World Journal of Advanced Research and Reviews
eISSN: 2581-9615 CODEN (USA): WJARAI
Cross Ref DOI: 10.30574/wjarr
Journal homepage: https://wjarr.com/

(REVIEW ARTICLE)

Check for updates

Research gaps for future research and their identification

Michael Nnaemeka Ajemba [1,*] and Ebube Chinwe Arene [2]

[1] *Department of Primary Care and Population Health, University of Nicosia Medical School, Cyprus.*
[2] *Department of Nutrition and Dietetics, University of Nigeria, Nsukka, Nigeria.*

World Journal of Advanced Research and Reviews, 2022, 16(01), 575–579

Publication history: Received on 14 September 2022; revised on 15 October 2022; accepted on 18 October 2022

Article DOI: https://doi.org/10.30574/wjarr.2022.16.1.1062

Abstract

The process of conducting research starts with posing queries and identifying new areas for study and development based on prior research. The numerous branches of research gain fresh knowledge as a result of this. A research gap develops as a result of the design of the study's constraints, the use of poor tools, or external influences that the study could or could not control. Research needs can be viewed as gaps in knowledge, which will help expand the field of study. By identifying these gaps in knowledge and the causes behind them, new research can be centered on these gaps.

Keywords: Gaps; Research; Knowledge; Identify

1. Introduction

Wang, Wang, Chen and Yang [1] defined a research gap as an area where lack of information restricts the inference of a specific question. It is an area that inadequate research information and the processes have caused a limit to the ability to reach a full proof conclusion to a research question. The occurrence or presence of research gaps prevent policy and decision makers from making the right decisions in their fields. This is because a research gap represents a problem that has not gotten a satisfactory answer in a field of research.

2. Why research gaps?

Robinson, Saldanha and McKoy [2] imply that research gaps can occur due to a variety of reasons ranging from information that is inaccurate, partial or biased evidence including procedures of research that are unsuitable.

However, when identification of these research gaps happens, it presents an opportunity for new research/ enhanced research to be done.

The identification of these research gaps also x-rays sections where evidence is not up to standard hence enabling the stakeholders in that field to identify the nature of questions that need addressing and the type of studies to be done in the future to address these.

In this paper, the searchlight is on identifying the research gaps to stimulate future research by examining research studies that have been done by different scholars as per their interest. This will be done by addressing these in sections as follows:

- Gap in Research method and design

* Corresponding author: Michael Nnaemeka Ajemba
Department of Primary Care and Population Health, University of Nicosia Medical School, Cyprus.

- Gap in Research variables
- Gap in Sampling method
- Gap in Data Collection

2.1. Gap in Research method and design

In the study done by Xinekuo and Simosi [3] that was focused on establishing the relationship between organizational culture and transformational leadership, they state that the study could have yielded better results if the method adopted was longitudinal instead of cross-sectional. The cross-sectional method that was adopted limited the extent to which the variables in consideration influenced each other. The research was conducted at a single point in time, hence this made it difficult to establish the impact of cause and effect over a period. Cross-sectional data is not suitable to be used to decide the connectedness of variables this is because casual relationships usually unfold over time hence for such relationships, longitudinal data is the best.

Determining relationship between independent and dependent variables using a cross-sectional study is difficult, according to Setia [4], this is because the measurements are only done once. This is also echoed by Wiklund and Shepherd [5] in the study on entrepreneurial orientation and small business performance. In this study, the researchers infer that data gotten from cross sectional studies is less effective compared to data obtained from longitudinal studies. This was made in the support of their type of study which they note is not possible to be done properly using the cross-sectional method.

Ranaweera and Prabhu [6] note similar observations as above in their own research which focused on the determinants of customer retention, as they observed that the study was subpar because of the use of cross-sectional data to carry out the research. They made a case for longitudinal data to be used for such research in the future whereby data is gotten from the same sample population at differing periods. This would make the data valid and realistic.

