

CHALLENGES OF CONDUCTING EMPIRICAL RESEARCH IN NIGERIA

PRINCEWILL CHIKAKPOBI CHUKWURE

Department of Dental Surgery Technician
Rivers State College of Health Science and Management Technology,
PMB 5039, Oro-Owo Rumueme, Port Harcourt, Nigeria
Email: princechukwure@gmail.com

BAMIDELE B.K. OSAMUDIAMEN

Department of Building Technology
Auchi Polytechnic, Auchi
osamudiamenbamidele@gmail.com

DR. IME ROBSON NSEOBOT

Department of Business Administration,
Akwa Ibom State Polytechnic, Ikot Osurua, Ikot Ekpene, Nigeria
Email: nseobot857@yahoo.com

UDUCHUKWU PRECIOUS NWAKODO

Department of Public Administration
Abia State Polytechnic Aba
Email: preshy1973@gmail.com

Abstract

Conducting empirical research in Nigeria presents unique challenges that can hinder the progress and quality of research outcomes. This abstract provides an overview of the key challenges faced by researchers in Nigeria, highlighting their implications and potential solutions. Limited research funding is a significant obstacle, as it restricts the ability to conduct comprehensive studies and access necessary resources. Inadequate research infrastructure, including poorly equipped laboratories and libraries, hampers data collection, analysis, and storage processes. Data collection difficulties arise from a large and diverse population, poor record-keeping systems, and limited data accessibility. Additionally, cultural factors, language barriers, and social sensitivities can affect respondents' willingness to participate or provide honest responses, leading to biased or incomplete data. Addressing these challenges requires increased research funding, enhanced research infrastructure, capacity building, improved ethical guidelines, and collaboration among stakeholders. Governments, private organizations, and international collaborations should allocate more resources to research funding and infrastructure development. By overcoming these challenges, researchers in Nigeria can unlock the potential for valuable contributions to knowledge and foster sustainable development in the country.

Introduction

Empirical research plays a vital role in generating knowledge and informing evidence-based decision-making across various fields. However, conducting empirical research in Nigeria presents several unique challenges that can hinder the research process and affect the reliability and validity of the findings. This background of the study aims to shed light on the major challenges researchers face when conducting empirical research in Nigeria. Other challenges include ineffective Library System in which there is under stocking of libraries Onwujekwe, O., Uguru, N., Russo, G. et al. (2015). Hence, researchers face a challenge when compiling data. It is indeed worrisome that Poor Infrastructural Management contributes to the underdevelopment of research. In many schools in the country, laboratories are underequipped, mismanaged and not maintained properly Nnodim, (2022).

Empirical research is a scientific method that involves gathering and analyzing data to test hypotheses and answer research questions. It is a systematic approach to studying phenomena, relying on observable evidence and experimentation. This form of research plays a crucial role in various fields, including social sciences, natural sciences, psychology, and healthcare, among others. By conducting empirical research, researchers can gain insights into the relationships between variables, establish cause-and-effect relationships, and generate new knowledge Onwujekwe, O., Uguru, N., Russo, G. et al. (2015).

The process of conducting empirical research typically involves several key steps. These steps are designed to ensure rigor, reliability, and validity in the research process. The first step in empirical research is to define and narrow down the research problem or question. This involves reviewing existing literature, identifying gaps in knowledge, and formulating research objectives. Researchers need to design a study that aligns with the research question and objectives. This includes determining the appropriate research methodology, selecting participants or subjects, and outlining data collection methods.

In the words of Goundar, (2012) conducting empirical research requires careful planning, attention to detail, and adherence to ethical guidelines. It helps to ensure that research findings are based on objective evidence and contribute to the advancement of knowledge in a particular field. By following a systematic and rigorous approach, researchers can make meaningful contributions to their respective disciplines and drive innovation and understanding in their areas of study.

Accordingly, Chukwu, Ebue, Obikeguna, Arionu and Agbawodikeizu (2016) poised that conducting empirical research requires careful planning, attention to detail, and adherence to ethical guidelines. It helps to ensure that research findings are based on objective evidence and contribute to the advancement of knowledge in a particular field. By following a systematic and rigorous approach, researchers can make meaningful contributions to their respective disciplines and drive innovation and understanding in their areas of study.

