

# Translation and cross-cultural adaptation of the Newcastle Satisfaction With Nursing Scales into the Brazilian culture\*

TRADUÇÃO E ADAPTAÇÃO CULTURAL DO NEWCASTLE SATISFACTION WITH NURSING SCALES PARA A CULTURA BRASILEIRA

TRADUCCIÓN Y ADAPTACIÓN CULTURAL DEL NEWCASTLE SATISFACTION WITH NURSING SCALES A LA CULTURA BRASILEÑA

Gisele Hespanhol Dorigan<sup>1</sup>, Edinêis de Brito Guirardello<sup>2</sup>

## ABSTRACT

This study aimed to translate and culturally adapt the *Newcastle Satisfaction with Nursing Scales* for use in Brazil, and to assess its usability. The instrument contains two scales and aims to assess the patient's experiences and level of satisfaction with nursing care. The methodological procedure of cultural adaptation followed the steps: translation, synthesis, back-translation, assessment by an expert committee, and pre-test. The process of translation and cultural adaptation was considered adequate. The committee assessment resulted in simple grammatical modifications for most of the items, and 40 subjects were considered for the pre-test. The Brazilian version of the *Newcastle Satisfaction with Nursing Scales* demonstrated adequate content validity and was easily understood by the group of subjects. However, this is a study that precedes the evaluation of the psychometric properties of the instrument, whose results will be presented in a later publication.

## DESCRIPTORS

Patient satisfaction  
Nursing care  
Quality of health care  
Health evaluation  
Validation studies

## RESUMO

Este estudo teve por objetivos traduzir e adaptar o *Newcastle Satisfaction with Nursing Scales* para a cultura brasileira, bem como verificar seu uso prático. O instrumento contém duas escalas e tem como objetivo avaliar as experiências vivenciadas pelo paciente e a satisfação com o cuidado de enfermagem. Para o procedimento metodológico de adaptação cultural foram seguidas as etapas de tradução, síntese, retro-tradução, avaliação pelo comitê de especialistas e pré-teste. O processo de tradução e adaptação cultural foi considerado apropriado. A avaliação pelo comitê de especialistas resultou em modificações gramaticais simples para a maioria dos itens e, no pré-teste, participaram 40 sujeitos. A versão brasileira do *Newcastle Satisfaction with Nursing Scales* demonstrou adequada validade de conteúdo e facilidade de compreensão pelos sujeitos. Contudo, este é um estudo que antecede o processo de avaliação das propriedades psicométricas do instrumento, cujos resultados serão apresentados em publicação posterior.

## DESCRIPTORIOS

Satisfação do paciente  
Cuidados de enfermagem  
Qualidade da assistência à saúde  
Avaliação em saúde  
Estudos de validação

## RESUMEN

Se objetivó traducir y adaptar el *Newcastle Satisfaction with Nursing Scales* a la cultura brasileña y comprobar su viabilidad. El instrumento incluye dos escalas, y apunta a evaluar las experiencias del paciente y su satisfacción con los cuidados de enfermería. Para el procedimiento metodológico de adaptación cultural, se siguieron los siguientes pasos: traducción, síntesis, retrotraducción, evaluación por un comité de expertos y pre-test. El proceso de traducción y adaptación cultural se consideró apropiado. La evaluación por el comité de expertos dio lugar a cambios gramaticales simples para la mayoría de los elementos, y 40 sujetos participaron del pre-test. La versión brasileña del *Newcastle Satisfaction with Nursing Scales* demostró adecuada validez de contenido y facilidad de comprensión por parte de los sujetos. Sin embargo, este es un estudio que precede la evaluación de las propiedades psicométricas del instrumento, cuyos resultados serán presentados en una publicación posterior.

