

Chapter 4

Integration of Qualitative and Quantitative Methods in Quality of Life Studies

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The decision to use a certain research methodology is no minor question on the contrary it implies a philosophical, theoretical, political, and operative decision.

The path towards method integration sprang from triangulation, as far as the validation process of the completed research is concerned, and converged in the use of mixed methods as a strategy to complement and expand the combination of the quantitative and qualitative methods.

In 1978 Denzin defines triangulation as the combination of methodologies for the study of the same phenomena or process. Some decades before, Creswell, Felters e Ivankova (2004) explained that in triangulation each method has the same importance and the work is organized in different sections, with a final discussion at the end, in which the researcher combine the results of the use of both methods.

As the idea of triangulation develops, it gives way to the idea of mixed-methods. Apart from Sieber (1973) different authors have proposed this new methodological strategy in which researchers can combine both methods at different stages of the project. Actually, mixed-methods are considered a kind of theory and practice analyses in the research field, from different points of view, with the aim of achieving depth and corroborating the results.

Achieving method integration in the field of research on quality of life requires that the researcher should articulate the data obtained through qualitative and quantitative means, and produce an integrated analysis of the said data.

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4.1 Perspective and Points of View in the Quality of Life Research

Doing research on quality of life implies a series of theoretical and methodological decisions that must be undertaken by the researcher on the point of developing his project. As to the methodological alternatives, it is optional whether to use the quantitative method or the qualitative method, or both.

The possibility to use both methods has been developed from the use of a process known as triangulation, as well as the use of the so-called mixed methods, both questions that will be developed in the following items. Nevertheless, before becoming immersed in this subject, it is interesting to reflect upon two concepts which play a major role in the process leading to methodological decision-making: the concepts of perspective and of points of view (Tonon 2013).

According to Lechner (2002)

... perspective allows us to take a step back and raise our eyes beyond immediacy, assuming a point of view from which to look, since there is no longer a neutral view, hence all perspectives are situated (concerned) and imply a project, i.e. an intention towards the future. For, creating a certain perspective, is the same as creating a narration that situates the present in relation to the past and the future. (Lechner 2002, p. 124).¹

Bourdieu (2008, p. 17), on the other hand, calls our attention to the fact that “there is no such thing as a research object without a point of view, even when the object in question, has been produced with the intention of revoking the point of view, an equivalent to “partiality”.

In this line of thought, the consideration of the perspective chosen by the researchers and the considerations of their points of view, both sustain and mark the limits of their type of work.

Regarding the methods, the debate has traditionally been centered in the relevance of choosing the quantitative method or the qualitative method and, in this sense, we are aware that each of these options implies a number of specifications, characteristics, advantages and disadvantages.

In this case, we shall put forth the possibility of using both methodologies, not with a view on juxtaposition, but regarding it as an interchange leading to a possible integration. Thus, the choice of this perspective elicits the initial need to characterize and mark the difference between triangulation and the use of mixed methods.

4.2 Triangulation

In 1959, Campbell and Fiske, introduced the idea of triangulation based on the use of various methods to validate a process, with the ultimate object of demonstrating that the result obtained is not a mere product of the method used.

Metaphorically speaking, triangulation emerged from navigation and military strategy, in which cases it refers to the operation through which the situation of an

¹ Translation of the author of the original, in Spanish language.

object is defined by the crisscross pattern of lines drawn from different points, these latter being multiple points of reference which allow the localization of the exact position of the object. (Smith 1975, p. 273).

In 1978, Denzin defined triangulation as the combination of methodologies for the study of the same phenomenon, identifying four kinds: triangulation of data, triangulation of researchers, triangulation of theories, and triangulation of methodologies. Likewise, according to the author, triangulation has given way to three possible results: convergence, inconsistency, and contradiction.

Some years later, Kelbe (2001) would take up this idea by expressing that, if the quantitative and qualitative... methods are combined to answer a specific research question, three things may happen. They may:

- Converge: i.e., that the results of both methods will lead to the same conclusion.
- Complement: since, though the quantitative and qualitative results may relate to different objects or phenomena, they may be used to supplement each other.
- Contradict: a situation that takes place when the quantitative and qualitative results are divergent.

In 1979, Jick acknowledged the advantages of triangulation by expressing that it allows researchers to be more confident of the results, stimulate the development of creative forms of gathering data, facilitate the synthesis and/or integration of theories, and contemplate possible contradictions.

In 1991, Morse enunciated two types of methodological triangulation: simultaneous triangulation and sequential triangulation. Simultaneous triangulation implies the use of quantitative and qualitative methods, with a limited interaction between both methods during the stage of data gathering, and complementing each other's results at the moment of their interpretation. Sequential triangulation is characterized by the use of the application of the results of one of the methods for the planning of the application of the other; since they are both necessary to the development of the research process.