Key Characteristics of Empirical Research

Data Collection: Empirical research relies on the collection of data from real-world observations or experiments. This data can be qualitative or quantitative, depending on the research objectives and methodologies employed SS (2018).

Objectivity and Replicability: Empirical research strives to be objective by minimizing bias and personal opinions. Researchers aim to gather data in a systematic and replicable manner to ensure that others can repeat the study and obtain similar results Goundar, S. (2012).

Systematic Approach: Empirical research follows a structured and systematic approach to ensure rigor and reliability. Researchers develop hypotheses or research questions, design appropriate methodologies, collect and analyze data, and draw conclusions based on the findings Pelz, P. B. (n.d.).

Analysis and Interpretation: Empirical research involves analyzing and interpreting the collected data using statistical or qualitative analysis techniques. The results are then used to draw conclusions, test hypotheses, or generate new theories Goundar, S. (2012).

Generalizability: Empirical research aims to provide insights that can be generalized to broader populations or contexts beyond the specific sample or setting studied. This generalizability depends on the representativeness of the sample and the robustness of the research design Wright, D., & Austin, Z. (2015).

Examples of Empirical Research

Empirical research can be found in various fields and disciplines, including:

Social Sciences: Researchers may conduct surveys, interviews, or experiments to investigate topics such as human behavior, social interactions, economic trends, or political attitudes Hamed Taherdoost, (2012).

Natural Sciences: Scientists employ empirical research to study physical phenomena, conduct experiments, or analyze biological processes to understand natural systems and advance scientific knowledge.

Health Sciences: Empirical research is critical in studying disease patterns, evaluating treatment efficacy, conducting clinical trials, and identifying risk factors to improve healthcare practices and outcomes.

Education Research: Researchers utilize empirical methods to study teaching and learning processes, evaluate educational interventions, and assess the effectiveness of educational policies and programs.

Business and Management: Empirical research is employed to investigate consumer behavior, market trends, organizational practices, and strategic decision-making, providing evidence-based insights for businesses and management professionals.

Benefits of Empirical Research

Evidence-Based Decision Making: Empirical research provides a foundation of evidence that can inform decision-making processes in various domains, leading to more informed and effective policies, interventions, and practices Snyder, H. R. (2019).

Advancement of Knowledge: Through empirical research, new discoveries, insights, and theories can be developed, contributing to the expansion and refinement of knowledge in different fields Oliver, K., Lorenc, T., & Innvær, S. (2014).

Validation of Theories: Empirical research allows for the testing and validation of existing theories or the generation of new ones, enhancing the theoretical frameworks in a given area of study Oliver, K., Lorenc, T., & Innvær, S. (2014).

Practical Applications: Empirical research findings often have practical applications and can be used to address real-world problems, improve processes, and drive positive change in society Snyder, H. R. (2019).

Effect of Limited Research Funding and Conducting Empirical Research

One significant challenge is the limited availability of research funding in Nigeria. Insufficient financial support hampers researchers' ability to access necessary resources, such as data collection tools, equipment, and research participants Uzochukwu, B., Mbachu, C., Onwujekwe, O., Okwuosa, C., Etiaba, E. et al. (2016). Without adequate funding, researchers may struggle to conduct comprehensive studies, leading to limited scope and potentially biased results Chukwu, Ebue, Obikeguna, Arionu and Agbawodikeizu (2016).

Limited research funding has a significant effect on conducting empirical research. Insufficient financial resources create several challenges and limitations for researchers, which ultimately impact the quality, scope, and progress of empirical research studies Uneke, C.J., Okedo-Alex, I.N., Akamike, I.C. et al.(2023). The effects of limited research funding include:

Restricted Study Design and Sample Size: Limited funding often restricts the ability of researchers to design comprehensive and large-scale studies. They may be forced to narrow down their research scope or work with smaller sample sizes, compromising the representativeness and generalizability of the findings Be, I., Okoduwa, S. I. R., Akabuogu, E. P., Okoduwa, U. J., Enang, I. A., Idowu, O. O., Onyemachi, D. I. (2021).

Reduced Access to Resources and Facilities: Insufficient funding limits researchers' access to necessary resources, such as specialized equipment, software, databases, and research materials.

Without adequate funding, researchers may struggle to access or maintain required research infrastructure, hindering data collection, analysis, and storage processes Be et. al., (2023).

