



# Content validation of the Brazilian version General Comfort Questionnaire

## Validação do conteúdo da versão brasileira do *General Comfort Questionnaire*

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**Objective:** to validate the content of the Brazilian version of the General Comfort Questionnaire. **Methods:** validation study; the instrument was evaluated by 22 judges for clarity, comprehension, relevance, association with comfort and classification of items in the domains. The agreement among judges was analyzed through a binomial test and the Content Validation Index. **Results:** of the 48 items, ten were distributed in the physical domain, with agreement between 0.5 and 1.0; 11 in the socio-cultural domain (0.59 - 0.90); ten in the environmental (0.68 - 1.0); and 17 items in the psycho-spiritual (0.45 - 1.0). Regarding the criteria of clarity and association with comfort, all items obtained satisfactory evaluation and four did not reach the recommended agreement. **Conclusion:** the instrument is valid for measuring this construct and verifying the quality of care produced by the nursing staff according to the judges' perception, since the overall Content Validity Index was 0.81.

**Descriptors:** Patient Comfort; Validation Studies; Nursing; Nursing Theory.

**Objetivo:** validar o conteúdo da versão brasileira do *General Comfort Questionnaire*. **Métodos:** estudo de validação, no qual o instrumento foi avaliado por 22 juízes quanto à clareza, compreensão, relevância, associação com o conforto e classificação dos itens nos domínios. A concordância dos juízes foi analisada pelo teste binomial e Índice de Validação de Conteúdo. **Resultados:** dos 48 itens do instrumento, dez foram distribuídos no domínio físico, com concordância entre 0,5 e 1,0; 11 itens no sociocultural (0,59-0,90); dez itens no ambiental (0,68-1,0); e 17 itens no psíquicoespiritual (0,45-1,0). Quanto aos critérios de clareza e associação com o conforto, todos os itens obtiveram avaliação satisfatória e quatro não atingiram concordância recomendada. **Conclusão:** o instrumento torna-se válido para mensurar esse construto e verificar a qualidade do cuidado produzido pela equipe de enfermagem na percepção dos juízes, uma vez que o Índice de Validação de Conteúdo geral foi de 0,81. **Descritores:** Conforto do Paciente; Estudos de Validação; Enfermagem; Teoria de Enfermagem.

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## Introduction

Personalized care is related to the quality of the assistance provided and one of the ways to improve such quality is by implementing the nursing process, which uses theoretical references for scientific foundation of the elaboration and provision of health care<sup>(1)</sup>. Among existing theoretical frameworks, Kolcaba's Theory of Comfort predicts that comfort is understood as the satisfaction of basic human needs and the result of nursing care<sup>(2-3)</sup>.

Accordingly, nurses should be agents of practices that can promote active, passive or cooperative satisfaction of basic human needs for relief, tranquility, or transcendence arising in multiple stressful situations experienced by patients. Thus, biopsychosocial attention becomes essential to reduce negative tensions and engage in positive tensions, such as relief from pain, anxiety and discomfort<sup>(4-6)</sup>, common in many patients.

Comforting someone is a subjective act; it involves several aspects such as comfort care, comfort measures, comfort needs, health seeking behaviors, institutional integrity, and intervening variables<sup>(7)</sup>. To promote holistic nursing care that includes physical, psycho-spiritual, social and environmental interventions, it is necessary to understand the domains of comfort to reach the states of relief, tranquility and transcendence<sup>(3)</sup>.

Based on these definitions the theorist Katherine Kolcaba built the General Comfort Questionnaire (GCQ), an instrument composed of 48 items covering physical, spiritual, environmental and social dimensions. The questionnaire aims to measure comfort, identify positive and negative aspects involved in the provision of care for a patient regardless of his health condition, and measure factors related to comfort needs and care. Thus, it is noteworthy that this instrument has been translated and adapted to the Brazilian reality as to the semantic and conceptual validity of its items<sup>(8)</sup>.

However, in order to evaluate comfort as a dimension of nursing actions, it is essential to validate the content of the items in this instrument in order to favor the planning and implementation of interventions considered appropriate, successful and effective to the comfort needs of patients in the clinical practice<sup>(7)</sup>. There is a gap in nursing instruments as to the ability to measure and give dimension to the health status of individuals based on the various theoretical models of basic needs in the Brazilian reality. Thus, it is necessary to carry out the next phase of content validation by experts<sup>(9)</sup>.