## DESCRIPTORIOS

Satisfacción del paciente  
Atención de enfermería  
Calidad de la atención de salud  
Evaluación en salud  
Estudios de validación

\* Extracted from the dissertation "Adaptação cultural e validação do *Newcastle Satisfaction with Nursing Scales* para a cultura brasileira", Universidade Estadual de Campinas, 2011. <sup>1</sup> Nurse. Master's in Nursing, College of Medical Sciences, University of Campinas (Unicamp). Campinas, SP, Brazil. giselehd@fcm.unicamp.br <sup>2</sup> Associate professor at the College of Nursing, University of Campinas (Unicamp). Campinas, SP, Brazil. guirar@fcm.unicamp.br

## INTRODUCTION

The use of specific instruments for patient satisfaction assessment, although not the only way to assess perception about quality of care<sup>(1)</sup>, is the most widespread method in the literature, and is considered to be an important indicator of the quality of care<sup>(2)</sup>.

Patient satisfaction is considered a complex and multifaceted construct that includes relationship with medical staff, physical environment and organizational environment<sup>(2-3)</sup>. This assessment, as a result indicator, facilitates patient involvement in his own care, which enables the identification of aspects that need further attention by health professionals, as well as their needs and healthcare priorities<sup>(4)</sup>.

The definition of patient satisfaction with nursing care most widely accepted in the literature is that proposed by Risser<sup>(5)</sup>, which considers it to be the degree of congruence between the patient's expectations and subjective perception of care received.

In Brazil, the *Patient Satisfaction Instrument* (PSI) is available<sup>(6)</sup>, which aims to evaluate patient satisfaction with nursing care. Nevertheless, it is important that other instruments are available for that purpose. The *Newcastle Satisfaction with Nursing Scales* (NSNS) is an instrument that measures, in addition to patient satisfaction with nursing care, his experiences with nursing care during hospitalization<sup>(7)</sup>. It has been used in medical-surgical<sup>(7-15)</sup>, gynecology<sup>(10,11,15)</sup>, neonatal<sup>(16)</sup> and postpartum<sup>(17)</sup> units.

It consists of two scales that can be assessed independently: *Experiences of Nursing Care Scale* and *Satisfaction with Nursing Care Scale*, with 26 and 19 items, respectively. The measuring scale is a Likert-type, with 7 and 5 points, respectively, and the score for each scale ranges from 0 to 100. Higher scores represent more positive experiences of the patient and higher level of satisfaction with nursing care.

The instrument has adequate construct validity<sup>(7)</sup> and high Cronbach's alpha values, ranging from 0.75 to 0.95 for the *Experiences of Nursing Care Scale*<sup>(7-9,12,13,15-17)</sup> and 0.93 to 0.98 for the *Satisfaction with Nursing Care Scale*<sup>(7,8,10-13,15-17)</sup>.

The NSNS has been used in several countries, such as Jordan<sup>(9,10,15)</sup>, Turkey<sup>(11)</sup>, Italy<sup>(12)</sup>, Spain<sup>(13)</sup>, Portugal<sup>(16)</sup>, and Canada<sup>(17)</sup>, and it is considered to be an easy-to-understand instrument by subjects, with satisfactory reliability and validity results<sup>(8,11,17)</sup>.

The availability of NSNS in Brazilian Portuguese language may allow comparative studies among these different countries, in addition to enabling assessment of its psychometric properties in several inpatient units.

Therefore, the objective of this study was to translate and adapt the *Newcastle Satisfaction with Nursing Scales* into Brazilian Portuguese, as well as to assess the use of the new version.

## METHOD

This is a methodological study, characterized by processes of development and assessment of instruments for data collection<sup>(18)</sup>. For the procedure of translation and cultural adaptation, the steps of instrument translation into Portuguese, translation synthesis, back-translation, assessment by a group of experts, and pre-test<sup>(19)</sup> were followed. These methodological steps for cultural adaptation of measuring instruments were followed so that there was equivalence between the modified version and the original version, ensuring the quality of this process<sup>(19,20)</sup>.

The NSNS was the instrument chosen for this study because it aims to assess the patient's experiences and satisfaction with nursing care during hospitalization. It is valid and reliable<sup>(7,8,11,12,15-17)</sup> and can be used for both hospitalized patients in medical-surgical units and in postpartum units.

The NSNS consists of two scales that can be applied independently: *Experiences of Nursing Care Scale* and *Satisfaction with Nursing care Scale*<sup>(7)</sup>.

