

Case study or single case research design? What can we conclude?

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Over the last few years, numerous research studies published in our journal, and elsewhere in the field of physical education and physical activity, used the « case study » orientation / approach, a form of qualitative research. The best example of this type of research is an inquiry where an intervention elaborated by researchers to improve healthy life skills, such as the level of physical activity or healthy eating habits or both, is implemented in a specific context, either a leisure sport context or in schools. Data, most often interviews with the participants, is collected and analysed. And the paper concludes that the intervention was effective, attaining the goal described in terms of improvement in the elaboration phase.

These researchers most often adopt a « qualitative » orientation. This orientation became popular more than 30 years ago in the field of social sciences, such as physical activity and learning – teaching in physical education. This orientation challenged the positivist / experimental approach to research by adopting, the following characteristics, presented here in a very summarized format : the research has as its goal (1) to *understand* the perspectives of people involved in the studied phenomenon; (2) and assumes that any phenomenon where humans are involved is a *contingent and emerging process*. Methodologically, to respect these two characteristics, one has to be in extended contact with the context where the phenomenon is present to better grasp the complex perspectives of the people involved. And secondly, another requirement would be to observe (and not only use interviews of the participants) the phenomenon in a real context to document and describe the contingent / emergent process.

What struck me when reading numerous case study research over the last few years is the absence of even a short contact of the researcher with the context studied as well as very few data based on observation, either participant or non participant observation, of the implementation of the intervention. I think this situation weakens the confidence readers can have in the results and conclusions of these case studies. And if, as is often declared by researchers, « These results can not be generalized », what is added to our knowledge? I am very tempted to answer « nothing ... or not much ».

This rationale and reflexion on case study methodology lead me (« back » to my research methods courses!) to the similarities one could see of this methodology to the experimental design named « single case research design ». This design can be described as follows

X

O

where X represents the intervention under investigation and O the measure after the intervention. Putting side by side these two types of methodology made me realize they are very similar.

The single case research design has many important flaws when it comes to drawing conclusions. One can not draw any conclusions on « changes » since there are no measures before the intervention to which the measures after the intervention can be compared. No comparison can be made with a similar group who would experience no intervention, or to a group who would experience a similar but not identical intervention with the same goal. A comparison with these groups could help conclude on a real effectiveness of the implemented intervention, at least a greater (or lesser) effectiveness than with a group where there was no intervention, or a similar intervention.

If a case study is quite similar to a single case research design, and that this latter design restricts the conclusions to be drawn, it is not unwarranted to question the use of case studies in our field of research of physical activity and physical education.

If a case study - single case research design restricts at the same time generalization of conclusions and description of changes related to an intervention in terms of behaviour, what are we learning from these research studies?

I would gladly read any comments / answers you may have on this subject.

Enjoy your physical activity!

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