In view of the relevance of the adequacy of the GCQ in relation to semantic and content aspects, content validation by experts emerges as a prime tool because it favors professionals with experience in the area to provide significant collaborations to validate the items of the instrument<sup>(10)</sup>. Based on the above, this study aimed to validate the content of the Brazilian version of General Comfort Questionnaire.

## Methods

This is a validation study, with the aim to validate the content of the Brazilian version of the General Comfort Questionnaire<sup>(8)</sup>. The population consisted of 22 judges with expertise in the theme of comfort. Of these, 11 also had proven experience through scientific production in instrument validation. The sample calculation to determine the number of specialists<sup>(11)</sup> was as follows:  $n = Z\alpha 2.P (1-P)/e^2$ , where, " $Z\alpha 2$ " is the confidence level adopted (1.96), " $P$ " is the expected proportion of experts who agree with each item evaluated (85.0%), and " $e$ " is the acceptable proportional difference with respect to expected (15.0%). Thus, the sample of the first section of the results consisted of 22 experts.

The requirements established for the inclusion of specialists in the content validation of the instrument were: to have at least one year of experience with comfort in the practice of care and/or teaching

and/or research. The selection of judges occurred through snowball sampling, starting with contact with teachers of the nursing course who indicated eligible experts to compose the team of evaluators of the instrument.

The contact occurred by email. An invitation letter was sent together with the evaluation instrument to be answered, via Google Form. A deadline of 15 days was set for sending the response. The instrument was composed of the 48 items of the scale and four questions to be answered regarding the clarity, relevance, association with comfort of each item, and their classification in domains.

The answers were expressed dichotomously for the items clarity, relevance and association of the item with comfort. As to the classification of items in domains, this was expressed nominally.

Items without satisfactory agreement on the criteria of clarity, relevance, association with comfort and classification in the domains were modified and evaluated by a committee of three judges with high expertise proven by publications in the subject of comfort based on Katharine Kolcaba's theoretical framework for more than 20 years; their final evaluation was the criterion used as tiebreaker in the allocation of items in the domains.

The Content Validation Index (CVI) was used for grouping the items in the dimensions, and items with agreement equal to or greater than 0.80 was considered valid. To assess the clarity, relevance and association with item comfort, a binomial test was used to verify whether the proportion of nurses who agreed was statistically equal to or greater than 0.80 (value defined to consider an item as valid)<sup>(11)</sup>. For this test the significance level adopted was 5% and the Confidence Interval (CI) 95%.

The study was approved by the Research Ethics Committee of the Federal University of Ceará, under nº 1,482,596/2016.

## Results

The committee of evaluators was composed of nurses, of whom eight were male (36.3%) and 14 female (63.6%). As for the degree, seven (31.8%) were specialists, ten (45.5%) were masters and five (22.7%) had PhD. Regarding occupation, 12 (54.6%) worked in teaching and research; five (22.7%) worked only in care provision; four (18.2%) conciliated care, teaching and research activities and one (4.5%) worked in care and teaching. All of them had three to 20 years (average 5.54 years) of experience with the theme of comfort, and eleven had experience with instrument validation.

The judges classified and evaluated the content of the items of the questionnaire in the physical, social, environmental and spiritual domains, and these are presented in Table 1.

The judges attributed a percentage of 0.81 to the general CVI, considering the instrument appropriate to measure the construct. Some items that did not reach satisfactory CVI regarding the classification in the domains were reevaluated by three other judges, and are presented in Table 2.

The classification of the ten items in the physical domain obtained an agreement that ranged from 0.500 to 1 in the first evaluation. Of these, item 32 "This chair (bed) makes me hurt" and item 41 "I feel crummy because I am not dressed" did not reach a satisfactory consensus in the first evaluation, as to their allocation in the physical domain. They were therefore reassessed by the committee of three judges with expertise in Comfort Theory, thus obtaining maximum agreement that the contents of the two items refer to the physical domain.

Eleven items were allocated in the sociocultural domain. Of these, eight items did not obtain satisfactory agreement in the first evaluation, which ranged from 0.590 to 0.909. In the second round, six items did not reach satisfactory agreement, ranging from 0.333 to 0.660.

