por ocasião da lesão anterior: T2: O jogador já teve lesão do mesmo tipo no mesmo local (isto é, esta é uma lesão recorrente)? Sim; não. Se respondeu SIM, especificar a data que o jogador retornou plenamente a sua participação desde a lesão.	O jogador já teve lesão do mesmo tipo no mesmo local (isto é, esta é uma lesão recorrente)? Não; sim. Se respondeu SIM, especifique a data de retorno do jogador à participação plena por ocasião da lesão anterior.
9 Was the injury caused by: overuse; trauma?	T1: A lesão foi causada por: excesso de uso; trauma? T2: A lesão foi causada por: excesso de treino; trauma?	A lesão foi causada por: excesso de treino; trauma?
10 Did the injury occur during: training; match?	T1: A lesão ocorreu durante: treinamento; partida? T2: A lesão ocorreu durante: treinamento; trauma?	A lesão ocorreu durante: treino; partida?.
11 Was the injury caused by contact? No; yes; If YES, specify the activity: tackled; tackling; maul; ruck; lineout; scrum; collision; other.	T1: A lesão foi causada por contato? Não; sim. Em caso positivo, especifique a atividade: placagem (derrubado); placagem (derrubando); formação volante; formação fixa; alinhamento lateral; formação ordenada; colisão; outro. T2: A lesão foi causada por contato? Sim; não. Se respondeu SIM especificar o tipo de contato: tackled; tackling; batida; compressão; linout; luta pela posse de bola; colisão; outro.	A lesão foi causada por contato? Não; sim. Se respondeu SIM, especifique o tipo de atividade: tackleado; tackleando; maul; ruck; lineout; scrum; colisão; outro.
12A Did the referee indicate that the action leading to the injury was a violation of the Laws? No; yes.	T1: O árbitro indicou que a ação que causou a lesão foi uma violação das leis? T2: O juiz indicou que a jogada na qual a lesão ocorreu, foi infração de regra?	O árbitro indicou que a atividade na qual a lesão ocorreu foi infração de regra? Não; sim.
12B Did the referee indicate the the action leading to the injury was dangerous play (Law 10.4)? no; yes.	T1: O árbitro indicou que a ação que causou a lesão foi uma jogada perigosa (Lei 10.4)? T2: O juiz indicou que a jogada na qual a lesão ocorreu, foi jogada incorreta (Regra 10.4)?	O árbitro indicou a atividade que resultou na lesão como jogada perigosa? (Regra 10.4) Não; sim.

Chart 2. Modifications made at the back translation consensus meeting.

