UNIVERSIDAD DE ANTIOQUIA
1803

Investigación y Educación en

# Enfermería

–Nursing Research and Education–

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# Contents

Editorial

UNIVERSIDAD DE ANTIOQUIA
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# Use of Causal Diagrams for Nursing Research: a Tool for Application in Epidemiological Studies

Wilson Cañón Montañez[1]
Alba Luz Rodríguez Acelas[2]

Many epidemiological studies seek to assess the effect of one or several exposures on one or more outcomes. However, to quantify the causal inference produced, statistical techniques are commonly used that contrast the association among the variables of interest, not precisely of causal effect.[1] In fact, although these measures may not have a causal interpretation, the results are often adjusted for all potential confounding factors.[2,3] Some contemporary epidemiologists developed new methodological tools for causal inference, like the theory or contra-factual model[4] and representation of causal effects through the Directed Acyclic Graph (DAG).[5] The DAG, a fusion of the probability theory with trajectory diagrams, is quite useful to visually deduct the statistical associations implied by the causal relations among the study variables.

Learning the rules to visualize causal relations through a DAG can take some time and practice. Once these rules are mastered, they facilitate many tasks, like understanding confusion and selection biases, selecting covariates for statistical adjustment and analysis, understanding direct effects,[6] and analyzing instrumental variables.[7] In this regard, it should be noted that some researchers interested in facilitating the use of causal diagrams and diminish the risk of bias in the epidemiological studies developed the "DAGitty" open software.[8]

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It is appropriate to mention that the study of causal mechanisms of health problems constitutes a challenge that, in some scenarios, is often left aside. Although the potential of using DAG is recognized in the hypothesis description of the possible causal networks between the study variables and the presentation of more robust results for the scientific community, I consider, through my personal experience, that these graphs are still used scarcely in research work. This makes it a priority for scientific societies and academic institutions to teach this methodological tool during the formation of researchers undergoing epidemiological studies. Currently, it is possible for some editors and reviewers of scientific indexed journals to ask authors seeking to report results of epidemiological studies to include the DAG in the article. Within this context, a study using data from the National Health and Nutrition Examination Surveys (NHANES) in the United States, and whose objective was to examine the role of serum bilirubin as likely risk factor for hypertension, published in its article the DAG performed in DAGitty to a minimal sufficient adjustment set of variables that permit identifying the true effect, without confusion, of bilirubin in blood pressure.[9] A study from 2018, with data from an epidemiological study in Brazil,[10] reported that metabolic syndrome was associated independently with the global longitudinal strain variation or myocardial deformation index. For example, Figure 1 shows the DAG that represents the conceptual framework, the possible causal relations of the variables and their roles in the association the researchers sought to demonstrate. In this diagram, the exposure variable corresponds to the metabolic syndrome and the outcome is the global longitudinal strain. The other co-variables appearing in the DAG can be classified in several roles, for example: confusion, mediator, proxy confusion, competitive exposure, and collider. To describe the relationships among the variables in a DAG, these can be read as an ancestry tree and kinship terminology is used: child, parent, descendants, and ancestors.[5,8]

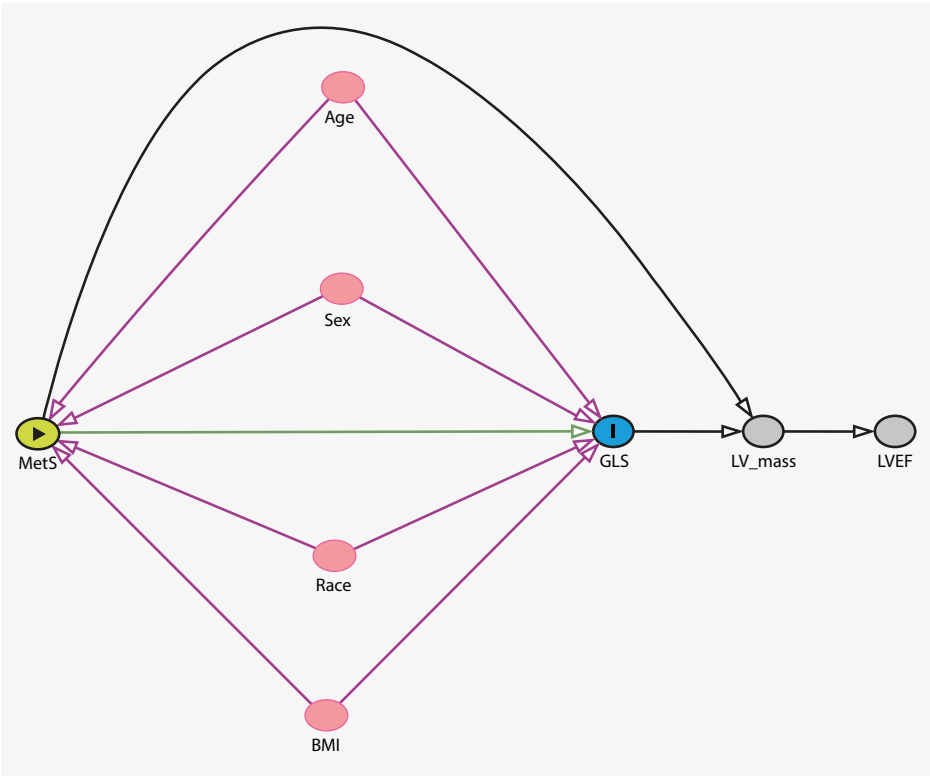


**Figure 1. Direct acyclic graph to represent the relationship between metabolic syndrome and global longitudinal strain.**

Exposure variable: metabolic syndrome (MetS); outcome variable: global longitudinal strain (GLS); confounder variables: age, sex, race, and body mass index (BMI); collider variable: left ventricular mass (LV mass); other variable: left ventricular ejection fraction (LVEF).

Lastly, it is worth highlighting that causal diagrams may also generate useful conclusions, even in situations where it is not possible to identify a sufficient set of variables to control and prevent confusion and selection bias. It is necessary, during the planning phase of epidemiological studies, for researchers to have sufficient knowledge and conceptual framework of all possible variables that can influence the relationship between the exposure and the outcome of interest. This is for the purpose of constructing plausible causal models that permit identifying the variables required to solve the research question and the methodological design that must be used to conduct the study. In addition, using DAGs in communicating and reporting results permits comparing models of causal effects, facilitating identification of possible explanations for the inconsistent results found in the literature.

Using the DAGs methodology is an opportunity for Nursing in improving knowledge of phenomena and health problems, which will contribute to identifying the necessary elements to be intervened to improve the wellbeing of the population. It is necessary for Nursing graduate programs to adopt these new tools in their study plans to train a new generation of researchers who are at the forefront of methods to analyze causal inference and produce professional progress towards excellence.

# References


1. Hernán MA, Robins JM. Causal Inference. Boca Raton: Chapman & Hall/CRC, forthcoming; 2019.
2. Arah OA. Bias Analysis for Uncontrolled Confounding in the Health Sciences. Annu. Rev. Public Health. 2017; 38:23-38.
3. VanderWeele TJ, Ding P. Sensitivity Analysis in Observational Research: Introducing the E-Value. Ann. Intern. Med. 2017; 167(4):268-74.
4. Höfler M. Causal inference based on counterfactuals. BMC Med. Res. Methodol. 2005; 5:28.
5. Cortes TR, Faerstein E, Struchiner CJ. Utilização de diagramas causais em epidemiologia: um exemplo de aplicação em situação de confusão. Cad. Saude Publica. 2016; 32(8):e00103115.
6. Aalen OO, Røysland K, Gran JM, Kouyos R, Lange T. Can we believe the DAGs? A comment on the relationship between causal DAGs and mechanisms. Stat. Methods Med. Res. 2016; 25(5):2294-314.
7. Langdon RJQ, Wade KH. Application of Mendelian randomization: can we establish causal risk factors for type 2 diabetes in low-to-middle income countries? Rev. Cuid. 2017; 8(1):1391-406.
8. Textor J, van der Zander B, Gilthorpe MS, Liskiewicz M, Ellison GT. Robust causal inference using directed acyclic graphs: the R package 'dagitty'. Int. J. Epidemiol. 2016; 45(6):1887-94.
9. Wang L, Bautista LE. Serum bilirubin and the risk of hypertension. Int. J. Epidemiol. 2015; 44(1):142-52.
10. Cañon-Montañez W, Santos ABS, Nunes LA, Pires JCG, Freire CMV, Ribeiro ALP, et al. Central Obesity is the Key Component in the Association of Metabolic Syndrome with Left Ventricular Global Longitudinal Strain Impairment. Rev. Esp. Cardiol (Engl Ed). 2018; 71(7):524-30.

# Content and face validity of the Spanish version of the Sexual Self-Concept Inventory for early adolescent girls

Magda Liliana Villamizar Osorio[1]
Elveny Laguado Jaimes[2]

Original article

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## Content and face validity of the Spanish version of the Sexual Self-Concept Inventory for early adolescent girls

**Objective.** To determine the content and face validity of the Spanish version of the Sexual Self-Concept Inventory (O'Sullivan et al.) for early adolescent girls. **Mehods.** Instrument-based study in which the translation, back-translation and adaptation of the 34 items of the Sexual Self-Concept Inventory (SSCI) scale was performed. Five experts carried out the content and face validation; face validation included 35 girls from the municipality of Girón (Colombia). **Results.** The version translated into Spanish has adequate content validity because all items exceeded the minimum CVI (0.58) value considered within an overall scale of 0.92. The face validity for the 35 early adolescent girls showed that 10 items of the instrument needed to be adjusted semantically and culturally. **Conclusion.** The Spanish version of the scale is semantically and conceptually equivalent to the original

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scale and can be used in similar contexts to evaluate sexual self-concept in early adolescent girls.

**Descriptors:** adolescent; female; semantics; comprehension; reproducibility of results; translations; self-concept.

## Validez de contenido y facial de la versión en español del Inventario de Autoconcepto Sexual para Niñas en Adolescencia Temprana

**Objetivo.** Establecer la validez de contenido y facial de la versión en español del Inventario de Autoconcepto Sexual de O'Sullivan *et al*. para niñas en adolescencia temprana. **Métodos.** Estudio de validación de una prueba en el que se realizó la traducción, retrotraducción y adaptación de los 34 ítems de la escala Sexual Self-Concept Inventory (SSCI). Se hizo validación de contenido y facial con 5 expertos y validación facial con 35 niñas del municipio de Girón (Colombia). **Resultados.** La versión traducida al español tiene adecuada validez de contenido pues todos los ítems superan ICV mínimo de 0.58, siendo este valor para la escala total de 0.92. La validez facial en las 35 niñas mostró que 10 ítems del instrumento requerían ser ajustados semántica y culturalmente. **Conclusión.** La escala en versión español posee equivalencia semántica y conceptual con la escala original y podría ser utilizada en contextos similares para evaluar el autoconcepto sexual en niñas en adolescencia temprana.

**Descriptores:** adolescente; femenino; semántica; comprensión; reproducibilidad de los resultados; traducciones; autoimagen.

## Validez de conteúdo e facial da versão em espanhol do Inventário de Auto-conceito Sexual para meninas na Adolescência precoce

**Objetivo.** Estabelecer a validez de conteúdo e facial da versão em espanhol do Inventário de Auto-conceito Sexual de O'Sullivan et al. para meninas em adolescência precoce. **Métodos.** Estudo de validação de um teste no qual se realizou a tradução, retro tradução e adaptação dos 34 itens da escala Sexual Self-Concept Inventory (SSCI). Se fez validação de conteúdo e facial com 5 especialistas e validação facial com 35 meninas do município de Girón (Colômbia). **Resultados.** A versão traduzida ao espanhol tem adequada validez de conteúdo pois todos os itens superam ICV mínimo de 0.58, sendo este valor para a escala total de 0.92. A validez facial nas 35 meninas mostrou que 10 itens do instrumento tiveram que ser ajustados semântica e cultural. **Conclusão.** A escala em versão espanhol possui equivalência semântica e conceitual com a escala original e poderia ser utilizada em contextos similares para avaliar o autoconceito sexual em meninas em adolescência precoce.

**Descritores:** adolescente; feminino; semántica; compreensão; reprodutibilidade dos testes; traduções; autoimagen.

# Introduction

According to the World Health Organization (WHO),[1] adolescence is a complex transitional stage of life between childhood and adulthood (10 to 19 years of age) characterized by physical, psychological, biological, intellectual and social changes. It is subdivided into first or early adolescence—10 to 14 years of age—and second or late adolescence—15 to 19 years of age. Adolescence is not only a stage of vulnerability but also of opportunity; it is the time for development, wherein risks and vulnerabilities are faced, as well as for preparing to develop the entire potential within each adolescent.[2] Borges[2] states that in order to understand adolescents' behaviors and to exert influence over them, it is important to understand the environment surrounding adolescents and how this environment affects their development, behavior and social relationships. These environments include family, peer groups, school, work and leisure activities; these environments are simultaneously in a state of constant change. This conceptualization implies that interventions must consider these dimensions and include the adolescents themselves, without excluding the role of health professionals.

Adolescence is a stage of human development involving physical changes strongly marked by sexual maturity, that is, the development of secondary sexual characteristics. However, these characteristics do not depend on the roles, duties and rights intrinsic to this stage, thus providing one explanation for early initiation into sexual practices during adolescence. Young people are more vulnerable to sexually transmitted infections, mainly for behavioral reasons. Additionally, at this stage, adolescents develop emotions related to genital sexual maturity, due to greater interest in the opposite sex and in the same sex.[3] Also important to consider are the sexual cognitions of early adolescents as they relate to pubertal development. These cognitions are associated with changes in sexual expectations and roles, for which girls develop social meanings and feelings, as evidenced by how puberty transforms the manner in which the mother-daughter relationship is handled.[4] Likewise, it requires an understanding of adolescent girls' sexual and reproductive health expectations[5-8] and the expression of sexuality through early adolescent girls' behavior.[9] Sexual cognitions in early adolescent girls (negative sexual affect, sexual agency and sexual arousal) are present when they determine their sexual self-concepts.[4] The English version of the Sexual Self-Concept Inventory has allowed assess of this domain[9] by allowing the instrument's measurements to precede sexual experiences.[10]

Thus, the first sexual experience of adolescents are related to desire, curiosity and, in some cases, pressure from their counterparts or friends who have had their first sexual relationship.[11] Therefore, health-prevention programs and the role of nursing are key to help early adolescent girls define their sexual self-

concepts in order to improve their normative beliefs and encourage healthy sexual behaviors.[12,13] In addition, helping adolescent girls understand the meanings regarding the subjective and social processes during adolescence is important,[11] since there is lack of interventions related to early adolescent girls' sexual health behavioral intentions and their sexual self-concepts.[12] In Colombia, no Spanish-language studies or instruments related to the sexual self-concept of early adolescent girls between 10 and 14 years of age were found. Likewise, the expression of the sexuality of adolescent girls through sexual self-concept has not been addressed. Therefore, supported by the presence of a validated English-version instrument, the study aimed to determine the content and face validity of the Spanish version of the Sexual Self-Concept Inventory of O'Sullivan *et al*.[4] for early adolescent girls, in order to carry out the transcultural adaptation of the instrument and apply it to the Colombian context.

# Methods

This research was based on a quantitative instrumental methodological design to determine content and face validity. The methodological aspects are described as follows.

*Selection of the instrument.* The Sexual Self-Concept Inventory (SSCI) was selected because it is an instrument that evaluates sexual self-concept in early adolescent girls. This instrument consists of three dimensions: sexual arousal, sexual agency and negative sexual affect. Its output offers a means to evaluate sexual behavior in adolescent girls and to assist the decision-making of nursing professionals with regard to risk. In addition, its results contribute to the development of research.[9] The SSCI comprises 34 items (sexual arousal = 17 items, sexual agency = 10 items and negative sexual affect = 7 items). It includes Likert-type response options on a scale of 1 to 6, with higher scores representing greater risk of sexual behavioral intention and expectation of sexual activity. The original version of the SSCI has demonstrated content validity, construct validity, and reliability. The percentage of explained variation is 40.2% for the 34 items. The total Cronbach's alpha for the scale is 0.91 (sexual arousal = 0.91, sexual agency = 0.76 and negative sexual affect = 0.67).[9]

*Process of translation and revision of official translations.* Three official translators were selected in order to generate a Spanish version closest to the original instrument in terms of construct, grammar and SSCI context. Once the translation was generated, experts in early adolescence and sexual and reproductive health within the research group conducted a process to verify and review the Spanish version to choose the translation that best matched the context for Santander, Colombia.[14-16]

*Content validity.* Content was validated through the assessment of 5 experts (4 females, 1 male) with research and teaching experiences in sexual and reproductive health and adolescence, whose inclusion criteria included having a postgraduate degree in health (specialization, masters or doctorate) and 10 or more years of experience. The process was conducted according to the Lawshe index, modified by Tristán,[17] which measures each item in three categories—essential, useful but not essential, and not necessary (for the overall scale)—in order to corroborate if each item adequately represented the sample of content.[18] Five experts were contacted personally and via email, each of whom conducted an individual assessment. Subsequently, the researchers consolidated the information for each item with their observations and made decisions, considering items that exceeded the minimum CVI value ≥ 0.58 as not needing to be modified.[17]

*Face validity.* We contacted 5 additional female experts in the research and teaching of sexual and reproductive health and adolescence, whose inclusion criteria included having a postgraduate degree in health (specialization, masters) and 10 or more years of experience. Our experts evaluated the 34 items of the instrument

according to the following criteria: clarity (the type of language or easy-to-understand wording), precision (expression in a concise and exact language, leaving no doubts) and comprehension (understanding of what is meant by reading the item).[19] It was then decided that values closest to 80% comprehensibility would be considered satisfactory.[20] Subsequently, the Kappa index was calculated to evaluate the index of inter-observer agreement;[21] values between 0.61 and 0.80 were assumed to represent acceptable substantial agreement, and values of 0.81 or higher were assumed to represent superior acceptability agreement.[20] For face validity, 35 early adolescent girls were selected, among whom the instrument was assessed according to the comprehensibility criteria. The items' comprehensibility was determined by the following percentages: equal to or greater than 85% = high comprehensibility; 80-85% = medium comprehensibility; and less than 80% = low comprehensibility. This study was carried out in the municipality of Girón (Santander, Colombia) in 2017. Subsequently, the information from the experts and the participants was consolidated separately, in order to perceive the clarity, precision and comprehension of the 34 items, which led to a final consensus on each item and consolidation of the consensus version.

*Back translation.* This phase consisted of sending the final Spanish version of the instrument, adapted to the local context, to two official translators different from the initial translators to have it back-translated from Spanish to English. Subsequently, it was sent for verification and authorization of the changes made by the authors, who approved the Spanish version of the instrument.

*Ethical considerations*. Resolution 8430 of 1993 and Law 911 of 2004, chapter IV, articles 29, 30 and 34 of the Republic of Colombia were considered. This research was endorsed by the Ethics Committee of the Cooperative University of Colombia *(Universidad Cooperativa de Colombia)*. All phases included prior informed consent from both parents and assent of the girls prior to the explanation of the study. During the development of the study, no intervention or care for any adolescent girl due to emotional disturbance was required.

# Results

## Content validity

Table 1 shows the CVIs according to the expert assessments obtained for each item. Additionally, the table shows that the overall validity index of the 34 items was 0.92, a value considered acceptable. Consequent to these findings, all items were maintained.

**Table 1.** Content validity index according to the five experts, by dimension and item

| Dimension | Item | Essential | Useful; non-essential | Not necessary | CVI |
|---|---|---|---|---|---|
| Sexual arousal | SE01 | 5 | 0 | 0 | 1 |
| | SE02 | 4 | 1 | 0 | 0.6 |
| | SE03 | 4 | 1 | 0 | 0.6 |
| | SE04 | 4 | 1 | 0 | 0.6 |
| | SE05 | 4 | 1 | 0 | 0.6 |
| | SE06 | 4 | 1 | 0 | 0.6 |
| | SE07 | 5 | 0 | 0 | 1 |
| | SE08 | 5 | 0 | 0 | 1 |
| | SE09 | 5 | 0 | 0 | 1 |
| | SE10 | 5 | 0 | 0 | 1 |
| | SE11 | 4 | 1 | 0 | 0.6 |
| | SE12 | 5 | 0 | 0 | 1 |
| | SE13 | 5 | 0 | 0 | 1 |
| | SE14 | 4 | 1 | 0 | 0.6 |
| | SE15 | 5 | 0 | 0 | 1 |
| | SE16 | 4 | 1 | 0 | 0.6 |
| | SE17 | 5 | 0 | 0 | 1 |
| Sexual agency | SA01 | 5 | 0 | 0 | 1 |
| | SA02 | 5 | 0 | 0 | 1 |
| | SA03 | 5 | 0 | 0 | 1 |
| | SA04 | 4 | 1 | 0 | 0.6 |
| | SA05 | 5 | 0 | 0 | 1 |
| | SA06 | 4 | 1 | 0 | 0.6 |
| | SA07 | 4 | 1 | 0 | 0.6 |
| | SA08 | 5 | 0 | 0 | 1 |
| | SA09 | 5 | 0 | 0 | 1 |
| | SA10 | 5 | 0 | 0 | 1 |
| Negative sexual affect | NE01 | 5 | 0 | 0 | 1 |
| | NE02 | 5 | 0 | 0 | 1 |
| | NE03 | 5 | 0 | 0 | 1 |
| | NE04 | 4 | 1 | 0 | 0.6 |
| | NEO5 | 4 | 1 | 0 | 0.6 |
| | NE06 | 5 | 0 | 0 | 1 |
| | NE07 | 5 | 0 | 0 | 1 |

## Face validity

Regarding the precision of the scale, the Kappa index of inter-observer agreement had a value of 0.9, which corresponds to almost perfect agreement. The experts clarified the questions with regard to concept and terminology; thus, it was necessary to review the items from the linguistic approach, with the help of an expert in Spanish language and literature.

**Table 2.** Inter-rater agreement of the five experts regarding the categories of clarity, comprehension and precision for the SSCI items

| Dimension | Items | Clarity | Comprehension | Precision |
|---|---|---|---|---|
| Sexual arousal | SE01 | 0.6 | 0.4 | 1 |
| | SE02 | 1 | 1 | 1 |
| | SE03 | 1 | 0.6 | 1 |
| | SE04 | 1 | 1 | 1 |
| | SE05 | 1 | 1 | 1 |
| | SE06 | 1 | 1 | 1 |
| | SE07 | 1 | 1 | 1 |
| | SE08 | 1 | 1 | 1 |
| | SE09 | 0.4 | 0.6 | 1 |
| | SE10 | 1 | 1 | 1 |
| | SE11 | 1 | 1 | 1 |
| | SE12 | 1 | 1 | 1 |
| | SE13 | 1 | 0.6 | 1 |
| | SE14 | 1 | 1 | 1 |
| | SE15 | 1 | 1 | 1 |
| | SE16 | 1 | 0.6 | 1 |
| | SE17 | 1 | 1 | 1 |
| Sexual Agency | SA01 | 1 | 0.6 | 0.6 |
| | SA02 | 1 | 1 | 1 |
| | SA03 | 1 | 0.6 | 0.6 |
| | SA04 | 1 | 1 | 1 |
| | SA05 | 1 | 1 | 1 |
| | SA06 | 0.6 | 1 | 0.6 |
| | SA07 | 1 | 1 | 1 |
| | SA08 | 0.4 | 1 | 0.4 |
| | SA09 | 1 | 1 | 1 |
| | SA10 | 1 | 1 | 1 |
| Negative sexual affect | NE01 | 1 | 1 | 1 |
| | NE02 | 1 | 1 | 1 |
| | NE03 | 1 | 1 | 1 |
| | NE04 | 1 | 1 | 1 |
| | NE05 | 1 | 1 | 1 |
| | NE06 | 1 | 1 | 1 |
| | NE07 | 1 | 1 | 1 |

Regarding face validity of the scale for the group of 35 early adolescent girls, the items' degree of comprehensibility was determined according to the following percentages: equal to or greater than 85% (13 items) = high comprehensibility; 80-85% (6 items) = medium comprehensibility; and less than 80% (15 items) = low comprehensibility (see Table 3).

**Table 3.** Inter-rater agreement for the 35 early adolescent girls regarding the comprehension categories for the SSCI items

| Dimension | Items | % |
|---|---|---|
| Sexual arousal | SE01 | 82.86 |
| | SE02 | 85.71 |
| | SE03 | 65.71 |
| | SE04 | 57.14 |
| | SE05 | 77.14 |
| | SE06 | 80 |
| | SE07 | 40 |
| | SE08 | 91.43 |
| | SE09 | 65.71 |
| | SE10 | 80 |
| | SE11 | 62.86 |
| | SE12 | 82.86 |
| | SE13 | 68.57 |
| | SE14 | 74.29 |
| | SE15 | 74.29 |
| | SE16 | 85.71 |
| | SE17 | 82.86 |
| Sexual agency | SA01 | 85.7 |
| | SA02 | 94.3 |
| | SA03 | 71.4 |
| | SA04 | 91.4 |
| | SA05 | 97.1 |
| | SA06 | 65.7 |
| | SA07 | 94.3 |
| | SA08 | 74.3 |
| | SA09 | 71.4 |
| | SA10 | 74.3 |
| Negative sexual affect | NE01 | 91.4 |
| | NE02 | 71.4 |
| | NE03 | 82.9 |
| | NE04 | 85.7 |
| | NEO5 | 94.3 |
| | NE06 | 94.3 |
| | NE07 | 85.7 |

The results obtained from the adolescent girls show that 10 items of the instrument had values lower than 80; thus, these were discussed and adjusted from a semantic, conceptual and cultural approach, to be better understood by the early adolescent girls. Table 4 shows that after reviewing the 34 items, 76.5% were classified as semantically and conceptually equivalent to the original version, without needing to be modified, whereas 5.8% needed to be modified to achieve cultural equivalence.

**Table 4.** Classification of the equivalence of translations

| Item | Original Version | Translation | Consensual version | Observations |
|---|---|---|---|---|
| SE01 | I sometimes think I'd like to try doing the sexual things my friends are doing with their boyfriends. | A veces pienso que me gustaría intentar hacer las cosas sexuales que mis amigas hacen con sus novios. | A veces pienso que me gustaría intentar hacer las cosas sexuales que mis amigas hacen con sus novios. | Semantically and conceptually equivalent to the original version, without needing to be modified. |
| SE02 | When I kiss a guy, I get hot. | Cuando beso a un chico, me excito. | Cuando beso a un chico, me excito. | Semantically and conceptually equivalent to the original version, without needing to be modified. |
| SE03 | I would really want to touch a boyfriend if we were left alone together. | Realmente quisiera tocar a mi novio, si nos dejaran solos. | Realmente quisiera tocar a mi novio, si nos dejaran solos. | Semantically and conceptually equivalent to the original version, without needing to be modified. |
| SE04 | I sometimes want to know how different types of sex feel. | A veces, quiero saber cómo se siente los diferentes tipos de relación sexual. | A veces, quiero saber cómo se sienten las diferentes manifestaciones de relaciones sexuales. | Semantically and conceptually equivalent to the original version, without needing to be modified. |
| SE05 | If I'm going to see a guy I like, I like to dress sexy. | Si voy a salir con un chico que me gusta, me gusta vestirme atractiva. | Si voy a salir con un chico que me gusta, me visto sexy. | Semantically and conceptually equivalent to the original version, without needing to be modified. |
| SE06 | If a guy kisses me, I also want him to touch my body. | Si un chico me besa, también quiero que toque mi cuerpo. | Si un chico me besa, también quiero que toque mi cuerpo. | Semantically and conceptually equivalent to the original version, without needing to be modified. |
| SE07 | When I flirt with a guy, I like to feel him up. | Cuando coqueteo con un chico, me gusta que se dé cuenta. | Cuando coqueteo con un chico, me gusta que se dé cuenta. | Semantically and conceptually equivalent to the original version, without needing to be modified. |
| SE08 | Sometimes I dress sexy to get attention from guys. | Algunas veces me visto atractiva para llamar la atención de los chico. | Algunas veces me visto atractiva para llamar la atención de los chico. | Semantically and conceptually equivalent to the original version, without needing to be modified. |
| SE09 | If I were to kiss a guy, I'd get really turned on. | Si fuera a besar a un chico, de verdad me excitaría mucho. | Si fuera a besar a un chico, de verdad me excitaría. | Semantically and conceptually equivalent to the original version, without needing to be modified. |
| SE010 | There are things about sex I want to try. | Hay cosas sobre sexo que quiero probar. | Hay cosas sobre sexo que quiero probar. | Semantically and conceptually equivalent to the original version, without needing to be modified. |
| SE011 | If a boy kisses me, my body feels good. | Si un chico me besa, mi cuerpo se siente bien. | Si un chico me besa, mi cuerpo se siente agradable. | Modified to obtain cultural equivalence. |
| SE012 | I enjoy talking about sex or talking sexy with boys I know really well. | Disfruto hablar de sexo o hablar provocativamente con chicos que realmente conozca bien. | Disfruto hablar de sexo o hablar provocativamente con chicos que realmente conozca bien. | Semantically and conceptually equivalent to the original version, without needing to be modified. |

**Table 4.** Classification of the equivalence of translations (Cont.)

| Item | Original Version | Translation | Consensual version | Observations |
|---|---|---|---|---|
| SE013 | If I were kissing and touching a guy, I would get hyped, real excited. | Si, estuviera besando y tocando a un chico, podría excitarme. | Si, estuviera besando y tocando a un chico, me emocionaría y excitaría mucho. | Semantically and conceptually equivalent to the original version, without needing to be modified. |
| SE014 | I enjoy talking about sex with my girl friends. | Disfruto hablar de sexo con mis amigas. | Disfruto hablar de sexo con mis amigas. | Semantically and conceptually equivalent to the original version, without needing to be modified. |
| SE015 | It's okay to feel up on a guy. | Está bien, sentirse bien con un chico. | Está bien, sentirse a gusto con un chico. | Modified to obtain cultural equivalence. |
| SE016 | I like it when a guy tells me I look good. | Me gusta cuando un chico me dice que me veo bien. | Me gusta cuando un chico me dice que me veo bien. | Semantically and conceptually equivalent to the original version, without needing to be modified. |
| SE017 | I think I'm ready to have sex. | Creo que estoy lista para una relación sexual. | Creo que estoy lista para una relación sexual. | Semantically and conceptually equivalent to the original version, without needing to be modified. |
| SA01 | Girls always wonder what sex is going to be like the first time. | Las chicas siempre se preguntan cómo será tener sexo la primera vez. | Las chicas siempre se preguntan cómo será tener sexo la primera vez. | Semantically and conceptually equivalent to the original version, without needing to be modified. |
| SA02 | I sometimes think about who I would want to have sex with. | A veces pienso con quien me gustaría tener sexo. | A veces pienso con quien me gustaría tener sexo. | Semantically and conceptually equivalent to the original version, without needing to be modified. |
| SA03 | When I decide to have sex with a guy, it will be because I wanted to have sex and not because he really wanted me to have sex with him. | Cuando decida tener sexo con un chico, será porque realmente yo quiera y no porque él lo quiera conmigo. | Cuando decida tener sexo con un chico, será porque realmente yo quiera y no porque él lo quiera conmigo. | Semantically and conceptually equivalent to the original version, without needing to be modified. |
| SA04 | Girls sometimes have sex because they're curious and want to see what it's like. | Algunas veces las chicas tienen sexo por curiosidad y porque quieren saber cómo es. | Algunas veces las chicas tienen sexo por curiosidad y porque quieren saber cómo es. | Semantically and conceptually equivalent to the original version, without needing to be modified. |
| SA05 | Sex is best with a guy you love. | El sexo es mejor con un chico que ames. | El sexo es mejor con un chico que ames. | Semantically and conceptually equivalent to the original version, without needing to be modified. |
| SA06 | I like to let a guy know when I like him. | Me gusta que un chico sepa cuando me gusta. | Me gusta que un chico sepa cuando me gusta. | Semantically and conceptually equivalent to the original version, without needing to be modified. |
| SA07 | If I have sex, my friends will want to know all about it. | Si tengo relaciones sexuales con un chico, mis amigas quisieran saber todo acerca de ello. | Si tengo relaciones sexuales con un chico, mis amigas quisieran saber todo acerca de ello. | Semantically and conceptually equivalent to the original version, without needing to be modified. |
| SA08 | If I had sex with a guy, I would be running the risk of being played (taken advantage of). | Si tuviera relaciones sexuales con un chico, correría el riesgo de ser engañada. | Si tuviera relaciones sexuales con un chico, correría el riesgo de ser engañada. | Semantically and conceptually equivalent to the original version, without needing to be modified. |
| SA09 | Flirting is fun, and I am good at it. | Coquetear es divertido y lo hago bien. | Coquetear es divertido y lo hago bien. | Semantically and conceptually equivalent to the original version, without needing to be modified. |

**Table 4.** Classification of the equivalence of translations (Cont.)

| Item | Original Version | Translation | Consensual version | Observations |
|---|---|---|---|---|
| SA010 | If I have sex with a guy, I would worry that I could get my feelings really hurt. | Si tengo relaciones sexuales con un chico, me preocuparía que pudiera lastimar mis sentimientos. | Si tengo relaciones sexuales con un chico, me preocuparía que pudiera lastimar mis sentimientos. | Semantically and conceptually equivalent to the original version, without needing to be modified. |
| NE01 | If I kiss a guy I don't really know, I'm worried of what people will think about me. | Si tengo relaciones sexuales con un chico, mis amigas quisieran saber todo acerca de ello. | Si tengo relaciones sexuales con un chico, mis amigas quisieran saber todo acerca de ello. | Semantically and conceptually equivalent to the original version, without needing to be modified. |
| NE02 | Sex is nasty. | El sexo es desagradable. | El sexo es desagradable. | Semantically and conceptually equivalent to the original version, without needing to be modified. |
| NE03 | Sex isn't fun for girls my age. | El sexo no es divertido para las chicas de mi edad. | El sexo no es divertido para las chicas de mi edad. | Semantically and conceptually equivalent to the original version, without needing to be modified. |
| NE04 | I would be scared to be really alone with a boyfriend. | Realmente me asustaría estar sola con un novio. | Realmente me asustaría estar sola con un novio. | Semantically and conceptually equivalent to the original version, without needing to be modified. |
| NE05 | Some girls have sex just to be accepted or popular. | Algunas chicas tienen sexo solo para ser aceptadas o populares. | Algunas chicas tienen sexo solo para ser aceptadas o populares. | Semantically and conceptually equivalent to the original version, without needing to be modified. |
| NE06 | I think I am too young to have sex. | Creo que soy demasiado joven para tener sexo. | Creo que soy demasiado joven para tener sexo. | Semantically and Conceptually equivalent to the original version, without needing to be modified. |
| NE07 | If I have sex, my friends will want to know all about it. | Si tengo relaciones sexuales con un chico, mis amigas quisieran saber todo acerca de ello. | Si tengo relaciones sexuales con un chico, mis amigas quisieran saber todo acerca de ello. | Semantically and conceptually equivalent to the original version, without needing to be modified. |

# Discussion

Generating an instrument adapted to the Spanish language and to the Colombian culture of the municipality of Girón, Santander, becomes a starting point for measuring sexual self-concept in early adolescent girls, thereby strengthening aspects of interventions and research that allow this issue to be addressed and that contribute to the sexual and reproductive health of adolescent girls, which are essential in the progress of nursing. Sexual self-concept determines sexual behavioral intentions,[9] because it evaluates the individual's own feelings and sexual actions, which implies a reflection and evaluation of the individual and is considered a predictor of sexual activity. By evaluating sexual self-concept, the early adolescent girls' intentions to undertake health behaviors and prevent risk behaviors can be predicted.[12] This perspective is useful for nursing professionals in order to know how to address this issue.