Finally, in 1995, in his joint work with Field, Morse defined triangulation as the simultaneous or sequential use of two or more methods in order to examine the same phenomenon.

When triangulation is used in research, it is characterized by the fact that it gives equal importance to both methods, and is organized in separate sections: on the one hand, the gathering of data and qualitative analysis, and quantitative analysis on the other; this is followed by a final discussion of the results obtained by both. (Creswell et al. 2004, p. 11)

Considering that the concept of triangulation has acquired different meanings, Morgan (1998) has recommended the use of the concept of convergence or confirmation, in concurrence with Campbell who, in 1959, had emphasized the fact that triangulation referred to the convergence or confirmation of results in different methods.

Finally, Kelbe (2001, p. 5), identified two meanings of the word triangulation: a validation process, or a process that generates a new framework for the researched phenomenon.

4.3 Mixed Methods

The origin of the so-called mixed methods is simultaneous with the development of the idea of triangulation. In 1973, Sieber had already pointed out the reasons for the combination of quantitative and qualitative methods, without using the term triangular; only explaining how this combination might be effective to the different stages of research, i.e., the moment of making the design, when collecting data or when proceeding to analyze them.

Later on, in 1989, Greene, Caracelli and Graham identified five purposes in the studies made through mixed methods. They consider that the latter facilitate:

- triangulation (in terms of convergence),
- complementation, allowing a classification of results,
- development of the use of the results of the application of one method as a contribution to the information provided by the other,
- initiation, which reaffirms the initial question of the research by describing paradoxes and contradictions, and
- expansion, which allows probing into the research development.

Collins, Onwuegbuzin and Sutton (2006) identified four rational expositions to sustain the use of mixed methods:

- enrichment of the participants
- fidelity of the instruments
- integrated treatment, which allows to determine fidelity in the operation
- enhancement of significance, since they increase and allow interpretation and use of the results.

Mixed methods are plural and complement each other, and they allow the researcher an eclectic approach. (Johnson and Onwuegbuzin 2004). The importance of their usage lies in the initial question of the research, and the mixture of methods may take place at the stage of data collection, at the stage of analysis, or both.

Johnson and Turner (2003) constructed what is known as “the fundamental principle of mixed methods” which requires the researchers to collect a great amount of data through different strategies, thus strengthening the research study, which implies that the resulting product will be superior to the one derived from the application of individual methods, i.e., by using only the quantitative or the qualitative method.

Concerning the strong points and weaknesses of mixed methods, Johnson and Onwuegbuzin (2004) have identified some strong points:

- the use of words and images may complement figures, just as figures may give precision to words and images,
- researchers may broaden and complete research questions,
- the strong points of one of the methods may compensate the other’s shortcomings,
- access to stronger evidence in the conclusion and more thorough results,
- Eliciting of more complex knowledge, both in the fields of theory and practice, as a result of the use of mixed methods.

As regards weaknesses, the authors mention that:

- It requires team research work because it is difficult for a single researcher to use this approach,
- It is necessary that all the researchers should be acquainted with and master both methodologies,
- The use of this type of approach requires more time and is more expensive.

Morgan (1998, p. 364) pointed out two difficulties in the use of mixed methods, the first one is the fact that combining qualitative with quantitative generates a technical problem and a methodological challenge; and the second one implies taking into account the conflicts between the paradigms related to the origin of knowledge and the manner in which knowledge is produced.

These last decades have shown the advantage of using a combination of quantitative and qualitative methods and, in this sense, the opinions of the interviewed subjects across demographic variables, have facilitated the understanding of the situations in which these persons live. (Santos et al. 2007 in Tonon 2012).

Mixed methods are a form of research which implies much more than a mere collection of quantitative and qualitative data, it indicates that the data may be integrated, related, and/or mixed at some stage in the process. (Creswell et al. 2004, p. 7). The mix may occur both at the stage of data collection, at the stage of analysis, or both.

Nowadays, mixed research methods are considered an approach to knowledge, both in theory as well as in practice, from multiple points of view, perspectives, positions and outlooks (both qualitative and quantitative), with the purpose of probing more deeply into understanding and in the corroboration of the results, once they have been acknowledged as the third approach or paradigm of social research. (Johnson et al. 2007, p. 123).

4.4 Studies on Quality of Life Through Mixed Methods in the Applied Research in Quality of Life

During the period between 2006 (when the Journal appeared) and June 2013, *Applied Research in Quality of Life* has published four articles dedicated to the study of quality of life through mixed methods.