Questions in Portuguese from the consensus meeting	Translation into English	Final version
Data da lesão	T1: Date of injury T2: Date of injury	Date of injury
Horário da lesão (Tempo de jogo):	T1: Time of injury (Time during match): T2: Time of Injury	Time of injury (Time during match):
Data de retorno à participação plena	T1: Date of return to full participation T2: Return date of full participation	Date of return to full participation
Posição no jogo no momento da lesão	T1: Playing position at the time of injury T2: –	Playing position at the time of injury
Parte do corpo lesionada: cabeça/rosto; pescoço/coluna cervical; esterno/costelas/coluna torácica; abdômen; coluna lombar; sacro/pelve; ombro/clavícula; braço; cotovelo; antebraço; punho; mão/dedo/polegar; quadril/virilha; região anterior da coxa; região posterior da coxa; joelho; perna/tendão de Aquiles; tornozelo; pé/dedo do pé; outro.	T1: Injured body part: head/face; neck/ cervical spine; sternum/ribs/ upper back; abdomen; lower back; sacrum/pelvis; shoulder/clavicle; arm; elbow; forearm; wrist; hand/finger/thumb; hip/groin; anterior thigh; posterior thigh; knee; leg/Achilles tendon; ankle; foot/toe; other. T2: Injured body part: head; neck/cervical spine; sternum/ribs/thoracic spine; abdomen; lumbar spine; sacrum/pelvis; shoulder/clavicle; upper arm; elbow; forearm; wrist; hand/finger/thumb; hip/groin; anterior thigh; posterior thigh; knee; leg/achilles tendon; ankle; foot/toe; other.	Injured body part: head/face; neck/ cervical spine; sternum/ribs/upper back; abdomen; lumbar spine; sacrum/pelvis; shoulder/clavicle; upper arm; elbow; forearm; wrist; hand/finger/thumb; hip/groin; anterior thigh; posterior thigh; knee; leg/Achilles tendon; ankle; foot/toe; other:.
Lado do corpo lesionado:	T1: Side of body injured: T2: Body side injured	Body side injured:
Tipo de lesão: concussão (com ou sem perda de consciência); lesão cerebral; compressão da medula espinhal/lesão completa da medula espinhal; fratura; outra lesão óssea; luxação/ subluxação; entorse/lesão ligamentar; lesão de menisco/cartilagem ou disco; ruptura/distensão/laceração muscular/câimbras; lesão/ruptura de tendão/tendinopatia/bursite; contusão/edema/hematoma; escoriação; corte/ferida; lesão de nervo; lesão nos dentes; lesão nas vísceras; outra lesão (especifique).	T1: Type of injury: concussion (with or without loss of consciousness); brain injury; spinal cord compression/ transection; fracture; other bone injury; dislocation/subluxation; sprain/ligament injury; meniscus/ cartilage or disc injury; muscle rupture/strain/laceration /cramps; tendon injury/rupture /tendinopathy/bursitis; contusion/edema/hematoma; abrasion; cut/injury; nerve injury; dental injury; visceral injury; other injury (please specify). T2: Type of injury: concussion (with or without loss of consciousness); brain injury; spinal cord compression/ complete spinal cord injury; fracture; other lesion; dislocation/partial dislocation; sprain/ligament injury; meniscus/cartilage or disc lesion; muscular swelling/ rupture/ laceration/ cramp; tendon rupture/ tendinopathy/ bursitis; bruise/edema/ blood clot; skin abrasion; cut; nerve damage; tooth injury; internal damage (ex. organ); other injury (please specify):.	Type of injury: concussion (with or without loss of consciousness); brain injury; spinal cord compression/ complete spinal cord injury; fracture; other bone injury; dislocation/subluxation; sprain/ligament injury; meniscus/cartilage or disc injury; muscle rupture/ strain/laceration /cramps; tendon injury/ rupture/ tendinopathy/bursitis; contusion/edema/haematoma; abrasion; cut/wound; nerve injury; dental injury; visceral injury; other injury (please specify):
Diagnóstico da lesão (código ou descrição da doença):	T1: Diagnosis of injury (code or description of the disease): T2: Injury diagnosis (terminology or injury description):	Diagnosis of injury (international code of disease or description of the disease):
O jogador já teve lesão do mesmo tipo no mesmo local (isto é, esta é uma lesão recorrente)? Não; sim. Se respondeu SIM, especifique a data de retorno do jogador à participação plena por ocasião da lesão anterior.	T1: Did the player ever have the same type of injury before at the same site (that is, is this a recurrent injury)? No; yes. If YES, specify the date of the player's return to full participation after the previous injury T2: Has the player ever had a recurring injury (same injury in the same location)? No; yes. If yes, please specify return date of full training participation.	Has the player ever had the same type of injury before at the same site (that is, is this a recurrent injury)? No; yes. If YES, specify the date of the player's return to full participation after the previous injury:
A lesão foi causada por: excesso de treino; trauma?	T1: Was the injury caused by: excess training; trauma? T2: Injury was due to: overtraining; trauma?	Was the injury caused by: overtraining; trauma?
A lesão ocorreu durante: treino; partida?	T1: Did the injury occur during: training; match? T2: Injury occurred during: training; match	Did the injury occur during: training; match?
A lesão foi causada por contato? Não; sim. Se respondeu SIM, especifique o tipo de atividade: tackleado; tackleando; maul; ruck; lineout; scrum; colisão; outro.	T1: Was the injury caused by contact? No; yes. If YES, specify the type of activity: tackled; tackling; maul; ruck; lineout; scrum; collision; other. T2: Was the injury due to contact? No; yes. If yes, please specify the type of activity: tackle; tackle; maul; ruck; lineout; scrum; collision; other.	Was the injury caused by contact? No; yes. If YES, specify the type of activity: tackled; tackling; maul; ruck; lineout; scrum; collision; other.
O árbitro indicou que a atividade na qual a lesão ocorreu foi infração de regra? Não; sim.	T1: Did the referee indicate that the activity that caused the injury was a violation of the rules? T2: Did the referee indicate a foul for the sustained injury?	Did the referee indicate that the activity that caused the injury was a foul?
O árbitro indicou a atividade que resultou na lesão como jogada perigosa? (Regra 10.4) Não; sim.	T1: Did the referee indicate that the activity that resulted in the injury was dangerous play (Rule 10.4)? T2: Did the referee refer to the sustained injury as a form of dangerous play? (Rule 10.4)	Did the referee indicate that the activity resulting in the injury was dangerous play (Rule 10.4)?

