# How to *quantify* the qualitative aspects of nursing outcomes classification scales with psychosociocultural indicators

COMO QUANTIFICAR OS ASPECTOS QUALITATIVOS NAS ESCALAS DE CLASSIFICAÇÃO DE RESULTADOS NOC PARA ETIQUETAS PSICOSSOCIOCULTURAIS

CÓMO *CUANTIFICAR* LOS ASPECTOS CUALITATIVOS EN ESCALAS DE CLASIFICACIÓN DE RESULTADOS NOC PARA ETIQUETAS PSICO-SOCIOCULTURALES

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**ABSTRACT**

Working necessarily with Likert scales to measure Nursing Outcomes Classification (NOC) outcomes has the advantage of unification, but also presents difficulty in reducing the rating from 1 to 5, especially when the research is qualitative and thus includes the use of words and expressions, as well as observations and perceptions. What exactly does a score of 2 or 3 mean with regard to the NOC *Health beliefs*? In this paper, we make a number of different proposals for operationalizing concepts and transforming them to numbers; however, it should be noted that such proposals always end in a quantitative analysis. Thus, we propose the use of emic/etic qualitative observations for psychosocial and cultural indicators, following ethnographic principles. Basic and applied research on nursing languages must have correct methodological foundations and seek to satisfy the same criteria of methodological suitability as any other research.

**DESCRIPTORS**
Nursing research
Nursing methodology research
Classification
Evaluation
Reproducibility of results

**RESUMEN**

El hecho de trabajar necesariamente con escalas Likert en la medición de resultados NOC tiene la ventaja de la unificación, pero acarrea también la dificultad de cómo reducirlo a un número del 1 al 5, especialmente cuando una investigación es cualitativa y que por tanto trabaja con palabras y expresiones, con observaciones y percepciones. ¿Qué quiere exactamente decir un 2 o un 3 en el NOC *Creencias sobre la salud*? En el artículo se muestran las diferentes propuestas para la operacionalización de conceptos y su transformación en números, pero se advierte que en ellas siempre se termina con un análisis cuantitativo. Se hace una propuesta de utilización de observaciones cualitativas emic/etic para las etiquetas psicosociales y culturales siguiendo los postulados de la etnografía. La investigación en lenguajes enfermeros, básica y aplicada, debe tener cimientos metodológicos correctos y atender los mismos criterios de idoneidad metodológica que cualquier otra investigación.

**DESCRIPTORES**
Investigación en enfermería
Investigación metodológica en enfermería
Clasificación
Evaluación
Reproducibilidad de resultados

**RESUMO**

O fato de trabalhar necessariamente com Escalas tipo Likert para medir resultados NOC tem a vantagem de unificar, mas existe a dificuldade de como convertê-lo a um número de 1 ao 5, especialmente, quando uma pesquisa é qualitativa e por tanto trabalha com palavras e expressões, com observações e percepções. Que quer dizer exatamente 2 ou 3 nos NOC *Crenças sobre a saúde*? Neste artigo apresentamos diferentes propostas para operacionalização de conceitos e sua transformação em números, advertindo que a mesma sempre termina com uma análise quantitativa. Propomos utilizar as observações qualitativas emic/etic para etiquetas psicossociais e culturais, seguindo postulados da etnografia. Os estudos em linguagem enfermeiro, básica e aplicada, devem ter cimentos metodológicos corretos e atender aos mesmos critérios de idoneidade metodológica que qualquer outro estudo.

**DESCRITORES**
Pesquisa em enfermagem
Pesquisa metodológica em enfermagem
Classificação
Avaliação
Reprodutibilidade dos resultados

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## INTRODUCTION

The recent momentum that nursing taxonomies have gained for the advancement of the profession is due to the ability to use a common language to describe the work of nurses and to standardize research on the quality and effectiveness of nursing care. As stated by the Nursing Outcomes Classification (NOC) authors themselves:

Outcomes management and effectiveness research has become imperative in nursing practice in this era of managed care and integrated health care systems, but the evaluation of nursing effectiveness is hindered by a number of factors, including the inability to quantify nursing outcomes in most clinical settings. (NOC: 16[1]).