Due to the scarcity of measurement instruments for this discipline, it was necessary to carry out the transcultural adaptation process. Regarding the instruments face validity, its clarity, comprehension, and precision were assessed through the participation of experts. The kappa index of inter-observer agreement characterizes values between 0.61 and 0.80 as acceptable substantial agreement and of 0.81 and higher as agreement of superior acceptability; the study showed most items scored with a clarity value of 0.86, a precision value of 0.83 and a comprehension value of 0.89. Fleiss'

Kappa index showed substantial agreement in clarity and precision (0.75 and 0.72, respectively) and almost perfect agreement in comprehension (0.81).[22] In contrast, another study that used Fleiss' Kappa index assumed values among examiners from 0.41 to 0.60 as acceptable agreement and values greater than 0.61 as good or very good.[23] Regarding the face validity of the participants, values between 80 to 85% are considered to represent high comprehensibility, contrary to the study of validity and reliability of a professional care scale in its Spanish version, where a level of comprehensibility was set at greater than 95%, with an error of 8%, thus applying greater rigor in concluding adequate comprehensibility of the question.[24]

The content validity index obtained by the experts for the 34 items was 0.92; such value is considered acceptable, different from a study of validity and reliability of the Spanish version of the "Measurement of Self-Efficacy Perceived in Sleep Apnea" (SEMSA) instrument, in which 23 items reached a satisfactory level of acceptability and the remaining 4 items were subject to modification.[25] Compared to a study of validity and reliability of the Spanish version of the Technological Competency as Caring in Nursing instrument,[22] assessing each item under the criteria of Belonging and Relevance and qualifying each of them (per Denise Polit [26]) as 0 = Not pertinent/relevant, 1 = Slightly pertinent/relevant and 2 = Pertinent or relevant, the modified content validity index of Lawshe's relevance criterion was 0.9, with high degree of agreement between the experts and meeting the relevance criterion of 0.9. This result was considered of great importance. Thus, a process of transcultural adaptation is necessary, with semantic adequacy to ensure clarity and comprehensibility by the subject of study. However, researchers must temper their efforts in terms of fidelity to the reproduction of content and interpretation of the items of the construct.[27]

The conclusion of this study is that the Spanish version of the SSCI is semantically and conceptually equivalent to the original scale and could be used in similar contexts to evaluate sexual self-concept in early adolescent girls.

# References


1. Organización Mundial de la Salud (OMS). Empoderamiento de mujeres adolescentes: un proceso clave para lograr los Objetivos de Desarrollo del Milenio. Washington D.C.: OMS; 2010.
2. Borges AL. Pressão social do grupo de pares na iniciação sexual de adolescentes. Rev. Esc. Enferm. USP. 2007; 41(spe):782-6.
3. Chacón-Quesada T, Corrales-González D, Garbanzo-Núñez D, Gutiérrez-Yglesias JA, Hernández-Sandí A, Lobo-Araya A, et al. ITS Y SIDA en adolescentes: descripción, prevención y marco legal. Med. Leg. Costa Rica. 2009; 26(2):79-98.
4. O'Sullivan LF, Meyer-Balhburg HF, Watkins BX. Social cognitions associated with pubertal development in a sample of urban, low-income, African-American and Latina girls and mothers. J. Adolesc. Health. 2000; 27(4):227-35.
5. Coley RL, Lombardi CM, Lynch AD, Mahalik JR, Sims J. Sexual partner accumulation from adolescence through early adulthood: The role of family, peer, and school social norms. J. Adolesc. Health. 2013; 53(1):91-7.
6. Manlove J, Wildsmith E, Ikramullah E, Terry-Humen E, Schelar E. Family environments and the relationship context of first adolescent sex: Correlates of first sex in a casual versus steady relationship. Soc. Sci. Res. 2012; 41(4):861-75
7. Markham CM, Peskin MF, Shegog R, Baumler ER, Addy RC, Thiel M, et al. Behavioral and psychosocial effects of two middle school sexual health education programs at tenth-grade follow-up. J. Adolesc. Health. 2014; 54(2):151-9.
8. Peres CA, Rutherford G, Borges G, Galano E, Hudes ES, Hearst N. Family structure and adolescent sexual behavior in a poor area of São Paulo, Brazil. J. Adolesc. Health. 2008; 42(2):177-83.
9. O'Sullivan LF, Meyer-Bahlburg HF, McKeague IW. The development of the sexual self-concept inventory for early adolescent girls. Psychol. Women Q. 2006; 30(2):139-49.
10. O'Sullivan LF, Brooks-Gunn J. The timing of changes in girls' sexual cognitions and behaviors in early adolescence: A prospective, cohort study. J. Adolesc. Health. 2005; 37(3):211-9.
11. Valencia CP, Canaval GE, Sevilla TM, Orcasita LT. Sexual debut in young adults in Cali as transition: keys for care. Invest. Educ. Enferm. 2015; 33(2):355-64.
12. Pai HC, Lee S, Yen WJ. The effect of sexual self-concept on sexual health behavioural intentions: a test of moderating mechanisms in early adolescent girls. J. Adv. Nurs. 2012; 68(1):47-55.
13. Pai HC, Lee S. Sexual self-concept as influencing intended sexual health behaviour of young adolescent Taiwanese girls. J. Clin. Nurs. 2012; 21(13-14):1988-97.
14. Parkes A, Henderson M, Wight D, Nixon C. Is parenting associated with teenagers' early sexual risk-taking, autonomy and relationship with sexual partners?. Perspect. Sex. Reprod. Health. 2011; 43(1):30-40.
15. Sánchez R, Echeverry J. Validación de escalas de medición en salud. Revista de Salud pública. 2004; 6:302-18.
16. Arribas Alberto. Adaptación transcultural de instrumentos. Guía para el proceso de validación de instrumentos de tipo encuestas. Rev. Asoc. Med. Bahía Blanca. 2006; 16(3):74-82.
17. Urrutia-Egaña M, Barrios-Araya S, Núñez MG, Camus MM. Métodos óptimos para determinar validez de contenido. Rev. Cub. Educ.Méd. Super. 2014; 28(3):547-58.
18. Tristán- López A. Modificación al modelo de Lawshe para el dictamen cuantitativo de la validez de contenido de un instrumento objetivo. Avances en medición. 2008;6(1):37-48.
19. Herrera BS, González GM, Cardenas DC, Alarcón AA. Diseño, validez facial y de contenido del instrumento carga de la enfermedad crónica para el paciente–GPCP-UN. Rev. Méd. Risaralda. 2017; 23(1):18-29.
20. Fleiss JL. The design and analysis of clinical experiments. New York: Wiley; 1999.
21. Hutchinson A, Bentzen N, Konig-Zanhn C. Cross cultural health outcome assessment: a user's guide. Groningen: European Research Groupon Health Outcomes (ERGHO); 1997.
22. Rincón-Álvarez DA, Chaparro-Díaz L. Validity and Reliability of the Spanish Version of the Technological Competency as Caring in Nursing Instrument. Invest. Educ. Enferm. 2017; 35(2):154-64.

23. González GMC, Herrara BS, Rosero EV. Desarrollo y pruebas psicométricas del Instrumento “cuidar”-versión corta para medir la competencia de cuidado en el hogar. Rev. Salud UIS. 2016; 48(2):222-31.

24. Vesga-Gualdrón LM, Ruiz CH. Validez y confiabilidad de una escala de cuidado profesional en español. Av. Enferm. 2016; 34(1):69-78

25. Galeano EMM, Cuevas VMC. Validez y confiabilidad del instrumento “Medición de la autoeficacia percibida en apnea del sueño”-SEMSA. Versión en español. Aquichan. 2016; 16(1):67-82.

26. Polit DF, Hungler BP. Investigación Científica en Ciencias de la Salud. 6th ed. México: McGraw-Hill; 2005.

27. Morales MNP, Ruiz CH. Adecuación semántica de la Escala de Cuidado Profesional (CPS). Aquichan, 2013; 13(1):104-17.

# Care from the Cultural Perspective in Women with Physiological Pregnancy: a Meta-Ethnography

Original article

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## Care from the Cultural Perspective in Women with Physiological Pregnancy: a Meta-Ethnography

**Objective.** This work sought to conduct an interpretative synthesis of qualitative studies on the phenomenon of care from the cultural perspective in women with physiological pregnancy. **Methods.** The Meta-ethnography method was used with the seven traditional phases by Noblit and Hare to describe the knowledge derived from the results of qualitative studies with relation to the study phenomenon. A bibliographic search was carried out in seven databases. Twenty-nine qualitative studies were pre-selected of which 23 complied with the quality criteria of the Critical Appraisal Skills Program. **Results.** Upon synthesizing the studies selected, 12 thematic categories emerged: pregnancy: a natural phenomenon in the woman's life; spirituality and family support; the midwife; positive and negative feelings; physical exercise; comfort and rest; feeding; avoid consumption of non-beneficial substances; intrauterine stimulation; heat and cold; sexuality during

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pregnancy; and traditional beliefs and myths. **Conclusion.** Synthesis of the studies permitted developing a line of argument, which reveals that the care practices of pregnant women have a cultural legacy of beliefs, values, myths, and customs that are aimed at guaranteeing the protection of the mother and of her unborn child.

**Descriptors:** culture; pregnancy; transcultural nursing; qualitative research; review literature as topic.

## Cuidado desde la perspectiva cultural en mujeres con embarazo fisiológico: una metaetnografía

**Objetivo.** Realizar una síntesis interpretativa de los estudios cualitativos sobre el fenómeno del cuidado desde la perspectiva cultural en mujeres con embarazo fisiológico. **Métodos.** Se empleó el método Metaetnográfico con las siete fases tradicionales de Noblit y Hare, para describir el conocimiento derivado de los resultados de estudios cualitativos con relación al fenómeno de estudio. Se realizó una búsqueda bibliográfica en siete bases de datos. Se preseleccionaron 29 estudios cualitativos, de los cuales 23 cumplieron con los criterios de calidad del *Critical Appraisal Skills Programme*. **Resultados.** Al sintetizar los estudios seleccionados, surgieron doce categorías temáticas: El embarazo: fenómeno natural en la vida de la mujer, la espiritualidad y el apoyo familiar, la comadrona, sentimientos positivos y negativos, el ejercicio físico, la comodidad y el descanso, la alimentación, evitar el consumo de sustancias no beneficiosas, la estimulación intrauterina, el calor y frío, la sexualidad en el embarazo y, las creencias tradicionales y los mitos. **Conclusión.** La síntesis de los estudios permitió el desarrollo de una línea de argumentación la cual revela que las prácticas de cuidado de la mujer gestante cuentan con un legado cultural de creencias, valores, mitos y costumbres que están orientadas a garantizar la protección de la madre y del niño por nacer.

**Descriptores:** cultura; embarazo; enfermería transcultural; investigación cualitativa; literatura de revisión como asunto.

## Cuidado da perspectiva cultural em mulheres com gravidez fisiológica: uma meta-etnografia

**Objetivo.** Realizar uma síntese interpretativa de estudos qualitativos sobre o fenômeno do cuidado a partir da perspectiva cultural em mulheres com gestação fisiológica. **Métodos.** O método Meta-etnografia foi utilizado com as sete fases tradicionais de Noblit e Hare, para descrever o conhecimento derivado a partir dos resultados de estudos qualitativos em relação ao fenômeno de estudo. Uma busca bibliográfica foi realizada em sete bases de dados. Vinte e nove estudos qualitativos foram pré-selecionados, dos quais 23 preencheram os critérios de qualidade do Critical Appraisal Skills Program. **Resultados.** Ao sintetizar os estudos selecionados, emergiram doze categorias temáticas: Gravidez: um fenômeno natural na vida das mulheres; espiritualidade e apoio familiar; a parteira; sentimentos positivos e negativos; exercício físico; conforto e descanso; a alimentação; evitar o consumo de substâncias não benéficas; estimulação intra-uterina; o calor e o frio; sexualidade na gravidez; e, crenças e mitos tradicionais. **Conclusão.** A síntese dos estudos permitiu o desenvolvimento de uma linha de argumentação, o que revela que as práticas de cuidados das mulheres grávidas, têm um legado cultural de crenças, valores, mitos e costumes que são destinadas a assegurar a proteção da mãe e seu feto.

**Descritores:** cultura; gravidez; enfermagem transcultural; pesquisa qualitativa; literatura de revisão como assunto.

# Introduction

Pregnancy is a life experience and one of the most important events within the vital cycle of the woman and the family during which women develop behaviors and perform care practices for themselves and the unborn child to maintain health, care for their diseases, and conserve their wellbeing and that of their child, according to Muñoz.[1] The behaviors and care practices women have during the prenatal stage depend on the social structure and on the ethno-historic and environmental context, that is, on the culture in which they grow and live.[2,3] Leininger states that culture was the broadest, most comprehensive, holistic and universal aspect of human beings, and that caring for people should be carried out from a transcultural vision. In this sense, Leininger conceives cultural care as the dual, central, and dominant construct within the theory of Culture Care Diversity and Universality,[4] the theorist refers to *cultural care* as: "The values, beliefs, and structured and known expressions of a cognitive form that aid, support, facilitate, or train people or groups to maintain their health or wellbeing, improve their situation or way of life, prevent disease or confront disabilities or death".[5] From this perspective, this proposal constitutes a humanistic, scientific, and comprehensive alternative in caring for pregnant women, recognizing that it is not exempt from the cultural constructions, where its values, customs and beliefs have direct influence on the care practices and each culture defines them from their particular vision of life to be transmitted from generation to generation and, thus, be perpetuated over time.[6]

Nursing and other disciplines have studied the care of pregnant women from the meanings and experiences to describe, discover, or explore the practices of cultural care conducted by women during the prenatal stage. However, no research was found that have integrated, synthesized, analyzed, and interpreted the results of primary qualitative studies, upon which emerged the interest of carrying out a Meta-Ethnography on the theme. Knowledge derived from this work will be essential to further understand the care of pregnant women and their families from a transcultural perspective. Likewise, interpretation of caring for pregnant women, from this vision, will support the application of the strategic framework of the Policy of Comprehensive Health Care in Colombia, which recognizes the health problems are generated or enhanced by environmental, social, and cultural conditions,[7] which must be considered within the guidelines of the Comprehensive Care Route in Maternal Perinatal Health.[8] The objective of this study was to conduct an interpretative synthesis of the qualitative studies on the phenomenon of care from the cultural perspective in women with physiological pregnancy.

# Methods

The methodology used was the meta-ethnography developed by Noblit and Hare,[9] which permits conducting a combination of results in interpretative manner rather than aggregative, to generate a higher level of analysis that contributes much more than the individual findings of each investigation.The seven traditional phases by Noblit and Hare were followed for the meta-ethnography which overlap and repeat as the synthesis advances; these include:

**Phase I: Start of the process.** Interest was established in conducting an interpretative and explicative synthesis of cultural care in women with physiological pregnancy.

**Phase II: Decide what is relevant for the initial interest.** The meta-ethnography included original articles and research works from the Masters in Nursing or other disciplines, which described care from the cultural perspective in women with physiological pregnancy, published in full text, in English, Portuguese, and Spanish between 2000 and 2016. The search strategy used MeSH and DeSH terms "care/cuidado", "culture/cultura", "cultural care/cuidado cultural", "care practices/ prácticas de cuidado", "culturally competent care/ cuidado culturalmente competente", "beliefs/ creencias", "pregnancy/embarazo" y "ethnography/ etnografía". The studies were recovered through a search in PubMed, Lilacs, Scielo, Ovid, Academic Search Complete, Medline Complete, ScienceDirect databases and the Repository at Universidad Nacional in Colombia. Finally, the studies selected were evaluated with the quality criteria from the Critical Appraisal Skills Program (CASP) to assess qualitative studies,[10] which are considered fulfilled if there is internal validity of the study, rigorous analysis of the data, and external validity of the findings.

**Phase III: Reading of the studies.** This phase included the reading and rereading of the studies, which permitted extracting the results and conclusions from each of the studies the key metaphors.

**Phase IV: Determine how the studies are related.** A list was made of the key metaphors extracted and these were organized to facilitate their comparison, within and between studies.

**Phase V: Transfer the studies one within another.** This phase applied the reciprocal translation process among the studies, which consisted in examining the list of the key metaphors in relation to other metaphors within each study. At the end of this phase, it was established that the studies were directly comparable, that is, the key metaphors extracted expressed similarities among the findings of each study.

**Phase VI: Synthesize the translations.** The key metaphors were grouped into 12 thematic categories that represented the characteristics or dimensions of cultural care in women with physiological pregnancy. This phase implied new re-readings of the original studies to re-conceptualize the results, that is, the generation of a new interpretation from a second level of analysis.

**Phase VII: Express the synthesis in a final product.** This phase consisted in analyzing the interpretations obtained in the synthesis of translations; this again implied reading the studies and the comparison of the 12 thematic categories, which gave way to what Noblit and Hare describe as "line of argument", which is understood as the construction of a reinterpretation of the findings of the studies. Generation of the line of argument permitted creating a new interpretative synthesis of care from the cultural perspective in women with physiological pregnancy.

# Results

The selection process of the articles to be analyzed identified 1497 bibliographic sources from which 21 articles were obtained and

two Masters Theses in Nursing were finally included in the Meta-Ethnography, as shown in Figure 1.

Table 1 shows the objective, form of collecting the information, and methodological design of the studies included in this Meta-ethnography.

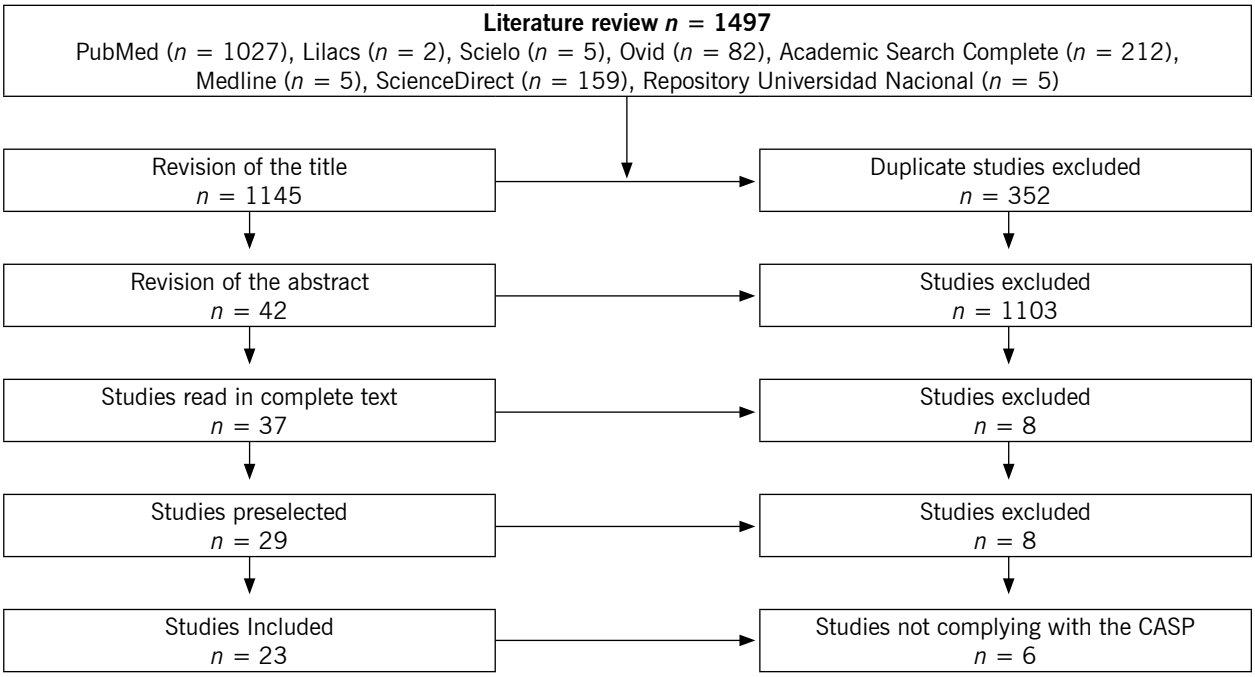


**Figure 1.** Article selection process

The synthesis of translations among studies permitted identifying 12 thematic categories, which linked together allowed creating a new interpretative synthesis of care from the cultural perspective in women with physiological pregnancy from the line of argument. The thematic categories are: a) pregnancy: a natural phenomenon in the woman's life; b) spirituality and family support: bond tie with God, the family, and the unborn child; c) the midwife: a symbol of traditional practices during pregnancy; d) Positive and negative feelings: search for emotional balance during pregnancy; e) physical exercise: a way preparing for the delivery moment; f) comfort, rest, and general care: actions aimed at caring for the body of the pregnant woman; g) feeding: a way of preserving the wellbeing of the mother and her unborn child; h) avoid consuming non-beneficial substances: provide protection to the unborn child; i) intrauterine stimulation: strengthens the mother-child affective bond; j) heat and cold: equilibrium in the woman's body; k) sexuality during pregnancy: interpretations by the woman; l) traditional beliefs and myths: a different way of caring herself during pregnancy (Figure 2).

**Table 1.** Characteristics of the 23 qualitative studies included in the Meta-ethnography

| Authors / Year | Objective | Country | Participants | Collection of information | Methodological Design |
|---|---|---|---|---|---|
| Ahlqvist M, Wirfäl E. (2000) [11] | To explore the cultural beliefs on feeding and health during pregnancy and breastfeeding. | Sweden | 14 women | Open and focal interviews | Grounded theory |
| Flores C. (2003) [12] | To describe and analyze the health representations and practices of the process of pregnancy, delivery, puerperium in the daily lives of Zapoteca women from Yahuío, Sierra Norte de Oaxaca. | Mexico | 42 women | Semistructured interviews and in-depth interviews | Ethnographic study |
| Medina A, Mayca J. (2006) [13] | To understand and revise the cultural aspects and customs impacting upon the processes of pregnancy, delivery, and puerperium. | Peru | 40 participants among midwives, health promotors, and users | In-depth interviews, focal groups and participant observation. | Ethnographic, descriptive study. |
| Giraldo DI. (2007) [3] | To discover the meaning of care pregnant women have of themselves and of their unborn child from their beliefs, values, and practices, from the transcultural perspective by M. Leininger, in the pre-delivery stage, from the El Pinar neighborhood in Medellín. | Colombia | 12 pregnant women | Ethnographic interview by Spradley | Ethnographic study based on ethnonursing. |
| Argote LA, Vásquez ML. (2007) [14] | To explore the care of themselves and of their unborn child in a group of displaced pregnant women, who live in the Pampas de Mirador neighborhood in Cali. | Colombia | 9 pregnant women and 4 general informants | In-depth interviews and observation | Ethnographic study based on ethnonursing |
| Chávez R. et al., (2007) [15] | To know the traditional self-care of native women during pregnancy, delivery and the newborn. | Peru | 5 mothers, 4 pregnant women, 3 puerperants and 4 midwives | Semistructured interviews | Ethnographic study |
| Bernal MC et al., (2007) [2] | To explore the meaning of caring for themselves and of their unborn child for a group of displaced pregnant women residing in Bogotá, from their own beliefs and practices. | Colombia | 12 pregnant women | Individual unstructured in-depth interview, focal group and observation | Ethnographic study based on ethnonursing. |
| Suárez DP, Muñoz de Rodríguez L. (2008) [16] | To discover the meaning of physical exercise during the prenatal stage from the beliefs and practices of pregnant women in the prenatal control program at the E.S.E Hospital San Rafael in Girardot. | Colombia | 8 pregnant women | In-depth interviews and direct participant observation | Ethnographic study based on ethnonursing |
| Hernández LM. (2008) [17] | To describe the meaning of caring for themselves and for their unborn child, from their values, beliefs, and practices, for a group of pregnant women from the locality of Engativá. | Colombia | 8 pregnant women | Semistructured in-depth interviews | Ethnographic study based on ethnonursing |
| Grewal S; Bhagat R; Balneaves L. (2008) [18] | To describe the knowledge and cultural traditions surrounding the perinatal experiences of Punjabi immigrant women and the ways the beliefs and traditional practices are legitimized and incorporated into the context of Canadian medical care. | Canada | 15 women | Individual interviews | Naturalist descriptive study |
| Rátiva N, Ruíz de Cárdenas CH. (2009) [19] | To describe the meaning of the care practices of pregnant adolescents and their unborn child attending prenatal control in the Candelaria Primary Care Unit (UPA, for the term in Spanish) from Hospital Vista Hermosa of locality 19, Ciudad Bolívar from the beliefs, practices, and values between March and June 2007. | Colombia | 8 pregnant women | In-depth interview and observation | Ethnographic study based on ethnonursing. |

**Table 1.** Characteristics of the 23 qualitative studies included in the Meta-ethnography (Cont.)

| Authors / Year | Objective | Country | Participants | Collection of information | Methodological Design |
|---|---|---|---|---|---|
| Ribeiro M, Ferreira S. (2010) [20] | To analyze the feeding practices during pregnancy from the perspective of pregnant women and puerperants living in a complex of favelas in Rio de Janeiro, Brazil. | Brazil | 18 pregnant women and 8 puerperants | Semistructured Interview | Study adopted the interpretative theory |
| Rodríguez I, Bernal MC (2010) [21] | To describe the meaning of caring for themselves of a group of pregnant adolescents and their unborn child, related to feeding, from their practices, beliefs, and cultural values, who attended prenatal control in the Primary Care Unit (UPA) at Candelaria la Nueva, Hospital Vista Hermosa, Ciudad Bolívar, Locality 19 of Bogotá, in 2007. | Colombia | 8 pregnant women | Unstructured, in-depth ethnographic interview | Ethnographic study |
| Guarnizo M, Pardo MP. (2011) [22] | To describe the meaning of sexuality for pregnant women. | Colombia | 9 pregnant women | Semistructured interviews | Ethnographic study |
| Ramos CP, Muñoz de Rodríguez L. (2011) [23] | To describe the cultural practices of caring for indigenous pregnant women who live in the Zenú reservation in the Córdoba Sabana. | Colombia | 10 indigenous pregnant women | Observation and in-depth interview | Ethnographic study based on ethnonursing |
| Barragan D, et al., (2011) [24] | To evaluate the integration of the practices of cultural health and Western medicine during pregnancy in women of Mexican origin from different levels of acculturation. | The United States | 15 women | Semistructured interviews | Qualitative study |
| Choudhury N, Ahmed SM. (2011) [25] | To explore existing maternal care practices during pregnancy, delivery, and post-delivery period of women from extremely poor homes included in the CFPR II program (2007-2012). | Bangladesh | 12 nursing mothers and 8 pregnant women | In-depth interviews | Exploratory study |
| Wulandari LPL, Whelan AK (2011) [26] | To explore the beliefs, attitudes, and behaviors of pregnant women in Bali, Indonesia. | Indonesia | 18 pregnant women | In-depth interviews | Descriptive study |
| Agus Y, Horiuchi S, Porter SE. (2012) [27] | To describe the perception of women on themes related with traditional beliefs during their pregnancy in the rural area of Indonesia. | Indonesia | 16 women | Focal groups using semistructured interview | Cross-sectional exploratory study |
| Rendón BJ, Ruíz de Cárdenas CH. (2012) [28] | To describe the meaning of the cultural care practices of pregnant women with themselves and their unborn children in prenatal control, in the San Antonio hospital in the municipality of Villamaría, Caldas, from February to August 2011. | Colombia | 10 pregnant women | In-depth interview, participant observation, and field notes. | Ethnographic study based on ethnonursing |
| De- Graft Aikins A. (2014) [29] | To explore the feeding beliefs and practices of women in Ghana during pregnancy. | Ghana | 35 women | Interviews | Exploratory study |
| Higginbottom GM, et al., (2014) [30] | To understand the feeding practices and ethnocultural health and how these are integrated into a particular social context of cultural adaptation. | Canada | 10 women | Semistructured interview | Case study that incorporates a participative approach |
| Muñoz M; Pardo MP. (2016) [31] | To describe the meaning of cultural care practices in a group of pregnant adolescents attending prenatal control in the Niño Jesús Hospital in Barranquilla, Colombia. | Colombia | 10 pregnant women and 12 nurses | Ethnographic interviews | Ethnographic study based on ethnonursing |

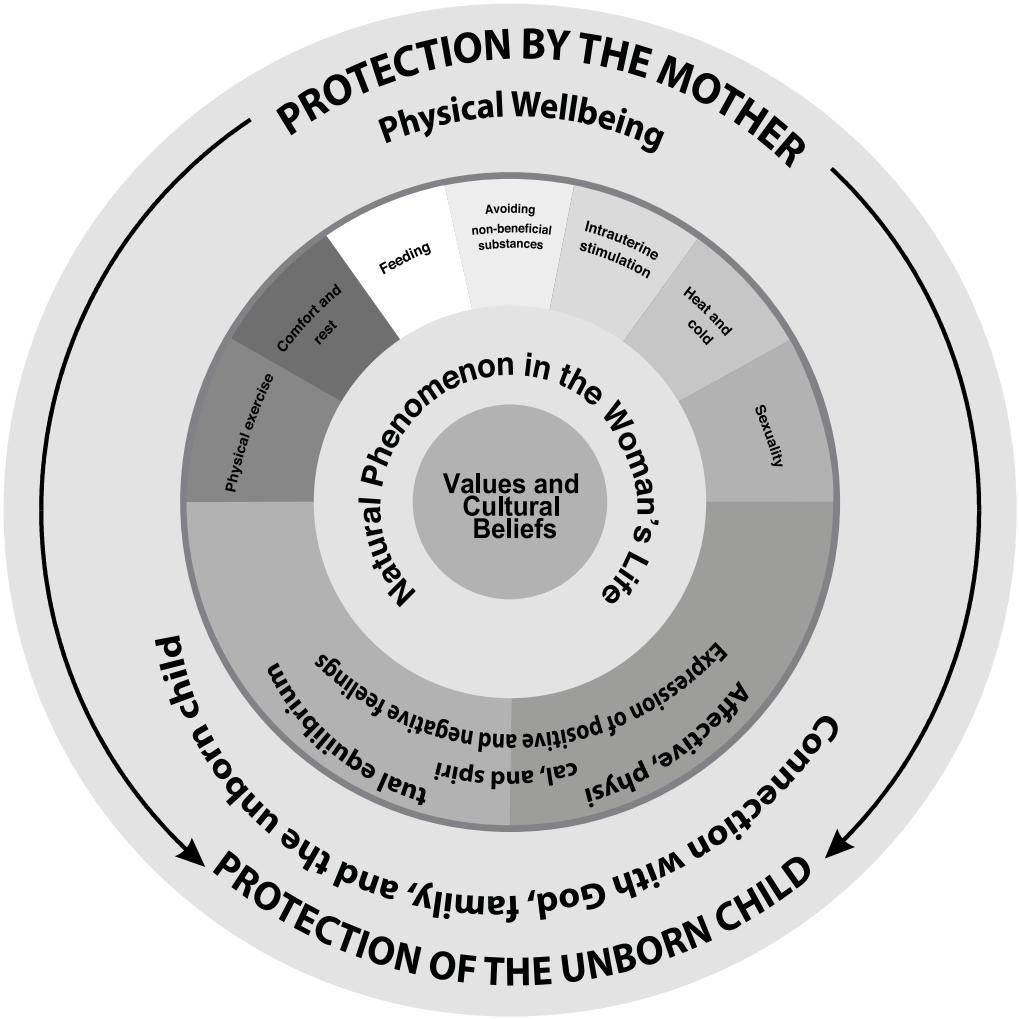


**Figure 2.** Line of argument: "care from the cultural perspective aimed at the protection of the mother and her unborn child"

Care from the cultural perspective of the pregnant woman, as construct generated in this research proposes that *pregnancy is conceived as a natural phenomenon in the woman's life and the family*, is part of the social and biological dimension and from the woman's vision it develops as an event that requires behaviors and care practices to favor the evolution of the pregnancy, prepare for the delivery, and safeguard the wellbeing of the unborn child. [12,14,22,25,27] In these practices, it is important to indicate the articulation among the categories of *spirituality and family support: bond tie with God, the family, and the unborn child; and the midwife: a symbol of traditional practices during pregnancy.* The family,[14,26,28,30,31] the spouse,[25,26,30] women in the family,[3,14,31] the midwife for some cultures[12,14,15,23,28] and the bond with a superior being [3,26,27,28,31] with that related with physical, affective, economic, and spiritual care, which influences positively on the pregnancy.[3,14,23,31]