The *Experiences of Nursing Care Scale* contains 26 items in which the patient assesses his experiences with nursing care during hospitalization. It has a Likert-scale measuring scale with seven alternative responses ranging from *strongly disagree* to *strongly agree*. Items 2, 3, 4, 5, 7, 8, 9, 14, 15, 20 and 24 are negative, and their score

should be recoded in an inverted way, so that: 1→6; 2→5; 3→4; 4→3; 5→2; 6→1 and 7→0.

The *Satisfaction with Nursing Care Scale* contains 19 items and aims to assess the level of patient satisfaction with nursing care. The measurement scale is a Likert-type with five response categories ranging from *not at all satisfied* to *completely satisfied*.

To obtain the scores of these two scales, the instructions provided by the instrument's authors were followed<sup>(21)</sup>, which guided the recoding of the values of each item and the calculations needed; the analysis was done separately. The total score of each scale ranges from 0 to 100. The higher the score, the more positive experiences are for patients and the greater the level of satisfaction with nursing care.

Prior to this study, authorization was obtained from one of the NSNS authors, Dr. Elaine McColl, and also the approval of the Research Ethics Committee of the College of Medical Sciences (809/2009) was received.

The Newcastle Satisfaction with Nursing Scales (NSNS) is an instrument that measures, in addition to patient satisfaction with nursing care, his experiences with nursing care during hospitalization.

The first step of the cultural adaptation process consisted of instrument translation from English into Brazilian Portuguese by two independent bilingual translators, with Brazilian Portuguese as their mother tongue. One of the translators was informed about the objectives of the instrument and the concepts involved, the second one did not have such knowledge. Two independent versions resulted from this step, performed by a nurse and a linguist, respectively: T1 and T2, which were analyzed by a third translator who developed the synthesis version (T12) with researchers, which constituted the second stage of the procedure of cultural adaptation of the instrument.

In the third step, the synthetic version (T12) was translated back to English by two other independent translators fluent in the target language, who had the same language of the instrument as their mother tongue<sup>(19)</sup>. Two other bilingual translators whose mother tongue was English participated in this step, which produced two versions of the NSNS translation into English (BT1 and BT2). These translators were also unaware of the objectives of the instrument and its concepts.

The fourth stage of the method consisted of instrument assessment by an expert committee and aimed to consolidate all translated versions, to obtain consensus between the version translated into Brazilian Portuguese and the original version of the instrument and to assess its content validity<sup>(19)</sup>. This step was performed in two phases: quantitative and qualitative assessment of the content validity of the instrument.

Prior to the consensus meeting, with about two weeks notice, the members of the expert committee received all the translated versions, the synthesis, the original instrument and specific instructions for assessment of semantic, idiomatic, cultural and conceptual equivalencies. This quantitative assessment was individually performed by the members, and an agreement rate  $\geq 80\%$  for the instrument items was considered satisfactory.

Subsequently, there was a consensus meeting, which was attended by five bilingual experts: a methodologist, a linguist, a nursing professor, a psychologist with experience in the methodological procedure of cultural adaptation, and a nurse. In this meeting, the qualitative assessment of content validity was performed, in which members suggested modifications to ensure equivalence with the original instrument. At the end of this step, the pre-final version of the NSNS was obtained to be pre-tested.

The pre-test stage aimed to assess the understanding, clarity of items and time to complete the instrument, along with ensuring the equivalence of the translated version of the NSNS with the original version. Another important aspect pre-tested was the assessment of the NSNS used in practice, with the use of a specific instrument<sup>(22)</sup> with the aim of assessing the time to answer and the ease with which subjects could respond to the instrument.

In order to accomplish the fifth stage, inclusion criteria were considered: a) subjects 18 years of age or older, b) identification and/or forecast of discharge, or transfer to another inpatient unit c) length of stay  $\geq 24$  hours, and, d) ability to respond to and understand the instrument. Patients were invited to participate in the study and, after explanations about the aims, expressed their agreement and signed the Consent Statement.

## RESULTS

The translation, synthesis and back-translation steps were satisfactorily performed, without the need for significant changes. The expert committee was composed of five members who assessed all bilingual versions of translations, synthesis and back-translations, consolidating the pre-final version of the NSNS to be pre-tested (Chart 1).