Indeed, the development of nursing knowledge relies on the measurement of grouped results that provide improvement strategies for patient care.

Working necessarily with Likert scales has the advantage of unification but also presents difficulty in reducing the rating from 1 to 5, especially when the research is qualitative, and thus includes the use of words and expressions as well as observations and perceptions. What exactly does a score of 2 or 3 mean with regard to the NOC outcome of *Health beliefs*? The different scales of the NOC attempt to deal with this problem by choosing the most appropriate scale, based on the topic under discussion. For example, the aforementioned NOC outcome of *Health beliefs* provides a scale from *Very weak* to *Very intense*, whereas other categories within the NOC that have a more physiological scope provide different scales: for example, the *Weight: body mass* outcome provides a scale from *Severe deviation from normal range* to *No deviation from normal range*.

However, clinical judgment is fundamental for scoring sensitive indicators adequately, both for daily clinical practice and for research. It is also necessary to establish which methodology has been used; in this case, *methodology* refers to how the research is being conducted, whether this is to investigate the effectiveness of care, *gold standards* or key indicators, or the interrelations between the NNN (North American Nursing Diagnosis Association – Nursing Inteventions Classfication – Nursing Outcomes Classification (NANDA-NIN-NOC) taxonomies.

Thus, we must find methodologies that help transition from the abstract to the concrete, i.e. the operative definitions or the operationalization of concepts.

### OPERATIONALIZATION OF CONCEPTS: METHODOLOGY PROPOSALS

The operationalization process entails a way of thinking that leads from the abstract (concept) to the concrete (measurement). It is therefore necessary to differentiate and understand the two fundamental notions of the global process of operationalization: conceptualization and measurement[2].

- Conceptualization refers to the theoretical process through which ideas or theoretical constructs are clarified. These ideas and constructs derive from theoretical reflections based on a review of the literature, or they may come from reflections that stem from the author's own field work.

- Measurement connotes the general process that links physical operations of measurement with mathematical operations of assigning numbers to objects.

The complete process would therefore entail a triple nexus that connects theoretical concepts with physical operations of measurement, and the latter with numbers (mathematical symbols). Some authors consider this concept appropriate for the physical sciences but not for the social sciences, given that many social phenomena are too abstract for measurement, as mentioned above[3]. Nevertheless, in this study we began with the idea that standardization of the NOC is beneficial for research, hence the key issue is how these concepts translate to operational definitions or terms, and how they can be used to deduce empirical categories or indicators that can corroborate the concept being analyzed.

The concepts fulfill a fundamental function of synthesis, i.e. of a common denominator that encompasses a series of observations, giving them meaning. For example, the concept of *sadness* constitutes a common denominator for a series of different symptoms, including crying, depression, low tone of voice, refusal to speak or eat, and sleeping problems, The concepts may evoke individual or collective realities, as, according to Bourdieu's definition *they are structures that make us structure reality*[4].

The concepts are essentially different with respect to their degree of abstraction; the concept of *power*, for example, denotes a higher degree of abstraction than does the concept of *education*.

The NOC talks about four general levels of abstraction based on which the nursing outcomes are designed and by which processes are measured at an empirical level. At higher levels the level of abstraction is higher, and it becomes increasingly concrete until it reaches the most empirical level, which is that of measurement scales.

In practice, the empirical level is easier to define when numerical data are used, such as blood pressure, or the number of times a patient needs to urinate/defecate.

It is also necessary to define and to know what each point of the scales means. According to Rodríguez et al., when

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theoretical concepts are to be operationalized, it is always necessary to start with the following considerations[2]:

**Chart 1** – Levels of abstraction in NOC taxonomy - Barcelona, 2008

| Level of abstraction | Classification |
|---|---|
| Mostly abstract | Domains of nursing outcome |
| Medium to high abstraction | Classes of nursing outcomes |
| Medium abstraction | Nursing outcomes |
| Low abstraction | Indicators of nursing outcomes |
| Empirical | Measurement of nursing outcomes activities |

Source: Moorhead S *et al.* NOC. 2008: 41[1]

There must be full correspondence between the indicators and the concept to be measured. Indicators must be chosen to ensure they correspond to the latent property that the concept represents in validity and reliability.