Regarding family support, it should be noted that the spouse and other family members are particularly interested in the pregnant woman, desiring the woman and the child have a pregnancy in the best possible conditions.[14,25,26,28,30,31] For this, the role of the women in the family is highlighted, especially that of the mother, who as caregiver and, above all as transmitter of beliefs and care practices, has the experience and knowledge to advice women during pregnancy.[3,14,23,31] The representation of the midwife is a symbol of service and of traditional practices that represent the care of the pregnant woman; these are granted recognition, merit, acceptance, and credibility by the women and their families, by being in charge of the control and care for the woman during pregnancy and delivery.[14,15,23,27]

It is evident that women during pregnancy act by following their beliefs and traditional practices and advice from the family, but finally the results of the pregnancy "are in hands of God".[3,27,31] From this perspective, spirituality is an internal guide that provides strength, sense, and significance to the life of the pregnant woman and creates spiritual unity with a supreme being in which the family is involved, seeking to entrust Him with the protection and maintenance of the health of the mother and her unborn child.[28,31] Support from the family, from women in the community or midwives, as well as having a spiritual guide during pregnancy favors *the expression of feelings*. Women seek to maintain an emotional balance that leads them to avoid or stay away from situations that generate negative feelings, like sadness, anger, or distress,[3,14] thus, permitting them to care for their own wellbeing and that of their children with the expression of positive feelings that generate in them tranquility, happiness, and desires to go forth.[3] Just like pregnant women are aware of the need and importance of emotional care, they also develop activities aimed at caring for and preparing their bodies for a quick delivery and without complications to them and the unborn child.[3] Around this goal, care actions are deployed, among them, *physical exercise: a way of preparing for the delivery.* This is a practice that includes everything related with the body of the future mother, like walking, adopting different positions, and performing some bodily movements, that is, activities that can favor the future mother and avoiding others that cause them harm, to protect themselves during pregnancy and prepare for the delivery.[3,14,16,17,19,31]

For pregnant women, *comfort, rest and general care* are practices aimed at caring for their bodies,[3,18,19,23,28,31] which help them to avoid infections, abortions, premature deliveries, risk of falls, mistreatment to the babies and the children being born with physical defects.[18,23,31] In the search for maternal health protection, pregnant women consider *feeding: a way of preserving the wellbeing of the mother and of her unborn child*, and it is achieved through a feeding change and beneficial practices, like eating well.[2,3,11-13,17,19-23,25-28,30,31] The women include in their eating the consumption "soft foods" or "healthy foods"; among them, vegetables, fruits, meat, chicken, fish, milk and its derivates, which are recognized as foods that serve to gain weight, strengthen the body by avoiding the threat of abortion, preventing anemia, ensuring physical strength, minimizing the physiological effects of the pregnancy, maximizing the baby's health, and preparing for the delivery;[3,18-21,29-31] and restriction of "strong foods " which could be interpreted as harmful, "heavy", capable of causing harm to the body, such as junk food, snacks and industrialized foods, among others, seen as forbidden during pregnancy.[3,20,21,29-31] Around feeding, rituals also exist aimed at guaranteeing in the mother "to have a good delivery", from consuming foods that "provide strength", like foods with salt and *bienestarina* (vegetable flour, added with powdered skimmed milk, enriched with vitamins and minerals); food to "open the flesh" (onion); ingesting hot beverages (cinnamon and castor oil) "favor labor contraction pain";[3] consuming butter in each meal and drinking abundant liquid facilitate expulsing the fetus.[30]

Women consider *avoiding the consumption of non-beneficial substances* as a way of generating protection to themselves and to the

unborn child, recognizing that substances, like alcohol, cigarettes, psychoactive substances and medications are harmful to them and to the child because they are associated with negative effects in the short and long term in the health of the infants.[13,14,19,21,22,24]

*Intrauterine stimulation: enhances the mother-child affective bond* by expressing love and affection with the hope of delivering a happy baby, which develops emotionally, mentally, and socially; generating a human being who is more critical, adaptable, and endowed with emotional intelligence; besides giving the mother the opportunity to reflect on the new role she will soon acquire.[3,19,28,31]

*Heat and cold: balance in the woman's body*. Cold is considered an enemy that must be fought in as much as possible through heat.[3,28] Cold can enter the woman's body through different ways and become a threat to the mother and the unborn child.[3,23,31] This leads them to developing a series of practices that let them keep their body in equilibrium between cold and heat and which guarantees them, from their traditional knowledge, to remain well during pregnancy, guarantee the health of the fetus and restore the mother's health after the delivery.[3,14,23] In synthesis, cold behaves as a sensation they do not like, they feel that what their body presents is not good and is unpleasant.[3]

*Sexuality during pregnancy: interpretations by the woman.* For the pregnant woman, the fact of engaging in sexuality, relating with her partner, and being well are cultural domains with which they identify sexuality in this stage of life.[22] However, fear exists upon practicing the sexuality: hurting or causing physical defects in the fetus, precipitating the moment of delivery,[22,23] and the presence of physical changes during pregnancy altering the image and self-concept, so that sexuality is reduced to the enjoyment of a sexual encounter by the couple without affective feelings.[22]

*Traditional beliefs and myths as a different way of caring for themselves in the pregnancy*; during pregnancy, women stick to diverse customs, myths, and beliefs, which are founded, developed, transmitted, and maintained through knowledge and the experience of a social group social and from a family context in which the pregnant woman is immersed.[28] This is how beliefs are reported related with certain restrictions and mobility during a lunar or solar eclipse,[24,25] attending funerals, weddings[26] and cemeteries,[25] as a way of protecting themselves, preventing deformities in the unborn child, and avoiding disease.[28]

# Discussion

The Meta-ethnography permitted, from first-order interpretations (points of view expressed by the participants of the studies) and second-order interpretations (interpretations reported by the authors of the studies), developing a line of argument (third-order interpretation)[32] that exposes in greater depth existing knowledge on care the women carry out from the cultural context during the prenatal stage. The line of argument links 12 thematic categories, one of them highlights how the pregnancy, in spite of being conceived as a *natural phenomenon in the woman's life,*[12,14,22,25,27] is a process defined by the social, historical, and cultural contexts that demands in her two important components in caring for herself and her unborn child. The first, is to be prepared psychologically, emotionally, and spiritually.[33] In this sense, the following categories are described: *spirituality*[3,26-28,31] and *family support:* [2,3,14,25,26,28,30,31] *a bond tie with God, the family and the unborn child, and the midwife: a symbol of traditional practices during pregnancy.*[12,14,15,23,28] Family support, women from the community, and the connection with a supreme being during the pregnancy, permit in the woman an affective, economic, and spiritual equilibrium,[3,14,23,31] which leads her to stay away from situations that generate *negative feelings,*[3,14] thus, permitting the care of their own emotional wellbeing with the expression of *positive feelings* that generate in them tranquility and happiness during the pregnancy.[3]

The second component corresponds to the physical preparation, which implies the change of behaviors

and habits aimed at the health of the mother and that of the unborn child.[33] This process links seven categories, *the practice of physical exercise;*[3,14,16,19,28,31] *comfort, rest, and general care;*[3,18,19,23,28,31] *feeding: a way of preserving the mother's wellbeing and that of her unborn child;*[3,12,13,17,19,20,21,23,25-28,30,31] *avoiding the intake of non-beneficial substances;*[13,14,19,21,22,24] *intrauterine stimulation: strengthens the mother-child affective bond;*[3,19,28,31] *heat and cold: equilibrium in the woman's body;*[3,14,23,28,31] *sexuality during pregnancy: interpretations by the woman.*[22,23] The behaviors and care practices mentioned are framed within a strong system of traditional beliefs*, customs and myths*[24-26,28] that constitute a cultural dimension, which persists, is transmitted through tradition and is part of the reality of the pregnant women to care for their own health and that of their unborn children.[28]

According to the Theory of Culture Care Diversity and Universality, by Madeleine Leininger, the findings of this research evidence how caring for the woman during the prenatal stage, in each country, is a cultural phenomenon with differences and similarities in its meanings, values, beliefs, life styles, and care practices in the pregnant woman and social and family nucleus. From this principle, the goal of the theory of cultural care, according to Leininger, is to offer care synthesized within Universality (shared or similar characteristics of cultural care) and Diversity (differences or variations of cultural care), so that it can be culturally congruent, safe, beneficial, and significant,[4] aimed at the protection of the mother and her unborn child.

**Limitations of this study.** The meta-ethnography is a qualitative methodology constituted by seven phases which overlap and repeat as the interpretative synthesis advances. However, no guide exists to clearly transmit the methodology, analysis and synthesis of the reinterpretation of the findings, which becomes an important barrier to the base of the scientific evidence that permits evaluating the methodological rigor, credibility, and reliability of the findings of a meta-ethnography. It is possible that all the studies published on caring for pregnant women from the cultural perspective have not been included in this synthesis, although a complete and extensive search was conducted in Spanish, English, and Portuguese in seven databases and the repository at Universidad Nacional de Colombia.

**Conclusion.** The line of argument reflects how behaviors and care practices of pregnant women are aimed at guaranteeing their protection and that of their unborn children. These care practices are configured from knowledge, values, beliefs, and customs, that is, the culture in which the women are born, grow up, and develop. Consequently, care from the cultural perspective in women with physiological pregnancy is a construct that must be understood from the meanings, experiences, and cultural context surrounding the woman's family, social, and spiritual structure during pregnancy. This interpretative synthesis reflects the need to offer culturally congruent care by the health staff in charge of maternal perinatal care to achieve a dual construct between generic knowledge (emic) and professional knowledge (ethical), which permits their planning and effectively applying care actions adapted to the beliefs of health or disease, values and practices of the pregnant woman and her family, and which helps the pregnant woman to maintain or reach full physical, mental, social, and spiritual wellbeing.

# References


1. Arévalo E. Gestación y prácticas de cuidado. Av. Enferm. 2007; 25(2): 50-7.
2. Bernal MC, Muñoz de Rodríguez L, Ruíz de Cárdenas CH. Significado del cuidado de sí y de su hijo por nacer en gestantes desplazadas. Aquíchan. 2008; 8(1):97-115.
3. Giraldo DI. Significados del cuidado en el preparto. Av. Enferm. 2007; 25(1):115-21.
4. Leininger MM, McFarland MR. Culture care diversity and universality. A worldwide nursing theory. Chapter 1. Culture care diversity and universality theory and evolution of the ethnonursing method. 2nd Edition. Sudbury Massachusetts: Jones and Bartlett Publishers; 2006. P.1-42.
5. Leininger MM. Transcultural nursing concepts, theories, research & practices. Chapter 2. Transcultural nursing perspectives: basic concepts, principles and cultural care incidents. Second Edition. New York: McGraw-Hill, Inc. College Costom Series; 1995. P. 57-91.
6. Laza C, Cárdenas FJ. Una mirada al cuidado en la gestación desde la enfermería transcultural. Rev. Cubana Enferm. 2008; 24 (3-4).
7. Ministerio de Salud y Protección Social. Política de atención integral en salud. Bogotá D.C; 2016.
8. Ministerio de Salud y Protección Social. Lineamiento técnico y operativo de la ruta integral de atención en salud materno perinatal. Bogotá D.C; 2018.
9. Noblit G, Hare D. Meta-Ethnography: Synthesizing Qualitative Studies. Newbury Park, California: Sage Publications; 1988. P. 26-9.
10. National Collaborating Centre for Methods and Tools. Critical Appraisal Skills Programme. CASP Checklist: 10 questions to help you make sense of a Qualitative Research Checklist. [Internet]. 2018 [cited Nov 18, 2018]. Available from: https://casp-uk.net/wp-content/uploads/2018/01/CASP-Qualitative-Checklist-2018.pdf
11. Ahlqvist M, Wirfält E. Beliefs concerning Dietary Practices during Pregnancy and Lactation. Scand. J. Caing Sci. 2000; 14(2):105-11
12. Flores C. Saber popular y prácticas de embarazo, parto y puerperio en Yahuío Sierra Norte de Oaxaca. Perinatol. Reprod. Hum. 2003;17(1):36-52
13. Medina A, Mayca J. Creencias y costumbres relacionadas con el embarazo, parto y puerperio en comunidades nativas awajun y wampis. Rev. Perú. Med. Exp. Salud Pública. 2006; 23(1):22-32.
14. Argote LA, Vásquez ML. Ante la desesperanza del desplazamiento: Un hijo sano, el mayor anhelo de la mujer gestante. Colomb. Med. 2007; 38(4):27-43.
15. Chávez RE, Arcaya MJ, García G, Surca TC, Contreras MV. Rescatando el autocuidado de la salud durante el embarazo, el parto y al recién nacido: representaciones sociales de mujeres de una comunidad nativa en Perú. Texto-Contexto Enferm. 2007; 16(4):680-7.
16. Suárez DP, Muñoz de Rodríguez L. La condición materna y el ejercicio en la gestación favorecen el bienestar del hijo y el parto. Av. Enferm. 2008; 26(2):51-8.
17. Hernández LM. La gestación: proceso de preparación de la mujer para el nacimiento de su hijo(a). Av. Enferm. 2008; 26(1):97-102.
18. Grewal SK, Bhagat R, Balneaves LG. Perinatal beliefs and practices of immigrant Punjabi women living in Canada. J Obstet. Gynecol. Neonatal Nurs. 2008;37(3):290-300.
19. Rátiva N, Ruíz de Cárdenas CH. Si protegemos la vida y la salud durante la gestación, construimos para los dos un futuro saludable. Av. Enferm. 2009; 27(1):30-7.
20. Ribeiro M, Ferreira S. Práticas alimentares na gravidez: um estudo com gestantes e puérperas de um complexo de favelas do Rio de Janeiro. Ciênc. Saúde Coletiva. 2010; 15 (Suppl 2): 3199-206.
21. Rodríguez I, Bernal MC. La alimentación de la gestante adolescente: el cambio favorable. Av. Enferm. 2010; 28(1):83-95.
22. Guarnizo M, Pardo MP. El significado de la sexualidad durante la gestación. Av. Enferm. 2011; 29(2):294-306.

23. Ramos CP, Muñoz de Rodríguez L. Prácticas culturales de cuidado de gestantes indígenas que viven en el Resguardo Zenú ubicado en la Sabana de Córdoba [Internet]. Bogotá DC: Universidad Nacional de Colombia. Facultad de Enfermería; 2011 [cited 16 Jan 2019]. Available from: http://bdigital.unal.edu.co/5416/1/539507.2011.pdf
24. Barragan DI, Ormond KE, Strecker MN, Weil J. Concurrent use of cultural health practices and Western medicine during pregnancy: exploring the Mexican experience in the United States. J. Genet. Couns. 2011; (6):609-24.
25. Choudhury N, Ahmed SM. Maternal care practices among the ultra-poor households in rural Bangladesh: a Qualitative exploratory study. BioMed Pregnancy Childbirth. 2011; 11:15.
26. Wulandari LPL, Whelan AK. Beliefs, attitudes and behaviours of pregnant women in Bali. Midwifery. 2011; 27(6):867-71.
27. Agus Y, Horiuchi S, Porter SE. Rural Indonesia women's traditional beliefs about antenatal care. BioMed Res. Notes. 2012; 5: 589.
28. Rendón BJ, Ruiz de Cárdenas CH. Significado de las prácticas de cuidado cultural que realizan las gestantes consigo mismas y sus hijos por nacer en el control prenatal [Internet]. Bogotá DC: Universidad Nacional de Colombia. Facultad de Enfermería; 2012 [cited 16 Jan 2019]. Available from: http://bdigital.unal.edu.co/8904/1/Blancajeannetterendon.2012.pdf
29. De-Graft Aikins A. Food beliefs and practices during pregnancy in Ghana: implications for maternal health interventions. Health Care Women Int. 2014; 35(7-9):954-72
30. Higginbottom GM, Vallianatos H, Forgeron J, Gibbons D, Mamede F, Barolia R. Food choices and practices during pregnancy of immigrant women with high-risk pregnancies in Canada: a pilot study. BMC Pregnancy Childbirth. 2014; 14:370.
31. Muñoz M, Pardo MP. Significado de las prácticas de cuidado cultural en gestantes adolescentes de Barranquilla. Aquichan. 2016; 16(1):43-55.
32. Atkins S, Lewin S, Smith H, Engel M, Fretheim A, Volmink J. Conducting a meta-ethnography of qualitative literature: Lessons learnt. BMC Medical Research Methodology. 2008; (8):21.
33. Osorio JH, Carvajal G, Rodríguez M. Preparación para la maternidad durante la gestación: un análisis de concepto. Invest. Educ. Enferm. 2017; 35(3):295-305.

Original article

# Effectiveness of an Educational Nursing Intervention on Caring Ability and Burden in Family Caregivers of Patients with Chronic Non-Communicable Diseases. A Preventive Randomized Controlled Clinical Trial


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## Effectiveness of an Educational Nursing Intervention on Caring Ability and Burden in Family Caregivers of Patients with Chronic Non-Communicable Diseases. A Preventive Randomized Controlled Clinical Trial


**Objective.** To evaluate the effect of the "Caring for Caregivers" program in the caring ability and burden in family caregivers of patients with chronic diseases at health care institutions. **Methods.** A randomized controlled clinical trial was conducted in 34 relatives of patients with chronic diseases that had cared for them for more than 3 months. Zarit scale was used to measure caregiver burden and the CAI (Caring Ability Inventory) was also used to measure caring ability. An educational intervention was applied based on the "Caring for Caregivers" strategy of the Universidad Nacional de Colombia. **Results.** Although both groups improved their percentage of unburdened caregivers from the first to the second assessment, the difference between the two assessments was 41.2%



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in the intervention group whereas it was 11.8% in the control group, being only statistically significant the difference for the intervention group. Regarding the caring ability, no significant changes were identified in both groups. **Conclusion.** On family caregivers, it was observed that the "Caring for Caregivers" intervention had a positive impact on decreasing burden, but not on improving the caring ability.

**Descriptors:** noncommunicable diseases; chronic disease; caregivers; control groups; clinical trial.

## Efectividad de una intervención educativa de enfermería sobre la habilidad del cuidado y carga del cuidador familiar de pacientes con enfermedad crónica no trasmisible. Ensayo clínico controlado aleatorizado de tipo preventivo

**Objetivo.** Evaluar el efecto del programa "Cuidando a Cuidadores" en la habilidad del cuidado y la carga de los cuidadores familiares de personas con enfermedad crónica que asisten a una institución de salud. **Métodos.** Ensayo clínico controlado randomizado, realizado en 34 familiares de personas con enfermedad crónica que los hubieran cuidado por más de 3 meses. Se utilizaron las escalas de ZARIT para medir la sobrecarga del cuidador y el CAI (*Caring Ability Inventory*) para medir la habilidad del cuidado. Se aplicó una intervención educativa basada en la estrategia "cuidando a cuidadores" de la Universidad Nacional de Colombia. **Resultados.** Aunque ambos grupos mejoraron en el porcentaje de cuidadores sin sobrecarga de la primera a la segunda evaluación, en el grupo de intervención la diferencia entre los dos momentos de evaluación fue de 41.2%, mientras que en el grupo control fue de 11.8%, estadísticamente significante la diferencia para el grupo de intervención. En la habilidad del cuidado no se identificaron cambios significativos en los dos grupos. **Conclusión.** En los cuidadores familiares se apreció que la intervención "cuidando a los cuidadores" presentó impacto positivo en disminución de la sobrecarga, pero no en la mejora de la habilidad de cuidado.

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**Descriptores:** enfermedades no transmisibles; enfermedad crónica; cuidadores; grupos control; ensayo clínico.

## Efetividade de uma intervenção educativa de enfermagem sobre a habilidade do cuidado e carga do cuidador familiar de pacientes com doença crônica não transmissível. Ensaio controlado aleatorizado de tipo preventivo

**Objetivo.** Avaliar o efeito do programa "Cuidando a Cuidadores" na habilidade do cuidado e a carga dos cuidadores familiares de pessoas com doenças crônica que frequentam a uma instituição de saúde. **Métodos.** Ensaio controlado randomizado, realizado em 34 familiares de pessoas com doenças crônica que os tiveram cuidado por mais de 3 meses. Se utilizaram as escalas de ZARIT para medir a sobrecarga do cuidador e o CAI (Caring Ability Inventory) para medir a habilidade do cuidado. Se aplicou uma intervenção educativa baseada na estratégia "cuidando a cuidadores" da Universidade Nacional de Colômbia. **Resultados.** Embora ambos grupos melhoraram na porcentagem de cuidadores sem sobrecarga da primeira à segunda avaliação, no grupo de intervenção a diferença entre os dois momentos de avaliação é de 41.2%, enquanto que no grupo controle é de 11.8%, sendo unicamente estatisticamente significante esta diferença para o grupo de intervenção. Na habilidade do cuidado não se identificaram câmbios significativos nos dos grupos. **Conclusão.** Nos cuidadores familiares se apreciou que a intervenção "cuidando aos cuidadores" apresentou impacto positivo em diminuição da sobrecarga, mas não na melhora da habilidade de cuidado.

**Descritores:** doenças não transmissíveis; doença crónica; cuidadores; grupos controle; ensaio clínico.

# Introduction

Chronic non-communicable diseases have an important impact on public health in Latin America and Colombia, being a big challenge for health personnel, especially for nursing, who should be involved to propose care interventions that meet with the General Health and Social Security System in a holistic and primary way.[1,2] In addition, chronic diseases are the leading causes of mortality and morbidity, which further indicate the need for care actions that aim at improving health care quality of patients and their families, who get affected by having to assume the burden generated by limitations, disabilities and dependence caused by chronic diseases, affecting the quality of life, especially of those caring for them.[3,4]Thus, chronic diseases cause disability and involve patients and their caregivers, that in most cases is a family member who assumes this function and does not receive any remuneration nor previous training, social support or any other service that prepare him/her to assume this new role. Most of them were have a low education level. These family caregivers require to be available without any time limitations, increase in costs, resources and efforts that may generate feelings of loneliness and emotional affectation due to the exhaustion that comes up from caring, generating a physical and mental impact on those who assume the caring role. All this leads to caregiver burden as a consequence of the combination of physical work, emotional pressure and economic burden.[5,6]

Regarding this aspect, the caring ability of patient caregivers plays a vital role and its impact on the survival of these patients and their disease management. Regarding this topic, the concept of ability is based on the holistic care of Milton Mayeroff,[7] described as the way to establish a relationship with another person that gets favored in his/her development. This author proposes a conceptual framework to study and understand the nursing care. In most cases, this implies understanding the person that receives care, considering their needs, strengths, weaknesses and whatever is involved in their well-being. The above also involves the knowledge of oneself, including beliefs and values, since these will be the base for the decisions that are made in relation to the patient. Thus, the caring ability is understood as the development of skills and abilities that are available to an individual to perform actions that help others to grow or appreciate their own life.

Family caregivers should know the basics and be courageous and patient enough to deal with this situation,[6] but it requires to train and strengthening this ability to provide care that goes beyond care quality being offered to patients with chronic non-communicable diseases. This could also be an aspect that influences the well-being of people in charge of those chronicity situations.[8] In relation to burden, according to existing research,[9-12] nursing interventions to decrease burden have had a positive effect. However,

these do not follow any methodology with a randomized control clinical trial that can clearly recommend the effect of these strategies in reducing the burden perception. Stress, fatigue, reduction in social relationship and all emotional disturbances affecting family caregivers converge on a burden in activities that impact the quality of life of caregivers, leading them to experience of coping with difficult situations at work, financial difficulties and to the point of affecting the family functioning, due to the fact that not only the main caregiver feels burdened but also those caregivers that occasionally get involved in activities.[7]

The studies that include Colombia have implemented strategies to decrease this burden in relatives of patients with chronic non-communicable diseases such as the use of information technology and communication through counseling that seek an active listening and knowledge of the disease, which help decrease the levels of anxiety and depression that might be present in caregivers, resulting in a decrease in burden. This also contributes to improve access to health system information and have more contact with other caregivers dealing with a similar situation, which contributes to having a better perception of the disease and quality of life.[9]

Considering the important background of the studies conducted by the Chronic Care group of the Universidad Nacional and the researcher network in the field of caring for caregivers of patients with chronic diseases that have conducted multiple research on this topic, the "Caring for Caregivers" program has been developed with the aim of improving the caring ability and decreasing burden in family caregivers of patients with chronic non-communicable diseases. The caring group of Universidad de Santander (UDES) in partnership with the Latin American Network of Chronic Patients and their Families generated a proposal that helps guide the management of disease situations in both patients and their caregivers. For that, its main objective is to evaluate the effect of the "Caring for Caregivers" program in relation to the caring ability in family caregivers of patients with chronic diseases at a private health care institution in Bucaramanga.

## Methods

A preventive controlled clinical trial was conducted with two comparison groups (intervention and control) in 2017. The inclusion criteria were to be aged 18 or over, be the caregiver of a patient with a chronic non-communicable disease (NCD) and the time devoted to caring was at least three months. Caregivers with difficulties in communication and those who could not receive the whole intervention were excluded. To meet the selection criteria, 34 family caregivers of patients with NCD were selected, who were users of a private tertiary hospital in Bucaramanga (Colombia).

***Randomization.*** To assign the intervention, on behalf of the project coordination center, a co-researcher of this study randomized family caregivers in balanced blocks to either the control group or intervention group, by using a list of random numbers generated in Excel.

***Intervention.*** The intervention consisted of the application of a four-topic workshop aimed at improving the family caregiver ability on knowledge, courage and patience, using a booklet designed by the Universidad Nacional de Colombia [13]. This workshop was individually applied to each patient in a window of 3 hours at the hospital and was led by a nurse of the research team accompanied by a final year student of the nursing degree. The topics, objectives and activities are described in Table 1. Training related to the chronic pathology was provided to the control group, using educational support material designed by the research team. All participants of the control group were offered to have an intervention after the post-intervention surveys had been applied.

**Table 1.** "Caring for Caregivers" Program Modules[13]

| Topics | Objective | Activities |
|---|---|---|
| Introduction | To introduce the topic and its recognition. | Group members introduce themselves, including caregivers who start the program as well as those who coordinate it. |
| Knowledge required to understand and facilitate the caregiver role. | To generate a space for knowledge and recognition of the people involved in the family caring process around the experience of chronic diseases. | • Appreciation of the most beautiful and important aspects of the people involved in caring and the way they are expressed.<br>• Aspects that take hard work and that inspire confidence to the caregiver.<br>• Identification of caring activities done with oneself and others.<br>• Solving questions related to the level of caring preparation. |
| Social ability and decision making when caregiving. | To apply a decision model and recognition of caregivers' support when caregiving. | • Similarities among caregivers.<br>• Coping with caring difficulties.<br>• Identifying one's own value.<br>• Decision-making process applied in caregiving situations.<br>• Strengthening of the social support network. Provision of support and action in emergencies. |
| Experience of growing and understanding the meaning of caring. | To reevaluate the experience of being a caregiver. To understand the meaning of patience as a growth element in the caring process. | • Whatever calms down and exasperates the caregiver.<br>• Identifying what caregivers can do to be more patient.<br>• Setting goals to improve knowledge, courage and patience.<br>• Skilled caregivers.<br>• Caregivers with new goals and strategies. Recognizing oneself as a competent caregiver requiring help, guidance and rest.<br>• Whatever will happen in the future and how to be prepared. |

***Instruments.*** Zarit scale (Zarit Burden Interview)[14] was used to determine the perception of caregiver burden. This scale consists of 22 items with 5 Likert response options ranging from 1=never to 5=nearly always. The total score varies from 22 to 110, categorized as follows: no burden (≤ 46), mild burden (47-55) and severe burden (>55).[15] Its inter-observer reliability is 0.71 to 0.85 and an internal consistency using Cronbach's alpha between 0.85 and 0.93.[11] This scale is widely used to measure caregiver burden.[16] To evaluate caring abilities, the Nkongho Caring Ability Inventory [17] was used in its Spanish version. The instrument consists of 37 questions answered on a Likert scale with scores from 1 to 7. Higher scores indicate a higher level of caring ability. Three dimensions are considered: knowledge (14 items), courage (13 items) and patience (10 items). This scale reports an internal consistency using Cronbach's alpha between 0.84 and 0.86.[6,10] For the characterization of the family caregivers and patients, the GCPC-UN-D instrument for characterization was used for each caregiver-patient with chronic disease duo, in which demographic information was registered (age, marital status, sex, education level, origin, occupation and religion), as well as caregiver characteristics (time as caregiver, number of daily hours of care, and support available to the patient and caregiver.) In addition, this instrument contains the mental state assessment and the functional capacity assessment using SPMSQ and PULSES scales. The first instrument is a 10-questions questionnaire in which depending on the number of errors, it is categorized as intact mental functioning (0-2), mild cognitive impairment (3-4), moderate cognitive impairment (5-7) and severe cognitive impairment (8-10).[18] The PULSES [19] instrument evaluates the functional capacity of the patient to perform daily activities, in which there are 6 items scoring from 1 to 4, in which the higher score is obtained, the higher dependency.

***Procedure and Information Collection.*** The research team was responsible for the information collection (four nursing professionals, two of

them hold a master's degree in epidemiology and another one holds a postgraduate diploma in university teaching), with the collaboration of three students of the CUIDEN research seedbed group. All these people had prior training on the use of the instrument and the application of the intervention using the educational booklet "Caring for Caregivers". Initially, hospitalized patients with chronic non-communicable diseases were identified at "Los Comuneros" University Hospital in Bucaramanga. Once the patient had been selected, the caregiver was identified to later define the objective, importance and procedures of the study. Then, the informed consent was signed and the instruments for the collection of sociodemographic information and the caring ability and burden assessment (pre-intervention) were filled out. Later, an educational workshop was carried out on the four topics of the "Caring for Caregivers" program to the intervention group. Likewise, an educational meeting on chronic diseases and their caring was carried out to the control group. Family caregivers were contacted on the next day to apply again the instruments of caring ability and burden assessment (post-intervention).

People who carried out the study assessments and the responsible person for the statistical analysis of the information did not know to which group the participant's information belonged. It was not possible to mask the group allocation due to the nature of the intervention. The process carried out with the group participants is shown in Table 2.

**Table 2.** Tasks carried out in the study groups

| Groups | | Description |
|---|---|---|
| Intervention | Control | |
| Enrollment | Enrollment | Caregivers that met with the selection criteria were identified in the emergency and the hospital care units at the tertiary hospital. |
| Measurement of caring ability and burden | Measurement of caring ability and burden | All caregivers were first measured for caring ability and burden, also the completion of the caregivers and patients' characterization form. |
| An educational workshop with four topics contained in the "Caring for Caregivers" booklet. | An educational meeting with contents of pathology management of the patient, the educational booklet designed by the research team. | Workshops were carried out by research team members in a single day, based on the prior group allocation and using either the "Caring for Caregivers" educational booklet that lasted around 3 hours or the educational booklet with basic chronic pathology management for patients that lasted around 30 minutes. |
| Final research meeting | Final research meeting | Later, instruments were applied again to measure the caring ability and burden of family caregivers after the intervention. |

***Information Analysis.*** The collected information was analyzed using the statistical software Stata14 (Stata Corporation, College Station, USA). Quantitative variables showed a nonparametric distribution, so the middle value and the interquartile range were reported. The Mann—Whitney U test was applied to identify differences among the groups (intervention and control groups). Relative and absolute frequencies were calculated for the categorical variables. Fisher's exact test was also applied as cells had an expected value of less than 5. For all tests, when the reported probability value was less than 0.05, a statistical significance was assumed. To measure changes in scores of Zarit and CAI scales prior and after the intervention, the Wilcoxon signed-rank test was used for repeated measures in groups and the Mann—Whitney U test was used when assessing differences between groups.

***Ethical Principles.*** This research received the approval from the bioethics committee of the

Universidad de Santander and the Health Institution committee where the research was conducted. Participants signed an informed consent form. This project was registered in the Clinicaltrials.gov site under the number NCT03159728, the database for the record and the results of the clinical worldwide studies involving human subjects as participants.

# Results

The total number of participants was 34 family caregivers (17 in the intervention group and 17 in the control group). All people who agreed to participate were analyzed in the group that they were initially allocated. (Figure 1)

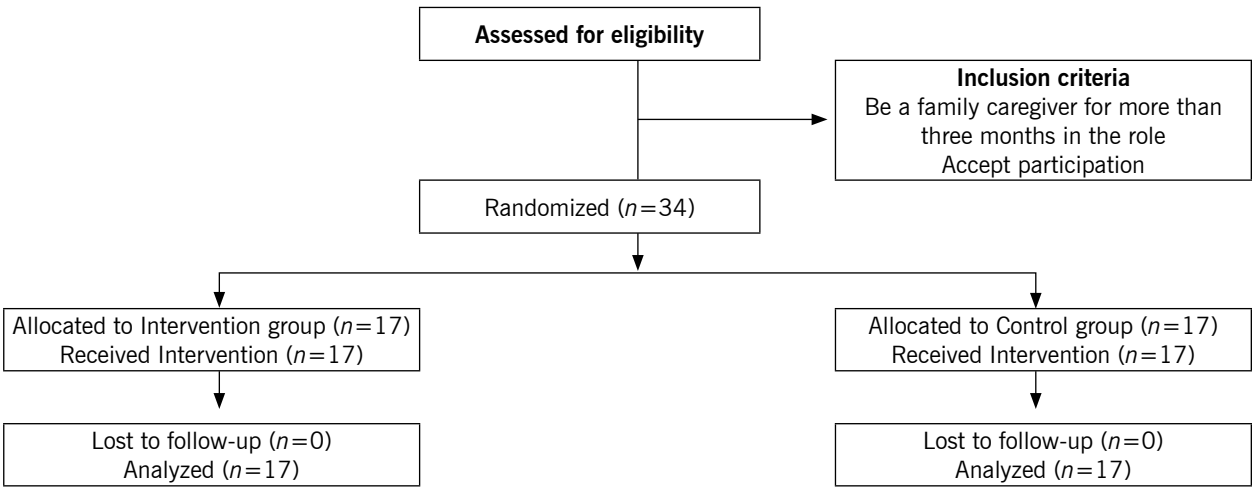


**Figure 1.** Article selection process

Sociodemographic characteristics are described in Table 3. It was observed that there are no significant differences in the demographic and support variables that might interfere with their comparability, except for the caregivers' socioeconomic status, in which 58.82% of the caregivers in the intervention group are from the lowest strata while it was 11.76% in the control group.

