

The Roy Adaptation Model and Content Analysis*

El Modelo de Adaptación de Roy. Análisis de contenido

ABSTRACT

The purpose of this paper is to explain how the Roy Adaptation Model can be used to guide a combined qualitative and quantitative content analysis of responses to open-ended interviews questions. Responses can be categorized as adaptive or ineffective within the physiological, self-concept, role function, and interdependence modes of adaptation and then tallied to yield an adaptation score.

KEY WORDS

Roy Adaptation Model, open-ended questions, content analysis.

RESUMEN

El objetivo del presente estudio consiste en explicar de qué manera se puede utilizar el Modelo de Adaptación de Roy para guiar el análisis de contenido cuantitativo y cualitativo de respuestas a preguntas abiertas en una entrevista. Estas respuestas pueden ser catalogadas como adaptativas o inefectivas respecto de los modos de adaptación psicosocial, autoconcepto, función de rol e interdependencia y, entonces, asociadas a un determinado puntaje de adaptación.

PALABRAS CLAVE

Modelo de Adaptación Roy, preguntas abiertas, análisis de contenido.

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Content analysis involves classification of textual material, “reducing it to more relevant, manageable bits of data” (1). The textual material typically is in the form of interview transcripts, essays, journal articles or book chapters, diaries, speeches, and other printed documents. Nurse researchers frequently use content analysis to classify responses to open-ended interview questions.

Classification of textual material into manageable data is accomplished by carefully reading the document and inducing categories from the words, phrases, and sentences in the textual material. For example, the response to an open-ended question may be a word, a phrase or an entire sentence found in the transcript of an interview. The word, phrase, or sentence is examined for similarities and differences with other words, phrases, and sentences in the transcript and eventually placed in an evolving category. Another approach is to place the words, phrases, and sentences into preexisting categories. This approach is appropriate if the textual material is the raw data collected from participants in conceptual model-based studies. The concepts of the conceptual model can then serve as the preexisting categories.

Although many people regard content analysis as an exclusively qualitative methodology, some experts add a quantitative component to the analysis (2, 3). According to Weber (3), “The best content-analytic studies use both qualitative and quantitative operations on texts”.

The purpose of this paper is to explain how the Roy Adaptation Model can be used to guide a combined qualitative and quantitative content analysis of responses to open-ended interviews. The example is from a series of studies of women’s responses to cesarean birth (4, 5, 6, 7, 8). Women who had experienced a cesarean delivery were asked to respond to the Cesarean Birth Experience Questionnaire (CBEQ). The CBEQ is made up of five questions:

- How did you feel, physically and emotionally, when you found out you were to have your baby by the cesarean method?
- How did you feel, physically and emotionally, during the actual birth experience?
- What happened after the baby was born?
- How did you feel physically and emotionally during that time? What were your greatest needs during the entire experience?
- What could have been done, and by whom, to make this experience better for you?

As can be seen in Figure 1, the words, phrases, and/or sentences that represent the women’s responses to the five questions are classified within the four adaptive modes of the Roy Adaptation Model (physiological, self-concept, role function, interdependence). Responses that do not reflect any of the adaptive modes are placed in an “other” category. In keeping with the Roy model, the responses also are classified as adaptive or ineffective responses. Examples of responses are given in Table 1.

Once they are classified, the total number of responses in each cell in Figure 1 is entered into a computer database and quantitative analyses are performed. For example, the total

number of responses is computed by adding all cells across all questions. The total number of adaptive responses across all questions is computed by adding the “A” cells (P,A; SC,A; RF,A; I,A; and O,A), and the total number of ineffective responses across all questions is computed by adding the “I” cells (P,I; SC,I; RF,I; I,I; and O,I). The total number of adaptive or ineffective responses for a particular question is computed by adding all “A” or “I” cells for that question. Frequency statistics can be used to obtain tallies of the various categories of responses. Chi-square statistics can be used to examine differences in responses for such contextual stimuli as cultural groups, regional or general anesthesia, partner presence or absence at de-

livery, planned or unplanned cesarean birth, and cesarean birth information obtained or not obtained prior to the delivery.