Content validity was assessed by the expert committee through the percentage of concordance for the semantic, idiomatic, cultural and conceptual equivalencies. In the *Experiences of Nursing Care Scale*, the agreement percentage obtained was  $\geq 80\%$  for eight items (5, 8, 10, 13, 18, 20, 25, 26) for all the equivalencies.

Six of the items presented agreement percentages of 60% for the semantic (1, 2, 9, 12, 21, 24) and cultural (6, 9, 11, 19, 21, 24) equivalencies, eight for the idiomatic (1, 2, 4, 7, 15, 16, 17, 24) and conceptual (1, 3, 7, 11, 12, 22, 23) equivalencies. Seven items presented an agreement rate of 40% for cultural equivalence (1, 3, 7, 12, 15, 16, 22) and four items for conceptual equivalence (2, 16, 19, 24), and two items (4 and 14) had a 20% rate for the semantic, cultural and conceptual equivalencies in the *Experiences of Nursing Care Scale*.

In the *Satisfaction with Nursing Care Scale*, items 1, 3, 5, 8, 10, 11, 15 and 18 had a higher percentage of agreement among experts  $\geq 80\%$  for all equivalencies. Four items of that scale had a 60% agreement rate for the semantic equivalence (2, 4, 6, 14), five for the idiomatic (2, 6, 9, 14, 17), five for the cultural (2, 7, 9, 12, 13) and three for the conceptual equivalence (2, 4, 16).

Two items presented a 20% agreement percentage among experts (4, 14) for the cultural equivalence. Item 19 had a 40% agreement percent for semantic, idiomatic and cultural equivalencies, and item 6, only for cultural equivalence (item 6).

In a second step, a qualitative analysis of the content validity of the expert committee was performed, which required two meetings, each of three hours in duration. Changes of the instructions and of most of the instrument items were proposed in order to ensure understanding and adaptation into Brazilian Portuguese. Consensus was reached as to the substitution of the words *nurses* for *nursing team* and *ward* for *inpatient unit* throughout the instrument to ensure cultural and conceptual equivalence of the items of the Brazilian version.

**Chart 1** – Items of the *Newcastle Satisfaction with Nursing Scales*: Brazilian version

Scale	Items of the instrument
<b>Experiences of Nursing Care Scale</b>	1. It was easy to have a laugh with the nursing team.
	2. The nursing team favoured some patients over others.
	3. The nursing team did not tell me enough about my treatment.
	4. The nursing team was too easy going and laid back.
	5. The nursing team took a long time to come when they were called.
	6. The nursing team gave me information just when I needed it.
	7. The nursing team did not seem to know what I was going through.
	8. The nursing team turned the lights off too late at night.
	9. The nursing team made me do things before I was ready.
	10. No matter how busy the nursing team was, they made time for me.
	11. I saw the nursing team as friends.
	12. The nursing team spent time comforting patients who were upset.
	13. The nursing team checked regularly to make sure I was okay.
	14. The nursing team let things get on top of them.
	15. The nursing team took no interest in me as a person.
	16. The nursing team explained what was wrong with me.
	17. The nursing team explained what they were going to do to me before they did it.
	18. The nursing team told the next shift what was happening with my care.
	19. The nursing team knew what to do without relying on doctors.
	20. The nursing team used to go away and forget what patients had asked for.
	21. The nursing team made sure that patients had privacy when they needed it.
	22. The nursing team had time to talk to me.
	23. Doctors and the nursing staff worked well together as a team.
	24. The nursing team did not seem to know what each other were doing.
	25. The nursing team knew what to do for the best.
	26. There was a happy atmosphere in the inpatient unit, thanks to the nursing team.
<b>Satisfaction with Nursing Care Scale</b>	1. The amount of time the nursing team spent with you.
	2. How capable the nursing team was at its job.
	3. There always being someone of the nursing team around if you needed one.
	4. The amount the nursing team knew about your care.
	5. How quickly the nursing team came when you called for them.
	6. The way the nursing team made it so you could feel at home.
	7. The amount of information the nursing team gave to you about your condition and treatment.
	8. How often the nursing team checked to see if you were okay.
	9. The nursing team's helpfulness.
	10. The way the nursing team explained things to you.
	11. How the nursing team helped put your relatives' or friends' minds at rest.
	12. The nursing team's manner in going about their work.
	13. The type of information the nursing team gave to you about your condition and treatment.
	14. The treatment the nursing team gave to you as an individual.
	15. How the nursing team listened to your worries and concerns.
	16. The amount of freedom you were given on the inpatient unit.
	17. How willing the nursing team was to respond to your requests.
	18. The amount of privacy the nursing team gave you.
	19. The nursing team's awareness of your needs.