In general, patients with chronic non-communicable diseases, regardless of their group, can be described as mainly married individuals over 70 years of age with no or little education from low socioeconomic status. Caregivers are described as mostly women almost 30 years younger than patients, with secondary and higher education in a civil partnership and also from the lowest strata. As for the support that patients and their caregivers receive, no statistically significant difference was found. In addition, it can be observed that psychological and social support are the lowest supports in patients and caregivers in both groups, while religious, economic, and family support were the highest supports (the latter in all participants.)

**Table 3.** Characteristics of patients and family caregivers in each group

| Characteristics | Patients | | | Caregivers | | |
|---|---|---|---|---|---|---|
| | Intervention *n*=17 | Control *n*=17 | *p* | Intervention *n*=17 | Control *n*=17 | *p* |
| Age; middle value (IQR) | 73 (69-88) | 77 (72-80) | 0.69 | 47 (40-58) | 54 (48-56) | 0.09 |
| Female gender; *n* (%) | 8 (47.06) | 11 (64.71) | 0.49 | 15 (88.24) | 17 (100) | 0.48 |
| Level of education; *n* (%) | | | 0.53 | | | 0.42 |
| None | 1 (5.88) | 0 | | 0 | 1 (5.88) | |
| Primary education | 14 (82.35) | 13 (76.47) | | 4 (23.53) | 5 (29.41) | |
| Secondary education | 2 (11.76) | 2 (11.76) | | 10 (58.82) | 5 (29.41) | |
| Undergraduate degree | 0 | 2 (11.76) | | 1 (5.88) | 3 (17.65) | |
| Technical degree | 0 | 0 | | 2 (11.76) | 2 (11.76) | |
| Postgraduate degree | 0 | 0 | | 0 | 1 (5.88) | |
| Marital status; *n* (%) | | | 0.69 | | | 0.10 |
| Single | 4 (23.53) | 3 (17.65) | | 9 (52.94) | 4 (23.53) | |
| Married | 5 (29.41) | 9 (52.94) | | 4 (23.53) | 9 (52.94) | |
| Separated | 2 (11.76) | 1 (5.88) | | 0 | 2 (11.76) | |
| Widowed | 5 (29.41) | 4 (23.53) | | 4 (23.53) | 2 (11.76) | |
| Civil partnership | 1 (5.88) | 0 | | 0 | 0 | |
| Socioeconomic status; *n* (%) | | | 0.10 | | | 0.02 |
| 1 | 10 (58.82) | 3 (17.65) | | 10 (58.82) | 2 (11.76) | |
| 2 | 4 (23.53) | 5 (29.41) | | 4 (23.53) | 5 (29.41) | |
| 3 | 1 (5.88) | 4 (23.53) | | 1 (5.88) | 6 (35.29) | |
| 4 | 2 (11.76) | 4 (23.53) | | 2 (11.76) | 4 (23.53) | |
| 6 | 0 | 1 (5.88) | | 0 | 0 | |
| Residence sector; *n* (%) | | | 0.60 | | | 1 |
| Rural | 1 (5.88) | 3 (17.65) | | 1 (5.88) | 1 (5.88) | |
| Urban | 16 (94.12) | 14 (82.35) | | 16 (94.12) | 16 (94.12) | |
| Occupation; *n* (%) | | | 0.28 | | | 0.46 |
| Homemaker | 8 (47.06) | 4 (23.53) | | 10 (58.82) | 14 (82.35) | |
| Employee | 0 | 1 (5.88) | | 1 (5.88) | 2 | |
| Self-employed | 0 | 0 | | 3 (17.65) | 1 (5.88) | |
| Other | 9 (52.94) | 12 (70.59) | | 3 (17.65) | 2 (11.76) | |
| Support; *n* (%) | | | | | | |
| Psychological | 2 (11.76) | 7 (41.18) | 0.06 | 1 (5.88) | 5 (29.41) | 0.07 |
| Family | 17 (100) | 17 (100) | 1 | 17 (100) | 17 (100) | 1 |
| Economic | 14 (82.35) | 16 (94.12) | 0.30 | 14 (82.35) | 14 (82.35) | 1 |
| Religious | 12 (70.59) | 14 (82.35) | 0.34 | 10 (58.82) | 15 (88.24) | 0.052 |
| Social | 7 (41.18) | 7 (41.18) | 1 | 12 (70.59) | 9 (52.94) | 0.481 |
| Other | 0 | 0 | 1 | 0 | 0 | 1 |

Characteristics of patient caring in each group are shown in Table 4. No statistically significant difference was found among both groups. Regardless of the group, it was predominant the devotion of 24 hours of care per day required by the patient, the relationship with the patient is parent-son in seven

out of ten cases, being the sole caregiver in the same proportion. The patient's dependency level in the PULSES assessment is high and the mental impairment assessment using the SPMSQ scale is from moderate to severe in 23.5% of patients in the study group versus 41.2% in the control group.

**Table 4. Characteristics of Patient Caring by Group**

| Characteristics | Group | | |
|---|---|---|---|
| | Intervention *n*=17 | Control *n*=17 | *p* |
| Care hours per day Middle value (IQR) | 24 (12-24) | 24 (12-24) | 0.50 |
| Relationship to the patient; *n* (%) | | | 1 |
| Husband/Wife | 2 (11.76) | 3 (17.65) | |
| Son/Daughter | 12 (70.59) | 11 (64.71) | |
| Friend | 1 (5.88) | 1 (5.88) | |
| Other | 2 (11.76) | 2 (11.76) | |
| Sole caregiver; *n* (%) | 12 (70.59) | 12 (70.59) | 1 |
| Patient PULSES Assessment; *n* (%) | | | 1 |
| Low malfunction | 1 (5.88) | 1 (5.88) | |
| Partial dependent | 4 (23.53) | 3 (17.65) | |
| Total dependent | 12 (70.59) | 13 (76.47) | |
| Patient SPMSQ Assessment; *n* (%) | | | 0.58 |
| Intact | 4 (23.53) | 3 (17.65) | |
| Mild cognitive impairment | 9 (52.94) | 7 (41.18) | |
| Moderate cognitive impairment | 3 (17.65) | 3 (17.65) | |
| Severe cognitive impairment | 1 (5.88) | 4 (23.53) | |

***Caregiver Burden*** Although both groups improved their percentage of unburdened caregivers from the first to the second evaluation, the difference among the two evaluations is 41.17% in the intervention group while it was 11.76% in the control group, being only statistically significant the difference for the intervention group. When analyzing the data continuously, middle values in the control group were higher and varied than in the intervention group: The initial middle value was 66 in the control group (IQR: 50 – 77) and 53 in the intervention group (IQR: 49 – 62). When evaluating the change of these values, it is statistically significant in both groups, with probability values under 0.01. To evaluate differences among the groups, the final evaluation was subtracted from the initial one. The middle value for the lower half in the intervention group was 7 (IQR: -0.5 – 11) and 5.5 in the control group (IQR: 2.5 – 10), with a probability value of 0.9548, which indicated that the difference was not statistically significant.

**Table 5.** Level of Caregiver Burden Based on the Study Group and Time of Evaluation

| Group | Evaluation | Burden Level | | | *p*-value |
|---|---|---|---|---|---|
| | | Intense *n* (%) | Mild *n* (%) | Unburden *n* (%) | |
| Intervention | Initial | 8 (47.06) | 6 (35.29) | 3 (17.65) | 0.001 |
| | Final | 3 (17.65) | 4 (23.53) | 10 (58.82) | |
| Control | Initial | 12 (67.71) | 3 (17.65) | 3 (17.65) | 0.15 |
| | Final | 11 (64.71) | 1 (5.88) | 5 (29.41) | |

***Caring Ability*** It can be observed in Table 6 that the development of abilities did not show a statistically significant change in the levels of total ability and its dimensions, for both caregivers in the control group and intervention group. Within the evaluated dimensions, patience stands out to have the highest percentages of well-classified ones in the category of low ability in both groups, with percentages from 47.06% to 76.47%.

**Table 6.** Caregivers Ability Based on the Study Group and Time of Evaluation

| Characteristic | Intervention (*n*=17) | | *p*-value | Control (*n*=17) | | *p*-value |
|---|---|---|---|---|---|---|
| | Prior *n* (%) | Post *n* (%) | | Prior *n* (%) | Post *n* (%) | |
| Full ability | | | 0.15 | | | 0.23 |
| Low ability | 3 (17.65) | 3 (17.65) | | 2 (11.76) | 4 (23.53) | |
| Average ability | 5 (29.41) | 4 (41.18) | | 5 (29.41) | 5 (29.41) | |
| High ability | 9 (52.94) | 7 (41.18) | | 10 (58.82) | 8 (47.06) | |
| Knowledge | | | 0.44 | | | 0.91 |
| Low ability | 3 (17.65) | 4 (23.53) | | 2 (11.76) | 2 (11.76) | |
| Average ability | 6 (35.29) | 6 (35.29) | | 5 (29.41) | 6 (35.29) | |
| High ability | 8 (47.06) | 7 (41.18) | | 10 (58.82) | 9 (52.94) | |
| Courage | | | 0.07 | | | 0.14 |
| Low ability | 1 (5.88) | 3 (17.65) | | 2 (11.76) | 1 (5.77) | |
| Average ability | 3 (17.65) | 7 (41.18) | | 2 (11.76) | 9 (52.94) | |
| High ability | 13 (76.47) | 7 (41.18) | | 13 (76.47) | 7 (41.18) | |
| Patience | | | 0.25 | | | 0.65 |
| Low ability | 10 (58.82) | 13 (76.47) | | 8 (47.06) | 10 (58.82) | |
| Average ability | 5 (29.41) | 2 (11.76) | | 6 (35.29) | 3 (17.65) | |
| High ability | 2 (11.76) | 2 (11.76) | | 3 (17.65) | 4 (23.53) | |

When analyzing the variable continuously, the values for caring ability decreased in both groups (from 223 (IQR: 207 – 242) to 214 (IQR: 202 – 223) in the intervention group and from 236 (IQR: 214 – 242) to 212 (IQR: 205 –235) in the control group), being this difference at the

borderline of the statistical significance in the intervention group ($p$=0.0467). In relation to the CAI scale dimensions, only the scores of the courage dimension had a significant difference in the intervention group (from 83 (IQR: 75 – 85) in pre-intervention and 74 (IQR: 67 – 76) in post-intervention), which corresponds to a probability of 0.0128, showing that these might have influenced on the full ability scores to have these unfavorable changes.

# Discussion

Caregivers are mostly women aged between 40 and 58 years old, similar to the findings of other studies.[20-24] The occupation with the highest percentage is being a homemaker, with 58.82% in the intervention group and 82.35% in the control group. This differs from the study published by Arias *et al*. in 2014, with individuals from different regions of Colombia in which the homemaker occupation was reported to be between 35.71% and 57%.[25]

Patients presented high dependency levels with 70.59% in the intervention group and 76.47% in the control group, which is related to the intense caregiver burden.[26] These levels differ somewhat from those found by Vega *et al*.[21] in which 48% of patients had a severe dependency, 30% with moderate dependency and 22% mild dependency. Moderate or severe mild cognitive impairment was 23.53% in the intervention group and 41.18 % in the control group, which is different from the study conducted by Soto *et al*. in which 52.9% were identified to present this feature but in this study, patients from hospital palliative care units in Spain were only involved. The level of cognitive impairment and patient dependency were determining factors for keeping elderly patients active,[27] having an impact on caregiver burden.

In previous quasi-experimental studies, important findings on the effect of intervention have been reported, such as the improvement on the specific ability of knowledge dimension, in which post-intervention changes have resulted to be very favorable. In addition, the intervention has been reported to have a positive effect on the knowledge and patience dimensions, but it did not have any on the courage dimension.[28,29] In our study, there were no favorable changes for the caring ability. On the contrary, courage dimension degraded in particular, which may mean that the strategy used may not be convenient. At one end, the training of these topics in a single session may be exhausting and at the other end, if the session is held individually, caregivers will not be able to share their experiences, as it happens in group workshops where they can realize what happens to other people that are in similar situation. A similar result was reported by Vega *et al*.[21] in which a decrease in the average of the courage dimension was observed, especially in the control group. In addition, the study published by Montalvo *et al.*[30] reported that courage was the dimension with the lowest score at the beginning and end of the program and that despite the changes in the caregiver ability, these were not statistically significant. It was relevant that the patience dimension had the highest percentages in the categories of low ability level for both intervention group and control group, and that it has also been reported Chaparro *et al.*[31]

With regards to burden, a study with elderly patients to evaluate the effect of an educational intervention showed an important burden reduction between pre-test and post-test, demonstrating that interventions have a positive effect on this variable.[32] This finding is very similar to that found in our study in which there was an increase in the percentage of unburdened caregivers from the first to the second evaluation (41% in the intervention group versus 12% in the control group, when the variable is categorically analyzed) When burden analysis is carried out continuously, the effect on the control group can be observed, which might be explained by the fact that these caregivers tend to live in places with higher socioeconomic levels (82.35% of the intervention group caregivers used to live in stratum 1 and 2 as well as 41.17% of the control group caregivers), and could access the different

support types. Therefore, control group caregivers tend to report higher percentages of psychological and religious support, compared to the reported by the intervention group, in 29.41% and 88.24% for each dimension, while these were 5.88% and 58.82% respectively in the intervention group. In addition, it is important to consider that the intervention in the control group might have an impact, since information related to the patient pathology was provided, such as risk factors, possible complications, preventive measures for pathology management, among others.

Perceived burden levels are similar to the those reported in by Leal *et al*.[33] in which the implementation of an educational program in three groups of relatives of schizophrenic patients that had previously participated in different educational activities found out that the intervention had a beneficial effect in reducing the proportion of relatives with burden perception. Burden levels were different to those in the study published by Eterovic *et al*.[34] in which 13.9% reported an intense burden and its population was bedridden people of different ages with severe disability or loss of autonomy.

In conclusion, the educational intervention "Caring for Caregivers" proved to be effective in decreasing the burden perception on caregivers but it was not conclusive on the changes generated in the caring ability in caregivers of patients with chronic non-communicable diseases. A limitation of the study was the difficulty to meet the inclusion criteria for time caring for the patient. In addition, considering that caregivers have their relatives in hospital at the time, they did not have much time to attend the educational intervention. However, it was possible to intervene during their stay in the hospital. Considering the above two limitations and the results presented, it was decided to continue with the second part of this study by developing group workshops with aim of doing this intervention in 1 or 2 sessions, as the limitation for caregivers to attend the total sessions is still present.

# References


1. Vega-Angarita O, Mendoza-Tarazona M, Ureña-Molina M, Villamil Santander W. Efecto de un programa educativo en la habilidad de cuidado de los cuidadores familiares de personas en situación crónica de enfermedad. Rev. Cienc. Cuid. 2008; 5(1):5-19.
2. Barreto-Osorio RV, Campos de Aldana MS, Carrillo-González GM, Coral-Ibarra R, Chaparro-Díaz L, Durán-Parra M et al. Entrevista Percepción de Carga del Cuidado de Zarit: pruebas psicométricas para Colombia. Aquichan. 2015; 15(3):368-80.
3. Organización Mundial de la Salud. Estrategia para la prevención y el control de las enfermedades no transmisibles, 2012- 2025 [Internet]. Washington: OMS. 2012 [17 Jan 2019]. Available in: http://www.msal.gov.ar/ent/images/stories/insitucional/pdf/estrategia-nacional-prevencion-control-ent-2012-2025.pdf
4. Ávila NL, Flores MM, Santos MT, Ochoa MC, Gallegos A. Sobrecarga en el cuidador de paciente con infarto agudo al miocardio. Rev. Cuid. 2012; 3(1):342-8.
5. Sánchez RT, Molina EM, Gómez-Ortega OR. Intervenciones de enfermería para disminuir la sobrecarga en cuidadores: un estudio piloto. Rev. Cuid. 2016; 7(1):1171-84.
6. Ortiz C, Yirle Grecia et al. Características sociodemográficas asociadas a la sobrecarga de los cuidadores de pacientes diabéticos en Cúcuta. Rev. Cuid. 2013; 4(1):459-66.
7. Mayeroff M. On Caring. J. Philos.1972; 69(4):114-17.
8. Barrera OL, Galvis CR, Moreno ME, Pinto AN, Pinzón ML, Romero GE, Sanchez HB. La habilidad de cuidado de los cuidadores familiares de personas con enfermedad crónica. Invest. Educ. Enferm. 2006; 24(1):36–46.
9. Carrillo G, Sánchez B, Barrera L. Habilidad de cuidado de cuidadores familiares de niños con cáncer. Rev. Salud Pública. 2015; 17(3):394-403.
10. Hernández N, Moreno C, Barragán J. Necesidades de cuidado de la diada cuidador-persona. Expectativa de cambio en intervenciones de enfermería. Rev. Cuid. 2014; 5(2):748-56.
11. Eterovic C, Mendoza S, Sáez K. Habilidad de cuidado y nivel de sobrecarga en cuidadores informales de personas dependientes. Enferm. Global. 2015; 38:235-48.
12. Sánchez B, Chaparro L, Carrillo GM. La carga del cuidado en la enfermedad crónica en la díada cuidador familiar-receptor del cuidado. Invest. Educ. Enferm. 2016; 18(2):43-60.
13. Barrera L, Pinto N, Sánchez B, Carrillo M, Chaparro L. Cuidando a los Cuidadores familiares de personas con enfermedad crónica Cartilla. Bogotá: Grupo de cuidado al paciente crónico y la familia. Facultad de Enfermería. Universidad Nacional de Colombia; 2013.
14. Zarit, SH, Reever KE, Back-Peterson J. Relatives of the impaired elderly: correlates of feelings of burden. Gerontologist. 1980. 20:649-55.
15. Abreu W, Tolson D, Jackson GA, Costa N. A cross-sectional study of family caregiver burden and psychological distress linked to frailty and functional dependency of a relative with advanced dementia. Dementia. 2018:1-18.
16. Arroyo E, Arana A, Garrido R, Crespo R. Análisis de la sobrecarga del cuidador del paciente en diálisis. Enferm. Nefrol. 2018; 21(3):213–24.
17. Nkongho N. The Caring Ability Inventory. In: Strickland OL, Waltz CF. Measurement of Nursing Outcomes: Self Care and Coping. NewYork. Springer Publishing Company, Part III. 1990; (3 y 4):3-16.
18. Martínez J, Dueñas R, Onís M Carmen, Aguado C, Albert C, Luque R. Adaptación y validación al castellano del cuestionario de Pfeiffer (SPMSQ) para detectar la existencia de deterioro cognitivo en personas mayores de 65 años. Med. Clin (Barc) 2001; 117: 129-14.
19. Marshall S, Heisel B, Grinnell D. Validity of the PULSES Profile Compared Whit the Functional Independence Measure for Measuring Disability in a Stroke Rehabilitation Setting. Arch. Phys. Med. Rehabil. 1990; 80:760–65.
20. Hu XL, Dolansky, MA, Hu, XY, Zhang, FY, Qu, MY. Factors associated with the caregiver burden among family caregivers of patients with heart failure in Southwest China. Nurs. Health Sci. 2016:105–12.

21. Vega OM, González DS, Ramírez MM. Fortalecimiento del cuidado a cuidadores de personas con enfermedad crónica en red: resultados del estudio multicéntrico en el Norte de Santander. Respuestas. 2009;(1):16–29
22. Alonso A, Garrido G, Díaz A, Casquero R, Riera M. Perfil y sobrecarga de los cuidadores de pacientes con demencia incluidos en el programa ALOIS. Aten. Primaria. 2004; 33(2):3361-67.
23. De Valle-Alonso, Hernández-López I, Zúñiga-Vargas M, Martínez-Aguilera P. Sobrecarga y Burnout en cuidadores informales del adulto mayor. Enferm. Univ. 2015; 12(1):1219-27.
24. Campos de Aldana MS, Moya D, Mendoza JD, Duran EY. Las enfermedades crónicas no transmisibles y el uso de tecnologías de información y comunicación: revisión sistemática. Rev. Cuid. 2014; 5(1):661-9.
25. Arias M, Barrera L, Carrillo GM, Chaparro L, Sánchez B, Vargas E. Cuidadores familiares de personas con enfermedad crónica en las regiones de frontera colombiana: perfil y carga percibida de cuidado. Rev. Fac. Med. 2015; 62(3):387–97. Available in: http://www.revistas.unal.edu.co/index.php/revfacmed/article/view/39091.
26. Soto-Rubio, Ana, Pérez-Marín, Marián Antonia, Barreto, Pilar, Frail elderly with and without cognitive impairment at the end of life: their emotional state and the wellbeing of their family caregivers. Arch. Gerontol. Geriatr. 2017; 73:113-9.
27. Salazar-Barajas ME, Lillo CM, Hernández CPL, Villarreal RMA, Gallegos CE, Gómez MM, Salazar– González BC. Factors Contributing to Active Aging in Older Adults, from the Framework of Roy's Adaptation Model. Invest. Educ. Enferm. 2018; 36(2):e08.
28. Díaz-Álvarez, Juan Carlos; Rojas-Martínez MV. Cuidando al cuidador: efectos de un programa educativo. Aquichan. 2009; 9(1):73–92.
29. Morales-Padilla O. Efectos del Programa Cuidando al Cuidador, en la mejora de la habilidad de cuidado. Av. Enferm. 2008; 26(2), 27-34.
30. Montalvo-Prieto M, Flórez-Torres I, Stavro D. Cuidando a cuidadores familiares de niños en situación de discapacidad. Aquichan. 2008; 8(2):197-211.
31. Chaparro L, Carreño SP, Campos-de-Aldana MS, Benavides F, Niño- Cardozo CL, Cardona RM, et al. La habilidad de cuidado del cuidador familiar en diferentes regiones de Colombia. Rev. UDCA Actual. Divulg. Cient. 2016;19(2):275–84.
32. Velásquez V, López L, Cataño N, Muñoz E. Efecto de un programa educativo para cuidadores de personas ancianas. Una perspectiva cultural. Rev. Salud Pública. 2011; 13(4):610-9.
33. Leal M, Sales R, Ibáñez E, Giner J, Leal C. Valoración de la sobrecarga en cuidadores informales de pacientes con esquizofrenia antes y después de un programa psicoeducativo. Actas Esp. Psiquiatr. 2008; 36(2): 63-9.
34. Eterovic C, Mendoza S, Sáez K. Habilidad de cuidado y nivel de sobrecarga en cuidadoras/es informales de personas dependientes. Enferm. Glob. 2015; 14(2):235-48.

Original article

# Commitment and Human Tone: the Difference between Traditional Service and Nursing Care


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## Commitment and Human Tone: the Difference between Traditional Service and Nursing Care

**Objective.** To describe the transformation of decisive moments that arise within the nurse-patient and family caregiver interaction to turn them into moments of care capable of favoring adaptation. **Methods.** In a high complexity hospital in the city of Bogotá (Colombia), a "nursing methodological research"-type study was conducted. It was developed in five stages: 1) identification of the institutional route of patients and their caregivers and, within it, the moments of encounter with nursing; 2) typical day of the nurse; 3) analysis of the nurse-patient and family caregiver encounters; 4) literature review on how to strengthen the nurse-patient and family caregiver relationship; and 5) proposal to transform decisive moments into moments of care. **Results.** Patients and their family caregivers usually experience six moments of encounter with nursing that include admission, assessment, satisfaction of basic needs, administration of



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medication, shift change, and discharge; all of them cross-cut by education and communication. Recognition of experiences during moments of encounter allowed transforming them into moments of nursing care. **Conclusion.** The transformation of decisive moments into moments of nursing care to favor adaptation of patients and their family caregivers is consequence of the nursing commitment and human nature expressed in every encounter of the care process.

**Descriptors:** nursing care; adaptation; nursing theory; nursing processes; nursing methodology research.

## Compromiso y tono humano: La diferencia entre la asistencia y el cuidado institucional de enfermería

**Objetivo.** Describir la transformación de los momentos de verdad que se dan en la interacción enfermera–paciente y cuidador familiar para convertirlos en momentos de cuidado capaces de favorecer la adaptación. **Métodos.** En una institución hospitalaria de alta complejidad de la ciudad de Bogotá (Colombia) se realizó un estudio del tipo "investigación metodológica en enfermería", el cual se desarrolló en cinco etapas: 1) identificación de la ruta institucional del paciente y su cuidador familiar y en ella los momentos de encuentro con enfermería; 2) Día típico de la enfermera; 3) Revisión de los encuentros enfermera – paciente y cuidador familiar; 4) Revisión de la literatura sobre cómo fortalecer la relación enfermera – paciente y cuidador familiar; y 5) Propuesta para la transformación de los momentos de verdad en momentos de cuidado. **Resultados.** El paciente y su cuidador familiar tienen generalmente seis momentos de encuentro con enfermería que incluyen el ingreso, la valoración, la atención de necesidades básicas, la administración de medicamentos, el cambio de turno y el egreso. La educación y la comunicación son transversales a ellos. El reconocimiento de experiencias en los momentos de encuentro permitió transformarlos en momentos de cuidado de enfermería. **Conclusión.** La transformación de los momentos de verdad en momentos de cuidado de enfermería para favorecer la adaptación del paciente y de su cuidador familiar son una consecuencia del compromiso y del tono humano de enfermería expresado en cada uno de los encuentros del proceso de atención.

**Descriptores:** atención de enfermería; adaptación; teoría de enfermería; procesos de enfermería; investigación metodológica en enfermería.

## Compromisso e tom humano: A diferença entre a assistência e o cuidado institucional de enfermagem

**Objetivo.** Descrever a transformação dos momentos de verdade que se dá na interação enfermeira–paciente e cuidador familiar para convertê-los em momentos de cuidado capazes de favorecer a adaptação. **Métodos.** Em uma instituição hospitalar de alta complexidade da cidade de Bogotá (Colômbia) se realizou um estudo do tipo "investigação metodológica em enfermagem", a qual se desenvolveu em cinco etapas: 1) identificação da rota institucional do paciente e seu cuidador familiar e nela os momentos de encontro com enfermagem; 2) Dia típico da enfermagem; 3) Revisão dos encontros enfermeira – paciente e cuidador familiar; 4) Revisão da literatura sobre como fortalecer a relação enfermeira – paciente e cuidador familiar; y 5) Proposta para a transformação dos momentos de verdade em momentos de cuidado. **Resultados.** O paciente e seu cuidador familiar, têm geralmente seis momentos de encontro com enfermagem que incluem o ingresso, a valorização, a atenção de necessidades básicas, a administração de medicamentos, o câmbio de plantão e o egresso. A educação e a comunicação são transversais a eles. O reconhecimento de experiências nos momentos de encontro permitiu transformá-los em momentos de cuidado de enfermagem. **Conclusão.** A transformação dos momentos de verdade em momentos de cuidado de enfermagem para favorecer a adaptação do paciente e do seu cuidador familiar sao uma consequência do compromisso e do tom humano de enfermagem expressado em cada um dos encontros do processo de atenção.

**Descritores:** cuidados de enfermagem; adaptation; teoria de enfermagem; processo de enfermagem; pesquisa metodológica em enfermagem.

# Introduction

The nursing care process must guarantee to patients and their family caregivers a practice of safe care that is technically sound, objective, and subjectively reliable, detectable and, consequently, capable of improving.[1] This is why daily there is increased use of guides and protocols to orient care work in diverse contexts. However, these tools can hardly guarantee adequate care, if they are not imprinted with the art of caring.[2] Although health institutions seek standardized care that is measurable and focused on productivity, the nursing practice experiences daily the conflict of a philosophical humanist view, embodied in its conceptual models and theories. To be implemented, these could require greater nurse-patient and family caregiver interaction, and which contrast with the reality of the financial costs of institutions pressured into being increasingly efficient and, consequently, more impersonal.

Within this context, going from performing activities and procedures to looking to respond to the paradigm of caring for the health experiences of individuals, implies for Nursing to dare go beyond the known environments and again question their reason for being, to achieve equilibrium in the practice with positive impact on caring for patients and their family caregivers, while responding to the demands of the context.

In the *Universidad de La Sabana Clinic,* it has been understood that in spite of the difficulties inherent to the system to provide authentic nursing care, it is necessary to think about how to develop a significant practice for patients and their family caregivers, as well as for the nursing profession. This work emerges from these reflections and seeks to describe the transformation of the decisive moments taking place in the nurse-patient and family caregiver interaction in this institution to convert them into moments of care capable of favoring the adaptation. The work permits improving the nursing practice[3] in favor of patients and their family caregivers, within a specific context that experiences the tensions of a health system that privileges economic criteria. It responds to the reason for being of Nursing and heeds the trends and conceptual guidelines in effect in the professional discipline[4] and provides knowledge to a current global problem.

# Methods

This work is framed as Nursing methodology research,[5] conducted between 2016 and 2018, as part of strengthening the teaching-care alliance between the Universidad de La Sabana Clinic and the Faculty of Nursing and Rehabilitation at the same institution. The study was approved by the pertinent instances within the Institution and developed within the framework of international ethical and environmental principles. The process implied the following stages:

*(i) Identification and description of the institutional route of patients and their family caregivers and of the moments of encounter with Nursing*. For this purpose, a Nursing group was assigned during two months to follow the movements of randomly selected patients and their family caregivers, through prior consent, keeping a field diary. The route traced was analyzed to recognize in them the common pattern of encounters among patients and their family caregivers, and Nursing, individually or collectively to describe when, how, where and for how much time these took place and the need or service offer in each case. *(ii)* Complementing the aforementioned, another group of observers *analyzed the typical day of nurses;* and revised *(iii) encounters with patients and their family caregivers*, within their care route. The outcomes of the routes were contrasted, evidencing some decisive moments occurring since the patients and their family caregivers were admitted into the institution, were expressed during the care process and continued until the moment of discharge. The common characteristics were then revised; following, for this purpose, the analysis parameters for this type of interaction.[6] The study considered, specifically as qualities or attributes, the type and form of communication, knowledge, tone of the relationship, exercise of roles, and guaranty of necessary resources. It sought to understand care in terms of its meaning and repercussions for the parts implied. It was verified if learning occurred during this process, including the pedagogic methods and the way of assessing care from the perspective of those implied.

*(iv)* Upon identifying the encounters among patients and their family caregivers, and nurses, a literature review was conducted to answer the question: What does the global literature say about how to strengthen the moments of encounter between the nurse and the subject of care? The search criteria established the following: inclusion of literature reviews, case studies and controls, experimental studies, systematic reviews, and clinical guides based on evidence, as long as they were in indexed journals. The search included the following databases: PubMed, ScienceDirect, Ovid Nursing, CINALH, SciELO, and Bireme. In addition, the lists of bibliographic references of the studies selected were revised. The window of observation was 2003 to 2016, in English, Spanish, and Portuguese, with the following formula [Decisive moment OR Openness OR Honesty OR Presence OR Sensitivity OR Sensitive Care OR Sensitive Nursing] AND [Nursing care, OR Adaptation OR Nursing Processes OR, Patient Care Planning]. Data organization and tabulation considered the reference, objective, methodology, results, and relevant aspects. Critical analysis was performed of the findings with interpretation of the content grouped in integrative manner to interpret from this the recommendations for the nursing practice. The search was complemented with a revision of the best practices in the service available in "*Advisory Board*"[7] and the Nursing Outcomes Classification (NOC) was revised to propose the indicators. *(v)* Lastly, based on the diagnosis and the review, a proposal was made to *strengthen the most frequent decisive moments among patients and their family caregivers and nurses*. This involved specifying the concepts of nursing care and moment of nursing care for the institution.

## Results

The route of patients and their family caregivers goes from the programmed or emergency admission to the discharge from the hospital. In it, the experience is shared between patients and their family caregivers with various moments of encounter with nurses that include admission, general assessment and the pain permanent, care of basic needs, change of shift, administration of medications, and discharge. Each of those moments include education and communication activities among patients and their family caregivers, and nurses. Eventually, other encounters take place responding to specialized care or procedures.

The moment of encounter among patients and their family caregivers, and nurses was defined as a decisive moment of nursing care in the

institution. The encounters were heterogeneous in the amount and content of communication and, although the exchange tends to be friendly, important differences were noted in the tone of the relationship. The principal roles of Nursing during the encounters were those of caring and educating, although on some opportunities other roles emerged, like advisory, advocacy, and the administrative role. During the encounters, there was much logistics activity by nurses to guarantee the necessary resources of the environment for patient care. For the patients, being cared for meant being identified as persons, having timely care, receiving treatment, and receiving a response to their concerns. For the family caregivers, care meant their loved ones were properly cared for in timely and friendly manner; in general, they did not identify themselves as subjects of care. For nurses, care was associated with the guaranty of safety, diminished risk, suitability, kindness and recognition of patients and their family caregivers as people. In no case was care seen as an opportunity for interpersonal growth. The educational activity was frequent; most of the cases had no didactic aids other than an illustrative sheet or booklet. The comprehensive evaluation of care identified as a priority challenge of the Nursing direction.