**Table 1** – Classification of items in domains, agreement, clarity and comprehension, relevance, and association with comfort (n=22)

Items	CVI*	CLA†	REL‡	CON§	p
<b>Physical domain</b>					
1. I feel my body relaxed now	1	1	1	0.99	1
5. I don't want to exercise	1	1	0.84	0.95	1
14. My pain is difficult to endure	0.90	0.95	1	1	0.86
19. I am constipated right now	1	1	0.95	0.99	1
20. I do not feel healthy right now	0.95	1	0.95	0.95	0.97
25. I am hungry	1	0.95	0.84	0.84	1
28. I am very tired	1	1	1	0.99	1
32. This chair (bed) makes me hurt	0.63	1	1	1	0.01
36. I feel good enough to walk	0.95	1	0.95	1	0.97
41. I feel crummy because I am not dressed	0.5	0.84	0.95	0.84	0.00
<b>Sociocultural Domain</b>					
02. I feel useful because I'm working hard	0.81	0.84	0.13	0.05	0.42
04. There are those I can depend on when I need help	0.81	0.99	0.26	0.13	0.42
08. I feel dependent on others	0.68	1	0.84	0.99	0.03
13. No one understands me	0.72	0.99	0.84	0.66	0.09
16. I am unhappy when I am alone	0.59	0.95	0.95	0.95	0.00
23. I have a favorite person(s) who makes me feel cared for	0.68	0.99	0.84	0.84	0.03
26. I would like to see my doctor more often	0.68	1	0.84	0.95	0.03
30. The mood around here uplifts me	0.59	0.95	0.95	0.95	0.00
35. I feel out of place here	0.72	1	1	1	0.09
37. My friends remember me with their cards and phone calls	0.90	0.99	0.66	0.95	0.86
39. I need to be better informed about my health	0.68	1	0.95	0.95	0.03
<b>Environmental Domain</b>					
03. I have enough privacy	0.68	0.84	0.84	0.84	0.03
11. These surroundings are pleasant	0.95	0.45	0.99	1	0.86
12. The sounds keep me from resting	0.90	1	1	1	0.86
18. I do not like it here	0.81	0.66	0.95	0.99	0.42
21. This room makes me feel scared	0.95	0.99	0.99	1	0.86
27. The temperature in this room is fine	0.81	1	0.95	1	0.42
33. This environment inspires me	0.68	0.05	0.05	0.05	0.03
34. My personal belongings are not here	0.81	0.84	0.66	0.95	0.42
42. This room smells terrible	1	1	1	1	1
47. It is easy to get around here	0.95	0.99	0.95	0.95	0.86
<b>Psycho-spiritual Domain</b>					
06. My condition gets me down	0.77	0.84	0.99	0.99	0.09
07. I feel confident	1	0.99	0.45	0.26	1
09. I feel my life is worthwhile	1	1	0.84	0.45	1
10. I am inspired by knowing that I am loved	0.77	0.99	0.84	0.84	0.09
15. I am inspired to do my best	1	1	0.84	0.66	1
17. My faith helps me not to be afraid	1	1	0.95	0.95	1
22. I am afraid of what is next	1	0.95	0.95	0.95	1
24. I have experienced changes which make me feel uneasy	0.54	0.99	1	1	0.00
29. I can rise above my pain	0.77	0.99	0.99	1	0.09
31. I am happy	0.77	0.99	0.95	0.95	0.09
38. My beliefs give me peace of mind	1	1	0.95	1	1
40. I feel out of control	0.90	0.95	0.66	0.66	0.86
43. I am alone but not lonely	0.45	0.99	1	1	0.03
44. I feel peaceful	1	1	1	1	1
45. I am depressed	0.90	1	0.99	1	0.86
46. I have found meaning in my life	0.95	1	0.66	0.84	0.86
48. I need to feel good again	0.72	0.99	1	1	0.09
<b>General CVI</b>			0.81		

\*Content validity index; †Binomial test for the clarity criterion; ‡Binomial test for the relevance criterion; §Binomial test for association with comfort