Forty adult patients hospitalized in medical-surgical units of a teaching hospital were enrolled in the pre-test, with a mean age of 49.25 years (Min = 20, Max = 74, Med = 49, SD = 14.56), most (57.5%) were male, with a mean of approximately seven years of education (Table 1). The mean time to complete the instrument was 11.25 minutes (SD = 2.35), with a minimum of 7 and maximum of 16 minutes.

**Table 1** – Characteristics of the subjects in the pre-test sample - Campinas, 2010

Variable	N	%	Mean (SD)*	Median	Observed range
Age			49.25 (14.56)	49	20 – 74
<b>Sex</b>					
Male	23	57.5			
Female	17	42.5			
<b>Marital status</b>					
Single	8	20			
Married	25	62.5			
Widow(er)	0	0			
Separate or divorced	7	17.5			
Education (complete years)			6.9 (4.41)	5.50	0 – 15
Family income (minimum wage)			2.70 (1.54)	2	0 – 6
<b>Previous hospitalization in the unit</b>					
Yes	13	32.5			
No	27	67.5			
<b>Time of hospitalization in the unit (days)</b>			6,1 (4.30)	5	1 – 20

\* SD = standard deviation  
Note: (n=40)

Patients had difficulties understanding three items of the NSNS during the pre-test: item 19 of the *Experiences of Nursing Care Scale* and items 6 and 14 of the *Satisfaction with Nursing Care Scale*. Changes were then proposed to ensure semantic and idiomatic equivalence of these items with the original version. For item 19 of the *Experiences* scale, replacement of the word *constantly* by the expression *all the time* was proposed. For item 6 of the *Satisfaction* scale, grammar adequacy was performed with the substitution of the words *made you feel* by *made it so that you could feel*. For item 14 of that same scale, due to the difficulty of understanding the expression *dispensed to you*, the replacement for the expression *gave you* was suggested, making the final version of this item: *The treatment the nursing team gave to you as an individual*.

Five subjects considered that item 22 item of the *Experiences of Nursing Care Scale* (The nursing team had time to sit and talk to me) was inconsistent, because the nursing team did not necessarily have time to sit and talk to patients. This item was reviewed by experts who agreed with the change, and the final version for this item was: *The nursing team had time to talk to me*.

The results showed that 60% of the subjects in the pre-test agreed that the instrument instructions were easy to understand, 57.5% agreed with the ease of choice among response alternatives and 47.5% agreed that the questions were easy to understand.

## DISCUSSION

All stages of the methodological procedure of cultural adaptation were satisfactorily completed. The Brazilian Portuguese instrument translation and back-translation enabled error detection and different interpretations of items whose meanings were discrepant compared to the original instrument. The discussion by the expert committee allowed for equivalence analysis between the translated version and the original version of the NSNS.

It is of note that two meetings with the committee members were needed in order to assess the content validity of the NSNS, which can be justified by the number of items of the instrument. The importance of both individual assessment by each member and the assessment resulting from the committee meeting to obtain the pre-final version are highlighted.

The *Experiences of Nursing Care Scale* had an agreement rate  $\geq 80\%$  for most of the items for the semantic and idiomatic equivalencies, and  $\geq 60\%$  for most of the items for cultural and conceptual equivalencies. Two items stood out: 4 - *The nursing team was too easy going and laid back* and 14 - *The nursing team let things get on top of them*, which obtained an agreement rate of 20% for semantic, cultural and conceptual equivalencies.