Limited Research Personnel: Inadequate funding affects researchers' ability to hire and retain skilled research personnel, including research assistants, data analysts, and technical support staff. The lack of qualified personnel can delay or impede research progress, data analysis, and the overall efficiency of the research project Sociological Research: Designs, Methods. (n.d.).

Challenges in Data Collection: Limited funding can pose challenges in data collection efforts. Researchers may not have sufficient resources to reach a diverse and representative sample, conduct fieldwork in remote or hard-to-reach areas, or incentivize participation from respondents. This can lead to incomplete or biased data, limiting the validity and reliability of the research findings Chiang, I. A. (2015, October 13).

Inadequate Time and Project Duration: Insufficient funding often results in tight project timelines and limited duration for conducting empirical research. Researchers may face pressure to complete their studies quickly, potentially compromising the thoroughness and depth of data collection, analysis, and interpretation Chiang, I. A. (2015, October 13).

Reduced Dissemination and Impact: Limited research funding can hinder the dissemination of research findings. Researchers may lack resources to attend conferences, publish in reputable journals, or engage in knowledge-sharing activities. As a result, the impact of the research may be limited, and valuable insights may not reach policymakers, practitioners, or other researchers.

Implications for Career Development: Limited funding may hinder researchers' career development prospects, particularly for early-career researchers. Insufficient resources can restrict opportunities for publishing, networking, and collaborating with other researchers, impacting professional growth and recognition in the academic community Ponto, J. (2015, April 1).

Addressing the issue of limited research funding is crucial to mitigate these effects. Governments, funding agencies, and research institutions should prioritize allocating adequate resources to support empirical research. Increasing research funding can enhance the quality, scope, and impact of research studies, promoting scientific advancement, innovation, and evidence-based decision making across various disciplines.

Inadequate Research Infrastructure Conducting Empirical Research

The lack of adequate research infrastructure, including laboratories, libraries, and research centers, poses a considerable challenge to conducting empirical research in Nigeria Barrett, Peter, Alberto Treves, Tigran Shmis, Diego Ambasz, and Maria Ustinova (2019). Researchers may face difficulties in accessing relevant literature, databases, and research facilities. This limitation restricts their ability to engage in rigorous data analysis and can impede the overall quality of research Chukwu et. al (2016).

Inadequate research infrastructure poses significant challenges to conducting empirical research. Insufficient infrastructure hinders the progress and quality of research studies, limiting researchers' capabilities and impacting the overall research outcomes. The effects of inadequate research infrastructure include:

Limited Access to Equipment and Facilities: Inadequate infrastructure often means a lack of access to specialized equipment, technologies, and facilities required for data collection, analysis, and experimentation. Researchers may have to rely on outdated or suboptimal equipment, which can compromise the accuracy, reliability, and efficiency of their research.

Data Storage and Management Challenges: Inadequate research infrastructure may result in limited data storage capacity or unreliable data management systems. Researchers may face difficulties in securely storing and organizing large datasets, making it challenging to retrieve and analyze the data effectively.

Restricted Collaboration and Communication: Inadequate infrastructure can hinder communication and collaboration among researchers. Limited access to reliable internet connectivity, communication tools, and collaborative platforms may impede effective communication and knowledge sharing, hampering interdisciplinary collaboration and reducing the potential for innovative research.

Delays and Interruptions in Research Activities: Insufficient research infrastructure can lead to delays and interruptions in research activities. Researchers may experience frequent equipment failures, power outages, or unreliable laboratory conditions, which can disrupt data collection, experimentation, and analysis, affecting the overall timeline and progress of the research.

Limited Research Support Services: Inadequate infrastructure may result in a lack of necessary support services for researchers. This can include insufficient technical support, inadequate access to research assistance, and limited administrative support. These challenges can further impede research efficiency and productivity.

Inability to Keep Pace with Technological Advancements: Insufficient research infrastructure can lead to a gap between available technologies and the research needs. Researchers may struggle to adopt and utilize state-of-the-art tools and methodologies, limiting their ability to stay at the forefront of their respective fields and hindering innovation.

