Cultural adaptation of the version of the withdrawal assessment tool (wat - 1) for portuguese language spoken in Brazil

RESUMO | Objetivo: Adaptar, para a língua portuguesa do Brasil, o instrumento Withdrawal Assessment Tool Version (WAT – 1). Métodos: Pesquisa metodológica, realizada no município de São Paulo/SP de março de 2017 a abril de 2019. O processo de adaptação cultural obedeceu às dez etapas definidas segundo o Report of the ISPOR Task Force for Translation and Cultural Adaptation, sendo realizado avaliação das equivalências semântica, idiomáticas, conceitual e cultural, por um comitê de nove juízes, avaliação da compreensibilidade do instrumento por 30 especialistas em Terapia Intensiva Pediátrica; revisão da avaliação da compreensibilidade; revisão final da tradução; relatório final. Resultados: A concordância entre os juízes na análise das equivalências apresentou escore médio de 96,9% na segunda rodada, devido a concordância de 80% na primeira etapa. Já, na avaliação da compreensibilidade, obteve-se 100% de compreensão dos especialistas. Conclusão: A tradução e adaptação cultural do instrumento wat-1 para língua portuguesa falada no Brasil foram consideradas satisfatórias.

Descritores: Enfermagem pediátrica; Estudo de validação; Sedação profunda; Síndrome de abstinência a substâncias; UTI

ABSTRACT | Objective: To adapt the Withdrawal Assessment Tool Version (WAT - 1) to the Portuguese language of Brazil. Methods: Methodological research, carried out in the city of São Paulo/SP from March 2017 to April 2019. The process of cultural adaptation followed the ten stages defined according to the Report of the ISPOR Task Force for Translation and Cultural Adaptation: authorization; translation, reconciliation, backtranslation; back-translation review; harmonization, with the evaluation of semantic, idiomatic, conceptual and cultural equivalences carried out by a committee of nine judges; evaluation of the comprehensibility of the instrument by 30 specialists in Pediatric Intensive Care TIP; review of the comprehensibility assessment; final translation review; final report. Results: The adapted instrument was divided into 35 sentences, being evaluated by nine judges regarding their equivalences. The agreement among the judges in the analysis of equivalences proved to be excellent, with an average score of 96.9% in these cond round. There was a need for two rounds, as some items did not show 80% agreement in the first stage. In the comprehensibility assessment, 100% of the specialists' understanding was obtained. Conclusion: The translation and cultural adaptation of the wat-1 instrument to the Portuguese language spoken in Brazil were considered satisfactory.

Descriptors: Validation Study. Deep Sedation. Pediatric Nursing. Substance withdrawal syndrome. Pediatric ICU.

RESUMEN | Objetivo: Adaptar la Versión de la Herramienta de Evaluación de Retiros (WAT - 1) al idioma portugués de Brasil. Métodos: Investigación metodológica, realizada en la ciudad de São Paulo/SP de marzo de 2017 a abril de 2019. Cuyo proceso de adaptación cultural siguió las diez etapas definidas según el Informe del Grupo de Trabajo ISPOR para la Tráducción y Adaptación Cultural: autorización; traducción, reconciliación, retrotraducción; revisión de la retrotraducción; armonización, con la evaluación de equivalencias semánticas, idiomáticas, conceptuales y culturales realizada por un comité de nueve jueces; evaluación de la comprensibilidad del instrumento por 30 especialistas en Cuidados Intensivos Pediátricos TIP; revisión de la evaluación de comprensibilidad; revisión final de la traducción; informe final. Resultados: El instrumento adaptado se dividió en 35 sentencias, siendo evaluadas por nueve jueces en cuanto a sus equivalencias. La concordancia entre los jueces en el análisis de equivalencias resultó excelente, con una puntuación media de 96,9% en la segunda vuelta. Hubo necesidad de dos rondas, ya que algunos ítems no mostraron un 80% de acuerdo en la primera etapa. En la etapa de la evaluación de comprensibilidad, se obtuvo el 100% de la comprensión de los especialistas. Conclusión: La traducción y adaptación cultural del instrumento wat-1 al idioma portugués hablado en Brasil fue considerada satisfactoria.