**Table 2** – Classification of items in the domains in the second round (n=3)

Items	CVI*	CI95%†
<b>Physical Domain</b>		
32. This chair (bed) makes me hurt	1	-
41. I feel crummy because I am not dressed	1	-
<b>Sociocultural Domain</b>		
08. I feel dependent on others	1	-
13. No one understands me	0.666	0.12 – 0.98
16. I am unhappy when I am alone	0.666	0.12 – 0.98
23. I have a favorite person(s) who makes me feel cared for	1	-
26. I would like to see my doctor more often	0.666	0.12 – 0.98
30. The mood around here uplifts me	0.333	0.01 – 0.87
35. I feel out of place here	0.666	0.12 – 0.98
39. I need to be better informed about my health	0.666	0.12 – 0.98
<b>Environmental Domain</b>		
03. I Have enough privacy	0.333	0.01 – 0.87
33. This environment inspires me	0.666	0.12 – 0.98
<b>Psycho-spiritual Domain</b>		
06. My condition makes me sad	0.666	0.12 – 0.98
10. I am inspired by knowing that I am loved	0.666	0.12 – 0.98
24. I have experienced changes which make me feel uneasy	0.666	0.12 – 0.98
29. I can rise above my pain	0.666	0.12 – 0.98
31. I am happy	1	-
43. I am alone but not lonely	0.666	0.12 – 0.98
48. I need to feel good again	0.666	0.12 – 0.98

\*Content Validity Index; †CI: Confidence Interval

Ten items were grouped in the environmental domain and two did not reach the recommended agreement. Thus, when the item 3 “I have enough privacy” and 33 “This environment inspires me” passed through the second evaluation, there was a divergent response between the three judges, where each classified the item as belonging to different domains (CVI=0.333). However, as the criterion adopted for the choice was the maximum agreement between judges, so they remained in the environmental domain. As for the item 33, two judges (CVI=0.666) classified it in the environmental domain.

The spiritual domain has 17 items, of which seven did not reach satisfactory agreement, ranging from 0.450 to 1. After the second evaluation, four items had no improvement in agreement rates: items 6, 10, 29 and 48. In this sense, of the 19 items that pas-

sed through the second evaluation, eight had improvement in agreement rates, and four were changed to different domains after the opinion of the three experts, namely, items 16, 24, 41 and 43.

The items were also evaluated for clarity/comprehension, relevance and association with comfort. The results of the binomial test of each criterion are presented in Table 1. The items that make up the physical domain were considered clear and comprehensible, relevant and associated with comfort (0.845 to 1).

In the sociocultural domain, all items were considered clear and comprehensible (0.845 to 1), and two items (2 and 4) did not reach satisfactory agreement regarding relevance (0.133 and 0.267) and association with comfort (0.056 to 0.133).

In the environmental dimension, two items (11 and 33) did not reach agreement on clarity and

comprehension (0.457 and 0.056). As for relevance and association with comfort, only item 33 did not reach satisfactory agreement (0.056). In this sense, it was decided to follow the suggestions of the judges to change the writing of these items in order to make them clearer. Item 11 was written as follows: "This environment is pleasant" and item 33 as "This environment inspires me". Item 33 also underwent reevaluation regarding the criteria of relevance and association with comfort, showing improvement in agreement (0.488 and 1), respectively.

In the psycho-spiritual dimension, all items were considered clear and understandable (0.845 to 1). Item seven was not considered relevant (0.457). As for the association with comfort, items seven and nine did not reach the recommended index (0.267 and 0.457). Given this, they underwent reevaluation with three judges regarding the association with comfort, showing full association.

Of the seven items that underwent reassessment for the criteria of clarity, comprehension and association with comfort, all obtained a satisfactory evaluation. As for the four items reassessed for relevance, only one obtained satisfactory evaluation. Therefore, it is proposed that the GCQ-Brazilian version be validated with the target audience, in order to verify in practice which items can be excluded from the Brazilian version of the instrument in addition to verifying the strength of the grouping of the items in the domains.

## Discussion

The limitation of this study is not to show studies in the international literature with validation of general content, as well as regarding the clarity, relevance and association of the item with comfort in other languages and contexts of care. Particularly, these criteria in instrument validation studies have been delimited by Brazilian researchers.

We recognize that this study is able to contribute strongly to the science of nursing, since the Bra-

zilian version of the GCQ presented adequate properties of association with the comfort construct. Thus, it was noticed that this instrument can be applied in research and clinical practice, as it enables the measurement of the level of comfort and the quality of care produced. However, there is a need for follow-up in the subsequent stages of the psychometric validation of the instrument.

The direction of contemporary nursing care actions is based on the proposition, application and evaluation of structured instruments that allow identifying critical points and potentialities of patients with a view to promoting, rehabilitating and/or maintaining their health status<sup>(12-13)</sup>. However, considering that care strongly transits the cultural aspect, several instruments have been translated and adapted to different cultures, including in Brazil, so that they may coherently evaluate the construct proposed<sup>(8)</sup>.