Literature showed that to strengthen the moments of encounter between a nurse and the subject of care, it is necessary to prioritize the "authentic presence". This presence has been approached under different perspectives, with the following attributes: 1) Nursing devotion in an intersubjective relationship, where mutual openness and unconditional love is experienced along with a sense of comfort when present; 2) availability of nurses to respond to the person's needs; 3) presence that supposes concentrating on the other person's concerns, leaving aside the nurse's own concerns; 4) presence in a nursing intervention, like the skill to understand what others are feeling or experiencing; 5) presence amid the time of caring for the person that must be cared for; 6) presence as the nurse's experience of devotion in an authentic presence capable of transforming what is hidden or saved to generate hope, expansion of awareness, and care; 7) presence as a direct goal that responds to a call and has the intention of giving it all looking for a path of help; and 8) presence as something intangible, mutual, and recognized through tact, tone, or sight.[8]

This "authentic presence" is not a mechanism to obtain information, nor is it a form of changing or directing the person's health experience, or of having an empathic behavior. Authentic presence is a way of being with people during significant situations in their lives, of understanding their context. It is a subject-to-subject relationship that honors each of the changes of the other individual's reality in their uniqueness in the midst of their health situation and which demands commitment and devotion to make sure the other person is the center.[9] Nursing narratives have been an important aid to understand the meaning and form of being present. From the physical, it is being close to another when closeness generates safety and calm to the subject of care. The total presence is unique, requires empathy, permits care and propitiates innovation. Presence can also be transcendent, of spiritual nature, and it implies connection and synchrony with something or someone and is associated with wellbeing, peace, and comfort, being the most powerful form of restoring the whole person to heal them; it demands besides the technical-scientific, knowing when and how to act.[10] Authentic presence in nursing care is one of the most powerful interventions of caring for patients and their family caregivers, especially during moments of marked vulnerability, and which can impact positively satisfaction and transform the lives of those implied.[11] Having authentic presence in the encounter of nurses with patients and their family caregivers means being with them, observing, listening, learning, and supporting the experience of living or dying. It is necessary for nurses to be attentive to the situation, active, dedicated, sensitive to the context, isolate their prejudices and be empathic.[11] "Being there" is a concrete form of including the spiritual dimension in care and that permits resignifying the decisive moment. This implies getting support from observation and intuition

and being able to recognize the call. "Being there" implies a loving presence, which takes care of detail and seeks peace; it is listening with especial attention, it is respecting and becoming interested in the feelings expressed. "Being there" is speaking to provide valuable help that has to do with informing, guiding, or supporting, and it is having physical contact to express compassion and companionship.[12]

Understanding what characterizes that during a decisive moment, nursing care is perceived, from the perspective of patients or of their family caregivers, as recognized as unique, feeling that their interests and tastes, their values and beliefs are kept in mind. This supposes making a connection, knowing how to recognize the details, and understanding how people want to be cared for; due to this, nursing should be attentive to the experiences of the individuals and respond in anticipated manner or when said individuals require it. The transformation of a decisive moment into a moment of care requires courage, curiosity, collaboration, consideration, commitment, celebration of positive aspects and especially, emotional connection.[13] The perception of affect and demonstration of sincerity by Nursing is recognized as a mechanism to transform a moment of nurse-patient encounter into a moment of care.[14]

Retaking the routes and encounters of patients and their family caregivers with Nursing, in the Universidad de La Sabana Clinic, in light of the experiences and the literature review, the necessary conditions were established to favor adaptation during the experience in the institution. These were united into two big categories: commitment that must always be supported in the best evidence available and is associated with the science of caring, and the human tone, or the attribute associated with the caregiver's own condition of being and being present and which is related with the art of caring. It is the sum of these categories that manages for a moment of encounter of patients and their family caregivers, with nurses, to become a moment of care; a moment in which Nursing makes the difference for them, in spite of their vulnerability, to feel "at home", in what for Nursing in the institution has been denominated "adapted". This moment of care guarantees safety, seeks comfort and wellbeing, respects dignity, and aims to strengthen their autonomy. This change implies nursing autonomy; touches the transcendent sense of people and enhances them in their roles as receptors or caregivers (Figure 1).

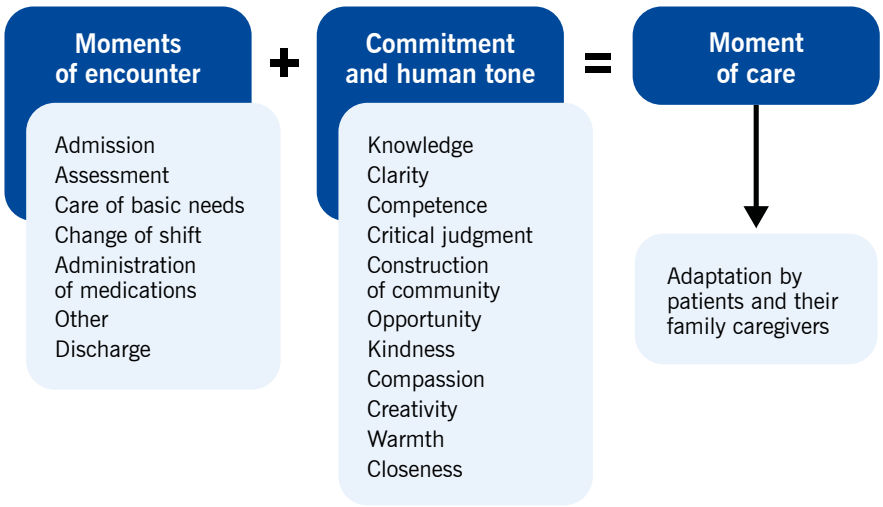


**Figure 1.** Transformation of moments of encounter into moments of nursing care in the Universidad de La Sabana Clinic

# Discussion

This work, because of its humanistic nature that considers the subject of care, patient, and family caregiver as the center of nursing care, is similar to various conceptual proposals exposed by Ann Mariner,[15] which include that by Ann Boykin and Savina Schoenhofer, known as the *Care Model for Transforming Practice*; Jean Watson's *Human Care*; and Callista Roy's with the *Conceptual Adaptation Model* that recognizes the wellbeing of the human person as central. Upon revising the successful experiences of other institutions to determine how to improve nursing care, we describe the importance of defining the route.[16] The same has occurred when seeking to improve quality or when requiring implementation of a conceptual systematic model. In this case, establishing the route for patients and their family caregivers and within such, the moments of encounter with Nursing were the key to recognizing and transforming decisive moments into moments of nursing care that propitiate adaptation.

The "decisive moment" is understood herein as the time during which the user comes into direct contact with the health care service and, based on this contact, formulates an opinion on the quality of said service.[17] This moment, as evidenced, occurs through the encounter of patients and family caregivers with nurses; in it, as in other cases, in the hospital care route, where the concept of authentic presence, can be analyzed in depth.[18] This study describes six key moments and two cross-sectional moments, admitting that others can exist. These are the moments of admission, assessment, care of basic needs, administration of medications, change of shift, and discharge. Education and communication are cross-sectional. No studies or models were found to admit together these moments of encounter or their transformation into moments of nursing care.

The moment of admission has been described as a key moment in the perception of satisfaction by patients and their family caregivers. It requires empathy and direct communication; prioritizing aspects, like pain and the patient's condition; revision of their medication conciliation; bearing in mind context, age, wait period and availability Nursing human talent to propose a care plan guided by goals and accompanied by educational strategies, which leads to modifying positively the experience of patients and their family caregivers.[19] Regarding the assessment by Nursing, work has been carried out on measuring adherence to protocols as base to improve the quality of patient-centered care; tools to evaluate specific aspects, like pain and suffering; unpleasant symptoms and recognition of the strengths and needs to favor the adaptation.[20] Care of basic needs, as a central function of the nursing work, includes hygiene, comfort, feeding, moving, dressing, and going to the bathroom. This moment of encounter considers and seeks to maintain the level of independence and satisfy the requirements related with daily life activities.[21]

The administration of medications is perhaps the moment with the most solid evidence in the literature. Its findings have centered on the error committed during this process and on the search for safety strategies, and technological support that reinforce safe behaviors, along with specialized accompaniment, and continuous formation on the theme, especially indicating that combined strategies are the most successful.[22] However, little has been differentiated between safe traditional care and nursing care during this moment of care, where it is necessary to transcend a correct scheme to arrive, as has been indicated, at a comprehensive and transcendent care scheme. The change of shift in Nursing has been recognized as a key moment to guarantee the continuity and safety of patients and their family caregivers and, although its evidence is still weak, the best practices suggest using guides, incorporating patients and their caregivers, and revising convenient shifts for the staff under care transference schemes.[23] The moment of discharge has greater conceptual clarity and evidence that supports its necessity as a factor to prevent readmissions and complications. However, evidence against the forms of performing it and its effectiveness are still quite weak.[24]

In synthesis, it is possible to state that, in spite of the growing documentation during each of these moments, the relationship among patients and their family caregivers, with nurses is scarcely mentioned. The studies reviewed reflect that the decisive moments are not always identified as susceptible to transformation to convert them into moments of nursing care, as proposed in this work. It is necessary to revise the scenario desired by Nursing in its function as caregiver to make this transformation and manage to care for the experience of patients and their family caregivers[25] within the institutional environment to, therein, guarantee its adaptation.

This study concludes that the transformation of decisive moments into moments of nursing care to favor the adaptation of patients and their family caregivers, in the Universidad de La Sabana Clinic, is consequential of the commitment and human tone of Nursing expressed during each of the encounters of the care process. Defining this route and focusing the nurse's work on the experience of the subject of care, in this case patients and family caregivers, to care for it, as proposed by the Nursing paradigm, is a different contribution that can permit greater social impact on the professional field and a more sound epistemological and ontological construction from the disciplinary perspective.

Recognizing and summarizing the characteristics of care necessary to modify the moments of encounter or decisive moments into true moments of care, require the application of all the patterns of nursing knowledge and can be specified in the relevance of assuming and demonstrating responsibility and respecting, without amendment, the dignity of the human person. In addition to following the care route, identifying decisive moments in the relationship of patients and family caregivers, with nurses has added to a strategy that accepts and articulates the science and art of caring, and permits making the difference between traditional service and nursing care.

# References


1. Sánchez B. Cuidado seguro, la nueva tendencia en el cuidado de la salud. Safe care, the new trend in health care. Actual. Enferm. 2011; 14(2):27–32.
2. León CA. Enfermería ciencia y arte del cuidado. Rev. Cubana Enferm. [Internet]. 2006 [cited 2019 Feb 1]; Available from: http://scielo.sld.cu/scielo.php?script=sci_arttext&pid=S0864-03192006000400007.
3. Báez-Hernández FJ, Nava-Navarro V, Ramos- Cedeño L, Medina-López OM. El significado de cuidado en la práctica profesional de enfermería. Aquichan. 2009; (2): 127-34.
4. Vélez C, Pico ME, Ariza C, Castellanos F, Salazar AM. Tendencias y agenda de prioridades de investigación en unidades académicas de Educación superior de Enfermería en Colombia. Cienc. Enferm. 2014; 20(3):11-20.
5. Biblioteca Virtual en Salud. Terminología DeCS/MeSH. Investigación Metodológica de Enfermería [Internet]. 2019 [cited 2019 Feb 1]. Available from: http://www.bvs.hn/php/decsws.php?lang=es&tree_id=H01.770.644.145.390.634&page=info
6. Santamaría NP, García LE, Sánchez Herrera B, Carrillo GM. Percepción del cuidado de enfermería dado a los pacientes con cáncer hospitalizados. Rev. Latino-Am Bioética. 2015; 16(30–1):104-127.
7. Advisory Board. Nursing [Internet]. Washington: Advisory Board; 2016 [cited 2019 Feb 1]. Available from: https://www.advisory.com/es-es/international/topics/nursing
8. Melnechenko KL. To make a difference: nursing presence. Nurs. Forum. 2003. 38(2):18-24.
9. Parse RR. Human Becoming: Parse's Theory of Nursing. Nurs. Sci. Q. 1992; 5(1):35–45.
10. Du Plessis E. Caring presence in practice: facilitating an appreciative discourse in nursing. Int. Nurs. Rev. 2016; 63(3):377–80.
11. Fahlberg B, Roush T. Mindful presence: Being "with" in our nursing care. Nursing (Lond). 2016; 46(3):14–5.
12. Uribe SP, Lagoueyte MI. El papel de la enfermera en el cuidado de los pacientes sometidos a colangiopancreatografía retrógrada endoscópica. Salud, Barranquilla. 2015; 31(1):153–80.
13. Mahler A. The clinical nurse specialist role in developing a geropalliative model of care. Clin. Nurse Spec. 2010; 24(1):18–23.
14. Prochet TC, da Silva MJP, Ferreira DM, Evangelista VC. Affection in elderly care from the nurses' perspective. Rev. Esc. Enferm. USP. 2012; 46(1):96–102.
15. Marriner AT, Raile M A. Modelos y teorías en enfermería. Madrid: Elsevier; 2007.
16. Milán Dobson N. Fundamentos de las rutas de cuidados en el paciente pediátrico. Rev. Cuba. Enferm. 2012; 28(2):181–8.
17. Duque E. Revisión del concepto de calidad del servicio y sus modelos de medición. Innovar, Rev. Cienc. Adm. Soc. 2005; 15(25):64–80.
18. Hessel JA. Presence in nursing practice: A concept analysis. Holist. Nurs. Pract. 2009; 23(5):276–81.
19. Kutney-Lee A, McHugh MD, Sloane DM, Cimiotti JP, Flynn L, Neff DF, et al. Nursing: A Key to Patient Satisfaction. Health Aff. 2009; 28(4):669–77.
20. Luna JR, Concha PJ, Merino Escobar JM. Adherencia de las enfermeras/os a utilizar un modelo teórico como base de la valoración de enfermería. Cienc. Enferm. 2007; 13(1):35-57.
21. Carvajal G, Montenegro J. Higiene: cuidado básico que promueve la comodidad en pacientes críticos. Enferm. Glob. 2015; 14(40):340-50.
22. Berdot S, Roudot M, Schramm C, Katsahian S, Durieux P, Sabatier B. Interventions to reduce nurses' medication administration errors in inpatient settings: A systematic review and meta-analysis. Int. J. Nurs. Stud. 2016; 53:342–50.
23. Guevara M, Arroyo LP. El cambio de turno: Un eje central del cuidado de enfermería. Enferm Glob. 2015; 401–18.
24. Sánchez B. Carrillo GM, Barrera L. El plan de transición y egreso hospitalario y su efecto en el cuidado de la salud: una revisión integrada. Div. Cient. 2014; 17(1):13–23.
25. Fawcett J. The metaparadigm of nursing: International in scope and substance. In: Krause K, Astedt-Kurki P. International perspectives on nursing: A joint effort to explore nursing internationally. Finland: Tampere University; 1992.

# Knowledge and perceptions of Indian primary care nurses towards mental illness

Original article


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## Knowledge and perceptions of Indian primary care nurses towards mental illness

**Objective.** To assess nurses' knowledge and perceptions towards mental illness. **Methods.** This was a cross-sectional descriptive study conducted among 126 randomly selected nurses those are working under District Mental Health program in Karnataka (India). The data was collected through self-reported questionnaires Using the modified version of *Public perception of mental illness questionnaire* and *Attitude Scale for Mental Illness*. **Results.** The findings revealed that majority of the subjects were women (74.4%), Hindus (92.1%) and were from rural background (69.8%). The mean Knowledge score 10.8±1.6 adequate knowledge (maximum possible =12) among 91% of the subjects, and 52% of them hold negative attitudes towards people with mental illness (88.9±13.6). While majority of the subjects hold negative attitudes in 'Separatism' (53.5%), 'Stereotyping' (73%), 'Benevolence' (54%), 'Pessimistic prediction' (53%) domains, they hold positive attitudes in 'Restrictiveness'



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(88%) and 'Stigmatization' (72%) domains. Women than men endorsed positive attitudes towards persons with mental illness in Stereotyping' ($p<0.001$), 'Restrictiveness' ($p<0.01$), 'Benevolence' ($p<0.001$) and 'Pessimistic prediction' (t= 2.22, $p<0.05$) domains. Similarly, Auxiliary Nursing Midwifery found to be less restrictive ($p<0.05$), more benevolent ($p<0.001$) and less pessimistic ($p<0.05$) compared to nurses with higher education (General Nursing and Midwifery and Bachelor of Science in Nursing). **Conclusion.** The present study showed adequate knowledge on mental illness among nurses. Yet they hold stigmatizing and negative attitudes towards mental illness. Hence, it is an urgent priority to develop and implement educational programs to inculcate positive attitudes towards people with mental illness to provide optimal care to this vulnerable population.

**Descriptors:** mentally ill persons; stereotyping; beneficence; optimism; pessimism; attitude; primary care nursing; cross-sectional studies; self-report.

## Conocimiento y percepciones de las enfermeras hindúes de atención primaria sobre la enfermedad mental

**Objetivo.** Evaluar los conocimientos y percepciones de las enfermeras de atención primaria hacia la enfermedad mental. **Métodos.** Se realizó un estudio descriptivo transversal con 126 enfermeras que trabajan en el programa de Salud Mental del Distrito en Karnataka (India). Los datos se recolectaron a partir de cuestionarios contestados por autorreporte, empleando la versión modificada del cuestionario *Percepción pública de la enfermedad mental* y la Escala de Actitudes hacia la enfemedad mental. **Resultados.** Los hallazgos revelaron que la mayoría de los participantes eran mujeres (74.4%), hindúes (92.1%) y de origen rural (69.8%). El puntaje promedio de conocimiento fue de 10.8±1.6, que indica un conocimiento adecuado (máximo posible = 12). El 52% de los participantes tienen actitudes negativas hacia las personas con enfermedades mentales, siendo mayor este porcentaje en los dominios 'Estereotipos' (73%), 'Benevolencia' (54%), 'Separatismo' (53.5%), 'Predicción pesimista' (53%); mientras que tienen actitudes positivas en 'Restricción' (88%) y 'Estigmatización '(72%). Las mujeres, en mayor porcentaje que los hombres, tuvieron actitudes positivas hacia las personas con enfermedades mentales en los dominios 'Estereotipos' ($p<0.001$), 'Restricción' ($p<0.01$), 'Benevolencia' ($p<0.001$) y 'Predicción pesimista' ($p<0.05$). Del mismo modo, las enfermeras parteras auxiliares fueron menos restrictivas ($p<0.05$), más benévolas ($p<0.001$) y menos pesimista ($p<0.05$) en comparación con las enfermeras con mayor educación (enfermeras parteras generales y licenciadas en ciencias de la enfermería). **Conclusión.** El presente estudio mostró un conocimiento

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adecuado sobre las enfermedades mentales entre las enfermeras. Sin embargo, tienen actitudes estigmatizantes y negativas hacia la enfermedad mental. Por lo tanto, es una prioridad implementar programas educativos para la adquisición de actitudes positivas hacia las personas con enfermedades mentales con el fin de brindar una atención integral a esta población vulnerable.

**Descriptores:** enfermos mentales; estereotipo; beneficencia; optimismo; pesimismo; actitud; enfermería de atención primaria; estudios transversales; autoinforme.

## Conhecimento e percepções das enfermeiras hindus de atenção primária sobre a doença mental

**Objetivo.** Avaliar os conhecimentos e percepções à doença mental das enfermeiras de atenção primária. **Métodos.** Se realizou um estudo descritivo transversal com 126 enfermeiras que trabalham no programa de Saúde Mental do Distrito em Karnataka (Índia). Os dados foram recolhidos a través de questionários respondidos por autorreporte, empregando a versão modificada do questionário *Percepção pública da doença mental* e a Escala de Atitudes à doença mental. **Resultados.** As descobertas revelaram que a maioria dos participantes eram mulheres (74.4%), hindus (92.1%) e de origem rural (69.8%). A pontuação média de conhecimento foi de 10.8±1.6 indicando conhecimento adequado (máximo possível = 12). 52% dos participantes têm atitudes negativas às pessoas com doenças mentais, sendo maior esta porcentagem nos domínios 'Estereótipos' (73%), 'Benevolência' (54%), 'Separatismo' (53.5%), 'Predição pessimista' (53%); enquanto que têm atitudes positivas em 'Restrição' (88%) e 'Estigmas'(72%). As mulheres, em maior porcentagem que os homens, tiveram atitudes positivas às pessoas com doenças mentais nos domínios 'Estereótipos' ($p<0.001$), 'Restrição' ($p<0.01$), 'Benevolência' ($p<0.001$) e 'Predição pessimista' ($p<0.05$). Do mesmo modo, as enfermeiras parteiras auxiliares formam menos restritivas ($p<0.05$), mais benévolas ($p<0.001$) e menos pessimista ($p<0.05$) em comparação com as enfermeiras com maior educação (enfermeiras parteiras gerais e licenciadas em ciências da enfermagem). **Conclusão.** O presente estudo mostrou um conhecimento adequado sobre as doenças mentais entre as enfermeiras. Porém, tem atitudes de estigmas e negativas à doença mental. Por tanto, é uma prioridade implementar programas educativos para o melhoramento das atitudes positivas às pessoas com doenças mentais com o fim de brindar uma atenção integral a esta população vulnerável.

**Descritores:** pessoas mentalmente doentes; estereotipagem; beneficencia; otimismo; pesimismo;atitude; enfermagem de atenção primária; estudos transversais; autorrelato.

# Introduction

Mental health is an urgent concern in India as every sixth Indian needs mental health help as reported by a recent National Mental Health Survey.[1] Further, while 20% of Indians suffer from a mental illness, only 10-12% of them seek help from mental health professionals mainly due to ignorance, stigma and discrimination that largely prevail in Indian community. The survey also found a huge treatment gap for various mental disorders ranged between 70% and 92%. District Mental Health Programme (DMHP) was initiated by India to ensure accessibility of mental health services at the community level by integrating mental health with the primary health services. Under this program, nurses working at primary care centers are trained to detect and refer the individuals with mental health problems. Nurses comprise the chief workforce in the Indian health care system. They also play an important role not only in recovery of people with mental illness, but also support their reintegration in to the community. Surprisingly, health care professionals hold negative and stigmatizing attitudes towards mental illness to an extent that can be comparable with generable population.[2] An earlier research reported that the predictors for nurses having negative and unfavourable attitudes towards mental illness include; lack of knowledge,[3] lower education,[4] less professional experience, and not having any contact with persons with mental illness, etc.[5]

In India, 90% of the people with mental illness live with their families.[6] Moreover, in a recent national survey conducted across eight cities of the country by *'The Live Love Laugh Foundation'* (n=3 556) reported that public had adequate knowledge awareness on mental illness (87%). Yet, they possessed high level of stigma towards people with mental illness as they used pejorative words such as *'retard'* (47%) or 'crazy' 'mad' 'stupid' (40%) or 'careless' 'irresponsible' (38%) to describe people with mental illness.[7] Nurses and Auxiliary Nurse Midwives under DMHP program serve people who live in rural areas. Nurses being primary health care providers play a key role in combating against stigma and discrimination against people with mental illness as they provide care to the patients and are also involved in disseminating health information to the family members.[8] Further, in India most of the research focused on understanding attitudes among nursing and medical undergraduate students.[9-12] To date there is limited research on nurses' attitudes towards mental illness in Indian settings.[13] Hence, it is critical to assess knowledge and attitudes of nurses those are working at primary health-care settings. In the present study, attitude refers to nurses' emotional, cognitive, and behavioral responses to persons with mental illness.[14]

# Methods

This was a cross sectional descriptive survey carried out among DMHP nurses who participated in a training program conducted by the Departments of Nursing and Community Psychiatry at National Institute of Mental Health and Neuro Sciences (NIMHANS) in the year 2017.

**Sample.** The sample for the present study was selected using random sampling technique. The nurses who were working under District Mental Health Program were randomly selected from various districts of Karnataka State, to undergo training in an onsite program held at National Institute of Mental Health neurosciences, Bangalore, India. The data was collected from the subjects prior to the training program. The study criteria include a) Registered nurse or Midwife b) working in District Mental Health program or rural health program. The questionnaires were distributed to 162 nurses. Only 146 completed questionnaires were received. However, uncompleted questionnaires ($n$=16) were discarded and the final sample comprised of 126 with 77.8% response rate.

**Data collection Instruments. 1-Demographic data survey instrument:** The demographic form comprised of eight items to obtain the background information of the subjects in the study that included; age, gender, religion, professional qualification, residence, source of information and level of interest to learn about mental illness. **2-Knowledge assessment questionnaire:** Modified version of **'Public Perception of Mental Illness Questionnaire'**[15] was used to collect subjects awareness on the risk factors for development of mental illness. This part of the tool consisted of 12 items with three responses namely 'Yes', 'No' and 'Don't Know'. One mark was awarded for every correct response, zero otherwise. Hence, the total score for knowledge questionnaire ranged from 0 to 12. **3-Attitude scale for mental illness –ASMI-:** This was a valid and reliable (Cronbach's Alpha 0.86), self-report measure used to measure health professionals attitudes toward persons with mental illness.[16] This was a 5-point Likert scale rated subjects' responses from totally disagree (1) to totally agree (5). The lower scores indicate positive attitudes toward persons with mental illness. This tool has six sub scales: **(i) Separatism:** Ten items, (1–9, and 24) to measure respondents' attitude of discrimination e.g.: *"People with mental illness have unpredictable behavior";* **(ii) Stereotyping:** Four items (10–13) intended to measure the degree of respondents' maintenance of social distance toward persons with mental illness. E.g.: *"It is easy to identify those who have a mental illness.";* **(iii) Restrictiveness:** Four items (14–17), that hold an uncertain view on the rights of people with mental illness. E.g.: *"It is not appropriate for a person with mental illness to get married"*; **(iv) Benevolence (reverse coded):** Eight items (18–23, 25 and 26) related to kindness and sympathetic views of the respondents toward people with mental illness e.g.: *"People with mental illness can hold a job";* **(v) Pessimistic prediction:** Four items (27–30) intended to measure the level of prejudice toward mental illness e.g.: *"It is harder for those who have a mental illness to receive the same pay for the same job",* and **(vi) Stigmatization-** Four items (31–34) that measure the discriminatory behavior of the nurses toward mental illness. For example; *"Mental illness is a punishment for doing some bad things".* The above described tools were translated and back translated into regional language (Kannada).

## *Attitude scale for mental illness*

**Data collection Procedure.** Data was collected from nurses and midwives just before commencement of a training program on mental illness at National Institute of Mental Health and Neurosciences, Bangalore. On introduction, the primary author explained briefly about aims and methods of the present study to all the subjects. Subjects who were willing to participate were asked to complete the Kannada version of the questionnaires. It took approximately 20 minutes to complete the questionnaires.

**Ethical consideration.** The research protocol was reviewed and approved by the Institute Ethics Committee. Subjects were explained briefly about aims and objectives of the study and requested to participate in the study. Written informed consent was obtained from all the subjects and they were given freedom to withdraw from the study at any time. Confidentiality of the subjects was assured as the data collection tools did not include any identifying information (such as name, address, mobile number, etc,).

**Data analysis.** The negatively worded items (Benevolence domain) were reverse coded before the analysis. The data were analyzed using appropriate statistical software (SPSS 21 version) and results were summarized and presented in the form of tables. Independent *t* test was performed to examine whether significant differences existed between attitude scores and socio-demographic variables. Statistical significance was considered at $p<0.05$.

# Results

The mean age of the respondents was 37.90±10.60 (M±SD). More number of the subjects (37.3%) were below 30 years old, women (79.4%), Hindus (92.1%) and belonged to rural background (69.8%). Nearly half of the subjects (46.8%) were working as Auxiliary Nurse Midwives –ANM-. A majority of the subjects (54%) had less than 10 years of experience and were interested to learn about mental illness (66.6%) (Table1).

With regard to source of information, 81.7% of the subjects agreed that they were aware about mental illness through nursing education, followed by internet (77%), professional experience (63.5%) and witnessed mental illness among friends and relatives (34.1%). While, 32.5% of the subjects got information through posters (32.5%), a small number i.e. 27% of them stated that newspapers were the source of information on mental illness.

Table 2 presents true responses of the subjects to the knowledge assessment questionnaire. The mean score was 10.88±1.58 on knowledge questionnaire that suggests 91% of the subjects had good knowledge on risk factors for developing mental illness. While majority of the subjects (95.2%) accepted that head injury and physical abuses are the main causes for developing mental illness, 27.8%, 11 % of them believed that mental illness is communicable and occurs due to fate or karma.

Table 3 describes mean scores of the various domains of the ASMI scale. Higher mean score indicates negative attitudes towards mental illness in all the domains except 'benevolence' domain. With regard to 'Separatism' domain, the mean score was 26.76 with 5.70 standard deviation indicates that merely 46.5% of the subjects had positive attitudes towards persons with mental illness. Similarly, the mean score was higher in 'Stereotyping' domain which indicates 73% of the subjects held negative stereotypical attitudes towards people with mental illness. More than half of the subjects (54%) were less benevolent towards persons with mental illness (21.06±8.40, M±SD). Likewise, higher mean score (10.60±4.04) was observed in 'Pessimistic prediction' domain that suggests that 53% of the subjects endorsed negative attitudes towards persons with mental illness in this domain. However, less than cut-off point scores were observed in restrictiveness (8.79, 88%) and Stigmatization (7.18, 72%) domains. The overall mean score (88.94±13.66) reports that majority (52%) of the subjects had negative attitudes towards people with mental illness.

Independent t test reveals that age, residence, religion and professional experience were not significantly associated with knowledge and attitudes towards mental illness among the respondents. While gender differences were not observed with regard to knowledge level of the subjects, the attitudes were significantly differed in 'Stereotyping' ($t=3.462$, $p<0.001$), 'Restrictiveness' ($t=3.182$, $p<0.01$), 'Benevolence' ($t=4.10$, $p<0.001$) and 'Pessimistic prediction' ($t=2.22$, $p<0.05$) domains as the mean score of the women were lesser compared to men

**Table1.** Description of the sample

| Variable | Frequency | Percentage |
|---|---|---|
| Age (years) | | |
| <30 | 47 | 37.3 |
| 31-40 | 26 | 20.6 |
| 41-50 | 26 | 20.6 |
| >51 | 27 | 21.4 |
| Gender | | |
| Male | 26 | 20.6 |
| Female | 100 | 79.4 |
| Religion | | |
| Hindu | 116 | 92.1 |
| Muslim | 2 | 1.6 |
| Christian/others | 8 | 6.3 |
| Residence | | |
| Rural | 88 | 69.8 |
| Urban | 38 | 30.2 |
| Education | | |
| Auxiliary Nursing Midwifery | 59 | 46.8 |
| General Nursing and Midwifery | 59 | 46.8 |
| Bachelor of Science in Nursing/Others | 8 | 6.4 |
| Professional experience (years) | | |
| <10 | 68 | 54.0 |
| 11-20 | 19 | 15.0 |
| >21 | 39 | 31.0 |
| Level of interest to learn about mental illness | | |
| <5 | 22 | 17.5 |
| 6-8 | 20 | 15.9 |
| >8 | 84 | 66.6 |

**Table 2.** True responses of the Subjects on knowledge assessment questionnaire about the causes of the Mental illness

| Variable | Frequency | Percentage |
|---|---|---|
| Genetic inheritance | 118 | 93.7 |
| Substance/alcohol abuse | 121 | 96 |
| God's punishment. | 119 | 94.4 |
| Brain disease | 113 | 89.7 |
| Personal weakness | 117 | 92.9 |
| Possession by evil spirits | 116 | 92.1 |
| Traumatic injury or head injury | 120 | 95.2 |
| Physical abuse | 120 | 95.2 |
| Poverty | 118 | 93.7 |
| Fate or karma | 111 | 88.1 |
| Communicable disease | 91 | 72.2 |
| Neurotransmitters | 107 | 84.9 |

**Table 3.** Mean scores of responses of the participants to the attitude towards mental illness scale

| Subscales | No. of items | Possible score | Cut-off (mid) point | Mean | Standard deviation |
|---|---|---|---|---|---|
| Separatism | 10 | 5-50 | 25 | 26.76 | 5.70 |
| Stereotyping | 4 | 4-20 | 10 | 14.55 | 3.70 |
| Restrictiveness | 4 | 4-20 | 10 | 8.79 | 4.13 |
| Benevolence | 8 | 8-40 | 20 | 21.06 | 8.40 |
| Pessimistic prediction | 4 | 4-20 | 10 | 10.60 | 4.04 |
| Stigmatization | 4 | 4-20 | 10 | 7.18 | 3.49 |
| Total score | 34 | 34-170 | 85 | 88.94 | 13.66 |

indicating women held positive attitudes towards persons with mental illness. The subjects with higher professional qualification were found to have adequate knowledge as the mean score was higher than ANMs (11.33±1.12) and significant difference was noted ($t$=-3.53, $p$<0.01). None the less ANMs were found to be less restrictive ($t$=-2.96, $p$<0.05), more benevolent ($t$=-7.31, $p$<0.001) and less pessimistic ($t$=-2.69, $p$<0.05) when compared to the subjects with higher qualification in nursing. Further, the subjects who were more benevolent ($t$=2.25, $p$<0.05) and had less stigmatic attitudes ($t$=3.28, $p$<0.001) were more interested to learn about mental illness (Table 4).

# Discussion

To best of our knowledge, this was the first study from India that examined primary care nurses' attitudes towards mental illness using internationally standardized scale. The findings revealed that though the subjects had adequate knowledge on etiology of the mental illness, they possessed negative attitudes towards people with mental illness in various sub domains.

In line with previous research, our study sample also mainly comprised of women and Hindus.[17] Our findings revealed that younger nurses were more interested to learn about mental illness. These findings may be an important concern because with adequate training and support, they can help individuals with mental illness in providing high quality of care in the community.

