Quantitative and Qualitative research in nursing

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# Introduction

Quantitative research, according to Jolley and Jolley is the methodological and empirical assessment of the apparent events which is achieved through computational and statistical procedures. The primary focus for a quantitative study is the put to use the arithmetic procedures and models, as well as strategies and assumption regarding the topic under study. Measurement forms the core of all quantitative studies because it play a key role in relation to calculated demonstrations and empirical observations.

Quantitative research refers to the methodical empirical examination of apparent events through the use of statistical or computational procedures (Jolley & Jolley, 2013). The purpose of the quantitative study is to advance or utilize arithmetical models, strategies and/or assumptions regarding an event under study. At the core of the quantitative research is measurement as it offers the central relation amid empirical observation and calculated illustrations. Qualitative analysis methods, on the other hand, do not investigate what, where, where or who of the subject under review, but rather why and how. Qualitative techniques in study have a significant influence on understanding human behaviour. This paper contrasts two analysis techniques, one with quantitative methods, while the other uses qualitative methods to investigate a related topic. In addition, the article would identify the strengths and drawbacks of the two approaches to research and respond to the argument that qualitative research is not actual science.

# Comparison of two studies research approaches

This discussion use 'A Qualitative Study of Patients' Attitudes toward HIV Testing in the Dental Setting and HIV/AIDS-related stigma and discrimination among Vietnamese adolescents – A quantitative study' in the attempt to compare the qualitative and quantitative research

approaches. The qualitative research used in-depth interview techniques to examine patients and all participants in the context of the dental health center study perspectives, dogmas, and professed tolerability of oral HIV test (VanDevanter, et al., 2012). In addition, the qualitative study used NYU College of Dentistry reports to obtain its demographic data ranging from age, gender and the most prevalent area. In choosing the most suitable interviewee for the research, the clinic's knowledge was important. In comparison, a cross-sectional analysis that included the use of systematic questionnaires was used in quantitative testing (Olausson & Lundgren, 2013). Moreover, qualitative research approaches went ahead to divide the questionnaire into four elements which could be treated as the variables that could be compared in the research. As for the quantitative research, a simple population was defined to represent the adolescents in Vietnam.

In terms of samples, quantitative research sampled more units of study as compared to the qualitative approach. According to Olausson and Lundgren, there were more than 400 questionnaires that were selected out of the 797 for study. On the other hand, the qualitative researchers just needed 19 interviews to make inferences. Data from the samples selected for study were mathematically computed and analyzed using the computer.

The sample size used in quantitative research is higher than that used in qualitative research. The quantitative research, in this case, selected 400 questionnaires of the 797 questionnaires filled (Olausson & Lundgren, 2013). In contrast, the qualitative research conducted 19 interviews (VanDevanter, et al., 2012). Calculable evidence is used to devise information to obtain conclusions in quantitative research. In this instance, for example, the quantitative analysis in the questionnaire tried to determine the precise number of teenagers who had learned of HIV/AIDS Vietnam, which they found to be 87 percent. The qualitative methods of study have gathered more explanatory and opinionated results. For example, in this case, the qualitative

analysis centered on putting forward the dogmas and expectations of the interviewee and HIV screenings plans at the NYU College of Dentistry (VanDevanter, et al., 2012).

### Advantages and disadvantages of the two research approach

According to Maltby (2010), one of the major advantages of quantitative research is the fact that data is quantified and substantiated and can be identified clearest. Because statistical data can be verified and evaluated using universal arithmetic models, the conclusions that are drawn from the data are likely to be accurate as compared to other forms of study. Numerical and statistical evaluation are advantageous because not only are they inferential but also descriptive.

One of the most significant benefit of quantitative researches in that they data is presented inform of quantities and therefore identified (Maltby, 2010). Since the data is quantifiable nature, the statistical examination is facilitated by drawing conclusions about the data. The statistical tests can be both descriptive and inferential statistics. The mean, the standard deviation, and the median are descriptive statistics. Optionally, inferential figures include, among others, t-tests and multiple regression correlations. The use of predictive measures helps the researcher to come up with crucial information that may include tendencies, differences between collections and demographics from the data gathered from the sample. Despite these benefits of quantitative analysis, the experiments do not have information on acceptance or other information important for the understanding of the conclusions reached.

#### Is Qualitative Science a Real Science?

Any form of research or study is determined to be scientific using two criteria; the extent to which it is replicable or falsifiable. In terms of replication, a study is considered to be scientific if the same results can be obtained without variance after multiple and similar studies are performed. Qualitative analysis has exceeded this measure by obtaining comparable outcomes when multiple experiments on a given subject are conducted. Falsifiability is a guarantee that the evidence is defined in a manner that can be denied. A researcher must be able to prove the knowledge is not false to ensure that inaccurate conclusions are made. This is a downside in qualitative analysis, as it is impossible to falsify. It is impossible to conclude whether qualitative testing is actual science by looking at the two tests. Nonetheless, for decades, science has used qualitative approaches. Qualitative analysis proves important based on the subject under study.

### Conclusion

Before embarking on a research endeavor, it is indispensable to understand the main variance and differences that exists between the two types of the study. In additional, researchers ought to understand the cases and instances where each of them is applicable. By so doing, they can be able to anticipate what to expect at the end of their research as well as how their studies could be furthered to make them more applicable. Wrong application of either could result to erroneous and less-useful findings.

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