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A Practical Validation Process for Questionnaires in the Field of Health Education and Health Promotion in Schools

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Contribution

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From an epistemological point of view, Potvin and Jones (2010), describe health promotion research as being applied by nature, producing knowledge about the conditions, practices and processes that makes changes possible and consider that research process should be health promoting itself. Creswell (2013) characterise a research by its philosophical assumptions (paradigms), strategies of inquiry and research methods. Do research in health education and promotion (HEPR) refers to only one (participatory) or more paradigms? Is there a specific set of research strategies and methods (mixed methods) for health promotion research?

In fact, unlike others research fields (such as social psychology, sociology...) HEPR is not rooted in a particular theoretical and methodological framework. The research is about understanding practices rather than testing theories. In health education and health promotion, what is essential is not the framework but rather the practices/action and the people (individual, groups and institutions ... stakeholders) who carry them out. The researcher can't be outside of the action but is essentially an actor within it. A "neutral position" is not an option.

The HEPR has two goals that must be addressed: creation of new knowledge "epistemic" and social transformation "transformative". In our view HEPR is by definition epistemic and transformative. One must ask then whether these two goals are compatible in research. This kind of tension between two different aims is not exclusive to HEPR. It also operates in

fields of research such as: political science, engineering science, social research and educational research in general... In all of these sciences research must firstly address themselves to actual practices.

HEPR is also characterised by a willing engagement with complexity, a multidisciplinary approach and a specific ethical framework in relationship to the position of the stakeholders which are not "objects" but also "subjects" of the research process.

In this communication we will discuss the impact of the epistemological status of HEPS on quantitative data collection. Questionnaires are routine tools to collect quantitative data, especially in psychology (Bjorner & Rugulies, 2010), psychometrics scales are commonly used to measure variables in specific and clearly defined areas. The validation process is based on classical methods (Falissard, 2008). In HEPS, depending on the research project, that questionnaires could be used but other kind of questionnaires are often build with the stakeholders, take into account the complexity and thus are multidimensional. These tools could explore people's views, practices, lifestyle, background information about contexts... In addition, the validation, as a part of the whole research project, has to be feasible (amount of time, resources and competencies requested) and to take place in the participatory approach. The validation of such questionnaires is a complex process. This communication will take a stock of the different approaches used for the validation of a questionnaire and will suggest a practical model taking into account the nature of HEPR.

Method

Three main fields to explore in a validation process are questionnaire's reliability, its validity and its sensitivity to change (Sauvé, 2005).
Reliability aims to verify that the questionnaire is reproducible, i.e. if results are similar when the questionnaire is applied in the same conditions (Marx and al., 2003). Sensitivity to change test the ability of the questionnaire to detect changes, over time in general. Validity seeks to evaluate if questionnaire measure what it is supposed to measure. There are different points in validity: the face validity (appearance of the questionnaire: understanding by stakeholders, social acceptability in the context for which the questionnaire have been developed, compatibility with the values of the community...), the content validity (relevance and completeness of items), the construct validity (consistency of the underlying dimensions of the questionnaire) (Cronbach, 1951; Bjorner & Pejtersen, 2010), predictive validity (capacity to predict real results), concurrent validity (compare results with those obtain with another tool). Finally, when questionnaire have to be used in several language, a translation with an adaption to context and a back translation by people who speak the two languages is needed.
Classical methods have been developed to explore each of these criteria; but they are particularly adapted for psychometric questionnaire which examine few dimensions (Falissard, 2008). The complex structure of a questionnaire makes the validation more difficult to perform.
For example, reliability of a multi-items scale can be explored by a traditional test-retest, which compare answers of two collects of data one the sample, or with internal consistency, seeing that question of the same dimension are a kind of repetition. Internal consistency is easier to use, because it ask only one collect of data instead two for test-retest. Unfortunately, in HEPR questionnaire, exploring reliability by internal consistency is rarely possible because of the its structure.
Moreover, it is not always possible to assess all the criteria. For example, compare results with those already obtained with another validate tools need that tool exists. It's is more difficult in the field of health education because it's a more recent field than psychology or quality of life in medicine area.
In addition, it is noted that there isn't a consensus between fields of psychology and medicine (Bouletreau and al., 1999). Indeed, they don't always use the same terms and methods to explore the same criterion (Falissard, 2008), making a supplementary difficulty for those who are not familiar with validation.

Expected Outcomes

Based on this analysis, we have developed a step by step practical method (Jourdan, 2015) for different contexts, different research and especially underprivileged settings. The method is accompanied by a tool for stakeholders community to make the validation process and its pertinence understandable by the communities.
This communication is to purpose a methodology to assess reliability, validity and sensibility to change in questionnaire validation process in the field of HEPR. It will be illustrated by an example, a questionnaire related to home-school collaboration developed and used in both Finland and France.

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