With regard to source of information on mental illness, 81.7% of them agreed that they learnt about mental illness through nursing education and internet (77%). These findings were dissimilar to a study from Australia, which found that TV was the main source of information for the general population.[18] However, in case of nursing professionals, nursing education at all the levels includes mental illness as part of curriculum in India. Yet in the present study, few subjects felt that they received information on mental illness through Television/Movies (31%), News papers (27%) and posters (32.5%). Mass media has a strong influence in shaping the attitudes of individuals towards persons with mental illness. Hence, governmental and non-governmental agencies as well as stakeholders need to be proactive in disseminating information on mental illness and portraying positively about persons with mental illness. The mean score 10.88(1.58, SD) on knowledge questionnaire suggests that 91% of the subjects in the present study were found to have adequate knowledge on etiology of mental illness. While these findings were supported by earlier research conducted among nurses,[19] on the contrary, only 50% of nurses from Ethiopia had adequate knowledge.[20] Yet, it cannot be ignored that 27.8% and 11 % of the nurses in the current study, believed that mental illness is a communicable disease and mental illness occurs due to fate or karma. Therefore, the educational programs should aim at changing prejudice and negative beliefs. These findings were comparable to a study conducted in Nepal[19] None the less,

**Table 4.** Comparison of mean scores for knowledge questionnaire and Attitude scale for mental illness scales with socio demographic variables

| | | Knowledge | Separatism | Stereotyping | Restrictiveness | Benevolence | Pessimistic prediction | Stigmatization |
|---|---|---|---|---|---|---|---|---|
| **Age** | Mean±SD | 10.90±1.59 | 26.77±5.43 | 14.93±3.64 | 8.75±4.11 | 27.40±8.51 | 10.85±3.56 | 7.03±3.10 |
| <40 (*n*=73) | Mean±SD | 10.85±1.59 | 26.75±6.11 | 14.02±3.74 | 8.83±4.19 | 26.23±8.26 | 10.26±4.65 | 7.40±3.99 |
| ≥40 (*n*=53) | *t*-value | 0.19 | 0.01 | 1.37 | -0.10 | 0.77 | 0.80 | -.58 |
| **Gender** | Mean±SD | 11.38±0.80 | 28.04±5.30 | 16.69±2.01 | 11.00±3.88 | 32.58±3.31 | 12.15±3.90 | 7.58±3.38 |
| Male (*n*=26) | Mean±SD | 10.75±1.71 | 26.43±5.78 | 13.99±3.84 | 8.21±4.01 | 25.43±8.69 | 10.20±4.01 | 7.08±3.53 |
| Female (*n*=100) | *t*-value | 1.83 | 1.28 | 3.46*** | 3.18** | 4.10*** | 2.22* | 0.64 |
| **Religion** | Mean±SD | 10.90±1.61 | 26.74±5.73 | 14.68±3.58 | 8.80±4.19 | 26.91±8.50 | 10.40±4.03 | 7.06±3.22 |
| Hindus (*n*=116) | Mean±SD | 10.70±1.34 | 27.00±5.62 | 13.00±4.81 | 8.60±3.47 | 26.80±7.38 | 12.90±3.63 | 8.60±5.87 |
| Others (*n*=10) | *t*-value | 0.37 | -0.137 | 1.38 | 0.14 | 0.04 | -1.89 | -1.34 |
| **Professional qualification** | Mean±SD | 10.37±1.87 | 25.92±6.08 | 13.49±3.92 | 7.66±3.73 | 22.02±9.19 | 9.59±4.24 | 7.00±3.90 |
| ANMs (*n*=59) | Mean±SD | 11.33±1.12 | 27.50±5.28 | 15.48±3.24 | 9.78±4.23 | 31.21±4.36 | 11.49±3.67 | 7.34±3.12 |
| Others (*n*=67) | *t*-value | -3.53** | -1.57 | -3.11* | -2.96* | -7.31*** | -2.69* | -.549 |
| **Residence** | Mean±SD | 10.82±1.56 | 26.61±6.14 | 14.59±3.79 | 8.86±4.37 | 26.35±8.98 | 10.24±4.19 | 7.39±3.67 |
| Rural (*n*=88) | Mean±SD | 11.03±1.65 | 27.10±4.58 | 14.45±3.52 | 8.60±3.53 | 28.18±6.77 | 11.45±3.61 | 6.71±3.49 |
| Urban (*n*=38) | *t*-value | -0.67 | -0.44 | 0.19 | 0.32 | -1.13 | -1.55 | 0.99 |
| **Professional experience (Yrs)** | Mean±SD | 11.00±1.47 | 26.79±5.27 | 15.10±3.67 | 8.94±4.16 | 28.06±8.29 | 11.07±3.78 | 7.34±3.48 |
| <10 (*n*=68) | Mean±SD | 10.74±1.72 | 26.72±6.22 | 13.90±3.65 | 8.60±4.11 | 25.55±8.38 | 10.05±4.30 | 7.00±3.53 |
| ≥10 (*n*=58) | *t*-value | 0.91 | 0.07 | 1.84 | 0.46 | 1.68 | 1.42 | 0.54 |
| **Level of interest** | Mean±SD | 11.18±1.14 | 28.82±5.85 | 15.73±1.80 | 9.41±3.28 | 30.50±4.23 | 11.18±4.34 | 9.32±4.08 |
| <8 (*n*=22) | Mean±SD | 10.82±1.66 | 26.33±5.60 | 14.30±3.95 | 8.65±4.29 | 26.14±8.86 | 10.48±4.00 | 6.73±3.20 |
| ≥8 (*n*=104) | *t*-value | 0.98 | 1.88 | 1.66 | 0.78 | 2.25* | 0.74 | 3.28** |

(*): $p<0.05$, (**): $p<0.01$, (***): $p<0.001$

merely 2% and 4% of the nurses believed that mental illness is contagious and due to own sin.

In the present study, less than half (46.5%) of the subjects held positive attitudes towards persons with mental illness as the mean score was higher than average (26.76, 5.70 SD) in this domain. These findings though similar to a study among Indian nursing students,[9] were not supported by a study on nurses in South Africa.[17] Similarly, majority (73%) of the subjects held negative stereotypical attitudes towards people with mental illness. This number is higher comparing to earlier research conducted in India and elsewhere.[9,17] The findings also revealed that more than half the subjects (54%) endorsed less benevolent and more pessimistic (53%) attitudes towards persons with mental illness. These mean scores were lesser comparing to other studies using the same scale.[9,17] Never the less, 88% and 72% of the nurses hold less restrictive and less stigmatized attitudes towards mental illness. Though, these findings were almost similar to other studies,[9,17] it should not be ignored that 28% of the nurses had stigmatizing attitudes towards individuals with mental illness. However, the total mean score on attitude questionnaire revealed that more than half of the nurses (52%) had negative attitudes towards mental illness which needs an urgent attention. These findings were in concordance with earlier research carried out among nurses.[5,21,22] On the contrary, several other studies also observed nurses having positive attitudes towards persons with mental illness.[13,23,24] The negative attitudes among nurses may not only lead to discrimination,[25] but also worsen the symptoms which can affect the chances of recovery of the people with mental illness. Hence, nurses need to be empowered with adequate knowledge and proper guidelines with basic principles of mental health care.

Contrary to our findings, it was well documented that older age was significantly associated with positive attitudes towards mental illness.[2,5] However, a recent Indian study reported that younger nurses had positive attitudes towards mental illness.[13]Similar to earlier studies[3] our study also noted that women hold positive attitudes towards persons with mental illness. They were found to be less stereotypy, less restrictive and more benevolent towards people with mental illness. These findings contradict a study that reported more positive attitudes among men than women in all subscales, except for benevolence.[13] Although, nurses with higher education were found to have better knowledge than ANMs. ANMs had positive attitudes in all the subscales except 'Stigmatization' domain. These findings could be due to their contact with people with mental illness in their professional practice. However, these findings were not in favor of earlier research that found a strong association between lower level of nursing education, social discrimination and social restriction.[4] Nurses who were more benevolent and with less stigmatized attitudes were more interested to learn about mental illness.

**Strengths and limitations.** The main strengths of the present study include random sample which can be representative of Karnataka state, using internationally standardized scale and with good response rate (77.8%). The present study was not an exception to certain limitations such as cross sectional descriptive study, small sample size and the data was collected using self reported questionnaires. Hence, our findings may not be representative of the nurses across the country which makes it difficult to generalize the findings. Further, it is necessary to consider the responses of the nurses with caution as there may be possibility of social desirability in their responses. Despite the limitations of the study, we emphasize that our findings offer relatively significant findings about primary care nurses' attitudes towards people with mental illness. Therefore, our findings may be helpful in developing academic programs to tackle the negative attitudes of nurses towards people with mental illness.

**Conclusion.** The present study showed that primary care nurses had adequate knowledge on mental illness. Yet it is an urgent concern to note that stigmatizing and negative attitudes prevail among primary care nurses which could affect

the quality of care they provide to the people with mental illness. Moreover, it may seriously impact detection, referral and support for the individuals with mental illness in a developing country with few resources where de-institutionalization of people with mental illness is still in rudimentary stage. While the main emphasis is on integration of mental health in to primary care, it is a serious concern to inculcate positive attitudes among nurses through appropriate training programs on mental illness.

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# References


1. Gururaj G, Varghese M, Benegal V, Rao GN, Pathak K, Singh LK, et al. National Mental Health Survey of India, 2015-16: Summary. Bengaluru: National Institute of Mental Health and Neuro Sciences, NIMHANS Publication No. 128; 2016.
2. Ewalds-Kvist B, Hogberg T, Lutzen K. Impact of gender and age on attitudes towards mental illness in Sweden. Nord. J Psychiatr. 2013; 67(5):360-8.
3. Cleary M, Horsfall J, O'Hara-Aarons M, Hunt GE. Mental health nurses' views on therapeutic optimism. Int. J. Ment. Health Nurs. 2012; 21(6):497-503.
4. Munro S, Baker JA. Surveying the attitudes of acute mental health nurses. J. Psychiatr. Ment. Health Nurs. 2007; 14(2):196-202.
5. Hansson L, Jormfeldt H, Svedberg P, Svensson B. Mental health professionals' attitudes towards people with mental illness: do they differ from attitudes held by people with mental illness? Int. J. Soc. Psychiatry. 2013; 59(1):48-54.
6. Reilly N, Harris S, Loxton D, Chojenta C, Forder P, Milgrom J, et al. Referral for Management of Emotional Health Issues During the Perinatal Period: Does Mental Health Assessment Make a Difference? Birth. 2013; 40(4):297-306.
7. The Live Love Laugh Foundation. How India Perceives Mental Health. TLLLF 2018 National Survey Report [Internet]; 2018 [cited 25 Jan 2018]. Available from http://thelivelovelaughfoundation.org/downloads/TLLLF_2018_Report_How_India_Perceives_Mental_Health.pdf. 2018.
8. Solanki C, Shah H, Vankar G, Parikh M. Attitude toward mental illnesses among paramedical professionals and junior doctors. Ann. Indian Psychiatr. 2017; 1(2):102-8.
9. Poreddi V, Thimmaiah R, Pashupu DRJIjopm. Undergraduate nursing students' attitudes towards mental illness: implications for specific academic education. Indian J. Psychol. Med. 2014; 36(4):368-72.
10. Poreddi V, Thimmaiah R, BadaMath SJIyeee. Medical and nursing students' attitudes toward mental illness: An Indian perspective. Invest. Educ. Enferm. 2017; 35(1):86-94.
11. Sreeraj V, Parija S, Uvais N, Mohanty S, Kumar S. Indian nursing student's attitudes toward mental illness and persons with mental illness. Ind. Psychiatr. J. 2017; 26(2):223-7.
12. Vijayalakshmi P, Reddy D, Math S, Thimmaiah R. Attitudes of undergraduates towards mental illness: A comparison between nursing and business management students in India. S. Afr. J. Psychiatry.2013; 19(3):66-74.
13. Mukesh K, Palayat AM, Yesudas KF ea. Attitude towards mental illness among staff nurses in a tertiary care hospital-a hospital-based cross-sectional study. J. Evol. Med. Dent. Sci. 2017; 6(27):2231-5.
14. Altmann TK. Attitude: a concept analysis. Nursing forum. 2008; 43(3):144-50.
15. Sadik S, Bradley M, Al-Hasoon S, Jenkins R. Public perception of mental health in Iraq. Int. J. Ment. Health Syst. 2010; 4(1):26.
16. Ng P, Chan KF. Sex differences in opinion towards mental illness of secondary school students in Hong Kong. Int J. Soc. Psychiatr. 2000; 46:79-88.
17. Basson M. Professional nurses' attitudes and perceptions towards the mentally ill in an associated psychiatric hospital. University of Western Cape; 2012 [cited 24 Jan 2019]. Available from: http://repository.uwc.ac.za/xmlui/handle/10566/2125
18. Reavley NJ, Cvetkovski S, Jorm AF. Sources of information about mental health and links to help seeking: findings from the 2007 Australian National Survey of Mental Health and Wellbeing. Soc. Psychiatr. Psychiatric Epidemiol. 2011; 46(12):1267-74.
19. Gurung G. Knowledge and attitude of nurses regarding mental illness. J. Chitwan Med. Coll. 2014; 4(2):40-3.
20. Mariam MG, Bedaso A, Ayano G, J E. Knowledge, Attitude and Factors Associated with Mental Illness among Nurses Working in Public Hospitals, Addis Ababa, Ethiopia. J. Ment. Dis. Treatment. 2016; 2:108.
21. Al-Awadhi A, Atawneh F, Alalyan MZ, Shahid A, Al-Alkhadhari S, Zahid M. Nurses attitude towards patients with mental illness in a general hospital in Kuwait. Saudi J. Med. Med. Sci. 2017; 5(1):31-7.
22. Chambers M, Guise V, Valimaki M, Botelho MA, Scott A, Staniuliene V, et al. Nurses' attitudes to mental illness: a comparison of a sample of nurses from five European countriesInt. J. Nurs. Stud. 2010; 47(3):350-62.
23. Mårtensson G, Jacobsson JW, Engström M. Mental health nursing staff's attitudes towards mental illness: an analysis of related factors. J. Psychiatr. Ment. Health Nurs. 2014; 21(9):782-8.
24. Alshowkan A. Nurses Attitude Toward People with Mental Illness. European Psychiatr. 2015; 30:620.
25. Rao H, Mahadevappa H, Pillay P, Sessay M, Abraham A, Luty J. A study of stigmatized attitudes towards people with mental health problems among health professionals. J. Psychiatr. Ment. Health Nurs. 2009; 16(3):279-84.

Original article

# Effectiveness of shifting traditional lecture to interactive lecture to teach nursing students

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## Effectiveness of shifting traditional lecture to interactive lecture to teach nursing students

**Objective.** This study was conducted to examine effectiveness of interactive lecture in teaching nursing students compared to traditional lecture. **Methods.** This study is a quasi-experimental design in which 29 students participated in eighteen sessions of intensive nursing care in Yasuj University of Medical Sciences, Iran. These sessions were randomly allocated for the interactive lecture and the traditional lecture. The interactive lecture consists in this steps: explaining the learning objectives, taking the pre-test, teaching the subjects of each session, Group discussion with introduction of the clinical cases, answering students' questions and mutual feedbacks, taking the post-test, and introducing students' future activities. The effectiveness of applied teaching method was evaluated through pre-test, post-test of each session, mid-term and final exams. **Results.** Significant statistical differences were observed in terms of students' mean score ($p$=0.001) and their satisfaction ($p$=0.001) in the interactive teaching

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method compared to traditional lectures. Further preparation, active participation and received immediate feedback were some benefits reported for the interactive teaching method. **Conclusion.** The interactive lecture resulted in significant learning and furthers nursing students' active participation in the teaching-learning process.

**Descriptors:** students, nursing; simulation training; lectures; teacher training.

## Efectividad del cambio de la clase tradicional a clase interactiva para la enseñanza a estudiantes de enfermería

**Objetivo.** Evaluar la efectividad de las clases interactivas para la enseñanza de la enfermería a estudiantes en comparación con las clases tradicionales. **Métodos.** Este estudio es un diseño cuasi-experimental en el que participaron 29 estudiantes en dieciocho sesiones para la enseñanza de cuidados intensivos de enfermería en una universidad en Irán. Las sesiones de las clases interactivas y tradicionales se asignaron al azar. La clase interactiva tenía los pasos: explicar los objetivos de aprendizaje, tomar la prueba previa, enseñar los temas de cada sesión, discutir en grupo los casos clínicos, responder las preguntas de los alumnos y hacer la retroalimentación mutua, realizar la prueba posterior, e introducir las actividades futuras que realizarían los alumnos. La efectividad del método de enseñanza aplicado se evaluó mediante la comparación de la prueba previa con la posterior de cada sesión y de los exámenes intermedios con los finales. **Resultados.** Se observaron diferencias estadísticas significativas en términos de la puntuación media pre y post-test ($p<0.001$) y de la satisfacción con el método ($p<0.001$) en las clases interactivas en comparación con las clases tradicionales. La preparación adicional, la participación activa y la retroalimentación recibida fueron algunos de los beneficios reportados para el método de enseñanza interactivo. **Conclusión.** En los estudiantes de enfermería la clase interactiva produjo aprendizaje significativo y fomentó la participación activa en el proceso de enseñanza-aprendizaje.

**Descriptores:** estudiantes de enfermería; entrenamiento simulado; clases; formación del profesorado.

## Efetividade da mudança da aula tradicional à aula interativa para o ensino a estudantes de enfermagem

**Objetivo.** Avaliar a efetividade das aulas interativas para o ensino da enfermagem a estudantes em comparação com as aulas tradicionais. **Métodos.** Este estudo é um desenho quase-experimental no qual 29 estudantes participaram em dezoito sessões para o ensino de cuidados intensivos de enfermagem numa universidade no Irã. As sessões das aulas interativas e tradicionais se designaram por azar. A aula interativa tinha os passos: explicar os objetivos de aprendizagem; tomar a prova prévia; ensinar os assuntos de cada sessão; discutir em grupo os casos clínicos; responder as perguntas dos alunos e fazer a retroalimentação mútua; realizar a prova posterior; e introduzir as atividades futuras que realizariam os alunos. A efetividade do método de ensino aplicado se avaliou através da comparação da prova prévia com a posterior de cada sessão e dos exames intermédios com os finais. **Resultados.** Se observaram diferenças estatísticas significativas em termos da pontuação média pré e post-test ($p<0.001$) e da satisfação com o método ($p<0.001$) nas aulas interativas em comparação com as aulas tradicionais. A preparação adicional, a participação ativa e a retroalimentação recebida foram alguns benefícios reportados para o método de ensino interativo. **Conclusão.** Nos estudantes de enfermagem a aula interativa produziu aprendizagem significativo e fomentou a participação ativa no processo de ensino-aprendizagem.

**Descritores:** estudantes de enfermagem; treinamento por simulação; aulas; capacitação de profesores.

# Introduction

Nowadays, revising teaching methods seems necessary.[1,2] Teaching method is an important element in the teaching-learning process. Lecture method is the oldest and the most common teaching method that is still employed at universities. Although this method is an appropriate way to transfer information and knowledge, it is not a suitable method for long-term learning.[3] Therefore, educational experts suggest other teaching methods to achieve high levels of learning goals.[4] Interactive teaching methods are a group of teaching methods based on Vygotsky's socio-cultural learning and social constructivism theories.[5,6] According to Vygotsky, learning has its basis in interacting with other people. Once this has occurred, the information is then integrated on the individual level.[7] Constructivism consists of learning or knowledge construction emphasizing learners as active participants in understanding their environment and their experiences within that environment.[8] The purpose of training is to develop knowledge, skills and attitudes. In interactive teaching methods, students are allowed to form their own professional skills and behaviors. The benefit of this approach is that students participate in the learning process. This educational method contributes to development of professional communication and collaboration skills and student critical thinking.[9]

One of the interactive methods is interactive lecture in which small groups of students interact with each other and with the information and materials and the teacher is an organizer and facilitator. The members of the group are responsible for their learning and they are actively engaged in the teaching-learning process. Accordingly, the teacher plays a facilitating role by encouraging students to learn in the group, and providing appropriate feedback to them.[8] However, there are contradictory findings about effectiveness of the lecture method compared to other teaching methods. For example, some studies have reported no differences in term of learning outcomes between the lecture method and other teaching methods.[10,11] While, some studies have reported better learning outcomes for other methods compared to traditional lectures.[12,13] Murphy and Sharma in their article state that they do not at all assume that in most cases interactive lecture is necessarily more effective than traditional lecture, but the important point remarkable indications tin some areas. In addition, they are interested in developing research to build a better knowledge base for the characteristics of good lectures and good uses of interaction within lectures.[14]

The main goal of nursing education is to train nurses who can play their role in the professional health team to provide high quality services to society.[15] However, nursing education has many challenges, including increasing advances in technology, increasing changes in healthcare systems, the patients' safety, and nurses multiple tasks.[16,17] Therefore, nursing students need to develop critical thinking skills, clinical judgment and decision-making to overcome these challenges.[18] Therefore, successful achievement

of the expected learning outcomes and the students' satisfaction depends on the nursing education methods capable of responding to the challenges of healthcare in the clinical complex environments in the 21st century.[19] As a result, periodic changes in teaching methods in line with existing challenges are inevitable.[20] Nursing education needs to have new, student-centered, and interactive teaching methods particularly for teaching the core and specialized courses. These courses are taught for acquiring skills such as critical thinking, clinical judgmental and decision-making, and problem-solving skills to provide specialized nursing services in the clinical setting. Studies into various pedagogical aspects in nursing education also show considerable attention to the concept of successful lecture, requiring interaction and attendance in the classroom.[21] Although the authors maintain that interactive teaching methods are considered by nursing teachers, their effectiveness has been less investigated in nursing education, particularly in teaching basic and specialized courses. Therefore, the present study aimed to use interactive teaching methods in nursing education to teach basic courses. For this purpose, the credit of intensive nursing cares was selected since this credit is offered in the sixth semester and other specialized courses are prerequisites of this credit. We investigated the ease of interactive lecture in nursing education as well as its effectiveness was compared to traditional lectures.

## Methods

This study is an equivalent quasi experimental design conducted in the second semester of 2015 academic year at the School of Nursing affiliated with Yasuj University of Medical Sciences (Iran). The credits of intensive nursing cares were taught via traditional lecture and interactive lecture. This study was conducted following approval of the Nursing Educational Group, Educational Development Office (EDO) of nursing school, and Educational Development Center (EDC) of the mentioned university. Eighteen sessions of class were randomly allocated for then two methods of teaching of which 9 sessions were taught in the interactive teaching method as the intervention group, and 9 sessions were taught in the traditional lecture method as the control group. Table 1 shows the design of interactive teaching. All of the credit subjects were taught by the first author of the present article according to the course plan.

The learning outcomes were evaluated through pre and post-tests in each session, mid-term and final

**Table1. The stages of interactive teaching method**

| Phase | Activities | Time |
|---|---|---|
| Introduction | Explaining the subject of session and expected learning objectives | 3-5 minutes |
| Taking pre-test | Taking the pre-test | 3-5 minutes |
| First teacher's presentation | Teaching the first subjects of each session | 25-30minutes |
| First group discussion | Group discussion with introduction of the clinical cases | 5-7 minutes |
| Second teacher's presentation | Teaching the second subjects of each session | 25-30 minutes |
| Second group Discussion | Group discussion with introduction of clinical cases | 5-7 minutes |
| Taking post-test | Answering students' questions and mutual feedbacks | 3-5 minutes |
| Feedback & Summarization | Taking the post-test | 3-5 minutes |
| Warm- up activities | Introducing students' future activities | 2-3 minutes |

exams containing multiple-choice question, short answer, and true and false questions. Mid-term and final exam sheets were anonymously corrected based on the key answer by a member of the related educational group who was blind to types of teaching methods. Then, the papers were also corrected by the main faculty. The final scores were reported after agreement between the first evaluator (master of the course) and the second evaluator. The students' satisfaction was assessed through the education evaluation form containing five items known as general satisfaction of teaching method, organizing of teaching method, learning objectives and learning stimulation suggested by the University of California at Los Angeles (UCLA). This evaluation form was anonymously made available to the students prior to the onset of the exam session by the experts of educational affairs. They gave assurance to the students that these forms would not be viewed by the main faculty until recording final scores. The collected data were analyzed using SPSS statistical software package through inferential tests such as the t-test or student's *t.*

# Results

Twenty-nine nursing students participated with the age range of 22-26 years in this study. By the mean score of last five semesters, eight students (27.6%) had a total mean score ≥ 85 (A), fourteen students (48.3%) had a mean score 75-84.99 (B) and seven students (24.1%) were C with a mean score 60-74.99. Midterm score was considered 50% of total score so that 25% of which was related to the lecture method and the remained 25% was related to the interactive teaching method. Final score also included 50% of total score as 25% of final score for the interactive method and the remained 25% for the traditional lecture. The study findings indicated an increase in the students' mean scores in both midterm exam and final exams for the credit subjects taught through the interactive teaching method compared to the credit subject taught via the traditional lecture method. Independent t-test showed a statistical significant difference in this regard ($p$=0.001). Significant difference was observed in term of overall satisfaction, learning objectives and learning stimulation of the two teaching methods except organizing of teaching method. In other words, the students' mean scores in terms of satisfaction with the teaching method, learning objectives and learning stimulation for the interactive lecture were more than those in traditional lecture method (Table 2).

**Table 2. Stressful events, spirituality, and values of the 119 people in the process of recovering from alcohol dependence**

| Method | Interactive teaching (n=29) | | | | Traditional lecture (n=29) | | | | Independent t sample test | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | M±SD | Std. Error | 95% CI | | M±SD | Std. Error | 95% CI | | Mean Difference | Std. Error | P-Value |
| | | | Lower | upper | | | Lower | Upper | | | |
| Midterm score | 38.2 ±5.1 | 0.8 | 36.4 | 39.9 | 33.9±4.6 | 0.8 | 32.2 | 35.5 | 4.3 | 1.2 | 0.001 |
| Final score | 39.1±3.7 | 0.7 | 37.8 | 40.4 | 35.2±4.5 | 0.8 | 33.6 | 36.7 | 3.9 | 1.1 | 0.001 |
| Total score | 77.3 ±6.8 | 1.3 | 74.7 | 79.9 | 69.1±6 | 1.1 | 66.8 | 71.3 | 8.2 | 1.7 | 0.001 |
| Satisfaction | 4.1 ±0.9 | 0.1 | 3.7 | 4.3 | 2.5±1.1 | 0.2 | 2.1 | 2.9 | 1.6 | 0.3 | 0.001 |
| Organizing of teaching method | 3.7±1 | 0.1 | 3.2 | 4 | 3.6±1.1 | 0.2 | 3.2 | 3.9 | 0.1 | 0.2 | 0.7 |
| Learning objectives | 4.1±1.1 | 0.2 | 3.7 | 4.5 | 3±1.1 | 0.1 | 2.6 | 3.4 | 1.1 | 0.3 | 0.001 |
| Learning stimulation | 4.1±0.9 | 0.2 | 3.8 | 4.5 | 2.4±1 | 0.2 | 2 | 2.7 | 1.7 | 0.2 | 0.001 |

More understanding, further preparation or pre-teaching study, lack of early fatigue, and immediate feedback were the examples of the educational benefits reported for the interactive lecture by the students (Table 3).

**Table 3.** Students' viewes about educational benefits of the interactive teaching

| Educational benfits | *n* (%) |
|---|---|
| More understanding for taught subject matters | 25 (86.2%) |
| Further preparation and pre-teaching study | 25 (86.2%) |
| Immediate feedback | 24 (82.7%) |
| Further acceptance for the comments received from students | 23 (79.3%) |
| Participation in group discussions | 23 (79.3%) |
| Lack of premature fatigue | 22 (75.8%) |
| Further interaction among the students | 22 (75.8%) |
| Group responsibility to learn | 21 (72.4%) |
| More motivation to learn | 21(72.4%) |
| Prolonged retention | 20 (33.3%) |
| Others | 15 (68.9%) |

# Discussion

In this study, we applied interactive lecture to teach the credit of intensive nursing care. The results showed that interactive lecture resulted in more significant learning and satisfaction compared to traditional lecture. Related studies had reported contradictory results about effectiveness of different teaching methods in the field of nursing education. For example, a positive effect was reported for nursing students' cognitive skills when it was taught via the simulator method, but no change in self- esteem level was reported between the simulator and the traditional lecture.[22] In this regard, Kohistan and Baghcheghi[23] reported better psycho-social climate of the classroom for team-based learningWhereas, acquiring knowledge in the combined lecture method was reported more than the role playing and e-learning techniques; however, long term learning and satisfaction rate were greater than the lecture method.[24] Purghazian *et al*.[24] examined the impact of e-learning, lecture and role playing methods on acquisition, retention and satisfaction. The results of the study showed that the lecture method was better than knowledge acquisition, and the other two methods were better than the lecture method in knowledge management. The results of this study were inconsistent with of our study results in terms of knowledge acquisition, which may be because we compared a type of lecture to the traditional lecture.

Safari *et al.* also studied the effect of teaching on two methods of lecture and discussion on students' learning and satisfaction. The results of their study indicated that the mean score of the student assessment test was significantly higher in the discussion method than in the lecture method. The findings are consistent with the results of our study.[25] Michelle *et al.*[26] examined the impact of an active teaching method and a traditional (inactive) method on the students' cognitive outcomes, which, according to quantitative evidence, they concluded that the active teaching approach might have an impact on more positive feedback on students' learning. The results of this study were also consistent with those of our study. The results of this study showed

that in the interactive lecture method, student satisfaction significantly increased compared to the traditional lecture method. Other studies have provided contradictory results regarding students' satisfaction. Missildine *et al.* examined the impact of traditional teaching methods, lectures and lectures capture back-up and flipped classroom on student performance and satisfaction. The results of their study demonstrated that students' satisfaction with traditional lecture was higher than with other methods, which is contradictory to our study results.[27] According to our study, it could be mentioned that interactive lecture had been more effective than the traditional method. Therefore, it could increase satisfaction rate in the students. The result of this study showed that stimulation of learning in interactive lecture was significantly more than traditional lecture. This was different from the study results that reported by Miller and colleagues;[28] however, it is in line with the results of the study of Fyrenius.[29]

The results of this study may be a stimulus for our colleagues to teach using interactive lecture, but the authors of the article argue that teaching-learning is a complex process in which many factors are involved. In particular, students have many differences in terms of their individual characteristics. Therefore, such studies need to be interpreted with more caution. Furthermore, interactive lecture requires more time and coordination such that effectiveness of classes with fewer students is suggested to be evaluated. Moreover, appropriate performance along with paper-pencil tests is suggested to evaluate the learning outcomes of the interactive teaching method.

This study has several limitations. First, the number of samples is low; therefore, generalization of the results is difficult. Second, some of the results are based on the participants' own statements that they may not have high credibility. Although the issue of whether students are or not legitimate referees to evaluate teaching methods was considered by the experts, there is a general sense that students are reliable evidence for research in education.[30] They are able to report the learning experience that can be invaluable, satisfactory and useful, and to express the effectiveness of the teaching method and the quality of the teacher's interaction with them.[31] Third, the increase in knowledge in this study is related to short-term results, and knowledge retention in the long term has not been investigated. Therefore, it is suggested that further studies be conducted with more samples. Additionally, in future studies, the impact of other interactive methods can be compared. It is suggested that the consequences of the Kirkpatrick's higher levels be investigated after applying new methods. In the interactive lecture method, owing to using discussion in small groups, it is anticipated that critical thinking and problem-solving skills will be improved. Accordingly, future studies can examine the impact of such methods on changing these skills.

**Conclusion:** Outcomes of the interactive lecture have been more desirable than traditional lecture to teach the credit of intensive nursing care. However, it needs more time compared to the traditional lecture. Moreover, interactive lectures are likely to increase students' satisfaction and stimulate their learning. Applying active teaching methods can help to achieve educational objectives. More evidence is needed to draw a more solid conclusion on these issues.

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# References


1. Zhang Q, Lee L, Gruppen LD, Ba D. Medical education: changes and perspectives. Med. Teach. 2013; 35(8):621-7.
2. Bradshaw M, Hultquist BL. Innovative Teaching Strategies in Nursing and Related Health Professions. 7th Ed. New York: Jones & Barlett; 2017.
3. Kaur G. Study and analysis of lecture model of teaching. Int. J. Educ. Plan. Admin. 2011; 1(1):9-13.
4. Mangena A, Chabeli MM. Strategies to overcome obstacles in the facilitation of critical thinking in nursing education. Nurse Educ. Today. 2005; 25(4):291-8.
5. Sabry K, Barker J. Dynamic interactive learning systems. Innov. Educ. Teach. Int. 2009; 46(2):185-97.
6. Saif A. Modern educational psychology: Psychology of learning and instruction book. 7th Edition. Tehran, Iran: Doran Pub; 2015.
7. Shaffer DR. Social and personality development. 6th ED. Wadsworth Inc Fulfillment; 2008.
8. Sessoms D. Interactive instruction: Creating interactive learning environments through tomorrow's teachers. Int. J. Technolo. Teach. Learn. 2008; 4(2):86-96.
9. Yakovleva NO, Yakovlev EV. Interactive teaching methods in contemporary higher education. Pac. Sci. Rev. 2014; 16(2):75-80.
10. Birgegård G, Persson E, Hoppe A. Randomized comparison of student-activating and traditional lecture: no learning difference. Med. Teach. 2008; 30(8):818-9.
11. Hafezimoghadam P, Farahmand S, Farsi D, Zare M, Abbasi S. A comparative study of lecture and discussion methods in the education of basic life support and advanced cardiovascular life support for medical students. Turk. J. Emerg. Med. 2013; 13(2):59-63.
12. Momeni-Danaei S ZL, Oshagh M, Omid-Khoda SM. Which method of teaching would be better; cooperative or lecture? Iran. J. Med. Educ. 2011; 11(1): 1-8.
13. Salimi T, Shahbazi L, Mojahed S, Ahmadieh MH, Dehghanpour MH. Comparing the effects of lecture and work in small groups on nursing students' skills in calculating medication dosage. Iran. J. Med. Educ. 2007;7(1):79-84.
14. Murphy R, Sharma N, editors. What Don't We Know About Interactive Lectures? Seminar.Net Int. J. Media, technol. Lifelong Learn; 2010; 6(1):111-120.
15. Sandahl SS. Collaborative testing as a learning strategy in nursing education: A review of the literature. Nurs. Educ. Perspect. 2009; 30(3):171-5.
16. Bartels JE. Educating nurses for the 21st century. Nurs. Health Sci. 2005; 7(4):221-5.
17. Scott PA, Matthews A, Kirwan M. What is nursing in the 21st century and what does the 21st century health system require of nursing? Nurs. Philos. 2014; 15(1):23-34.
18. Del Bueno D. A crisis in critical thinking. Nurs. Educ. Perspect. 2005; 26(5):278-82.
19. Raines DA. CAN-Care: An innovative model of practice-based learning. Int. Nurs. Educ. Scholars. 2006; 3(1):1-19.
20. Frenk J, Chen L, Bhutta ZA, Cohen J, Crisp N, Evans T, et al. Health professionals for a new century: transforming education to strengthen health systems in an interdependent world. Lancet. 2010; 376(9756):1923-58.
21. Reyes JR, Álvarez LNR, Pomarede MJM. Pedagogic Aspects in Nursing Education: Integrative Review. Invest. Educ. Enferm. 2018;36(3):e03.
22. Brannan JD, White A, Bezanson JL. Simulator effects on cognitive skills and confidence levels. J. Nurs. Educ. 2008; 47(11):495-500.
23. Koohestani HR, Baghcheghi N. The effects of team-based learning techniques on nursing students' perception of the psycho-social climate of the classroom. Med. J. Islam. Republic Iran. 2016; 30:437.
24. Pourghaznein T, Sabeghi H, Shariatinejad K. Effects of e-learning, lectures, and role playing on nursing students' knowledge acquisition, retention and satisfaction. Med. J. Islam. Republic Iran. 2015; 29:162.
25. Safari M, Yazdanpanah B, Ghafarian HR, Yazdanpanah S. Comparing the effect of lecture and discussion methods on studentslearning and satisfaction. Iran. J. Med. Educ. 2006; 6(1):59-64.