The research also lacks the capacity of transferability in terms of the findings to other industries because the study was done in only one industry with many distinct peculiarities. This is elaborated by Hennig-Thurau [7] who identified research gaps that were created due to the application of poor research designs. The researchers note that when a research design incorporates only a small or limited section of an industry, it becomes difficult to generalize the findings gotten in the research to the target population. This is because the results of the research may not apply to other sectors that were not represented in the research because those sectors may have peculiar challenges / characteristics. Ranaweera and Prabhu [8] echo this as well as they identified that using a single industry poses a research limitation since findings are not usually transferable.

In generalization, there is a creation of predictions about the possible transferability of results from a specific study area to similar areas that were not involved in the study. If the results of a study are not fit to broadly applied to diverse situations and scenarios, then that study has poor generalizability.

For this reason, it is essential that different areas/sectors are involved in the research, so that results can be generalized. The researchers also found a research gap that was related to the lack of transferability of the findings of a research in Germany to the United States due the study being done in German. This brings up the necessity of conducting similar research in other jurisdictions so that it is easier to harmonize the findings and present conclusions that are definite from the research.

2.2. Gap in research variables

The use of one independent variable (main-effects-only analysis) in research, may lead to the development of a partial depiction of the dependent variable.

According to Wiklund and Shepherd [5], combining different independent variables against a dependent variable (the configurational approach) is more effective than using one independent variable.

One of the major effects of using a single independent variable on a variable that is dependent is that other independent variables are ignored due to the use of marginal data.

With the configurational approach, no one factor will determine the outcome and hence ensures that combination of several factors will intersect and intermingle to cause an event. This view is supported by Meyer and Hennings [10] as they state that the use of the configurational approach helps in the advancement of the understanding of events.

Research done in the future would benefit from using the configurational approach to close research gaps seen in their research.

Myers [11] mirrors similar thought as above, as the research gap that was identified in the study is attributed to the use of limited predictor variables to measure the research outcome. With the limitation of these independent variables, the extent to which a measurement is achieved is limited. The variables that were not considered in the research may explain the differences in the research measures. Hence, the conclusion of a research would be difficult due to useful information/data being not available as they are hidden in issues that have been unresolved.

It is important to realise that a close evaluation of variables should be conducted to develop effective outcomes, even if future study that is done includes all the important and relevant independent variables. This is the view of Henig-Thurau [7] who indicate that future research is needed to evaluate the determinants of customer orientation of service employees, the background of factors that influence customer retention.

2.3. Gap in sampling method

According to Mugo [12], research sampling is the act, process, or technique of selecting a suitable sample, or a representative part of a population for the purpose of determining parameters or characteristics of the whole population. It is a very crucial in the research process and when done properly helps researchers select the right samples for the collection of data.

During the research sampling stage, the researchers need to pay attention to the specification of the target population, the difficulties that they are likely to encounter when choosing the sample, the possibility of using a wrong sampling method and having a response rate that is poor. If any of the above arises, it could lead to sampling bias and error. A sampling error and bias can be said to have occurred when there is failure to select a sample that is representative of the entire population. Such research with distorted sample will have a different result from a research that was done properly with the proper sample population.

Wiklund and Shepherd [5] highlighted survivor bias as a limitation to their research. This occurs when the data set reflects only ‘surviving’ or ‘existing’ observations and disregards observations that are past. Hence, historical performance or general attributes of a research area may be overestimated. This is acknowledged by the researchers as they acknowledged that their sample frame was not adequate since some of the firms that they used in their sample went out of business during or before the study. The implication is that information on factors that led to the failure of the firms could have been missed. The findings of the research therefore can only be linked to existing firms and will be of no value in providing a guide to avoid failure. Future research in that area would need the researchers to include failed or discontinued firms, that way reasons why their business failed could be obtained. The sample frame in future research therefore needs to be a representative sample.

Myers [11] reveals the research gap created using a wrong sampling method in research. Convenient sampling that was used in the research limited the generalization of the findings of the research because it only considered participants who volunteered to take part and all of them belonged to a similar group. The advantage of this type of sampling is that aids a very fast sample selection process, but the disadvantage is that the sample gotten will not represent the entire population.

Henig-Thurau [7] do also note a research gap created by sampling inaccuracies. Their sample used in their study was not representative of the entire population that they were researching on. The sample used did not fully represent the study population since it was selected using a quota sample, which made it difficult to make statistical inferences on the entire population. By including only one group of participants in this case the customer, the knowledge base and research findings were hampered, compared to better results that would have been obtained if the other groups of participants such as employees of the service, customer reps and employers were included.