Indicators can be presented in various forms, such as questions in a survey, analysis categories in an open interview, recording of an observed behavior, or statistical data, depending on the technique that the researcher has chosen when designing the research to obtain information.

In operationalization, as in any analytical process, there are some uncertainty margins. To reduce these to a minimum, it is necessary to use the same validation and rigor criteria as in any research.

The proposed methodologies by which this process is being carried out and some examples are as follows.

### 1. Operationalization of already validated scales

Research on the harmonization of already known and validated scales, such as the visual analogue scale VAS for pain, in order to merge them with the five-point Likert scales used in the NOC, is already under way. It is possible to merge some scales (e.g. on satisfaction, quality of life), which are many of them, by taking those survey items that coincide with the indicators suggested by the NOC, or proposing the inclusion of others. In this way, it is possible to ensure compatibility between charts or clinical-history records that have been developed with scales such as the EVA, Norton Risk Assessment Score, Glasgow Coma Scale, or Barthel Index, and the records used in programs of NNN care plans. For example *10* on the EVA scale may correspond to *5* in the NOC for *pain level*, or *10* on the Norton scale may correspond to *5* in the NOC for *Tissue integrity: skin and mucous membranes*[5].

### 2. Use of two scales: numbers or words that describe indicators

Instead of harmonizing an already validated scale with the Likert scale of the NOC, another possible method for the development and validation of bespoke tools is to assign numbers or descriptive words for an outcome's selected indicators, so that a clinical meaning is given to each point of a scale[6]. For example, a group of nurses at a palliative care hospital in Iowa used the indicators that they considered appropriate from the *Dignified death* outcome, and assigned descriptors to each of the scale values based on the reviewed literature on how patients and their families cope with the death process. For example, for the indicator *Puts his/her affairs in order*, the values suggested the following alternative scale to the NOC scale, which uses a scale of *not at all* to *very extensive*[7]:

1. Does not worry about or is not capable of putting his/her (legal, personal, business, or financial) affairs in order.

2. Worries about and is capable of identifying the affairs that must be put in order.

3. Participates actively in the organization of his/her affairs.

4. Puts most of his/her affairs in order.

5. Puts all his/her legal, personal, business, and financial affairs in order.

6. A cohort study was used from day 2 to day 48 of admission, and the data were analyzed quantitatively at a later date.

### 3. Use of NOC indicators as defining characteristics (indicators/diagnosis) and related factors (etiological indicators)

Through validation by experts, Morilla-Herrera *et al*[8] developed a supporting tool for the diagnosis *Inefficient management of one's own health*, in which each indicator represented one or more defining characteristics or relational factors. The scale of 1 to 5 was maintained in ascending order. Thus, low values (no outcome criterion) confirmed the presence of defining characteristics of the diagnosis (in the case of diagnosis indicators) or of related factors (in the case of etiological indicators), and *vice versa*.

### 4. Use of fuzzy logic

*Fuzzy logic* is a mathematical term used to describe a logic based on the theory of fuzzy sets, which makes it possible to imitate the behavior of human logic. In artificial intelligence, fuzzy logic is a machine-reasoning method similar to human thought, which can process incomplete or uncertain information, and is used to represent imprecise, ambiguous, or vague information. For instance, fuzzy logic allows the development of computer programs that can interpret human expressions, which are usually too imprecise for traditional mathematics.

Thus, if we have data on a patient's acute pain, these data form only two sets in traditional logic: *with acute pain* or *without acute pain*. In fuzzy logic, using fuzzy sets we can establish degrees of relevance for pain, which approximate it to a set of *severe acute pain*, *moderate acute*

*pain*, or *minor acute pain*. Fuzzy logic has started to be used by nurses mainly in decision-making processes and in the development of models, making it possible to understand how nurses deal with complex, ambiguous, or imprecise nursing phenomena, albeit not yet with nursing languages.[9]

### 5. Use of outcomes and indicators as measurement scales for nursing observations, and their subsequent statistical analysis

In their article,[10] Macnee *et al* measured the 11 indicators of the NOC outcome of *Health-seeking behavior* through observation of five nurses. The number of observations was quantified and statistical analysis of them carried out.