Chart 3. Modifications made to the pre-final version (version 1) resulting in the final version (version 2).

Pre-final version (version 1)	Final version (version 2)
Localização no campo no momento da lesão: [Open question, that is, without alternatives].	Localização no campo no momento da lesão: () Pilar Esquerdo; () Hooker; () Pilar Direito; () Segunda linha; () Oitavo; () Scrum Half; () Abertura; () Primeiro Centro; () Segundo Centro; () Ponta Esquerda; () Ponta Direita; () Fullback; () não aplicável.

Table 1. Results of the application of the pre-final version (version 1) of the Formulário para Notificação/Avaliação de Lesão em Jogadores de Rugby.

Rugby players' characteristics and percentage of understanding	
Number of players	23
Players' age (years)	25.9 ± 5.53
Players' BMI (Kg/m ²)	26.29 ± 4.64
Players' education level (n = 14)	n = 14, 60.8% answered. n = 8, 57.1% higher education; n = 6, 42.8% incomplete higher education.
Percentage of players that did not understand the question 1A "Data da lesão:"	8.69%
Percentage of players that did not understand the question 1B "tempo de jogo em que ocorreu a lesão".	26%
Percentage of players that did not understand the question 2 "Data de retorno à participação plena:"	0%
Percentage of players that did not understand the question 3 "localização no campo no momento da lesão"	82.5%
Percentage of players that did not understand the question 4 "Parte do corpo lesionada:"	0%
Percentage of players that did not understand the question 5 "Lado do corpo lesionado:"	0%
Percentage of players that did not understand the question 6 "Tipo de lesão:"	0%
Percentage of players that did not understand the question 8 "O jogador já teve lesão do mesmo tipo no mesmo local (isto é, esta é uma lesão recorrente)?:"	0%
Percentage of players that did not understand the question 9 "A lesão foi causada por:"	4.34%
Percentage of players that did not understand the question 10 "A lesão ocorreu durante:"	0%
Percentage of players that did not understand the question 11 "A lesão foi causada por contato?:"	0%
Percentage of players that did not understand the question 12A "O árbitro indicou que a atividade na qual a lesão ocorreu foi infração de regra?"	4.34%
Percentage of players that did not understand the question 12B "O árbitro indicou a atividade que resultou na lesão como jogada perigosa? (Regra 10.4)"	4.34%

Results are described in absolute frequency and percentage and mean and standard deviation. BMI: body mass index.

Table 2. Results of the application of the final version (version 2) of the Formulário para Notificação/Avaliação de Lesão em Jogadores de Rugby.

Rugby players' characteristics and percentage of understanding	
Number of players	25
Players' age (years)	29.44 ± 5.90
Players' BMI (Kg/m ²)	29.46 ± 4.32
Players' education level	High school (n = 2, 8%) Incomplete High school (n = 1, 4%) Higher education (n = 14, 56%) Incomplete higher education (n = 8, 32%)
Percentage of players that understood all the questions	100%

Results are described in absolute frequency and percentage, mean and standard deviation. BMI: body mass index.

DISCUSSION

The questionnaire Formulário para Notificação/Avaliação de Lesão em Jogadores de Rugby was successfully translated and cross-culturally adapted into Brazilian Portuguese, maintaining semantic, idiomatic, cultural, conceptual equivalences and following international methodological standards. The form could be considered a useful instrument, making its self-application possible, to evaluate injuries related to the practice of rugby in Brazilian players. The standardization of the record of injuries caused by the practice of Rugby through a questionnaire translated and cross-culturally adapted may provide clinical contributions to guide injury prevention programs, based on the results obtained from the self-administration of the Formulário para Notificação/Avaliação de Lesão em Jogadores de Rugby.