The validity of the content allowed us to clearly elucidate the meta-paradigmatic concepts of the Comfort theory for empirical indicators, which are the concrete elements of the definitions and relational propositions of theory according to Fawcett's criteria. Thus, it is observed that health is a satisfactory state of functioning of the body, defined based on individual or collective assessment (family, community); a sick individual is the one to whom care is directed, and this may be a person or groups; nursing is a process chain of intentional assessment and reevaluation to identify comfort needs; and, the environment is the junction of aspects that surround the sick individual, as well as the institutional networks that nurses can manage to increase the offer of comfort<sup>(14)</sup>.

Regarding the items that are associated with comfort, it was observed that the study allowed to consolidate that the physical, social, environmental and spiritual domains are dimensions that can interfere positively or negatively to assess the comfort level by the patient, although some disagreements among experts occurred regarding the allocation of some items and their level of association with comfort, even after the second evaluation.

Among the domains included in the questionnaire, the judges who were experts in the comfort construct and who evaluated the instrument in the second round did not reach a satisfactory level of agreement in four items regarding the sociocultural and psycho-spiritual domain, respectively.

These disagreements are possible and occur due to the difficulty of delimiting aspects that are intrinsic to each domain linked to the reference adopted to be human by the judges participating in the study. A similar reality was found in a Portuguese study with 3,451 nurses who used several references regarding meta-paradigmatic concepts. Regarding the human being, these conceptions were found to be based on the conceptions<sup>(15)</sup> of Virginia Henderson, Afaf Meleis, Madeleine Leininger, Dorothea Orem and Callista Roy.

Thus, it is noted that the judges presented different worldviews from the theory under study, especially in conceptions of reaction and simultaneous action. It is essential to highlight that the dimensionality of the construct is something present in the vision of reciprocal interaction, in which individuals are seen as holistic, active and interactive with their environments, which, in turn, return interactions<sup>(16)</sup>. Reality is seen as multidimensional, context-dependent, and relative.

This disagreement can be explained by the fact that items two and four were related to a condition of productivity and potency of social activity, which are sometimes limiting in cases of chronic morbidity. Items 7 and 9, on the other hand, report confidence and self-worth, strongly subjective concepts and that vary according to the patients' experiences in relation to their family and institutional context. A study on comfort in breast cancer patients in Indonesia showed that they were happier when family members could take care of them, receiving support from health staff, believing in cultural treatment and helping with financial problems<sup>(17)</sup>.

It is noteworthy that having disagreements in instruments such as this is a justifiable and likely feature in validation studies for constructs of a more sub-

jective magnitude, as in the case of the assessment of psychological well-being<sup>(18)</sup>.

Specifically in relation to the Physical domain, most items were correctly classified and all strongly associated with comfort. This dimension obtained more positive results, because feeling comfortable is undoubtedly linked to the conditions of physical well-being, satisfactory self-regulation of the body, and good performance in body systems<sup>(17)</sup>.

Among all domains, the one that presented the lowest evaluation for clarity, comprehension and association with the comfort construct was the social one. In a review conducted in Brazil to identify the characteristics that define the domains of comfort, it was found that the actions aimed at family members, patient and family relationships, and playful activities to promote comfort were inserted in the social domain<sup>(7)</sup>.

The environmental domain showed a high level of agreement as to clarity, comprehension, relevance and association with comfort in most items. This result is relevant because, from the clinical point of view, there is evidence that patients' environmental perceptions (sensory or not) about the place they are may provide better possibilities for comfort and health recovery<sup>(19)</sup>.

As for the spiritual domain, which includes self-esteem, self-concept, sexuality, self-meaning, faith in God and feeling useful<sup>(7)</sup>, there was a valid allocation in the case of most items. In the context of assessing comfort by caregivers of palliative care patients using the GCQ, it was found that being a practitioner of a religion increased the score of comfort, thus ratifying the allocation of the dimension of spirituality as a necessary characteristic for the evaluation of this construct<sup>(20)</sup>.

## Conclusion

This study allowed a better understanding of the items that make up the general comfort questionnaire proposed from the perspective of nursing assis-

tants and researchers. Thus, this instrument is valid to measure this construct and to verify the quality of care produced based on the relationship of comfort of patients assisted by the nursing staff.

## Collaborations

Melo GAA, Silva RA and Caetano JA contributed to the study design, data collection and interpretation, relevant critical review of the content and final approval of the version to be published. Aguiar LL, Pereira FGF and Galindo Neto NM contributed to the writing and relevant critical review of intellectual content.

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