For the *Satisfaction* scale, these rates were  $\geq 80\%$  for most items concerning all equivalences, except for item 2 - *How capable the nursing team was at its job* and item 6 - *The way the nursing team made it so you could feel at home* and item 19 - *The nursing team's awareness of your needs*, which presented rates  $\leq 60\%$  for semantic, idiomatic and cultural equivalencies. Item 4 - *The amount the nursing team knew about your care* and item 14 - *The treatment the nursing team gave to you as an individual*, had a 20% agreement rate for cultural equivalence.

At the expert consensus meeting, most items of the *Satisfaction* scale had simple changes to ensure coherence and consistency of the items with the measurement scale. On the other hand, the *Experiences of Nursing Care Scale* had major changes to ensure verbal and nominal agreement, as well as the replacement of some words by synonyms. For the instrument as a whole, the term *nurse* was replaced by

*nursing team*, which in Brazil is composed by the categories nurse, technician and nursing assistant.

The substitution of the word *ward* by *inpatient unit* or simply *unit* along the entire instrument was justified by the fact that the word *ward* denotes a physical structure that is not consistent with the current structure of the hospital units, where beds are arranged in rooms composing the inpatient unit.

The committee members suggested that contact with the instrument author was made in order to clarify doubts regarding two items: item 19 of the *Experiences of Nursing Care Scale* and item 13 of the *Satisfaction with Nursing Care Scale*. There was doubt about the meaning of item 13 by the committee members, whether the goal would be to assess patient satisfaction with information related to a specific situation or general information. The version proposed for the item, *The type of information the nursing team gave to you about your condition and treatment*, was considered adequate by Dr. Elaine McColl.

Regarding item 19 of the *Experiences of Nursing Care Scale*, Dr. Elaine McColl explained that the underlying theoretical concept was that the nursing team has knowledge, skills, confidence and autonomy to provide the necessary care to the patient without the need to have medical orders. The author also pointed out that it would be important that the item explicitly mentioned the idea of not having to rely on or refer to the medical team and suggested that the resulting pre-final version was: *The nursing team knew what to do without needing to check constantly with the doctors*.

At the pre-test, regardless of the educational level of the subjects, there were important contributions regarding the clarity of some instrument items. Those with higher educational level suggested changes of words or

expressions in order to facilitate the understanding of the NSNS items. This step enabled the solution of inconsistencies of some of the items for clarity and understanding by the subjects<sup>(19)</sup>.

The NSNS has been used in different countries<sup>(8-17)</sup> and reports of the process of translation and cultural adaptation were found in the literature in Turkey<sup>(11)</sup>, Italy<sup>(12)</sup>, Spain<sup>(13)</sup> and Portugal<sup>(16)</sup>.

Regarding the practical use of the NSNS translated and adapted to Brazilian Portuguese, most patients considered the instructions easy to understand, and regarding the items, 47.5% agreed that they were easy to understand.

## CONCLUSION

The process of cultural adaptation of the NSNS to Brazilian Portuguese was successfully completed after following all steps recommended in the literature.

The results of this study represent a stage prior to the assessment of reliability and validity of the instrument, whose methodological procedure of cultural adaptation ensured the content validity of the NSNS. The data resulting from the assessment of the psychometric properties of the instrument will be presented in a future publication.

The availability of the NSNS in Brazil may allow the assessment of the patient's perception about the quality of nursing care, reflected not only regarding the patient satisfaction, but also by the assessment of their experiences with nursing care. This assessment from the patient's perspective can provide important information to plan nursing care, in order to meet the needs of these individuals, allowing the active participation of patients in their care.