Such methods can can be a method of assessing in multiple research tasks, including validation, concordance, and effectiveness, but even if many researchers who follow the quantitative path understand that it is possible to do the same work with different types of indicators, researchers who carry out qualitative research resist using the same methodological tools, as quantifying the erythema of a wound is not the same as quantifying the spiritual needs of a person. Many psychometric tools have been proposed and validated in psychology, psychiatry, sociology, and other disciplines, but in this paper we aim to offer another approach from the perspective of anthropology and the social sciences, as we consider that nursing, given its holistic character, also belongs to the social sciences.

Thus, we make the following proposal.

### 6. Interpretation of emic/etic qualitative observations

*The patient's stories must be obtained* (Howard Butcher, NIC, 2010)

Emic/etic level

The goal of qualitative research is the development of concepts that help us to understand social phenomena, placing emphasis on the meanings, experiences, and opinions of all social actors. In 1954, Pike suggested the existence of two points of view when examining how this social reality is shaped and the way in which the researcher must access this reality; these two stances are referred to as *etic* and *emic*. The emic point of view is that of the subject or the community analyzed, whereas etic represents the observer's interpretive point of view[a]. This concept is different from that of *expert*, as it moves the point of interest

on to the subject and uses other methodological tools. We have adapted these ideas of Foucault's for a nursing context. Foucault is considered one of the fathers of the postmodern era, thanks to the role he assigns to discourse within general knowledge. The Foucaultian stance – that discourse is what defines the object and allows it to emerge in certain contexts – was the origin of a radical turn in ethnographic studies, in which the classic view was that such studies were only *descriptive* of a culture. This stance suggests that, before the discontinuity present in reality, discourse offers an articulation that is introduced from the outside. The discourse of an anthropologist, sociologist, historian, or any other scientist is their creation, which is developed based not only on an exterior context that defines their environment, but also on their inner history. These *stories* lead the researcher to listen to certain voices and silence others, and to use certain constructs and schemes present in his/her mind beyond his/her own conscience. He/she does not limit him/herself to considering thought and knowledge to be dependent on the dominant paradigm, but rather considers that such thought and knowledge shape his/her own reality[11].

Based on these concepts, the NOC outcome *Participation in decisions on health care* (1606) was compared cross-culturally between users of Eastern adjuvant therapies in Spain and Japan[b]. The NOC indicators considered to be most appropriate were selected. Following the postulates of the ethnographic method, which is the most adequate for cultural studies, these indicators were grouped thematically and associated with the categories that had been used in semistructured interviews and participative observation.

The analysis of emic and etic discourse levels resulted in the number to which each indicator corresponded on the Likert scale. The scale proposed by the NOC (*Never demonstrated* to *Consistently demonstrated*) was left unchanged, but we interpret qualitatively why this numbering was assigned, by analyzing the discourses of the participants. The objective itself is not to establish universal laws. Similarly to Foucault's work, Geertz's anthropological work[12], with its clear symbolic orientation, became a starting point in the postmodern era, where the anthropologist–researcher acts as intermediary, very far from what had been the romantic timelessness of the pioneers of the *ethnographic monograph*. The ethnographer would no longer be a passionate discoverer of a culture that he/she would document in the present time, but instead would assume the role of rediscoverer of a culture in which he/she lives, describing the life experiences stemming from the coexistence with individuals he/she has met. It is precisely this thematic account that confers a diachrony to events, which constitutes a counterpoint to monographic ethnography. Particularly in social research on health and illnesses, medical anthropology was

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[a] In 1954, linguist and missionary Kenneth L. Pike described in his work titled Language in relation to a Unified Theory of the Structure oh Human Behavior (Glendale, 1954, 2nd ed., La Haya 1971) the emic-etic distinction, taking into account that these suffixes come from the words phonemic and phonetic, where *phonemics* is the perspective centered on the study of units that are significant for the speaker, while *phonetics* studies the sounds of the speaker from outside the realm of linguistic effects. Subsequently, the field of anthropology adopted these terms for social research through authors including E. Sapir M. Harris (in Aguirre Batzán, E (ed) Etnografía. Metodología Cualitativa en la Investigación Sociocultural. (Ethnography. Qualitative Methodology in Sociocultural Research) Ed Boixareu Universitaria, 1995 p. 85-86.