Hence future research done this area would be better if it took note of the aforementioned research gaps and corrected them by doing what was missed. This can be done by using the stratified random sampling method.

Singh and Masuku [13] note that stratified sampling technique leads to representation of all the identified characteristics within a population. This will make sure that result gotten from the sample will be reliable.

2.4. Gap in data collection

Data collection is the process of gathering data for use in business decision-making, strategic planning, research, and other purposes. It is the process that the researcher gains the information that will be used subsequently in analysis and conclusion of a research. Failure to collect data in a proper manner encompasses poor response/non-response to the research questions, validation of results, findings that are inaccurate, recommendations that are false, resources that are lost during the research and even harm to the participants of the research.

In the research by Hening-Thurau [7], the data collection method used created a significant gap to the research. This was because it excluded customers without internet access.

Why this happened was that the use of online questionnaire as a data collection tool excluded those who had no access to the internet and hence the sample was not representative of the population. The people that were excluded thus could have provided useful information that would matter in the research. Hence the results gotten from this study cannot be generalized to the population. To neutralize this research gap, research in the future in this area should include other tools of data collection such as face to face interviews, etc.

Peersman [14] indicate that the use of appropriate data collection methods is important for all types of research, as it allows the effective evaluation of research problems

3. Conclusion

Research emanates from asking questions and discovering new things to investigate or develop based on research that had been done in the past. This brings in new knowledge into the various fields of research. A research gap occurs due to limitations in the design of a research, improper tools or factors that the research could or could not control affecting the research. Identification of research gaps and the causes for these gaps can help make the identified research gaps points for new research as they can be seen as research needs which will in turn add to the area of research.

Compliance with ethical standards

Acknowledgments

The authors sincerely thank Chief Donatus Ajemba for his support in the course of this work.

Disclosure of conflict of interest

The authors declare no competing interest.

References

[1] Wang Q, Wang X, Chen Y, & Yang K. Research gaps of guidelines might be an important approach to prioritization. Journal of Clinical Epidemiology. 2016; 69: 251-252.

[2] Robinson KA, Saldanha IJ, & Mckoy, NA. Development of a framework to identify research gaps from systematic reviews. Journal of Clinical Epidemiology. 2011; 64(12):1325-1330.

[3] Xenikou A, Simosi M. Organizational culture and transformational leadership as predictors of business unit performance. Journal of Managerial Psychology. 2006; 21(6): 566-579.

[4] Setia MS. Methodology series module 3: Cross-sectional studies. Indian Journal of Dermatology. 2016; 61(3): 261–264.

[5] Wiklund J, & Shepherd D. Entrepreneurial orientation and small business performance: a configurational approach. Journal of Business venturing. 2005; 20(1): 71-91.

[6] Ranaweera C, & Prabhu J. On the relative importance of customer satisfaction and trust as determinants of customer retention and positive word of mouth. Journal of Targeting, Measurement and Analysis for marketing, 2003; 12(1): 82-90.

[7] Hennig-Thurau T. Customer orientation of service employees: Its impact on customer satisfaction, commitment, and retention. International Journal of Service Industry Management. 2004; 15(5): 460-478.

[8] Meyer AD, & Hinings CR. Configurational approaches to organizational analysis, The Academy of Management Journal. 1993; 36(6): 1175-1195.

[9] Myers CA. Managing brand equity: a look at the impact of attributes. Journal of Product & Brand management. 2003; 12(1): 39-51.

[10] MugoFridah. Sampling in research [Internet]. University of Nairobi Library; 2002 [cited 14 May 2022] Available from http://erepository.uonbi.ac.ke/handle/11295/54895

[11] Singh AS, & Masuku MB. Fundamentals of applied research and sampling techniques. International Journal of Medical and Applied Sciences. 2013; 4(2): 124-138.

[12] Peersman, G. (2014). Overview: Data collection and analysis methods in impact evaluation. Methodological Briefs-Impact Evaluation, 10, 1-21. Retrieved from https://www.unicef-irc.org/publications/pdf/brief_10_data_collection_analysis_eng.pdf