## REFERENCES

1. Sofaer NG, Brown J, Hepner KA, Hays RD. Review of the literature on survey instruments used to collect data on hospital patients' perceptions of care. *Health Serv Res.* 2005;40(6):1996-2017.
2. Milutinovic D, Brestovacki B, Martinov-Cvejic M. Patients' satisfaction with nursing care as an indicator of quality of hospital service. *Health Med.* 2009;3(4):412-9.
3. Wagner D, Bear M. Patient satisfaction with nursing care: a concept analysis within a nursing framework. *J Adv Nurs.* 2009;65(3):692-701.
4. Larrabee JH, Ostrow CL, Withrow ML, Janney MA, Hobbs GR Jr, Burant C. Predictors of patient satisfaction with inpatient hospital nursing care. *Res Nur Health.* 2004;27(4):254-68.
5. Risser NL. Development of an instrument to measure patient satisfaction with nurses and nursing care in primary care settings. *Nurs Res.* 1975;24(1):45-51.
6. Oliveira AML, Guirardello EB. Patient satisfaction with nursing care: a comparison between two hospitals. *Rev Esc Enferm USP.* 2006;40(1):71-7.
7. Thomas LH, McColl E, Priest J, Bond S, Boys RJ. Newcastle satisfaction with nursing scales: an instrument for quality assessments of nursing care. *Qual Health Care.* 1996;5(2):67-72.
8. Findik UY, Unsar S, Sut N. Patient satisfaction with nursing care and its relationship with patient characteristics. *Nurs Health Sci.* 2010;12(2):162-9.
9. Ahmad MM, Alasad JA. Predictors of patient's experiences of nursing care in medical-surgical wards. *Int J Nurs Pract.* 2004;10(5):235-41.
10. Alasad JA, Ahmad MM. Patient's satisfaction with nursing care in Jordan. *Int J Health Care Qual Assur.* 2003;16(6):279-85

11. Akin S, Erdogan S. The Turkish version of the Newcastle Satisfaction with Nursing Care Scale used on medical and surgical patients. *J Clin Nurs*. 2007;16(4):646-53.
12. Piredda M, Cossu L, Amato S, Alvaro R, Tartaglini D, Spiga F, et al. A measure of patient satisfaction with nursing care: the Italian version of "Newcastle Satisfaction with Nursing Scales". *Int Nurs Perspect*. 2007;7(2-3):25-31.
13. Alonso R, Blanco-Ramos MA, Gayoso P. Validación de un cuestionario de calidad de cuidados de enfermería. *Rev Calidad Asistencial*. 2005;20(5):246-50.
14. Walsh M, Walsh A. Measuring patient satisfaction with nursing care: experience of using the Newcastle Satisfaction with Nursing Scale. *J Adv Nurs*. 1999;29(2):307-15.
15. Alhusban MA, Abualrub RF. Patient satisfaction with nursing care in Jordan. *J Nurs Manag*. 2009;17(6):749-58.
16. Rodrigues SPF. Supervisão em Enfermagem Neonatal: pais e enfermeiros como parceiros no desenvolvimento de competências [Internet]. Aveiro: Universidade de Aveiro; 2010 [citado 2012 jul. 16]. Disponível em: <http://ria.ua.pt/bitstream/10773/1416/1/2010000487.pdf>
17. Peterson WE, Charles C, DiCenso A, Sword W. The Newcastle Satisfaction with Nursing Scales: a valid measure of maternal satisfaction with inpatient postpartum nursing care. *J Adv Nurs*. 2005;52(6):672-81.
18. Lobiondo-Wood G, Haber J. *Nursing research: methods, critical appraisal and utilization*. 4<sup>th</sup> ed. St. Louis: Mosby; 2001.
19. Beaton DE, Bombardier C, Guillemin F, Ferraz MB. Recommendations for the cross-cultural adaptation of the DASH & QuickDASH outcome measures [Internet]. Rosemont: American Academy of Orthopaedic Surgeons and Institute for Work & Health; 2007 [cited 2012 July 16]. Available from: <http://www.dash.iwh.on.ca/how-translate2htm>
20. Guillemin F. Cross-cultural adaptation and validation of health status measures. *Scan J Rheumatol*. 1995;24(1):61-3.
21. Thomas L, Bond S, McColl E, Milne E. *The Newcastle Satisfaction with Nursing Scales (NSNS): user's manual*. Newcastle upon Tyne: Newcastle University, Centre for Heal; 1996.
22. Coluci MZO, Alexandre NMC. Development of a questionnaire to evaluate the usability of assessment instruments. *Rev Enferm UERJ*. 2009;17(3):378-82.

#### Acknowledgements

We acknowledge the financial support provided by CAPES and also the University of Newcastle staff, for their permission to conduct the cultural adaptation and validation of the instrument in Brazil.