[b] Project based on the data of P. Echevarria's doctoral thesis (2007) [14], and conducted at the Nursing School of Universidad Católica San Antonio in Murcia (Spain) by the research group called "Thought and nursing languages in a social context" (Murcia, Spain 2012).

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introduced as a subdiscipline that started in the 1970s, introducing hermeneutics as a methodological approach.

This work was carried out on a Spanish group and a Japanese group, first individually (Figure 1) and then on both. To study the concept that constituted the research object, the first of the four units of analysis proposed by Kleinman[13] was used to compare medical systems as cultural systems, as follows: (1) health-seeking process and explanatory models, (2) clinical realities, (3) adaptation of health systems, and (4) conflicts and *cultural iatrogenesis*.[c]
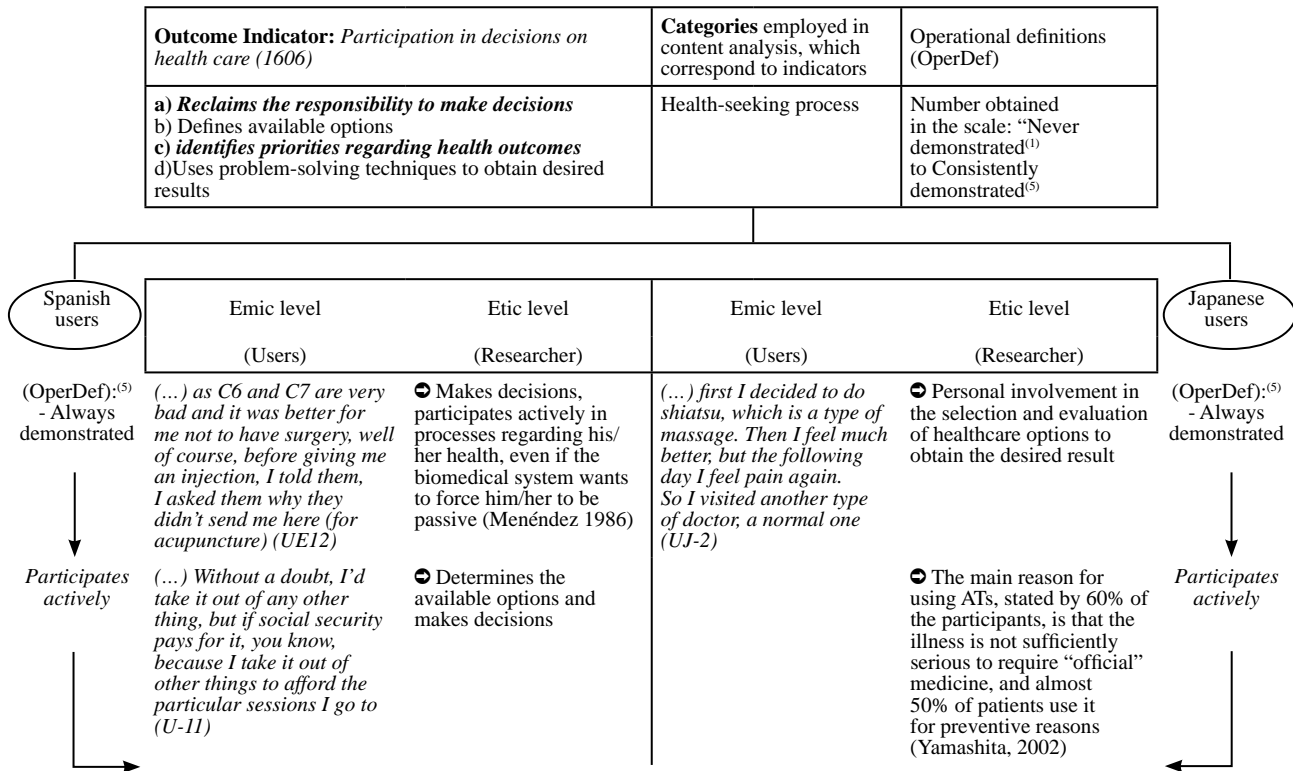


