**Qualitative and Quantitative Research and Appraisal**

**Critiquing and Evaluating Qualitative Research**

Research studies that are published are said to be either qualitative or quantitative research. Arguably, it has been hypothesized that it is difficult to critique and also evaluate the findings of published qualitative studies. Consequently, it is essential that all published research studies are critically scrutinized to determine the robustness of the results of the study. In this manner, the criteria used for evaluating the published research must apply to the paradigm of the study. Accordingly, the available means of assessing the validity and reliability of studies are known to be quantitative. Therefore, the validity and reliability that are quantitative conceptualizations are not devised for the analysis of the qualitative studies thereby confirming the assertion that qualitative studies are challenging to evaluate and critique. Additionally, when the qualitative studies are analyzed through using the quantitative criteria, it is often believed that qualitative research studies are not academically rigorous (Cope, 2014).

Conversely, the processes of appraising quantitative and qualitative are found to differ. For example, there are known steps for evaluating the quantitative studies and such different from the actions taken to assess qualitative studies. Therefore, the first area of concern while appraising quantitative research is to determine the steps of the research process used in the study. The second aspect of significance is the determination of the strengths and weaknesses of the research study. Additionally, the third aspect entails the evaluation of the meaning and credibility of the results presented in the study (Houghton et al., 2013).

On the other hand, identification and application to formalize the appraisal criteria characterize the process of critically appraising a qualitative research study. The aspects to consider in the review include the researcher’s reflexivity and the use of the first person in research coupled with the context the investigation takes place and the selection of the participants. Also, lay knowledge active acknowledgment, interpretation of the participants’ accounts, the flexibility of the research process and the generalizability of the findings are assessed when appraising qualitative studies. Therefore, it is proper to argue that valuing qualitative research is demanding and not difficult (Cope, 2014).

**Rigor in Qualitative Research**

Some researchers are known to argue that qualitative studies are not rigorous and further state that such published works are not controlled concerning the data produced. Such reasoning is influenced by some misconceptions that people have regarding qualitative research. The first argument that is a misunderstanding is that qualitative studies are slow and expensive yet it is known that benefits can be attained from such reviews at any budget level and affordable. Similarly, these groups of researchers have an opinion that qualitative research studies are not actionable because they are not quantitative. However, it is known that such qualitative work published provides data that support the quantitative information already acquired on a particular topic and tools such as text analytics are known to give the best insight. Another flawed opinion is that bias is inevitable in qualitative research and taints the results that are reported in the study and also it is challenging to use the unstructured data presented (Houghton et al., 2013).

Consequently, it is proper to argue that qualitative research will be used to guide the supposed practice change in the IR department. The qualitative research will be used to bridge the gap between the available scientific evidence and clinical practice. Moreover, it is known that there are areas of concern in clinical practice where it is not possible to employ quantitative methods and such are inclusive of providing data concerning the anticipated impact of interventions. Therefore, the use of qualitative data will be influential in informing on the proposed practice change in the IR department. In this context, qualitative studies are usable in designing practice change (Ellis & Clark, 2015).

**Critical Appraisal of Quantitative and Qualitative Research Articles**

*Qualitative Article*: Corso, R., Vacirca, F., Patelli, C., & Leni, D. (2014). Use of “Time-Out” checklist in interventional radiology procedures as a tool to enhance patient safety. La radiologia medica, 119(11), 828-834. DOI 10.1007/s11547-014-0397-9

The first area of focus is establishing if the performed research was necessary and it is proper to state that the research team conducted significant and essential research since they were focused on determining the feasibility and also the effectiveness of using a checklist in guiding the implementation of interventions in the IR department. Accordingly, the method employed is rigorous and effective in addressing the problem identified. The research team first, analyzed the needs of the unit regarding the use of the checklist, and then a group was formed to design the standardized protocol based on the identified needs. The engagement allowed for the scrutiny of all the phases of interacting with the patient in IR unit thereby giving the best available result as the “Time-Out” checklist. The results of using the list as outlined in the study are significant. The record shows that completeness of the checklist improved from the first month of implementation and other items that were considered redundant were removed from the checklist in the process of updating it to get a final checklist. The findings indicate that a checklist must be updated after rolling out its implementation and as time goes, IR department staff become acquainted with the list, and this is an essential aspect of putting into consideration when designing the DNP change project.

*Quantitative Article*: Koetser, I. C., de Vries, E. N., van Delden, O. M., Smorenburg, S. M., Boermeester, M. A., & van Lienden, K. P. (2013). A checklist to improve patient safety in interventional radiology. Cardiovascular and interventional radiology, 36(2), 312-319. DOI 10.1007/s00270-012-0395-z

The research team conducted the study with the aim of developing a safety checklist and also assessing the effectiveness of the list following its implementation; therefore, the clarity of the purpose indicates that the research conducted was necessary. On the other hand, the strength of the method used is seen in the progression from one stage to the next throughout the phases of the research. The method used indicates the ethics that governed the research, and it is also documented that the period before the implementation of the checklist was characterized by no standardized means of preparing for the IR interventions. The next phase describes the development of the checklist, and it is reported that the list was guided by the structure of surgical safety checklists which is the first area checklists have been adopted in the healthcare industry. The first testing of the developed checklist in practice was done in three weeks, and that allowed for appropriate modifications that led to the phase of broader testing after the preparation of the prototype. Observation as an essential tool was used both before and after the implementation of the checklist to compare outcomes. The observational data were used to refine the list and bias was limited by blinding the participating IR staff. In this manner, it is proper to argue that the method was valid and enabled the attainment of suitable data. Consequently, the findings are significant and the results under the development phase report a checklist with two stages of implementation A (before implementation) and B (procedure). The effect of the checklist was seen in the decrease in the optimal process per interventions from 24% to 5% before implementation and after implementation respectively with p-value being P < 0.001and the rate of cancellation decreased from 10% to 0% after implementation. The situation is similar to that of the current department and will be used to inform the designed practice change.

References

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