The first one, entitled *Kinship foster care from the perspective of quality of life: research on the satisfaction of the stakeholders*, Carmen Montserrat and Ferrán Casas, was published in September, 2006 and presents the results of a research with three main stakeholders: kinship caregivers, children who are placed in extended families and practitioners of the EAIAs (Childhood and Adolescence Interdisciplinary Care Teams). During the research the authors collected quantitative and qualitative data. For quantitative data collection they used a questionnaire for each stakeholder. The questionnaire included items about the personal characteristics of the respondents and items about their satisfaction according to the specific objectives.

All these items were measured through a five point Likert scale. For qualitative data collection they included: field observations throughout a year during the meetings of six existing caregivers support groups in the city of Barcelona (a total of 109 meetings were observed with the participation of 57 caregivers) and six caregivers focus group results with the participation of 40 caregivers.

The second article is entitled *Development of the measure of adaptation for pelvic symptoms (MAPS): the importance of incorporating the female patient's voice* by Patricia Wren, Nancy Janz, Linda Brubaker, Diane Borello-France, Catherine Bradley, Kathryn Burgio, Geoffrey Cundiff, Anne Weber, Jhon Wei, and it was published in September, 2006. The research aimed at extending women's health literature and expanding the registry of available measures to assess pelvic floor disorders. It was developed by following a specific sequence of steps utilizing quantitative and qualitative methods. First, a pilot study was carried out to explore the feasibility and utility of the first version of MAPS (measure of adaptation for pelvic symptoms) a questionnaire directed to 42 women with pelvic floor disorders who had already undergone surgery. Then, separate focus groups were conducted over a two week period with volunteer female clinic patients presented at Loyola University Medical Center outside Chicago. One of the conclusions of the authors was that the combination of quantitative pilot data and the descriptions of adaptations that women provided in the focus group enhanced the development and refinement of this new measure. (Wren et al. 2006, p. 249).

The third article, *A Mixed Methods approach to vulnerability and quality of life assessment of waste-picking in urban Nigeria* was written by Thaddeus Chidi Nzeadibe, Raymond Anyadike, Roseline Njoku-Tony. This paper identifies predominant social indicators relevant to the Aba scavengers, waste pickers' perceptions of quality of life expectations, and potential outcomes of meeting the quality of life expectations of waste pickers in the area. The authors approached the use of mixed methods by implementing different qualitative techniques such as focus group, oral statements, observation and interviews of key informants, and the later application of a questionnaire to 401 waste pickers. There were 2 sessions of focus groups, each composed of 6 subjects; 15 oral statements were taken; as well as 10 interviews of key informants (local authorities, residents, university professors, and ONG representatives). The article shows the need to apply quantitative and qualitative research methods in assessment of quality of life in the informal waste recycling system.

The fourth article written by Fahad Manee, Mohammed Nadar, Musaed Al-Naser, Khadijah Al-Ramezi, is *Quality of Life among Kuwaiti women living with chronic neuromuscular conditions*. The authors developed a mixed method design to describe the participants' perspectives of their functional impairments, level of activities and participation, and life satisfaction. They worked with a sample of 50 women with chronic neuromuscular conditions that live in the community, using the Barthel Index (Mahoney and Barthel 1965), the Role Check List Arabic (Yazdani et al. 2008) and the Arabic Version (Halabi 2006) of the Ferrans and Powers Quality of Life Index (Ferrans and Powers 1985). They completed the study with a phenomenological approach developing a semi-structured interview with five women

selected from the sample of 50. The use of both methods allowed a better understanding and analysis of the research problem.

4.5 Final Reflection on the Integration of Methods in Quality of Life Research

Reflecting on the possibility of integrating methods in the quality of life research field first implies remembering that the quantitative and qualitative methods play specific roles in the research process and, in this respect we coincide with Strauss and Corbin (2002) when they point out that “each form of research must receive due recognition and must be valued for its specific contribution”. (p. 36).

The path towards method integration began with triangulation in the validation of the accomplished research, and led to the use of mixed methods as a strategy to complement and expand the combination of the quantitative and qualitative methods. In this context we may state that integration, in terms of methodology, refers to the moment in the research process when the researcher articulates the collected data obtained through quantitative or qualitative means, and produces an integrated analysis of them. (Creswell et al. 2004, p. 10).

The complex social reality we live and work in should be approached and studied, not only through triangulation methods, but also by achieving their complementation and integration.

The decisions taken by every one of the researchers, according to their stock of acquired knowledge, technical training and philosophical-ideological outlook on the research subjects and the research itself, will (or will not) allow them to advance in the process towards methodological integration in the quality of life research field.

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