**Figure 1** – Comparison of Spanish and Japanese users of adjuvant therapies (ATs) for the first four indicators of the outcome "Participation in decisions on health care" Adapted from: Malcon Baldrige National Quality Award (MBNQA) Evaluation Scheme. 1995[15]

The data were taken from some of the results of a research that was part of a doctoral thesis,[14] and refer to the beliefs and perceptions of users of adjuvant therapies with respect to the effectiveness of such therapies in two different cultures, namely Spain and Japan.

The study population consisted of users of adjuvant therapies (AT), given that the NOC refers to outcomes that describe a variable state, behavior, or perception of the patient, caregiver, family, or community.

As an example, the outcome obtained in both groups for the first set of identified indicators was rated as 5 (Consistently demonstrated), as *Participates actively in making decisions about himself/herself* was considered to have the same meaning in both the emic discourses and the etic interpretation. Cultural differences were taken into account to a greater extent in other indicators, but not in these. In general, we concluded that human beings generally participate actively in aspects related to their health, although culturally there may be differences in how they do so.

The effectiveness of a nursing intervention was not measured, because there was no such intervention according to the NOC criteria for evaluating nursing sensitivity (Table 2), but in this case there was an observation or assessment conducted by a nurse-researcher and anthropologist on the perception of patients who used AT, and on questions related to the study of organizational factors that affect patient outcomes. The structure of the health-system organization has gained prevalence in recent times.

Moreover, as Kautz and Van Horn[16] have argued, the NOCs are not always used to measure the effectiveness of nursing interventions. They can, for example, be used for follow-up and evaluation, without any intervention. Kautz and Van Hor conducted a study on the NOC outcome of *family integrity* in families with an adolescent with cancer, and found that the majority of family issues are often resolved without nursing interventions. Sometimes evaluation can

[c] Kleinman coined this term to refer to the process created when conflicts arise. Conflicts are greater when illness episodes touch different sectors.

be more important than intervention. This is why the NOC indicators were conceived as variable concepts rather than as objectives, given that they *provide more information than the mere satisfaction of an objective.*[1]

**Chart 2** – Criteria for evaluating nursing sensitivity – Barcelona, 2008

| Criteria for evaluating nursing sensitivity* |
| --- |
| A nursing intervention produced a positive outcome |
| A nursing intervention contributed to a positive outcome |
| A nursing intervention occurred with the intention of producing or contributing to an outcome |
| A nursing intervention produced an improvement or maintenance of an outcome, or prevented the worsening or the appearance of a negative outcome |
| The nursing intervention occurred before the outcome was observed |
| A failure at the time of the nursing intervention made it impossible to achieve a positive outcome or to prevent a negative outcome |
| The interventions that produced or contributed to an outcome are within the scope of nursing practice |

*Sensitivity: capacity of an outcomes tool to detect changes attributable to interventions.
Source: Moorhead S et al. NOC. 2008: 43[1]

## QUALITY CRITERIA AND LEVELS OF EVIDENCE IN QUALITATIVE RESEARCH

It is often said that the problem with qualitative research is its lack of objectivity, and that therefore it is impossible to standardize this type of data. However, the opposite of objectivity is not always subjectivity. In qualitative research, objectivity stems from subjectivity in the analysis process. When the interpretation is performed by a group of researchers, subjectivity is successively transformed into intersubjectivity and coherence. Thus, it is possible to achieve standardization when the process is performed well and when the criteria for quality and scientific rigor are satisfied.