The stages of translation, synthesis and back-translation of the Formulário para Notificação/Avaliação de Lesão em Jogadores de Rugby were conducted in a simple way, since there were not many differences between the translated terms, always opting for grammatical changes more appropriate to Brazilian Portuguese and for alterations that aimed at the cultural equivalence used in the daily life of rugby players. Guillemin et al.¹⁵ reported that the equivalence of expressions based on the original version should

be sought, although colloquial expressions of a certain language, such as jargon used in sports, should also be considered.

The self-administration of the pre-final translation – version 1 by rugby players indicated that 26% did not understand the question "tempo de jogo em que ocorreu a lesão" and 82.5% did not understand the question "localização no campo no momento da lesão". These questions were reviewed in a meeting with experts. For the question "localização no campo no momento da lesão", it was suggested to include alternatives as answers, specifying a position in each alternative, so that the player could answer the question marking an × in the alternative that indicated their location in the field, thus making understanding easier. The suggestion that the work team had when monitoring the self-completion of the questionnaire was to change the word *localização* (location) for *posição* (position), making it easier to understand the question. The Brazilian players that filled the final version of the study presented 29.44 ± 5.9 years as the mean age, were all male, most had complete higher education (56%) and their mean weight was 99 ± 12.3 kg.

Other studies investigated the occurrence of injuries in Brazilian rugby players but used semi-structured questionnaires, which were not validated.^{2,5} Our study, through the translation of a questionnaire created by an international rugby authority, aims

to offer an assessment instrument that is easy to use and can be self-administered.

We emphasize the importance of the Formulário para Notificação/Avaliação de Lesão em Jogadores de Rugby to standardize the notification and cataloging of injuries that occur in Rugby. The reproducibility and reliability study of the Formulário para Notificação/Avaliação de Lesão em Jogadores de Rugby is under development and should contribute to increasing its usefulness as an instrument for the evaluation of injuries resulting from Rugby practice in the near future.

Our study has some limitations. The questionnaire was self-administered, which can cause memory bias when trying to remember the date of the injury and specific information about it if the questionnaire is not completed right after the injury occurred. Another limitation discussed by the work team was the use of the term “*excesso de treino*” (“overtraining”), translated from “*overuse*” in question 9. The use of this term oversimplifies the cause of injury, disregarding, for example, micro trauma and late injuries. Thus, it is suggested to add the alternative “*outro*” (“other”) (specifying, then, which one), so that the health professional or player can specify the cause of the injuries.

We recommend that the Formulário para Notificação/Avaliação de Lesão em Jogadores de Rugby should be used by health professionals for the notification of injuries during sports practice, so that it can contribute to guide prevention strategies prevention of injuries in players Rugby.

CONCLUSION

The questionnaire Formulário para Notificação/Avaliação de Lesão em Jogadores de Rugby was translated and cross-culturally adapted to Brazilian Portuguese, allowing its self-administration to assess injuries related to the practice of rugby in Brazilian players. Validation and reproducibility studies of the form are necessary to demonstrate its reliability.

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APPENDIX

FORMULÁRIO PARA NOTIFICAÇÃO/AVALIAÇÃO DE LESÃO EM JOGADORES DE RUGBI

Nome: _____ Time: _____ Data da avaliação: _____

Posição em que joga:

- | | | | |
|---|--|--|--|
| <input type="checkbox"/> Forward Pilar esquerdo | <input type="checkbox"/> Forward Hooker | <input type="checkbox"/> Forward Pilar direito | <input type="checkbox"/> Forward Segunda linha |
| <input type="checkbox"/> Forward Segunda linha | <input type="checkbox"/> Oitavo | <input type="checkbox"/> Back Scrum half | <input type="checkbox"/> Back Abertura |
| <input type="checkbox"/> Back Primeiro Centro | <input type="checkbox"/> Back Segundo Centro | <input type="checkbox"/> Back Ponta esquerda | <input type="checkbox"/> Back Ponta Direita |
| <input type="checkbox"/> Fullback | | | |