Descriptores: Estudio de Validación. Sedación Profunda. Enfermería Pediátrica. Sindrome de Abstinencia de Substancias. UCI Pediátrica

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INTRODUCTION

Sedation in the Pediatric Intensive Care Unit (PICU) is an important ally in the analgesia of critically ill patients, to alleviate the suffering and pain in the face of invasive procedures, necessary in this environment, often even causing deep sedation. However, the prolonged use of these drugs causes extensive complications for children who use them continuously or intermittently. (1-2) Therefore, it is important that professionals working at the PICU monitor the individual level of sedation of each child, and that weaning from this sedation is carried out efficiently and coherently, in order to avoid the appearance of the withdrawal syndrome. This contributes to an improvement in the patient's prognosis, making his recovery faster.(1)

The correct identification of manifestations indicative of substance withdrawal syndrome in children is essential for nurses to effectively intervene in the prevention of complications, as we know that critically ill patients who are exposed to sedation and analgesia therapy for prolonged periods have greater chances of development of withdrawal syndrome. However, this knowledge is still little disseminated, due to the scarcity of studies on the subject in the pediatric area, which generates frustration in the team, which does not feel prepared to act promptly. (3)

Withdrawal syndrome can be triggered by several factors, such as duration of use and pharmacological class, as well as the prescribed dosage, the child's age and the beginning of weaning. Therefore, it is important, and of paramount importance, that professionals are aligned with the conducts carried out, knowing the effects that these sedatives can trigger and the period necessary to properly perform weaning. Literature reports that the chance of triggering the withdrawal syndrome increases with the days of sedation use.

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(1-5)

Franck and Curley (2008) created a scale, called Withdrawal Assessment Tool - Version 1 (WAT-1), which addresses the concepts related to the detection of withdrawal syndrome in pediatrics, to identify the iatrogenic withdrawal syndrome. This scale scores the criteria divided into four categories and analyzes information from the patient's last 12 hours. (1)

The criteria evaluated in the first category concern symptoms related to the central nervous system. The second category is related to behavioral state, the third category is related to the autonomic nervous system, and the fourth refers to gastrointestinal symptoms. The scale score is divided into: 0 = no abstinence; 1-3 = possibly in abstinence; > or equal to 4 = in abstinence.

This scale consists of 11 items containing 12 points, and its application should be started on the first day of weaning in children who received opioids or benzodiazepines, by infusion or regular administration for prolonged intermittent periods greater than or equal to five days or even use of continuous sedation for a period of 24 hours. It is applied twice a day, 12 hours apart, until 72 hours after the last dose is administered.

Prior to this study, the WAT-1 had, in Brazil, only free translations, without any methodological rigor, carried out by a large pharmaceutical industry, at the request of the author of the scale, who wanted the scale to be used worldwide.

Thus, the present study aimed to adapt the Withdrawal Assessment Tool Version (WAT - 1) instrument to Brazilian Portuguese.

METHOD

This is a methodological research, cultural adaptation of a measurement instrument, giving rise to the thesis entitled "Cultural Adaptation of the

Withdrawal Assessment Tool Version (WAT-1) for the Portuguese language spoken in Brazil". The study began in March 2017 and ended in April 2019. The steps of this study followed those proposed by the International Society for Pharmacoeconomics and Outcomes Research (ISPOR) Task Force for Translation and Cultural Adaptation, in order to preserve equivalence in cultural adaptations, which will be described below:(6)

Step 1 – authorization for translation and adaptation of the instrument, obtained through electronic contact with the author of the original instru-

Step 2 - translation of the original instrument from English to Portuguese, carried out by two researchers with experience and fluency in both languages, independently.

Step 3 - reconciliation, performed by the key person, who was a specialist nurse in the field of pediatrics with experience in an intensive care unit, experience in adapting instruments and fluent in English; she compared the two translations and reconciled with the researcher, who is the project manager.

Step 4 - back-translation, in which the obtained version was translated into English by two different teachers, natives of the instrument's country of origin, who did not participate in the previous steps.

Step 5 - review of the back-translation, in which the two back-translated versions of the instrument into English were compared, by the researcher and the main author of the instrument.

Step 6 - Harmonization - as there were no other versions of the WAT-1 in other languages, it was decided to carry out the evaluation of the semantic, idiomatic, conceptual and cultural equivalences of the versions by a committee composed of nine judges.

Once the committee was formed, the judges analyzed the sentences according to the established criteria (0 = undecided, 1 = equivalent and -1 = not equivalent) for the technical review and evaluation of the semantic, idiomatic, conceptual and cultural equivalence of the versions. Item evaluation was performed using the equivalence scale

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and items with equivalence below 0.80 were reviewed by the translators.