*The term 'objectivity' is not a descriptor of the reality that a study discovers (partially) but of the process through which said discovery occurs* (Guba 1990:87)[17]. Other authors have referred to the *transparency* of the research process instead of its *objectivity*. Standardization, however, is not an end in itself, as we have argued above, based on Foucault's work.

Objectivity is an asset in qualitative investigation as in any scientific work, but we (the authors) seek to achieve it by including the circumstances of a social or cultural situation instead of excluding them. For this reason, qualitative research is subjected to the rigor and quality criteria of research through validation, but not to the same criteria as quantitative research (Table 3).

The main method for satisfying these criteria is the use of triangulation, i.e. the combination of approaches and perspectives on a particular research study in order to improve results, whether these refer to data, theories, or techniques.

**Chart 3** – Validation criteria in quantitative and qualitative methodology

| Regulatory criteria | Quantitative methodology | Qualitative methodology |
| --- | --- | --- |
| Veracity | Internal validity | Credibility |
| Applicability | External validity/ generalization | Transferability |
| Consistency | Reliability | Dependence |
| Neutrality | Objectivity | Confirmability |
| | | intersubjectivity |
| | | coherence |

Source: Adapted from Guba EG, Lincoln YS. 1994[18]

The traditional definition of validity assumes that there is a real correspondence between results and an objective reality. Qualitative research offers contributions based on social or personal experiences that necessarily have a strong interpretive or hermeneutic component, but this does not make such research less truthful. To avoid confusion, some qualitative researchers typically avoid the term **valid** and prefer alternative terms, such as **credible**[19].

Validation with experts versus validation with patients, their families, or the community; which is more correct? When it comes to emotions, perceptions, or beliefs, the discourse of the involved participant becomes the researcher's interpretive or hermeneutic work tool, without intermediaries. In biomedicine, it is typical for the clinician to think and decide for the patient. This is what Menéndez refers to as *subordinate participation*[19].

In qualitative research, the levels of evidence must be reviewed. Why is the level of evidence lower? As many authors suggest, the criteria for evaluating the progress of the

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movement of evidence-based practice have to expand and to question attempts to hierarchize evidence with exclusively positivist parameters; qualitative work is interpretive and subjective, and therefore it resists hierarchization at levels such as those of Cochrane reviews [20-21]. Clinical tests, characterized by the maximum scientific rigor according to evidence-level classifications, may be impossible or unethical for some interventions, and others may not have empirical support. For example, nurses cannot conduct one type of *listening* with one family and another type with another family[11]. Many nursing interventions can be classified as being of evidence level 1, even if they are not clinical tests. Interventions such as *facilitating privacy*, e*stablishing a relationship of trust*, or *active listening* can be established as standards of practice.

## CONCLUSION

From positivism to hermeneutics, research on nursing languages is beginning to develop, but must be conducted based on correct methodological foundations. Both basic and applied research must seek to satisfy the same criteria of methodological suitability as any other research. In the

NOC, the use of qualitative methodologies is more complex because of the necessity to reduce the outcomes to a Likert-type number scale. Even if this reality is considered positive for standardization, it is necessary for researchers to make an effort to promote qualitative methodology, especially for those NOCs with a psychosocial and cultural scope, and not necessarily to consider statistical analysis the endpoint. However, we have not found proposals to that effect in the literature. We therefore advocate a *middle road* between science and literature, and between positivism and postmodernism, which requires a more open and multidimensional methodology. This is where hermeneutics or interpretive methodology comes into play. In this paper we have sought to expand the methodological view so that it can be applied to other studies as well. Nursing has always been characterized by listening to patients, and this listening is precisely the basic tool for this type of methodological approach.

The fundamental change in medicine is to consider not only the opinions of experts as has been done up to now (e.g. with Fehring's validation model), but also the opinions of patients.