1A. Data da lesão: _____ **1B:** Horário da lesão (Tempo de jogo): _____

2. Data de retorno à participação plena: _____

3. Localização no campo no momento da lesão:

- | | | | |
|---|--|--|--|
| <input type="checkbox"/> Forward Pilar esquerdo | <input type="checkbox"/> Forward Hooker | <input type="checkbox"/> Forward Pilar direito | <input type="checkbox"/> Forward Segunda linha |
| <input type="checkbox"/> Forward Segunda linha | <input type="checkbox"/> Oitavo | <input type="checkbox"/> Back Scrum half | <input type="checkbox"/> Back Abertura |
| <input type="checkbox"/> Back Primeiro Centro | <input type="checkbox"/> Back Segunda Centro | <input type="checkbox"/> Back Ponta esquerda | <input type="checkbox"/> Back Ponta Direita |
| <input type="checkbox"/> Fullback | <input type="checkbox"/> não aplicável | | |

4. Parte do corpo lesionada: (Deve ser preenchido um formulário para cada lesão)

- | | | | |
|--|---|---|--|
| <input type="checkbox"/> cabeça/rosto | <input type="checkbox"/> braço | <input type="checkbox"/> região anterior da coxa | <input type="checkbox"/> pescoço/coluna cervical |
| <input type="checkbox"/> cotovelo | <input type="checkbox"/> região posterior da coxa | <input type="checkbox"/> esterno/costelas/coluna torácica | <input type="checkbox"/> antebraço |
| <input type="checkbox"/> joelho | <input type="checkbox"/> abdômen | <input type="checkbox"/> punho | <input type="checkbox"/> perna/tendão de Aquiles |
| <input type="checkbox"/> coluna lombar | <input type="checkbox"/> mão/dedo/polegar | <input type="checkbox"/> tornozelo | <input type="checkbox"/> sacro/pelve |
| <input type="checkbox"/> quadril/virilha | <input type="checkbox"/> pé/dedo do pé | <input type="checkbox"/> ombro/clavícula | |

5. Lado do corpo lesionado: esquerdo direito bilateral não aplicável

6. Tipo de lesão:

- | | | |
|--|---|---|
| <input type="checkbox"/> concussão (com ou sem perda de consciência) | <input type="checkbox"/> outra lesão (especifique): _____ | <input type="checkbox"/> escoriação |
| <input type="checkbox"/> lesão cerebral | <input type="checkbox"/> entorse/lesão ligamentar | <input type="checkbox"/> corte |
| <input type="checkbox"/> compressão da medula espinhal/
lesão completa da medula espinhal | <input type="checkbox"/> lesão de menisco/cartilagem ou disco vertebral | <input type="checkbox"/> lesão de nervo |
| <input type="checkbox"/> fratura | <input type="checkbox"/> ruptura/distensão/lesão muscular/câimbras | <input type="checkbox"/> lesão nos dentes |
| <input type="checkbox"/> outra lesão óssea | <input type="checkbox"/> lesão/ruptura de tendão/tendinopatia/bursite | <input type="checkbox"/> lesão nas vísceras |
| <input type="checkbox"/> luxação/ subluxação | <input type="checkbox"/> contusão/edema/hematoma | |

7. Diagnóstico da lesão (Código Internacional de Doenças 10 ou descrição da doença): (Deve ser preenchido por um profissional da saúde) _____

8. O jogador já teve lesão do mesmo tipo no mesmo local (isto é, esta é uma lesão recorrente)?

- não sim

Se respondeu SIM, especifique a data de retorno do jogador à participação plena por ocasião da lesão anterior: _____

9. A lesão foi causada por:

- excesso de treino ("overuse") trauma?

10. A lesão ocorreu durante:

- treino partida?

11. A lesão foi causada por contato?

- não sim

Se respondeu SIM, especifique o tipo de atividade:

- tackleado* *tackleando* *ma*
 ruck *lineout* *scrum*
 colisão outro

12A. O árbitro indicou que a atividade na qual a lesão ocorreu foi infração de regra?

- não sim

12B. O árbitro indicou a atividade que resultou na lesão como jogada perigosa? (Regra 10.4)

- não sim