Step 7 - pre-test, carried out to assess the comprehensiveness of the instrument, being applied to a group of 30 PICU specialists.

Step 8 - review of the understanda-

bility assessment, when the researcher analyzed the results, making the necessary adjustments to better understand the items.

Step 9 - final review, in which the translation was reviewed and any remaining errors were corrected.

Step 10 - the researcher prepared the final report of the translation process, with a complete description of the methodology used, item by item, with all translation decisions throughout the process.

The study was submitted to the Research Ethics Committee of the Hospital Israelita Albert Einstein, registered under the number CAAE 90355518.8.0000.0071 and approved under the number 2.801.555, and all participants signed the Informed Consent Form.

In the harmonization phase, the sample initially consisted of 10 judges, considering, as an inclusion criterion, that they should have fluency in the English language and experience in the field of pediatrics and pediatric intensive care. One of the judges did not deliver the instrument evaluation questionnaire in a timely manner, being excluded from the sample, resulting in nine judges.

In the pre-test stage by specialists, 30 nurses participated, who should have had experience of two years or more in the pediatric ICU field or a graduate degree in the completed field.

RESULTS

Initially considering the characteristics of the study participants, in relation to the profile of the judges, the mean age was 39 years, ranging between 29 and 60 years. All had a lato-sensu postgraduate degree, and 55.6% of them also had a stricto-sensu postgraduate degree.

As for the profile of the 30 nurses who participated in the pre-test stage, the average age was 32 years, ranging from 25 to 57 years. All had a lato-sensu graduate degree, and only 6.7% of them had a stricto-sensu graduate de-

Now approaching the instrument translation process, when comparing the original version and the translated versions, some divergences were identified, which were resolved by consen-

Each judge performed 140 evaluations, considering the 35 sentences, according to each of the four domains or equivalences, obtaining an average score of 96.9% in the second round, due to an agreement of 80% in the first stage.

In the understandability assessment stage, the results indicated that no adaptation to the content of the adapted instrument was necessary, as all components were fully understood by nurses with answers between 4 and 5, indicating 100% understanding by the experts.

DISCUSSION

This study was prepared through an extensive and rigorous process of translation and cultural adaptation, following the international standards of the Report of the ISPOR Task Force for Translation and Cultural Adaptation (ISPOR), to ensure the quality and reliability of the study. (6)

The translation and adaptation of the instrument was carried out according to all reliable criteria, step by step, until the final version of the instrument was prepared. It is important to use specific methods in carrying out the entire process of cultural adaptation, so that there is agreement and respect between existing cultural diversities. (7-9)

When the instrument is merely translated, without following any specific method with criteria to be followed and a correct operation, the instrument's reliability is impaired, making it impossible to effectively adapt to the

desired language. In this way, it compromises its understanding by the target population, impacting the use of the tool by professionals in their practice. (7-12)

The process of translating and culturally adapting an instrument requires

Through this study, there is now the possibility of a safe and assertive use of the adapted scale with all methodological rigor, since free translations do not suit the cultural reality of each country, often generating an impossibility of use

time to verify the full understanding and clarity of each translated and adapted component, requiring that this process be governed by an effective and resolute methodology(7-14).

ISPOR's methodology allows for the creation of an exchange between the researcher and the author of the instrument, which creates an interconnection with different cultures, without losing the context faithful to the original instrument. (6)

WAT-1 is known worldwide and it can also be applied to adolescents. The other scales that exist have age limitations, and some are indicated only for neonates, while others are also limited to restricted age groups, not covering the entire pediatric clientele. (1)

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Therefore, the present study is relevant, having a positive impact on its future use by the Brazilian population, due to the benefits that this scale will bring, due to its ease of use and practicality in its applicability for children who used sedatives in the pediatric intensive care.

In the process of adapting the WAT-1 to Portuguese, the first stage was completed quickly, given the author's prompt response, authorizing the study. Then, the second stage of translating the original version into the Portuguese version was performed, carried out by two different translators. After that, we proceeded to the version reconciliation step between the project researcher and the key person.

In the reconciliation phase, it was necessary to adjust the two translated versions and reach a consensus to obtain a single Portuguese version. The greatest difficulty encountered at this stage was to reach a consensus on the best version through a rigorous verification of each item of the instrument with the key person, as some terms did not match the cultural reality of our language.