In addition, a total adaptation score can be computed by dividing the total number of adaptive responses by the total number of responses (adaptive + ineffective responses) and multiplying by 100. The potential range of adaptation scores is 0 to 100, with higher scores indicating greater adaptation. In the example given for the CBEQ (Figure 1), an adaptation score can be calculated for each question or each mode of adaptation or for all questions. The total number of adaptive responses and the total number of ineffective responses can be obtained from the “sum” statistic in the

SPSS “Descriptives” program. The adaptation score that can be used in correlational and analysis of variance statistical procedures. For example, the correlation between the number of cesarean births a group of women have experienced and their adaptation scores can be calculated. Or, the difference in mean adaptation scores for women who had unplanned cesarean births and those who had planned cesarean births can be calculated.

Readers are encouraged to adapt this content analysis methodology for their studies. Questions may be addressed to Dr. Jacqueline Fawcett, PO Box 1156, Waldoboro, ME 04572; e-mail: jacqueline.fawcett@umb.edu.

Table 1. Classification of CBEQ Responses: Examples for the Adaptive Modes

Mode	Adaptive Responses	Ineffective Responses
Physiological	“Physically, I felt fine.” “I did not feel any pain.” “After the epidural, I did not feel anything.”	“I felt very tired.” “All I wanted to do was sleep.” “I had a lot of pain.”
Self-Concept	“I was so happy.” “I was thrilled that my baby was born.”	“I was really scared.” “I was very anxious.” “I was completely out of it” “I cried when I found out about the cesarean.”
Role Function	“I am so relieved that my baby is healthy.” “I really like being a mother.”	“I wasn’t able to have my baby vaginally.” “I was so disappointed that I could not breastfeed my baby right away.” “I do not know how to hold the baby so that it does not hurt my incision.”
Interdependence	“My partner was so supportive.” “The nurses were very helpful.”	“I wish my partner could have been with me.” “The staff were not supportive of my needs.”

Directions: Underline the words, phrases, or sentences that represent a response to the question. Assign consecutive numbers to each word, phrase, or sentence. Place the number of each underlined word, phrase, or sentence in the appropriate cell (P,A;

P,I; SC,A; SC,I; etc.) for each question. Calculate the sum of the responses in each cell for each question and enter that number in the computer database. (For example, calculate the sum of all responses in cell P,A for Question 1)

ID	P, A	P, I	SC, A	SC, I	RF, A	RF, I	I, A	I, I	O, A	O, I
Question 1										
Question 2										
Question 3										
Question 4										
Question 5										

Legend:

- ID = Study participant code number
- P,A = Physiological mode, adaptive response
- P, I = Physiological mode, ineffective response
- SC, A = Self-concept mode, adaptive response
- SC, I = Self-concept mode, ineffective response
- RF, A = Role function mode, adaptive response

- RF, I = Role function mode, ineffective response
- I, A = Interdependence mode, adaptive response
- I, I = Interdependence mode, ineffective response
- O, A = Other, adaptive response
- O, I = Other, ineffective response

Figure 1. Cesarean Birth Experience Questionnaire Coding Sheet.

REFERENCES

1. Lewis-Beck MS. Series editor's introduction. In R. P. Weber, Basic content analysis. 2 ed. Newbury Park, CA: Sage; 1990.
2. Krippendorff K. Content analysis: An introduction to its methodology. Newbury Park, CA: Sage; 1980.
3. Weber RP. Basic content analysis. 2 ed. Newbury Park, CA: Sage; 1990.
4. Fawcett J. Needs of cesarean birth parents. Journal of Obstetric, Gynecologic, and Neonatal Nursing 1981; 10: 372-376.
5. Fawcett J, Aber C, Weiss M, Mayers ST, King C. [Correlates of women's responses to cesarean birth.] Unpublished raw data; 2006.
6. Fawcett J, Burritt J. An exploratory study of antenatal preparation for cesarean birth. Journal of Obstetric, Gynecologic, and Neonatal Nursing 1985; 14: 224-230.
7. Fawcett J, Weiss ME. Cross-cultural adaptation to cesarean birth. Western Journal of Nursing Research 1993; 15: 282-297.
8. Reichert JA, Baron M, Fawcett J. Changes in attitudes toward cesarean birth. Journal of Obstetric, Gynecologic, and Neonatal Nursing 1993; 22: 159-167.
9. Roy C, Andrews HA. The Roy adaptation model. 2 ed. Stanford, CT: Appleton and Lange; 1999.