26. Michel N, Cater III JJ, Varela O. Active versus passive teaching styles: An empirical study of student learning outcomes. Hum. Resour. Dev. Q. 2009;20(4):397-418.
27. Missildine K, Fountain R, Summers L, Gosselin K. Flipping the classroom to improve student performance and satisfaction. J. Nurs. Educ. 2013; 52(10):597-9.
28. Miller CJ, McNear J, Metz MJ. A comparison of traditional and engaging lecture methods in a large, professional-level course. Adv. Physiol. Educ. 2013; 37(4):347-55.
29. Fyrenius A, Bergdahl B, Silén C. Lectures in problem-based learning—Why, when and how? An example of interactive lecturing that stimulates meaningful learning. Med. Teach. 2005; 27(1):61-5.
30. Marsh HW. Students' evaluations of university teaching: Dimensionality, reliability, validity, potential biases and usefulness. In: Perry RM, Smart JC, Editors.The scholarship of teaching and learning in higher education: An evidence-based perspective: Springer; 2007. P. 319-83.
31. Cho K, Schunn CD, Wilson RW. Validity and reliability of scaffolded peer assessment of writing from instructor and student perspectives. J. Educ. Psychol. 2006; 98(4):891.

Original article

# Challenges of Cooperation between the Pre-hospital and In-hospital Emergency services in the handover of victims of road traffic accidents: A Qualitative Study


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## Challenges of Cooperation between Pre-hospital and In-hospital Emergency services in the handover of victims of road traffic accidents: A Qualitative Study

**Objective.** To take a deep look at the challenges of cooperation between the pre-hospital and in-hospital emergency services in the handover of victims of road traffic accidents. **Methods.** This is a qualitative study and the method used is of content analysis type. Semi-structured interviews were used to collect the data. Through purposive sampling, fifteen employees from ambulance personnel and hospital emergency staff were selected and interviewed. They expressed their experiences of cooperation between these two teams in the handover of traffic accident casualties. The interviews were transcribed verbatim and content analysis method was used to explain and interpret the content of the interviews. **Results.** Three major categories were derived from the analysis of interviews: *Shortage of infrastructure*



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*resources* (Shortage of equipment, Shortage of physical space, and Shortage of manpower); *Inefficient and unscientific management* (Shaky accountability, Out-of-date information based activities, Poor motivation, and Manpower low productivity); and *Non-common language* (Difference in understanding and empathy, and Difference in training and experience). **Conclusion.** The obtained results of this study suggest that the careful planning of resources, the promotion of managerial practices as well as empowerment program of the staff, healthcare managers and policymakers can take a pace forward in order to enter into a hearty coordination between these two services for the attention of victims of road traffic accidents.

**Descriptors:** ambulances; accidents, traffic; patient handoff; personnel, hospital; health resources; emergency service, hospital resources; qualitative research.

## Desafíos para la cooperación entre los servicios de emergencias prehospitalarias e intrahospitalarias en la entrega de víctimas de accidentes de tránsito: un estudio cualitativo

**Objetivo.** Examinar los desafíos para la cooperación entre los servicios de emergencias prehospitalarias y hospitalarias en la entrega de víctimas de accidentes de tránsito. **Métodos.** Estudio cualitativo con análisis de contenido. Se utilizaron entrevistas semiestructuradas para la recopilación de los datos. Se seleccionaron y entrevistaron quince personas de los equipos de atención prehospitalaria y del servicio de emergencias de un hospital a partir del muestreo intencional. Los participantes expresaron sus experiencias de cooperación entre estos dos grupos en la entrega de víctimas de accidentes de tráfico. Las entrevistas se transcribieron textualmente y se utilizó el análisis de contenido para explicar e interpretar el contenido de las entrevistas. **Resultados.** Emergieron tres categorías principales*: Escasez de recursos de infraestructura* (equipos, espacio físico y de personal); *Gestión ineficiente y no científica* (responsabilidad inestable, actividades basadas en información desactualizada, motivación deficiente, y baja productividad de personal); y *Lenguaje no común* (diferencia en comprensión y empatía, y diferencia en capacitación y experiencia). **Conclusión.** Los resultados obtenidos en este estudio muestran dificultades con la planificación de los recursos y la promoción de las prácticas de gestión, así como la necesidad de un programa de empoderamiento del personal. Se deben formular políticas para poder avanzar en el mejoramiento de la coordinación de los servicios en la atención a víctimas de accidentes de tráfico.

**Descriptores:** ambulancias; accidentes de tránsito; pase de guardia; personal de hospital; recursos en salud; servicio de urgencia en hospital; investigación cualitativa.

## Desafios para a cooperação entre os serviços de emergências pré-hospitalar e intrahospitalar na entrega de vítimas de acidentes de trânsito: um estudo qualitativo

**Objetivo.** Examinar os desafios para a cooperação entre os serviços de emergências pré-hospitalar e hospitalar na entrega de vítimas de acidentes de trânsito. **Métodos.** Estudo qualitativo com análise de conteúdo. Se utilizaram entrevistas semiestruturadas para a recopilação dos dados. Através da amostra intencional se selecionaram e entrevistaram quinze pessoas das equipes de atenção pré-hospitalar e do serviço de emergências de um hospital. Os participantes expressaram suas experiências de cooperação entre estes dois grupos na entrega de vítimas de acidentes de trânsito. As entrevistas se transcreveram textualmente e se utilizou a análise de conteúdo para explicar e interpretar o conteúdo das entrevistas. **Resultados.** Emergiram três categorias principais*: Escassez de recursos de infraestrutura* (equipamentos, espaço físico e de pessoal); *Gestão ineficiente e não científica* (responsabilidade instável, atividades baseadas em informação desatualizada, motivação deficiente, e baixa produtividade de pessoal); e *Linguagem não comum* (diferença em compreensão e empatia, e diferença em capacitação e experiência). **Conclusão.** Os resultados obtidos neste estudo mostram dificuldades com a planificação dos recursos e a promoção das práticas de gestão, assim como a necessidade de um programa de empoderamento do pessoal. Se devem formular políticas para poder avançar no melhoramento da coordenação dos serviços na atenção as vítimas de acidentes de trânsito.

**Descritores:** ambulancias; acidentes de trânsito; transferência da responsabilidade pelo paciente; recursos humanos em hospital; recursos; serviço hospitalar de emergência em saúde; pesquisa qualitativa.

# Introduction

Road traffic crashes, as one of the biggest public health problems, are of man-made crises which cut short the lives of approximately 1.2 million annually and leave between 20 and 50 million people injured and disabled worldwide.[1] Traffic accidents are the second leading cause of death in Iran. Iran is one of the countries with the highest rate of fatalities from road traffic injuries worldwide.[2] Traffic crashes kill about 28 000 people and leave 300 000 people disabled and cost Iran's economy billions of dollars. Road traffic injuries are the leading cause of death among people under 40 and the second leading cause of death in all age groups.[3] Every year, millions of people are hospitalized for a long time due to road traffic injuries who may not be able to return to their normal life, work, or their previous role in society.[4] Pre-hospital emergency is an important link between managing emergency medical response to victims off the hospital and their treatment in the hospital.[1] One of the vital wards of any hospital is emergency department in which the patients are handed over to the nurses in health facilities by the emergency medical services (EMS) staff before they are visited by a physician.[5] Hearty cooperation between the staff of these two units while handing over the road traffic casualties is a significant and critical factor affecting the process of their health.[6]

Poor cooperation between pre-hospital and in-hospital emergency is considered as one of the main causes of high mortality rate of road traffic accidents in the developing countries and one of the biggest preventable challenges.[7] The complexity and unpredictability of working in hospital emergency departments, professional problems, time constraints, huge crowd of referrals, noisy and stressful environment at the time of the patient handover lead to missing of patients' information, exchanging false information, causing multiple errors and exposing cooperation with special challenges.[6,8] Despite the problems of cooperation between pre-hospital and in-hospital emergency in the handover of road traffic casualties, which is one of the main reasons for an increase in the mortality rate of traffic casualties, a few studies have been conducted on the challenges of collaboration in the handover of such patients which are mainly quantitative ones.[6,8,9] Since the cooperation between the pre-hospital and in-hospital emergency is influenced by such social, cultural and value factors whose identification requires a deep understanding of how cooperation is attained, it is clear that the data collected by quantitative studies using one or more questionnaires containing some objective and close-ended questions will not be able to show all aspects of this phenomenon in Iran. Moreover, most of the questionnaires used in quantitative studies have been prepared by researchers from other countries and they are mainly based on the concepts extracted from qualitative studies conducted in the same countries which of course conform to cultural, value, social and professional standards of those countries. There are lots of issues on how pre-hospital and

in-hospital emergency can enter into cooperation which are still unsolved or require further investigation in their cultural, social, value, and professional contexts. Accordingly, considering the high rate of road traffic accidents inflicting enormous financial losses and mortalities in Iran, the researchers prompted this qualitative study to deeply understand the existing challenges in the cooperation between the pre-hospital and in-hospital emergency departments and make use of the findings in health care management.

# Methods

This study is a qualitative one and the method used is of conventional content analysis type. This method was chosen because it is an appropriate way to extract valid and reliable findings from text data. It creates new ideas, knowledge and facts and can be used as a performance practical guide. Through compressing and extensive description of the phenomenon in this method, the ultimate goal which is extraction of concepts and descriptive categories can be achieved. Formation of the concepts and categories serves to build a model, a conceptual framework, a concept map or categories.[10] As the research environment of qualitative studies must be realistic and natural, the present study was carried out in pre-hospital and in-hospital emergency centers as natural settings. The research community was employees of these two medical settings. The inclusion criteria for participants were: a) having professional work experience for at least one year in pre-hospital or in-hospital emergency; b) willingness to recount their experiences related to cooperation between pre-hospital and in-hospital emergency in the handover of traffic road injured patients. Purposive sampling began in 1394 and continued with theoretical sampling until data saturation. The samples were chosen from the employees of pre-hospital and in-hospital emergency departments with whom the researchers had in-depth interviews individually.

To collect the data, the researchers used semi-structured interviews, and in-field notes. All face-to-face interviews began with asking an open question such as “Could you talk about your routine daily work?” and to clarify the issue further, such guiding questions as “Could you make a specific example?” or “In case of a problem, what would you do”? The objectives of the research were adjusted on the participants’ responses and follow-up study questions were raised for elaboration of the concept under study. Questions for future interviews were based on the categories emerged. The interviews lasted 55 minutes, on the average. At first, the objectives of the research, the methodology of the interview, the participants’ free will to take part or withdraw from the study were explained to them. Furthermore, the participants’ permission was asked to record the interviews. In the meantime, a written informed consent was obtained from every one of them. Initially, the content of the interviews was recorded and then they were set down word by word by the researcher. In order to get a gist of the data gathered, the researcher reviewed them simultaneously a few times. Through conventional content analysis, meaning units were identified out of the words, sentences and paragraphs in the interview texts on “Challenges of Cooperation between Pre-hospital and In-hospital Emergency in the Handover of Traffic Casualties”. After the manifest and latent concepts based on the participants’ description were identified, the concepts and the codes were outlined. Then, the codes and the concepts were classified with their similarities and differences. Finally, based on continuous thinking, interpretation and constant comparison of data, the categories and key concepts underlying the data were extracted. Having outlined the concepts and the codes, the researchers extracted the themes.

The data were then analyzed using the constant comparative analysis methods and inductive content analysis method. To achieve trustworthiness (Credibility) of the data, the researchers used protracted involvement, integration in data collection, frequent review, revision supervisor and constant comparison. To achieve dependability reflecting the reliability and stability of the data,

member check was used in the form of peer views, and reviewing the comments written by the participants. Conformability of the data was achieved by submitting the reports, the comments and the notes to two relevant professors and winning their approval. Transferability of the data was ensured by rich description of the data.[11,12] The principles of confidentiality, obtaining written informed consent to participate in the interview and record the conversation, having the right to withdraw from the study at any time were among ethical considerations which were observed while carrying out this study. The study was approved by the Ethics Committee of Shahid Beheshti University of Medical Sciences, Tehran, Iran.

# Results

The participants in this study were 15 employees at pre-hospital and in-hospital emergency departments who were purposefully selected as samples. They all had rich experience and they were willing to participate in the study. The average age of the participants was 35 and they had 8 years' professional work experience. The themes of the gathered data from the participants' responses were classified into main and sub-categories. The major categories included insufficient infrastructure resources, inefficient and unscientific management and non-common language. (Table 1).

**Table 1.** Major categories and subcategories derived from the data

| Major categories | Subcategories |
|---|---|
| Shortage of infrastructure resources | Shortage of equipment |
| | Shortage of physical space |
| | Shortage of manpower |
| Inefficient and unscientific management | Shaky accountability |
| | Out-of-date information based activities |
| | Poor motivation |
| | Manpower low productivity |
| Non-common language | Difference in understanding and empathy |
| | Difference in training and experience |

## Insufficient infrastructure resources

In view of the participants, one of the barriers in the way of collaboration is inadequate infrastructure resources. Lack of inadequate infrastructure resources would cause ambulance and patient delay at the time of handover, and tension among staff, and influence these two important parts of the health system. The subcategory of this category includes: shortage of equipment, physical working space, and manpower which are dealt with below.

***Shortage of equipment.*** One of the themes obtained was that of shortage of the equipment. It was considered as one of significant challenging factors in entering into a hearty cooperation between pre-hospital and in-hospital emergency personnel by the participants. Unless shortage of equipment is met, attainment of such cooperation is not feasible. Faced with shortage of equipment, the personnel had different experiences in dealing with like showing patience and endurance, and linger in order to prevent tension and conflict. Some of the participants had made an attempt to solve the problem by reflecting the issue to the highest in authority; however, they were not satisfied with the outcome of their efforts. Participant No. 1 said: *When we reach the hospitals, there is no stretcher. We ask the triage personnel why there is no stretcher. They answer,*

*Stretchers are few. Now you have to wait until they arrive*. Sometimes, they get in touch with the hospital supervisor to follow up. In fact, the supervisor does, but by the time the supervisor has it brought from another ward, from the 1st, the 2nd, or from the 3rd floor or somewhere else, time will have passed. It is some nerve-racking between me and the hospital personnel. The same is true with triage personnel. We, the two parties, cannot deal with the patient at ease of mind. In the end, it takes half an hour, forty-five minutes or sometimes even an hour to fetch a stretcher and move the patient. Participant No. 8 said: *Done. After handing over the patient, I myself lingered for 10 minutes to take delivery of the devices, for example, taking delivery of a long backboard used for the patient, and that I must do*. Another participant said: *The next problem is lack of stretchers, backboards and scopes, so patients are delayed and handover cannot be done*. Many of the participants in the study believed that shortage of equipment is one of the barriers in the way of cooperation between pre-hospital and in-hospital emergency departments and leads to a waste of time and confusion of pre-hospital emergency personnel.

***Shortage of physical working space.*** The other cooperation challenge experienced by most of the personnel was shortage of physical working space for the prompt handover of the patients to the in-hospital emergency ward and return to the emergency base. Shortage of physical working space affected timely and scientific handover of the patients and sometimes the continuity of treatment as well. Participant No. 2 said: *The capacity of the hospital emergency ward is limited. Imagine, the ward has 70 beds and stretchers for 70 patients. If it became 71 patients, it would mean a problem. We'll go there, we'll see everywhere is crowded with patients hospitalized even in the corridors. We have difficulty fighting our way through the crowd, let alone handing the patient over*. The other participant said: When there are lots of car crashes or in the case of special occasions like Nowruz Eid (The first day of a new year in Iran), there is not enough room for such patient volume in the hospital emergency ward. Participant No. 5 from hospital staff said: *Triage has little space for patients*. In addition to the shortage of equipment, shortage of physical space for patients' admissions is an important reason in the delay of pre-hospital emergency technicians. In some cases, shortage of physical space has interfered with the handover of the patients.

***Shortage of manpower.*** Manpower shortage is also one of the challenges on the way of attainment of cooperation between pre-hospital and in-hospital emergency departments in the handover of traffic casualties on which the participants focused on. Participant No. 3 from pre-hospital emergency staff said: *There are more than 50-60 patients in the emergency ward with 7-8 nurses, each of whom is to receive about 10 patients and that very nurse has to deal with their problems from A to Z. Nothing is done for the patient. Things like line, filing, visiting the patient, implementing attending physician's orders. The workload in emergency ward is three times as much as other wards*. *In a case where a heavy accident had happened, all the nurses were busy dealing with their patients. There was no free nurse to be able to take delivery of the new victims and attend to their needs*, No. 2 interviewee said. Another participant from pre-hospital emergency ward said: *Shortage of manpower has made us feel tired and this sort of fatigue can have an adverse effect on our cooperation*. The participants believed that shortage of manpower is a factor that causes wear-and-tear of the staff's physical bodies, a disruption in the handover of the patients and continuity of their treatment, and leaves emergency technicians with lots of delay in the hospital.

## Inefficient and unscientific management

One of the obtained themes was that of inefficient management. In participants' point of view, poor and inefficient management was considered as one of the most important challenges in entering into a hearty collaboration between pre-hospital and in-hospital emergencies. They stated that not

paying attention to scientific and methodological management in these two departments would cause a lot of problems. This main category has four sub-categories: shaky accountability, doing activities on out-of-date basis, inadequate motivation, and low productivity of manpower, described as follows:

***Shaky accountability.*** Most of the participants considered the low level of accountability of staff and authorities of both pre-hospital and in-hospital emergencies responsible for lack of coordination. This poor accountability made the nurses take the delivery of the patients from the pre-hospital emergency improperly, followed by creation of some problems for pre-hospital emergency staff as well as the patients / injured patients. Along with this line of argument, participant No. 13 said: *In case of accidents which are critical conditions and there are lots of casualties, despite the fact that hospitals are informed of such a condition by the Direction Headquarter, the hospital does not go through phases of crisis management to get ready for admission of the injured people*. Participant No. 6 said: *You do the handover of the patient to one of the staff. Someone else will arrive and says, I'm in charge of triage*. *So, you must repeat the handover process and hand in the report to the one claiming as responsible. Another scenario is that you already did the handover of the patient and have left the hospital. After a while, a call rings saying that you have not done the handover of the patient to the triage*. Participant No.2 said: *What are we going to do with the patient carried here? They say, Go and deliver to the triage. We answer, They're busy now. They would reply, it is nothing to do with us. So, we don't know what to do.* The participants stated that this very poor and shaky accountability, in addition to causing confusion and linger of the staff, not only causes dissatisfaction of the patients and those accompanying by but it will also affect the health outcomes of the patients.

***Doing activities on out-of-date basis.*** One of the challenges of cooperation was doing activities on out-of-date basis so that it showed the personnel's scientific information and practical activities not be updated. Therefore, some of the therapeutic measures taken for the patient were not considered as acceptable to the other party. Despite having new scientific information, some of the emergency personnel avoided applying them to the patients in order to experience less challenges at the time of handover. Along with this line of argument, participant No. 3 said: *According to the 2015 version of CPR, the most important task for a patient in need of CPR is to perform a cardiac massage within the very first few minutes. Identification of vein and chip intubation is not very important. On carrying the patient to the hospital, I get into discussion with the nurse.* The nurse asks such questions as: *Why aren't your patient with a line? Why didn't not you get the patient intubated? If not doing the procedures demanded by the nurse may not have some bad consequences to me this time, I'll put my effort into the things they demand next time.* Say, *if they pick on me next time, I'll carry the patient intubated. This means that I am forced to do an unscientific task. Sure, this will count against the patient. Spending one more minute, I'll get the patient lined and intubated not to be picked at by the hospital nurses next time*. Another participant said: *Some things have become routine somehow and everyone thinks he is doing the 'right thing'. If someone wants to do his job to the standard, he is being told What are you doing? Let it go. .... After a while, you will get discouraged, and you'll do as the others do*. Doing daily routine work and lack of paying attention to the scientific principles of taking care of patients / casualties is one of the challenges faced by pre-hospital and in-hospital emergency personnel which leads to conflicts during the handover of patients.

***Inadequate motivation.*** In participants' views, not paying attention to spiritual and material motivation was one of the challenging factors in attainment of collaboration that overwhelmed their willingness to work and overshadowed their interaction with colleagues. Participant No. 9 from the pre-hospital emergency department said: *We*

*have received less Karaneh (piecework wage) than the hospital staff and this has reduced the motivation of the guys. That is, it has reduced the incentive to cooperate and to work shift. We take all the traumatic patients to the hospital, and then, rumor has it that the earnings of triage staff are about twice as much as ours. It is 100% more*. Participant No.12 from hospital staff said: *The less the difference in the earnings and closer to reality, the less breach and the more cooperation would be*. Another participant said: *When you do a duty wholeheartedly and properly, then instead of being thanked for your effort, you're told 'you ruined that'. It drives us crazy at the very moment, but in the long run, it makes us indifferent. That is the worst possible scenario which should happen to someone, to me, he should quit his job.* The participants in the study considered lack of motivation as another challenging issue in collaboration between the two sectors and argued that the lack of attention to their motivational issues by managers would lead to their reluctance to cooperate.

***Low productivity of manpower.*** Low productivity of manpower and not using human resources properly was another challenge for entering into a good collaboration between pre-hospital and hospital emergency staff. The use of low-less experienced and knowledgeable personnel had adverse impact on the process of collaboration and handover of the patients. Participant No. 9 said, *Sometimes, someone who takes delivery of a patient is a university student or someone who has newly come to triage and cannot take delivery of the patients properly. For example, he doesn't know the trauma mechanism well, but to the extent to sign the handover form and let us go.* Another participant from the pre-hospital emergency staff said, *I'm left with a sophomore student who is inexperienced and has not yet seen an accident scene.* Another participant in the pre-hospital emergency department said: *Anyone who works in a triage must have at least 5 years of work experience, but sometimes they are novice or students and cannot really understand the patient's real needs*. Lack of employing staff based on knowledge and experience not only creates some problems in the attainment of collaboration between pre-hospital and hospital staff, but it also affects the health outcomes of post-delivery of the patients. Poor knowledge and lack of experience of those who take delivery of the patients result in the loss of patients' information and consequently leads to inadequate care delivery.

## Non-common language

Not using a common language was one of the main categories to which all the participants in the study referred as a challenge in collaboration between the pre-hospital and in-hospital emergency wards. Lack of mutual understanding of each other's job as well as difference in training and experience were considered to be a factor in an ineffective cooperation.

***Difference in understanding and empathy.*** The participants in this study believed that lack of mutual understanding and sympathy would diminish the cooperation in dealing with traumatic casualties. Participant No. 8 said: *The guys who have just worked in a pre-hospital emergency ward can never realize the present condition of the triage staff; similarly, many of the guys who have only worked in the triage can never understand the present condition of the one who has just removed the casualty of the accident scene*. Participant No. 3 said, *Nurses and emergency staff take guard. The hospital nurse wants to say that the emergency department does not do the job well, and the emergency technician says the hospital nurse does not do the work well and put the whole blame on others*. Participant No. 9 said: *The triage personnel are highly assertive. They think that their level of expertise and experience is much higher than the emergency staff, but we don't think so. They think that we are on a lower scientific level and that's why cooperation is being disturbed*. Shortage of mutual trust also increased the handover problems of the patients. The majority of the participants had the idea that the lack of understanding each other's circumstances prevents the occurrence of

desired cooperation between the personnel in the handover of the patients / casualties.

***Difference in knowledge and experience.*** Differences in degrees and academic degrees as well as practical and clinical experience of staff were the other challenge for collaboration. Participant No. 7 from the Pre-Hospital Emergency Department said: *Some medical emergency personnel are medical emergency technicians and some are nurse aides. Sure, their little knowledge does not allow them to take delivery of the patients from the pre-hospital emergency and this is the source of the problem*. Participant No. 8 from the hospital said: *Some time ago, one of the novice personnel who had not started his Service Plan, was put on the triage. I had brought a patient off the scene with TIA (transient ischemic attack). What I am saying is important because I'm the one who has seen the accident scene. The triage personnel who paid the patient a visit said that the patient had no problem at all, with no muscle weakness at all*! Another participant said*: While we are doing the handover of the patient to the triage, as the one in charge of the triage has not studied what the mechanism of the incident is, and he doesn't understand what it is, he doesn't heed our talk and our report*. One of the emergency personnel said: *The old hospital personnel while paying the patient a visit asks for the report, but not the novice ones. They talk to the patient, but not making any eye contact with him/her and they don't remember what they were told about*. The participant considered having enough training and experience as necessary for the reduction of problems in attainment of collaboration and emphasized the employment of experienced personnel in these two settings.

# Discussion

The analysis of the findings of this study reveals that three groups of challenging factors- at organizational, managerial and individual levels are involved in the attainment of cooperation in Iran. Shortage of infrastructure resources at the organizational level, efficiency and ability of the managers at the managerial level, and the difference in the level of experience and education at the individual level greatly contribute to the creation of cooperation challenges. Most participants in this study emphasized on the shortage of infrastructure resources as the most important challenging factor in cooperating in the handover of traffic casualties. To them, shortage of equipment, insufficiency of physical space and shortage of manpower undeniably have a negative effect on the cooperation between these two important parts of the health system. In this regard, the findings of other researchers are in support of those of the present study. According to the findings of this study, inadequate physical space was another collaboration challenge in the handover of traffic casualties resulting in overcrowding of the hospital emergency ward and poor collaboration in taking delivery of the patients.

To Trzeciak study,[13] overcrowding of the emergency ward is a very complicated issue whose adverse impact was emphasized in the ambulance delay in the hospital and a negative factor in the treatment process of casualties. Because in many cases the physical space of hospital emergency ward is sufficient enough to only accommodate injured patients under normal conditions,[14] it has contributed to the problem of transporting the casualties from pre-hospital emergency to the in-hospital emergency especially in urban areas.[15] Emergency room crowding is one of points of weakness in the country's health system in consequences of which there are delayed ambulances and the hospital's lack of readiness to deal with crises.[13] Inadequate working physical space, emergency room crowding due to the prolongation of patient handover time and the delay of the emergency technicians were identified as one of the challenges of the health system in collaboration with these two systems. Another finding of the study was the shortage of manpower which directly had a negative effect on the cooperation of pre-hospital and in-hospital emergency staff in the handover of casualties. This finding is similar to that of

Kralewski which emphasized the negative role of shortage of manpower on inter-ward cooperation.[16,17] Orthner *et al*.[18] study provides additional support for the shortage of emergency technicians as a factor in incomplete collection and recording of patient information from the accident scene and on the way to the hospital having adverse impact on collaboration.

**Inefficient management** was considered as one of the main categories in the challenges of collaboration between the emergency department and the hospital in this study. This category was characterized by shaky accountability, doing activities on out-of-date basis or routine activity, poor motivation and low productivity of manpower. Vaismoradi et al believe that the delivery of safe care requires the cooperation of all health system staff which is attained through a capable and competent management. Mismanagement can lead to dangerous nursing practices.[19,20] Cooperation in delivery of health services and patient care under inept management resulting from poor accountability, unscientific health services and demotivated personnel meets undeniable challenges.

**Doing activities on out-of-date information basis or routinism** was characterized by not using new scientific achievements in the handover process of the patient and insisting on taking therapeutic measures in the same routine from the past. Evans et al considered one of the delivery challenges as doing activities in the same routine and resistance to the use of advances in sciences and new technology.[21] Routinism was one of the causes of the scientific stagnation of a number of personnel which revealed itself in resistance to changes and promotion of scientific and practical knowledge. This challenge made a difference in the viewpoints of the staff who were willing to exploit new scientific information in the delivery of patient care and those who got used to doing activities on out-of-date basis was a barrier to desired collaboration.

**Poor motivation management** or not paying adequate attention to motivational issues in two material and spiritual dimensions was the other cooperation challenge. Discouragement, disillusionment, and lack of interest in collaboration resulted from poor motivation of the personnel. Smith and Rogers believed that paying attention to motivational issues and fairly giving points to activities in team working is very important.[22] To Bresnen and Marshall, "the use of incentives in partnering and alliancing has been seen as an important way of reinforcing collaboration in the short term and helping to build trust between clients and contractors in the long term".[23] In view of Vaismoradi et al, health service managers should pay attention to the encouragement of the personnel[20] because positive and negative incentives can be effective in helping individuals and groups work together to achieve collaboration.[23] When the authorities in the two systems disregard the motivational issues of the staff, their inclination and willingness to cooperate will peter out over time and it changes into a challenge in the handover of the patients. Another collaboration challenge was the low productivity of manpower with inefficient and inexperienced personnel in attendance to shifts which had an adverse impact on the process of cooperation. In a review study by Bost *et al*.,[24] knowledge, experience, and competency of the personnel were mentioned as important contributing factors in achieving collaboration. In addition, Owen *et al*.[25] considered staff's poor knowledge as one of the reasons for the development of handover problems as well as collaboration challenges.

**Lack of common language** was another main category that overshadowed the collaboration of both pre-hospital and in-hospital emergency staff.

**Difference in understanding and empathy** was the other cooperation challenge between pre-hospital and in-hospital emergency. The findings of this study are similar to the findings of a number of other studies. In Owen et al study, for instance, the difference in the description of staff's roles and responsibilities and work environment were mentioned as a challenging cooperation factor in the handover of the patients from ambulance personnel to hospital especially

in critical situations. Boost *et al.*[25] in a review study, noted mutual understanding and sharing of skills and competencies as important cooperation factors.[24] Das and Teng[26] believed that the role of trust in the implications of the cooperation is firmly established. Trust demonstrates professional qualification and competency of a co-worker to fulfill a commitment, and reduces the dangers of inappropriate performance by other co-workers. In Iran, such factors as poor inter-group communication, distrust, and lack of awareness toward group work processes were reported to be a few collaborative challenges.[27] One of the important components of collaboration in any organization is the common language without which weakening of intra and extra-group communication and inability to share information desirably will make cooperation run up against a serious challenge.

**Difference in knowledge and experience** was another collaborative challenges based on the findings of the current study. Behara *et al.*[28] believe that as two organizations with different backgrounds and specialties are involved in the handover of patients from ambulance personnel to the hospital, cooperation can face challenges; therefore, it is necessary to hold interdisciplinary and multi-purpose training classes to promote collaboration and achieve a safe delivery of the patients. These trainings would increase mutual understanding and team work culture. Furthermore, the same triage procedure in both emergency and hospital leads to improvement of cooperation and handover quality.[29] In view of Bruce et al, the conversion of specialized vocational training to joint inter-professional training and doing teamwork will reduce the likelihood of the occurrence of injury at the time of patients' handover.[30] In addition, mutual awareness of roles and responsibilities and sharing skills and capabilities are considered among the key factors in achieving cooperation.[24]

**Conclusion**. The results of this study have deepened the understanding of the challenges of co-operation between the two systems in road traffic accidents. In this study, confusion and delay of the participants in the handover the patients were attributed to the challenge of inadequate infrastructure resources. However, adequate provision of infrastructure resources such as equipment, physical space and manpower would lead into desired cooperation. Another challenge on the way of cooperation between these two systems is unscientific and ineffective management governing hospital emergency department with such components as shaky accountability, doing activities on out-of-date or traditional basis, poor motivation, and low productivity of manpower interferes with effective cooperation between pre-hospital and hospital emergency in the handover of road accident casualties. Scientific improvement of the handover process of road accident casualties and training the personnel of these two systems, as well as raising their knowledge and skills will maximize cooperation and minimize the problems. By exploiting the results of this study in careful planning of resources, promotion of managerial practices as well as empowerment program of the staff, healthcare managers and policymakers can take a pace forward in order to enter into a hearty coordination between these two systems.