In the fourth step of back-translation, the original author of the scale contributed with a suggestion and made corrections that she deemed necessary, giving a final guarantee for us to proceed with the next steps.

In the sixth stage, it was not possible to harmonize the translated instrument with other versions in different languages, since there are no versions of the WAT-1 adapted by methodological criteria, constituting a limitation in this phase of the study.

When we choose to adapt an instrument from another culture, it is essential to assess its relevance through semantic equivalence measurements with well-defined criteria in order to maintain the completeness of the original instrument. (15)

After this phase, an assessment of the comprehensiveness of the instrument, adapted by 30 specialist nurses with experience in the PICU, was carried out, in order to ensure that the version obtained by the committee of judges was fully understandable for its use in clinical practice.

The nurses who participated in the study also expressed the desire to readily use the scale in their clinical practice. This fact reflects a long-standing concern on the part of health professionals with the withdrawal syndrome in children, since currently there are not many scales used to assess patients in this situation.

Withdrawal syndrome is still a difficult approach in the pediatric field, since in pediatrics there is no general rule for this population, each sedative and analgesia administered to the pediatric public is individualized by age group, weight, drug dosage and particularities of each pathology, the pediatric intensive care nurse can make a difference in the outcome of weaning from sedation since he is daily monitoring the evolution of this child, this professional can assertively contribute to the monitoring of sedative weaning in a correct way, easing the signs and symptoms of the withdrawal crisis, as well as a decrease in the time of using these drugs. (12)

In the comprehensiveness assess-

ment stage, the results indicated that no adaptation to the content of the adapted instrument was necessary, as all components were fully understood by the nurses. This can be justified by the methodological rigor, faithfully followed from the beginning of the cultural adaptation process, ensuring that,

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at the end, the instrument is able to be applied safely in its target population.

The challenges of carrying out a validation study and adapting an instrument are immense and go beyond several horizons, not least because, as already mentioned, there is no single consensus on cultural adaptation. This universe is immense and broad, with a diversification that includes many variables in its environment and requires above all obedience to the method of choice and demands from the researcher a detailed attention to all the issues involved during all the steps to be followed. (17-19)

Moving forward in the ISPOR adaptation process, in the ninth stage called revision, a final evaluation of the translation was carried out, and there was no need for any correction of spelling errors, thus completing the final translation of the WAT-1 instrument into the Brazilian Portuguese language.

In the last step of the methodology suggested by ISPOR, a final report was prepared on the entire process, allowing the researcher to review and understand item by item, each step and respective decision-making.

CONCLUSION

The challenge of carrying out this study was broad and extensive, since there was a need to seek a methodology that included all eligibility criteria for adapting the instrument and the final result was as assertive as possible.

The nurse plays a fundamental role in the assessment and early diagnosis of the withdrawal syndrome, as its essence, through a holistic view, allows each child to be seen in a unique and individualized way.

The translation and cultural adaptation of the wat-1 instrument into the Portuguese language spoken in Brazil were considered satisfactory. The study has limitations, as despite having completed the adaptation process, the instrument must still be evaluated in the future in terms of its psychometric properties, so that evidence of reliability and validity of the Brazilian version can be investigated.