## REFERENCES

1. Moorhead S, Johnson M, Maas ML, editors. Nursing Outcomes Classification (NOC). St. Louis: Mosby; 2008.

2. Rodríguez Gómez G, Gil Flores J, García Jiménez E. Metodología de la investigación cualitativa. Málaga: Aljibe; 1996

3. Carmines EG, Zeller RA. Reliability and validity assessment. Beverly Hills: Sage; 1979

4. Bordieu P. La ilusión biográfica. Barcelona: Anagrama; 1989. (Historia y Fuente Oral, n. 2).

5. Giró Formatger D. Experiencias clínicas en el uso del NOC en España. En: 8ª Jornadas de Trabajo AENTDE : el NOC en el Proceso de Cuidados [Internet]. [Internet]. A Coruña; 2011 [citado 2012 mar. 20]. Disponible en: http://ruc.udc.es/dspace/handle/2183/7355

6. Almeida M, Seganfredo DH, Unicovsky MR. Nursing outcome indicator validation for patients with orthopedic problems. Rev Esc Enferm USP [Internet]. 2010 [cited 2012 Mar 11];44(4):1059-64. Available from: http://www.scielo.br/pdf/reeusp/v44n4/en_29.pdf

7. Brokel JM, Hoffman F. Hospice methods to measure and analyze nursing: sensitive patient outcomes. Hosp Palliat Nurs. 2005;7(1):37-44.

8. Morilla-Herrera JC, Morales-Asencio JM, Fernández-Gallego MC, Berroblanco Cobos E, Delgado Romero A. Utilidad y validez de un instrumento basado en indicadores de la Nursing Outcomes Classification como ayuda al diagnóstico de pacientes crónicos de Atención Primaria con gestión ineficiente de la salud propia. An Sist Sanit Navar. 2011;34(1):51-61.

9. Jensen R, Lopes MH. Enfermería y lógica difusa: una revisión integradora. Rev Latino Am Enferm USP. 2011;19(1):195-202.

10. Macnee Carol L, Edwards J, Kaplan A, Reed S, Bradford, S, Walls J, Schaller-Ayers JM. Evaluation of NOC standardized outcome of "health seeking behavior" in nurse-managed clinics. J Nurs Care Qual. 2006;21(3):242-47.

11. Focault M. La arqueología del saber. Méjico: Siglo Veintiuno Editores; 1997.

12. Geertz C. La interpretación de las culturas, México: GEDISA; 1987.

13. Kleinman A. Patients and healers in the context of culture. Berkeley: University of California; 1981.

14. Echevarria P. Hacia una medicina integral: convivencia de los modelos de salud oriental y occidental en España y Japón [Internet]. Murcia: Departamento de Ciencias Sociales, Universidad Católica San Antonio de Murcia; 2007 [citado 2012 mar. 12]. Disponible en: http://repositorio.ucam.edu/jspui/handle/10952/18/browse?type=author&order=ASC&rpp=20&value=Echevarr%C3%ADa+P%C3%A9rez%2C+Mar%C3%ADa+Paloma

15. Malcon Baldrige National Quality Award (MBNQA). Modelos para la implantación de la gestión de la calidad total: el sistema integrado de gestión. Directrices para el sector público. Bruxelas; 1995.

16. Kautz D, Van Horn ER. An exemplar of the use of NNN language in developing evidence-based practice guidelines. Int J Nurs Terminol Classif. 2008;19(1):14-19.

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17. Guba EG. Subjetivy and objetivy commentary on the papers by Phillips and by Roman and Apple. En: Eisner EW, Peshkin A, editors. Qualitative inquiry in education: the continuing debate. New York: Teachers College; 1990. p.74-91.

18. Guba EG, Lincoln YS. Eds. Handbook of qualitative research. Thousand Oaks: Sage; 1994.

19. Menéndez EL. Modelo médico, salud obrera y estrategias de acción del sector salud. Nueva Antropol. 1986;8(29):49-63.

20. De la Cuesta Benjumea C. La contribución de la evidencia cualitativa al campo del cuidado y la salud comunitaria. Index Enferm [Internet]. 2005 [citado 2012 mar. 11];14(50):47-52. Disponible en: http://scielo.isciii.es/scielo.php?script=sci_arttext&pid=S1132-12962005000200010&lng=es&nrm=iso&tlng=es

21. Morse JM, Swanson JM, Kuzel AJ, editors. The nature of qualitative evidence. Thousand Oaks: Sage; 2001.

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