

Review of: "Data Interpretation in Social Research: a Guide to Standardising Research Outcomes And Outcome Evaluation"

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Thank you very much for giving me this opportunity to read and review this paper, which I found very interesting and useful. The key points and arguments raised by the author are:

- Data interpretation must be done to show what knowledge is achieved clearly
- Data interpretation must be separate from data analysis
- Data interpretation must be standardized

This topic is very interesting and important to address in social science research. That is, the interpretation of data and results. The author refers to the current resources, including research methods texts, to argue that there are no clearly and explicitly stated or recommended approaches for researchers, particularly early career researchers, on how to interpret data. Even where there are some explanations in the resources, the author argues, they are brief and general and do not give justice compared to other research section issues discussed in those resources. Another important point discussed in this article is the standardization of approaching and discussing data interpretation.

The author addresses key approaches to research and different types of research questions. In elaboration, the distinction between descriptive and explanatory research is discussed, and research questions corresponding to these types of research are explained. Also, it is rightly explained that an initial descriptive study can lead to explanatory research, given that new insights can be developed in the course of research and the need to explain the underlying causes of why certain phenomena happen in the way they do. The article also eloquently explains and discusses academic research vs. field and applied research and the contribution of each to knowledge building and policy making. Theory testing and theory generation are also included in this discussion.

While the author has rightly touched on a significant and perhaps neglected issue in social science research, that is, interpretation, there are some points in need of further elaboration and clarification. The first is the place of interpretation in the research process. Is it at the data level, as the author has mentioned in all parts of the article? Or is the right place for interpretation after the data analysis, that is, interpreting what we have reached or found, the outcome of the data analysis? As researchers, we have the unwritten principle (standard) that we interpret our data analysis outcomes (results) in the discussion section. We have learned and taught our students in our research methods and in thesis mentorship that we present our results (the outcome of the data analysis) in the results section objectively with no

interpretations (subjective involvement). This applies to both quantitative and qualitative data and analysis. It is in the discussion section that we bring in our subjectivity to interpret our results. In fact, we do two things in the discussion section: first, we interpret our results (what do they mean, what new knowledge can be developed, and why these results are significant, given our closeness with the topic and the insider view we have developed), and second, we compare our results with other researchers' results already presented in the literature review section of the paper or the thesis. The author recognizes this approach in Section 3.4, where they explain and discuss how the discussion includes the interpretations of the results. It would be helpful if Section 3.4 were presented upfront in the article. It would be helpful if the author discussed this explicitly and said whether this is what we should do or not, or if this approach is inadequate and that we need to consider a more focused interpretation in the research process and research writing. I understand that this approach is being followed by examiners and reviewers of the new research, so we can say there is already a principle/standard in the research and writing process. In studies where theoretical frameworks are used, one aspect of the interpretation of the results is whether the results corroborate, modify, or contradict the theories.

It seems that the author is using data interpretation and data analysis interchangeably. On pages 6 and 7, this is obvious since the points the author is discussing are related to a lack of data processing and data analysis, especially in qualitative research.

Again, I understand that the relationship between (raw)data, information, knowledge, and wisdom framework is common sense among social science researchers and researchers more broadly. Using this framework, raw data must be analyzed and changed into information (in both quan and qual research), and that information must be processed and changed into knowledge. We also think that once the produced knowledge (materialized as journal papers, theses, and research reports) is reviewed and evaluated by more expert members of the field and approved and published, they get the chance to become wisdom to be used by policymakers and practitioners (in case of applied research), and to contribute to theory (in case of fundamental and academic research). Isn't this framework something we (as social sciences researchers and writers) follow? The author supports this approach on page 11, where we read, "Thus, interpretation supposes data transformation (after we already transformed its shape, structure, and size through processing and analysis), bringing it to the stage of clear and precise answers to the research objectives."

I have some reservations regarding the following:

"When we collect data with structured techniques (see, for instance, the questionnaire), the data is collected while being already classified (through standard answer variants) and does not need this type of processing." (p. 11)

I believe questionnaire items (whether demographic categorical variables or Likert-based items) still need some sort of basic analysis and cannot be an exception using my data, information, knowledge, and wisdom framework.

On pages 10 and 11, the point has been raised that to the quan and qual researchers, interpretation means reading the data analysis outcomes. I agree that this may be the case in many situations. However, it is the reviewers and/or examiners to bring this to the researchers/authors attention and require them to go beyond reading the data analysis outcomes and enter into the interpretation. The author clarifies this on page 13,

“the term ‘analysis’ invokes something sober and systematic, an activity that is carried out by technical experts who approach their work with objectivity, rigor, and attention to detail. [...] By contrast, ‘interpretation’ is associated with the arts, with creativity and with the imagination. [...] The language of ‘analysis’ is associated with science whereas the language of ‘interpretation’ is associated with arts and humanities” (Willig, 2017, p. 276).”

Overall, I think the paper discusses a very important issue: interpretation in social science research. However, I believe interpretation belongs to the discussion and interpretation of results. Data interpretation might be confusing. If the author agrees with the data, information, knowledge, and wisdom framework, then interpretation belongs to the knowledge stage, where we interpret information (the processed/analyzed data) and show what can be formulated as new knowledge. I think the paper is very informative and useful if some adjustments and clarifications are made.