References

- 1. Franck LS, Harris SK, Soetenga DJ, Amling JK, Curley MA. The withdrawal assessment Tool - Version 1 (WAT-1): an assessment instrument for monitoring opioid and benzodiazepine withdrawal symptoms in pediatric patients. Pediatr Crit Care Med. 2008;9(6):573-80. doi: 10.1097/ PCC.0b013e31818c8328
- 2. Curley MA, Harris SK, Fraser KA, Johnson RA, Arnold JH. State behavioral scale (SBS) a sedation assessment instrument for infants and young children supported on mechanical ventilation. Pediatr Crit Care Med. 2016;7(2):107-14. doi: 10.1097/01.PCC.0000200955.40962.38
- 3. Duceppe MA, Perreault MM, Frenette AJ, Burry LD, Rico P, Lavoie A, et al. Frequency, risk factors and symptomatology of iatrogenic withdrawal from opioids and benzodiazepines in critically III neonates, children and adults: A systematic review of clinical studies. J Clin Pharm Ther. 2019;44(2):148-56. doi: 10.1111/jcpt.12787
- 4. Lamas A, López-Herce J. Monitoring sedation in the critically ill child. Anaesthesia. 2010;65(5):516-24. doi: 10.1111/j.1365-2044.2010.06263.x
- 5. Curley MA, Wypij D, Watson RS, Grant MJ, Asaro LA, Cheifetz IM, et al. Protocolized sedation versus usual care in pediatric patients mechanically ventilated for acute respiratory failure: a randomized clinical trial. JAMA. 2015;3(4):379-89. doi: 10.1001/jama.2014.18399
- 6. Wild D, Grove A, Martin M, Eremenco S, McElroy S, Verjee-Lorenz A, et al. Principles of good practice for the translation and cultural adaptation process for patient-reported outcomes (PRO) measures: report of the ISPOR task Force for translation and cultural adaptation. Value Health. 2005;8(2):94-104. doi: 10.1111/j.1524-4733.2005.04054.x
- 7. Conceição CM, Coca KP, Alves MRS, Almeida FA. Validação para língua portuguesa do instrumento de avaliação do aleitamento materno LATCH. Acta Paul Enferm. 2017;30(2):210-6. doi: 10.1590/1982-0194201700032
- 8. Menezes SS. Avaliação do raciocínio clínico: adaptação e validação do Test de Concordance de Scripts Human Caring [tese]. São Paulo: Escola de Enfermagem, Universidade de São Paulo; 2017. 185f.
- 9. Souza AC, Milani D, Alexandre NMC. Adaptação cultural de um instrumento para avaliar a satisfação no trabalho. Rev Bras Saúde Ocup. 2015;40(132):219-27. doi: 10.1590/0303-7657000113715
- 10. Fayers PM, Machin D. Quality of life. Assessment, analysis and interpretation. The assessment, analysis and interpretation of patient-reported

- outcomes. 2nd ed. Chichester: John Willey & Sons; 2007
- 11. Fernandes ET, Dias AC, Ferreira SL, Marques GC, Pereira CO. Adaptação cultural e confiabilidade da Reproductive Autonomy Scale para mulheres no Brasil. Acta Paul Enferm. 2019;32(3):298-304. doi: 10.1590/1982-0194201900041
- 12. Neunhoeffer F, Kumpf M, Renk H, Hanelt M, Berneck N, Bosk A, et al. Nurse-driven pediatric analgesia and sedation protocol reduces withdrawal symptoms in critically ill medical pediatric patients. Paediatr Anaesth. 2015;25(8):786-94. doi: 10.1111/pan.12649
- 13. Lourenção DCA, Tronchin DMR. Segurança do paciente no ambiente cirúrgico: tradução e adaptação cultural de instrumento validado. Acta Paul Enferm. 2016;29(1):1-8. doi: 10.1590/1982-0194201600002
- 14. Souza AC, Alexandre NMC, Guirardello EB. Propriedades psicométricas na avaliação de instrumentos: avaliação da confiabilidade e da validade. Epidemiol Serv Saúde. 2017;26(3):649-59. doi: 10.5123/s1679-49742017000300022
- 15. Henriques SH, Chaves LDP, Brito LJS, Mello AL, Silva BR, Leal LA. Adaptação transcultural do Competency Evaluation Questionnaire - versão brasileira. Rev Gaúcha Enferm. 2019;40:e20180155. doi: 10.1590/1983-1447.2019.20180155
- 16. Guillemim F, Bombardier C, Beaton D. Cross-cultural adaptation of health-related quality of life measures: literature review and proposed quidelines. J Clin Epidemiol. 1993;46(12):1417-32. doi: 10.1016/0895-4356(93)90142-n
- 17. Murakami BM. Elaboração de instrumento para identificação de sentimentos, crenças e atitudes de enfermeiros em relação a eutanásia [dissertação]. São Paulo: Faculdade Israelita de Ciências da Saúde Albert Einstein; 2016. 131p.
- 18. Machado RS, Fernandes ADBF, Oliveira ALCB, Soares LS, Gouveia MTO, Silva GRF. Métodos de adaptação transcultural de instrumentos na área da enfermagem. Rev Gaúcha Enferm. 2018;39:e2017-0164. doi: 10.1590/1983-1447.2018.2017-0164
- 19. Dalla Nora CR, Zoboli E, Vieira MM. Validação por peritos: importância na tradução e adaptação de instrumentos. Rev Gaúcha Enferm. 2017;38(3):e64851. doi: 10.1590/1983-1447.2017.03.64851