# References


1. Haghparast-Bidgoli H, Hasselberg M, Khankeh H, Khorasani-Zavareh D, Johansson E. Barriers and facilitators to provide effective pre-hospital trauma care for road traffic injury victims in Iran: a grounded theory approach. BMC Emerg. Med. 2010; 10(1):20.
2. Khorasani-Zavareh D, Khankeh HR, Mohammadi R, Laflamme L, Bikmoradi A, Haglund BJ. Post-crash management of road traffic injury victims in Iran. Stakeholders' views on current barriers and potential facilitators. BMC Emerg. Med. 2009; 9(1):8.
3. Bahadori M. Prioritization of determinants influencing preparedness of Iranian Pre-Hospital Emergency Services. J. Crit. Care Nurs. 2011; 4(2):73-8.
4. World Health Organization. Global status report on road safety 2013 [Internet]. Geneva; 2004 [cited 24 Jun 2019]. Available from: https://www.who.int/violence_injury_prevention/road_safety_status/2013/en/
5. Grogan S, Conner M, Norman P, Willits D, Porter I. Validation of a questionnaire measuring patient satisfaction with general practitioner services. Qual. Health Care. 2000; 9(4):210-5.
6. Dawson S, King L, Grantham H. Review article: Improving the hospital clinical handover between paramedics and emergency department staff in the deteriorating patient. Emerg. Med. Australas. 2013; 25(5):393-405.
7. Jenkin A, Abelson-Mitchell N, Cooper S. Patient handover: time for a change? Accid. Emerg. Nurs. 2007; 15(3):141-7.
8. Slade D, Manidis M, McGregor J, Scheeres H, Chandler E, Stein-Parbury J, et al. Communicating in hospital emergency departments: Springer; 2015.
9. Mock C, Quansah R, Krishnan R, Arreola-Risa C, Rivara F. Strengthening the prevention and care of injuries worldwide. Lancet. 2004; 363(9427):2172-9.
10. Ward K, Procter PM, Woolley N. Creating the balance in the nursing curriculum. Nurse Educ. Pract. 2004; 4(4):287-91.
11. Chiovitti RF, Piran N. Rigour and grounded theory research. J Adv. Nurs. 2003; 44(4):427-35.
12. Graneheim UH, Lundman B. Qualitative content analysis in nursing research: concepts, procedures and measures to achieve trustworthiness. Nurse Educ. Today. 2004; 24(2):105-12.
13. Trzeciak S, Rivers E. Emergency department overcrowding in the United States: an emerging threat to patient safety and public health. Emergency Med. J. 2003; 20(5):402-5.
14. Taylor TB. Position statement on the critical state of emergency care in Arizona. Arizona emergency care crisis meeting summary. Phoenix, AZ: Governor's administrative offices conference; 2000.
15. Cone DC, Middleton PM, Marashi Pour S. Analysis and impact of delays in ambulance to emergency department handovers. Emerg. Med. Australas. 2012; 24(5):525-33.
16. Hicks RW, Becker SC, Krenzischeck D, Beyea SC. Medication errors in the PACU: a secondary analysis of MEDMARX findings. J. Perianesthesia Nurs. 2004;19(1):18-28.
17. Kralewski JE, Dowd BE, Heaton A, Kaissi A. The influence of the structure and culture of medical group practices on prescription drug errors. Med. Care. 2005; 43(8):817-25.
18. Orthner H, Mishra N, Terndrup T, Acker J, Grimes G, Gemmill J, et al., editors. Information infrastructure for emergency medical services. AMIA Annual Symposium Proceedings: American Medical Informatics Association; 2005.
19. Reason J, Hollnagel E, Paries J. Revisiting the Swiss cheese model of accidents. J. Clin. Eng. 2006; 27:110-5.
20. Vaismoradi M, Bondas T, Salsali M, Jasper M, Turunen H. Facilitating safe care: a qualitative study of Iranian nurse leaders. J. Nurs. Manag. 2014; 22(1):106-16.
21. Evans SM, Murray A, Patrick I, Fitzgerald M, Smith S, Cameron P. Clinical handover in the trauma setting: a qualitative study of paramedics and trauma team members. Qual. Saf. Health Care. 2010: 19(6):e57.
22. Smith M, Rogers J. Understanding nursing students' perspectives on the grading of group work assessments. Nurse Educ. Pract. 2014; 14(2):112-6.

23. Bresnen M, Marshall N. Motivation, commitment and the use of incentives in partnerships and alliances. Constr. Manag. Econ. 2000; 18(5):587-98.
24. Bost N, Crilly J, Wallis M, Patterson E, Chaboyer W. Clinical handover of patients arriving by ambulance to the emergency department–a literature review. Int. Emerg. Nurs. 2010; 18(4):210-20.
25. Owen C, Hemmings L, Brown T. Lost in translation: maximizing handover effectiveness between paramedics and receiving staff in the emergency department. Emerg. Med. Australas. 2009; 21(2):102-7.
26. Das TK, Teng B-S. Trust, control, and risk in strategic alliances: An integrated framework. Organ. Stud. 2001; 22(2):251-83.
27. Behnia O, HosseinPour M, Zare K. The Analysis of the Team Working Facilitating Factors among nurses Working in Training Centers affiliated with the University of Jondi SHapour in Ahvaz. Sci. J. Hamadan Nurs Midwifery Fac. 2016; 24(4):247-55.
28. Behara R, Wears RL, Perry SJ, Eisenberg E, Murphy L, Vanderhoef M, et al. A conceptual framework for studying the safety of transitions in emergency care. In: Henriksen K, Battles JB, Marks ES, Lewin D. Advances in Patient Safety: From Research to Implementation (Volume 2: Concepts and Methodology). Rockville (MD): Agency for Healthcare Research and Quality (US); 2005.
29. Jensen S, Lippert A, Østergaard D. Handover of patients: a topical review of ambulance crew to emergency department handover. Acta Anaesthesiol. Scand. 2013; 57(8):964-70.
30. Bruce K, Suserud BO. The handover process and triage of ambulance-borne patients: the experiences of emergency nurses. Nurs. Crit. Care. 2005; 10(4):201-9.

Original article

# The Effect of Group Reflection on Nursing Students' Spiritual Well-being and Attitude Toward Spiritual Care: a randomized controlled trial


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## The Effect of Group Reflection on Nursing Students' Spiritual Well-being and Attitude Toward Spiritual Care: a randomized controlled trial

**Objective.** To investigate how group reflection about spiritual care affects nursing students' spiritual well-being and attitude toward spirituality and spiritual care. **Methods.** This was a randomized controlled trial conducted on 63 second-year nursing students who were studying at Nursing and Midwifery Colleges in Shiraz and Jahrom, both located in south of Iran. The students were randomly divided into an intervention ($n$=30) and a control ($n$=33) group. The study data were collected using the Spiritual Well-Being Scale and Spirituality and Spiritual Care Rating Scale before and after the intervention. The intervention consisted in four sessions of group reflection based on the scenarios related to spiritual care. The control group was given a related lecture in one session. **Results.** A significant difference was found between the two groups' means in spiritual well-being scores after the intervention



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compared to before that. Likewise, a significant difference was observed in the intervention group students' total scores of attitude before and after the intervention. **Conclusion.** Group reflection improved the nursing students' spiritual well-being and their attitude toward spirituality and spiritual care compared with control group.

**Descriptors:** students, nursing; spirituality; attitude; control groups; nursing care.

## El efecto de la reflexión grupal sobre el bienestar espiritual de los estudiantes de enfermería y su actitud hacia el cuidado espiritual: un ensayo controlado aleatorio

**Objetivo.** Investigar cómo la reflexión grupal sobre el cuidado espiritual afecta el bienestar espiritual y la actitud de los estudiantes de enfermería hacia la espiritualidad y el cuidado espiritual. **Métodos.** Este fue un ensayo controlado aleatorio realizado en 63 estudiantes de segundo año de dos escuelas de enfermería y partería en Irán. Los estudiantes se dividieron aleatoriamente en los grupos de intervención ($n$=30) y de control ($n$=33). Los datos del estudio se recopilaron utilizando *la Escala de Bienestar Espiritual* y la *Escala de Calificación de Espiritualidad y Cuidado Espiritual* antes y después de la intervención. La intervención consistió en cuatro sesiones de reflexión grupal basadas en escenarios relacionados con el cuidado espiritual. El grupo de control recibió solamente una conferencia relacionada con el tema. **Resultados.** Se encontró una diferencia significativa entre las medias de los dos grupos en cuanto a las puntuaciones de bienestar espiritual después de la intervención en comparación con la de la preintervención. Asimismo, se observó una diferencia significativa en las puntuaciones totales de actitud de los estudiantes del grupo de intervención antes y después de la intervención. **Conclusión.** La reflexión grupal mejoró el bienestar espiritual de los estudiantes de enfermería y su actitud hacia la espiritualidad y el cuidado espiritual en comparación con el grupo de control.

**Descriptores:** estudiantes de enfermería; espiritualidad; actitud; grupos control; atención de enfermería.

## O efeito da reflexão grupal sobre o bem-estar espiritual dos estudantes de enfermagem e sua atitude ao cuidado espiritual: um ensaio controlado aleatório

**Objetivo.** Investigar como a reflexão grupal sobre o cuidado espiritual afeta o bem-estar espiritual e a atitude dos estudantes de enfermagem para a espiritualidade e o cuidado espiritual. **Métodos.** Este foi um ensaio controlado aleatório realizado em 63 estudantes de segundo ano de duas escolas de enfermagem e de parteiras no Irã. Os estudantes se dividiram aleatoriamente nos grupos de intervenção ($n=30$) e de controle ($n=33$). Os dados do estudo se recopilaram utilizando *a Escala de Bem-estar Espiritual* e a *Escala de Qualificação de Espiritualidade e Cuidado Espiritual* antes e depois da intervenção. A intervenção consistiu em quatro sessões de reflexão grupal baseadas em cenários relacionados com o cuidado espiritual. O grupo de controle recebeu somente uma conferência relacionada com o assunto. **Resultados.** Se encontrou uma diferença significativa entre as médias dos dois grupos em quanto às pontuações de bem-estar espiritual depois da intervenção em comparação com a da pré-intervenção. Assim mesmo, se observou uma diferença significativa nas pontuações totais de atitude dos estudantes do grupo de intervenção antes e depois da intervenção. **Conclusão.** A reflexão grupal melhorou o bem-estar espiritual dos estudantes de enfermagem e sua atitude à espiritualidade e o cuidado espiritual em comparação com o grupo de controle.

**Descritores:** estudantes de enfermagem; espiritualidade; atitude; grupos controle; cuidados de enfermagem.



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# Introduction

Health is a general concept that includes physical, social, cultural, emotional, and spiritual dimensions. So a holistic view must be considered in providing health care.[1] Since spirituality is an essential component of health and well-being and one aspect of holistic care, professional nursing governing bodies stressed on providing spiritual care in nursing practice.[2] Spiritual care is both essential and unique and answers basic questions related to the pain, suffering, and death and supporting patients with finding meaning, purpose and hope.[3] Although spiritual care is an essential, accepted, and required dimension of nursing practice[4] and nurses have intention and motivation for providing spiritual care,[5] research findings demonstrated many of them are not able to provide it adequately[2] and this integral aspect of holistic care often ignored.[6]

Therefore, it is necessary to teach spirituality as a major component of holistic care.[7] Since students begin to learn the basic concepts and principles of holistic care during their education, they should be taught the spiritual aspects of care and the ways to internalize spiritual values during their course of education by means of proper methods. Although many researchers have claimed that increased knowledge of spirituality and spiritual well-being enhances nurses' capacity to provide spiritual care, not many studies have addressed the strategies to improve nurses' spiritual well-being and attitude toward spiritual care. A review of the literature also revealed that little has been written about teaching nurses regarding spiritual care.[8] The methods used to teach spirituality often include exploratory techniques, such as brain storming, questioning, case-studies analysis, small group discussions, critical thinking about personal spirituality, and presenting students with possible scenarios.[8] Reflection is a modern teaching approach that has been proved to be effective in increasing nurses' knowledge and skills in clinical situations, and can be used to teach the spiritual aspects of care.[9] Group reflection is a kind of teamwork where different perspectives can be used to learn about and clarify an issue. It also helps individuals improve their reflection skills under the influence of others.[10]

Spiritual care education in Iranian nursing is subtle, ambiguous, informal, and nonprogrammable. A recent study in Iran reported that due to the lack of relevant contents in the nursing curriculum, educators are trying to be role models for their students; in turn, nursing student also experience and understand spiritual care informally with continuous presence in clinical practices.[11] It can be said that nurses' knowledge of spiritual care in Iran is poor and they need specific information on how to meet patients' spiritual needs. Reflective groups have a huge potential to help nurses and nursing students learn about spiritual care and critically consider their everyday practice regardless of the practice setting, specialty, level of experience.[12] Reflective group working as a means of developing an individual's abilities, skills and knowledge mirrors

other shifts in thinking.[13] Nursing students learn that in order to gain from a practice experience, they will benefit from critically analyzing the situation and applying their newly gained perspective to future experiences.[12] Considering poor spiritual care in Iranian nursing students and teaching benefits of reflexive group, the present study aims to investigate the impact of teaching spiritual care through group refection on nursing students' spiritual well-being and their attitude towards spirituality and spiritual care.

# Methods

**Design, Setting and Participants.** This study was a randomized controlled trial conducted at Nursing and Midwifery School in Shiraz and Nursing School in Jahrom, both located in south of Iran. In spring semester of 2014, all of nursing students who were in third and fourth semester in two mentioned schools were included in the study. Out of the 75 second-year nursing students, 70 (36 students from Shiraz and 34 students from Jahrom) were willing to participate in the study. Exclusion criteria were missing more than one reflection sessions and unwillingness to continuing participation in the study. In each school participants were randomly divided into two groups by block randomization with a random sequence of 2 or 4 block sizes. During the study, 7 students (5 from the interventional group and 2 from the control group) were excluded according to exclusion criteria. Eventually, the collected data from 63 students (30 in the intervention group and 33 in the control group) were analyzed (Figure 1).

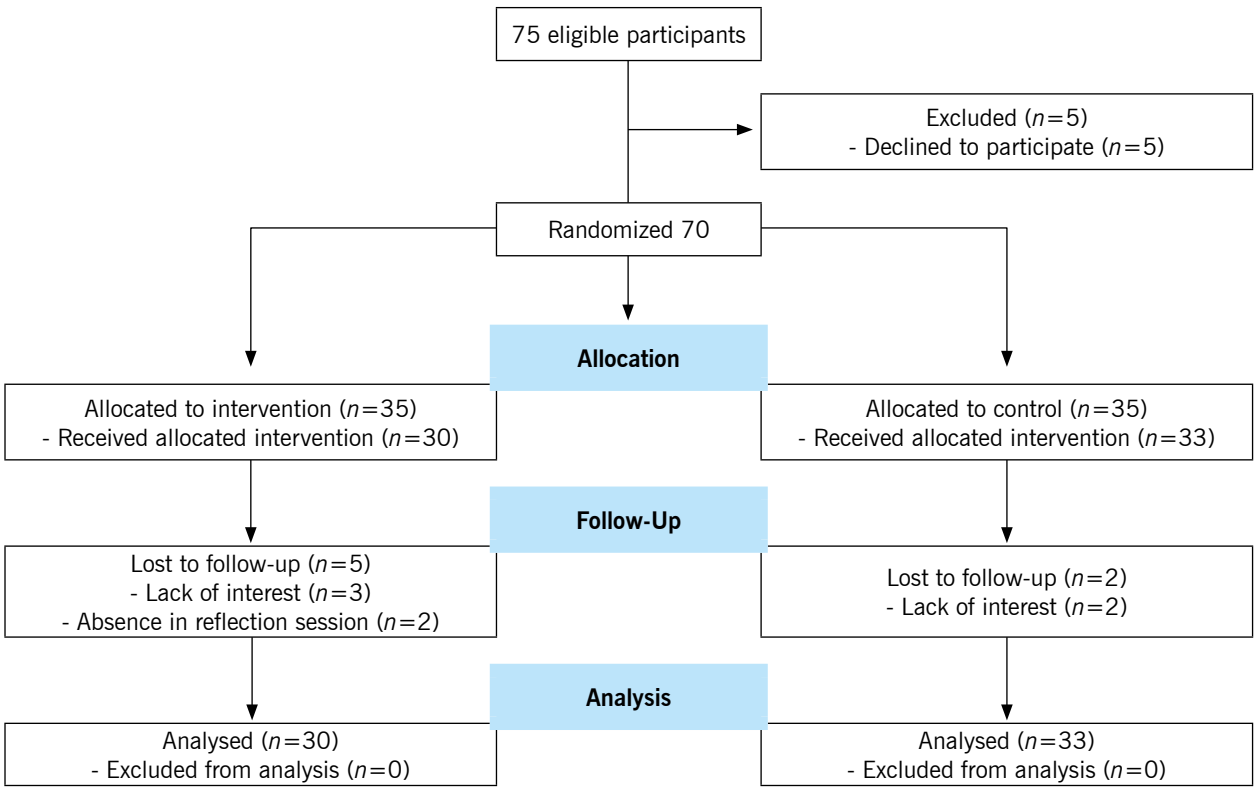


**Figure 1.** Flow Diagram of the study

**Data Collection.** The study data were collected using a demographic information form and two standard questionnaires. The first one was Spiritual Well-Being Scale (SWBS), designed by Ellison (1982), which is the most popular and widely used scale to assess the individuals' subjective perception of their quality of life in relation with spirituality, as perceived through religious and existential dimensions. It consisted of 20 items which could be responded through a 6-point Likert scale, ranging from "I totally agree" to "I totally disagree". Thus, the total score of the questionnaire ranged from 0 to 120. This scale included two subscales, namely religious well-being and existential well-being. Each part, in turn, included 10 items whose scores ranging from 0 to 60.[14] The validity and reliability of the questionnaire were verified in the previous studies. Its overall reliability is approved with Cronbach's alpha 0.82. In the present study, the Persian version of the questionnaire was used which has been reported to have appropriate content validity and internal consistency ($\alpha$=0.7) [15] The second instrument was Spirituality & Spiritual Care Rating Scale (SSCRS) which used to evaluate the participants' attitude. SSCRS was originally developed by McSherry et al. (2002) for investigating nurses' beliefs and values in relation to the nine fundamental areas including hope, meaning and purpose, forgiveness, beliefs and values, spiritual care, relationships belief in a God, or deity, morality, creativity and self expression.[16] This 17-item, Likert scale instrument was designed to "discover and explore nurses' understanding of and attitudes toward the concepts of spirituality and spiritual care". It is a valid and reliable measure of spirituality/spiritual care with the intended sample. It has been used in over 42 studies in 11 countries demonstrating consistent levels of reliability & validity with Cronbach's alpha scores ranging from 0.64 to 0.84.[17] There are 17 statements scored on a 5-point scale from 'strongly agree' to 'strongly disagree'. A high overall score indicates a broader view of spirituality (i.e. inclusive of both religious and existential elements) and spiritual care (i.e. facilitating religious rites/rituals as well as addressing patients' need for meaning, value, purpose, peace and creativity). The content validity and reliability of the Persian version of the scale which was used in this study was verified previously. , In the day of data collection, the study objectives and procedures were explained to the students. Subsequently, the students who were willing to participate in the study were asked to sign the written informed consent. Afterwards, the students were asked to complete SWBS and SSCRS. After all, the participants were randomly divided into an intervention and a control group.

**Intervention.** The students in the intervention group were divided into 3 groups in Shiraz and 2 groups in Jahrom nursing school. Each group attended 4 two-hour sessions of reflection. Two scenarios related to spiritual care were presented in each session for the groups to reflect over. The subjects of these scenarios were search for meaning and purpose, relationship with God, others, and environment, forgiveness, prayer and religious rituals, hope instillation, and family and nurse presence. These scenarios were developed based on academic resources such as nursing textbooks and the common events in clinical wards according to researchers' experiences. Then their content was revised and confirmed by five nursing professors. Group reflections were done according to the Gibbs' reflective cycle which is often used as a user-friendly framework for reflection and derives from Kolb's principle of experiential learning.[12] This cycle consists of 6 stages, namely description of the event, expression of feelings, evaluation, analysis, conclusion, and action plan. In the reflection sessions that are directed by the researcher, after reading each scenario according to stages of Gibbs' model following questions were asked: What happened? What are your feelings? What's good and bad about the event? What sense do you make of this event? What have you learnt from this scenario? What would you do differently? The students in the control group, on the other hand, attended a two-hour session during which the concepts of spirituality and spiritual care were presented through common educational method -a formal lecture- by the researcher. There is not any group discussion in this session, but the students

asked their questions. Two weeks after the last reflection and lecturing sessions, the participants in both groups completed SWBS and SSCRS. Finally, the entire students were given access to the scenarios and the contents of the lecture presented to the intervention and control groups.

**Ethical considerations.** This study was approved by the Ethics Committee of Shiraz University of Medical Sciences (No. 93-6987). The participants after receiving oral explanation about the study objectives and procedures signed consent. The students were also assured that refusal to participate in or withdrawal from the study would not affect their academic evaluation. Also anonymity and confidentiality of information were guaranteed.

**Data analysis.** The collected data were analyzed using the SPSS statistical software. Descriptive statistics were used to describe the students' demographic characteristics. Besides, paired t-test was employed to compare each group's mean scores before and after the intervention. Independent t-test was also used to compare the mean differences of the two groups' scores. In addition, Pearson's correlation test was applied to determine the relationship between the students' spiritual well-being and spiritual attitude.

# Results

## Demographic characteristics

Among the participants, 42 were female (66.7%). The mean age of the participants was 20.84±1.7 years and their age ranged from 19 to 25 years. The mean ages of the students in the intervention and control groups were 20.56±1.74 and 21.1±1.21 years, respectively, and the students' age and sex distribution and marital status was almost identical in the two groups ($p>0.05$). 78% of the students were single. In addition, the students' Grade Point Averages (GPA) in the intervention and control groups were 16.95±0.69 and 16.92±0.70, respectively, but the difference was not statistically significant.

## Spiritual well-being

At the beginning of the study, no significant difference was observed between the two groups regarding the students' total scores of spiritual well-being as well as its sub-scales; i.e., religious well-being and existential well-being (Table 1). At this stage, the students' total score of spiritual well-being was 95.69±12.29, which was a high score. However, at the post-test, a significant difference was found between the intervention and control groups concerning the total score of spiritual well-being. Besides, the results of independent t-test showed that the mean differences of the two groups' well-being mean scores in pre- and post-tests were statistically significant. The difference was also significant in the case of the existential well-being subscale. Although, this was not the case regarding the religious well-being subscale (Table 1).

**Table 1.** Comparison of the intervention and control groups regarding the mean scores of spiritual well-being and its subscales

| Comparison | Baseline Mean (SD) | End of intervention Mean (SD) | Difference Mean (SD) | Paired t-test *p*-value |
|---|---|---|---|---|
| Total spiritual well-being | | | | |
| Intervention group | 95.83 (13.36) | 102.36 (11.33) | 6.5 (10.92) | 0.0003 |
| Control group | 95.57(11.43) | 95.12 (13.86) | 0.45 (12) | 0.829 |
| *Between group p-value* | *0.935* | *0.028* | | |
| Religious well-being subscale | | | | |
| Intervention group | 51.16 (7.11) | 52.56 (6.13) | 1.4 (5.23) | 0.154 |
| Control group | 51.39 (6.50) | 50.54 (8.07) | 0.84 | 0.519 |
| *Between group p-value* | *0.894* | *0.271* | | |
| Existential well-being subscale | | | | |
| Intervention group | 44.6 (8.94) | 49.86 (7.17) | 5.2 (8.65) | 0.0003 |
| Control group | 43.63 (8.09) | 44.69 (9.07) | 1.06 (8.52) | 0.479 |
| *Between group p-value* | *0.625* | *0.014* | | |

## Attitude toward spirituality and spiritual care

The results revealed no significant difference between the two study groups with respect to the students' total scores of attitude toward spirituality and spiritual care and their mean scores of the subscales in the pre-test (Table 2). At this stage, the students' mean score of attitude was 57.31±9.74 which signified their semi-satisfactory attitude. In the intervention group, the total mean score of the scale and the mean score of attitude toward spirituality subscale differed significantly between the pre-test and the post-test. However, no significant difference was observed regarding attitude toward spiritual care subscale (Table 2). The study findings demonstrated no significant correlation between the nursing students' spiritual well-being and attitude toward spirituality and spiritual care and their age and sex. Also, Pearson's correlation test showed no statistically significant relationship between the students' spiritual well-being and their attitude.

**Table 2.** Comparison of the nursing students' attitudes toward spirituality & spiritual care and its dimensions in the two groups before and after the intervention

| Spiritual well-being | Baseline Mean (SD) | End of intervention Mean (SD) | Difference Mean (SD) | Paired t-test *p*-value |
|---|---|---|---|---|
| Total Spirituality & spiritual care | | | | |
| Intervention group | 56.83 (11.52) | 60.76 (7.04) | 4.20 (10.42) | 0.047 |
| Control group | 57.75 (4.97) | 60.51 (9.75) | 2.84 (8.45) | 0.068 |
| *Between group p-value* | *0.715* | *0.939* | | |
| Spirituality subscale | | | | |
| Intervention group | 28.30 (5.98) | 30.76 (4.36) | 2.46 (5.87) | 0.029 |
| Control group | 29.15 (4.57) | 30.90 (6.27) | 1.75 (5.85) | 0.094 |
| *Between group p-value* | *0.532* | *0.918* | | |
| Spiritual care subscale | | | | |
| Intervention group | 28.53 (6.62) | 30.00 (4.89) | 1.46 (6.47) | 0.220 |
| Control group | 28.60 (4.93) | 29.60 (4.82) | 1 (5.04) | 0.263 |
| *Between group p-value* | *0.961* | *0.749* | | |

# Discussion

The results of the present study showed that after group reflection on spiritual care, the mean score of the intervention group was higher than that before the intervention and differed significantly from that of the control group. These results confirmed contribution of group reflection to the students' spiritual well-being. According to a previous study, by providing spiritual care, nurses could enhance their own spiritual well-being, as well.[18] The students' existential well-being, as a sub-category of spiritual well-being, was most significantly affected in the current study. Existential well-being is based on one's relationship with others, environment, and oneself[19] and forms an important part of spiritual care. Establishing an effective relationship with patients is the key to spiritual care;[20] hence, this concept was considered in most of the scenarios in this study. This may account for the fact that the students' existential well-being was more affected by reflection compared to the other dimension of spiritual well-being. On the other hand, individuals' religion and religious well-being are influenced by such factors as culture and personal beliefs and family background[21] and, thus, are not easily affected by short-time interventions. Yet, the current study findings showed the nursing students' high levels of spiritual well-being. Other studies have also indicated that Iranian students' spiritual well-being is relatively high.[17] This advantage can be used to improve nursing students' spiritual care skills in Iran.

The results of the present study demonstrated that group reflection improved the students' overall attitude towards spirituality and spiritual care. Through group reflection, the students were exposed to clinical situations which they had not considered before and by reflecting on and discussing the situations in groups, the learners' feelings and attitudes were affected. Evidence has approved that group reflection sessions influenced students' perceptions and conceptions more than other educational approaches. In fact, reflective teaching methodology allows ongoing mentoring of students and enables transferring learning into clinical practice related to spiritual care.[22] According to Lindberg's study, group reflection in the field of profession and professional skills increased nurses' professional satisfaction.[23] In our study, the students developed a better attitude towards spirituality. In other words, the technique of group reflection positively affected the students' spiritual attitude. This finding is similar to that of the study by Baldacchino where teaching spirituality and spiritual care had positive effects on the learners' personal dimensions and internal spirituality.[8] Although the students' scores of attitude to spiritual care were higher after the intervention, the difference was not statistically significant. In other words, group reflection did not significantly influence the students' attitude towards spiritual care. This might be attributed to the traditional methods students encounter in clinical wards every day. In addition, students' attitude towards spiritual care can be affected by barriers to spiritual care, such as inadequacy of nurses, emphasizing the routines, and poor communication skill.[24]

In the current study, the control group students' mean scores of overall attitude to spirituality and spiritual care and its two subscales increased in the post-test after attending a lecturing session; however, the difference was not statistically significant. According to another study, lecture can be effective in teaching spirituality and spiritual care.[8] Thus, when using student-centered approaches is not possible, traditional approaches are suggested to be employed. It is interesting to note that in the present study, most of the students' mean scores of attitude toward spirituality and spiritual care were semi-satisfactory, while another study in Iran indicated the satisfactory attitude of most of the nurses toward spirituality and spiritual care.[17] This difference can be explained by the differences between nursing students' and practicing nurses' experiences. The students in this study were in the second year of education and had little clinical experience. It has been proved that more experienced nurses have

better attitudes towards spirituality and spiritual care.[25] It is also believed that nursing students' clinical experience is not enough for them to obtain a professional attitude which includes the attitude toward spirituality and spiritual care.[26] Moreover, the topic of spirituality is not treated separately in the nursing curriculum,[8] while these students need to be taught the spiritual aspects of care which are essential to their preparation for their future professional roles and provision of holistic care. It is also important to employ proper educational strategies to teach this aspect of clinical care.[26] Furthermore, teaching spirituality to large groups of learners might not be effective and, consequently, it has been suggested that spirituality be taught to small groups through workshops. Additionally, active student-centered strategies have been proved to be more useful.[27] Other studies also showed that different teaching methods and strategies have be used based on students' learning preferences.[28] Reflection not only enhances learners' cognitive skills, but also reduces the gap between theory and practice.[6] Therefore, it has been recommended as an effective method in teaching spirituality.

According to the previous studies, there is a close relationship between nurses' internal spirituality and tendency to provide spiritual care. In other words, the higher the nurses' spirituality, the more they will try to provide spiritual care.[29] However, the results of Pearson's correlation test in this study showed no significant relationship between the nursing students' spiritual well-being and their attitude towards provision of spiritual care ($p=0.74$). It should be noted that students' attitude toward spirituality and spiritual care is affected not only by their spiritual well-being, but also by such factors as culture, religious beliefs, and personal traits.[25] One of the limitations of this study was the limited number of participants, which makes the results difficult to generalize. Therefore, future studies are suggested to be performed on larger groups of students in various years of study and degrees, practicing nurses, and students of other majors. Another limitation of the study was using non-native questionnaires. Since spirituality is influenced by cultural and social factors, employing the questionnaires designed in other cultures can cause a limitation. Of course, the questionnaires used in this study were in Persian and their validity and reliability had been verified.

The study results showed that teaching spiritual care through group reflection enhanced the nursing students' spiritual well-being and improved their attitude towards spirituality and spiritual care. Accordingly, this active student-centered approach, which can easily be performed, is recommended to be used in nursing students' course of education. Teaching spiritual care through group reflection will increase students' sensitivity to patients' spiritual needs in their future professional practice. Also, by improving their spiritual well-being, students can positively influence the provision of holistic care both during their studies and after graduation.

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# References


1. Potter PA, Perry AG, Stockert P, Hall A. Fundamentals of nursing. Elsevier Health Sciences; 2013.
2. Burkhart L, Schmidt W. Measuring effectiveness of a spiritual care pedagogy in nursing education. J. Prof. Nurs.. 2012; 28(5):315-21.
3. Baldacchino DR. Teaching on spiritual care: The perceived impact on qualified nurses. Nurs. Educ. Pract. 2011; 11(1):47-53.
4. Vlasblom JP, van der Steen JT, Knol DL, Jochemsen H. Effects of a spiritual care training for nurses. Nurse Educ. Today. 2011; 31(8):790-6.
5. Timmins F, Murphy M, Neill F, Begley T, Sheaf G. An exploration of the extent of inclusion of spirituality and spiritual care concepts in core nursing textbooks. Nurse Educ. Today. 2015; 35(1):277-82.
6. McCarthy J, Cassidy I, Tuohy D. Lecturers' experiences of facilitating guided group reflection with pre-registration BSc Nursing students. Nurse education today. 2013; 33(1):36-40.
7. VanLeeuwen R, Tiesinga LJ, Post D, Jochemsen H. Spiritual care: implications for nurses' professional responsibility. J. Clin. Nurs. 2006; 15(7):875-84.
8. Baldacchino DR. Teaching on the spiritual dimension in care to undergraduate nursing students: the content and teaching methods. Nurse Educ. Today. 2008; 28(5):550-62.
9. Branch Jr WT, Paranjape A. Feedback and reflection: teaching methods for clinical settings. Acad. Med. 2002; 77(12, Part 1): 1185-8.
10. Ardakani M. The Effect of group reflection on thinking styles & critical thinking skills in nursing of Alzahra Heart Center Shiraz. Shiraz: Shiraz University of Medical Sciences; 2012 [cite 28 Jan 2019]. Available from: https://en.irct.ir/trial/2399
11. Tazakori Z, Valizadeh S, Mohamadi E, Hasankhani H. Process of spiritual care learning in Iranian nursing students: A grounded theory study. J. Urmia Nurs. Midwifery Fac. 2013; 11(1):51-63 [persian].
12. Bulman C, Schutz S. Reflective practice in nursing: John Wiley & Sons; 2013.
13. Carter B. Reflecting in groups. In: Bulman C, Schutz S, editors. Reflective Practice in Nursing. Oxford, UK: Wiley-Blackwell; 2013.
14. Ellison CW. Spiritual well-being: Conceptualization and measurement. J. Psychol. Theol0. 1983; 11:330-40.
15. Bamdad M, Fallahi Khoshknab M, Dalvandi A, Ardakani K, Reza M. Impact of spiritual care on spiritual health of hospitalized amphetamin dependents. Iran. J.Psychiatr. Nurs. 2013; 1(3):10-8.
16. McSherry W, Draper P, Kendrick D. The construct validity of a rating scale designed to assess spirituality and spiritual care. Int. J. Nurs. Stud. 2002; 39(7):723-34.
17. FallahiKhoshknab M, Mazaheri M, Maddah SS, Rahgozar M. Validation and reliability test of Persian version of the spirituality and spiritual care rating scale (SSCRS). J. Clin. Nurs. 2010; 19(19):2939-41.
18. McBrien B. Nurses' provision of spiritual care in the Emergency Setting–An Irish Perspective. Int. Emerg. Nurs. 2010; 18(3):119-26.
19. Swinton J. Spirituality and Mental Health Care: Rediscovering a 'Forgotten' Dimension. London and Philadelphia: Jessica Kingsley Publishers; 2009.
20. O'brien ME. Spirituality in nursing: Jones & Bartlett Publishers; 2013.
21. Lowry L. A qualitative descriptive study of spirituality guided by the Neuman systems model. Nurs. Sci. Q. 2012; 25(4):356-61.
22. Attard J, Baldacchino DR, Camilleri L. Nurses' and midwives' acquisition of competency in spiritual care: A focus on education. Nurse Educ. Today. 2014; 34(12):1460-6.
23. Lindberg EB. Increased job satisfaction after small group reflection on an intensive care unit. Dimens. Crit. care Nurs. 2007; 26(4):163-7.

24. Tiew LH, Creedy DK, Chan MF. Student nurses' perspectives of spirituality and spiritual care. Nurse Educ. Today. 2013; 33(6):574-9.
25. Ozbasaran F, Ergul S, Temel AB, Gurol Aslan G, Coban A. Turkish nurses' perceptions of spirituality and spiritual care. J. Clin. Nurs. 2011; 20(21-22):3102-10.
26. KhoramiMarekani A, Yaghmaie F, Izadi A. Instruction of spirituality and spiritual care in nursing: a challenge in curriculum development. Adv. Nurs. Midwifery. 2010; 20(68):41-9 [persian].
27. Cone PH, Giske T. Teaching spiritual care–a grounded theory study among undergraduate nursing educators. J. Clin. Nurs. 2013; 22(13-14):1951-60.
28. Vizeshfar F, Torabizadeh C. The effect of teaching based on dominant learning style on nursing students' academic achievement. Nurse Educ. Pract. 2018; 28:103-8.
29. Jafari E, Dehshiri GR, Eskandari H, Najafi M, Heshmati R, Hoseinifar J. Spiritual well-being and mental health in university students. Procedia Soc. Behav. Sci. 2010; 5:1477-81.

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