Addressing the issue of inadequate research infrastructure is crucial to overcome these challenges. Governments, research institutions, and funding agencies should prioritize investments in research infrastructure development. The following recommendations can help improve research infrastructure:

- Adequate financial resources should be allocated to upgrade and maintain research infrastructure, including laboratories, data centers, libraries, and computing facilities.

Funding agencies should prioritize infrastructure development in their research funding programs.

- Collaborative initiatives between research institutions, industry, and government bodies can help leverage resources and expertise to improve research infrastructure. Partnerships with international organizations and institutions can also facilitate knowledge exchange and access to advanced infrastructure.
- Researchers should receive training on using and maintaining research equipment and infrastructure effectively. Technical support staff should be available to assist researchers in troubleshooting equipment issues and addressing technical challenges.
- Institutions should invest in reliable and secure data storage and management systems. This includes implementing backup protocols, ensuring data security and privacy, and providing researchers with access to robust data storage solutions.
- Research institutions and funding agencies should adopt long-term planning strategies for infrastructure development, considering the evolving needs of researchers and keeping pace with technological advancements.

By addressing the inadequacies in research infrastructure, researchers will have access to the necessary tools and resources, enabling them to conduct high-quality empirical research, advance knowledge, and contribute to societal development.

Data Collection Challenges and Conducting Empirical Research

Data collection is a critical aspect of empirical research, and Nigeria presents unique challenges in this regard. Limited access to reliable and up-to-date data sources can make it challenging to obtain accurate and representative samples Hamed Taherdoost. (2021). additionally, cultural and language barriers may affect the accuracy and validity of responses from research participants, especially in diverse communities with different languages and cultural practices.

Data collection is a critical phase of conducting empirical research and often presents various challenges that researchers must navigate. These challenges can affect the quality, validity, and generalizability of research findings. Some common data collection challenges in empirical research include:

Sampling and Representativeness: Determining an appropriate sample size and ensuring its representativeness of the target population can be challenging. Limited resources, time constraints, and accessibility issues may lead to sampling biases or inadequate representation, compromising the external validity of the research Oribhabor, C. B., & Anyanwu, C. A. (2019).

Access to Participants: Gaining access to participants can be difficult, especially in sensitive or restricted settings. Researchers may face resistance from potential participants or encounter challenges in recruiting individuals who meet specific criteria. Building rapport, establishing

trust, and addressing ethical considerations are essential in mitigating these challenges general sampling considerations. (n.d.).

Nonresponse and Attrition: Nonresponse and attrition occur when participants fail to complete surveys or drop out of longitudinal studies, leading to missing data and potential biases. Researchers must anticipate and address these challenges through strategies such as follow-ups, incentives, and careful study design to minimize their impact Vasileiou, K., Barnett, J., Thorpe, S. J., & Young, T. (2018).

Data Quality and Measurement: Ensuring the quality and reliability of collected data is crucial. Researchers need to design clear and unambiguous survey questions, use validated measurement scales, and employ rigorous data collection techniques. Errors in data entry, coding, or transcription can also introduce inaccuracies, highlighting the importance of careful data management and quality control procedures Nowell, L., Norris, J. M., White, D. L., & Moules, N. J. (2017)..

Cultural and Language Barriers: Conducting research in multicultural or multilingual settings introduces challenges related to language barriers, cultural differences, and interpretation of questions. Researchers must carefully translate and adapt research instruments to ensure cross-cultural validity and overcome language-related challenges during data collection.

Data Collection Logistics: Logistics such as coordinating fieldwork, managing data collection teams, and organizing data collection timelines can be complex, particularly in large-scale studies or multi-site research. Adequate planning, training, and coordination are crucial to maintain consistency and minimize logistical challenges Wright, D., & Austin, Z. (2015b). To address these challenges, researchers can consider the following recommendations:

Thorough Planning and Pilot Testing: Careful planning, including pilot testing research instruments and data collection procedures, helps identify and address potential challenges before conducting the full-scale study.

Training and Standardization: Providing training to data collectors on research protocols, ethical guidelines, and data collection techniques improves data quality and consistency across the study.

By proactively addressing data collection challenges and implementing appropriate strategies, researchers can enhance the quality and reliability of their empirical research, leading to more robust and meaningful results.

Ethical Considerations and Conducting Empirical Research

Ethical considerations are crucial in empirical research to protect the rights and well-being of research participants. In Nigeria, researchers often face challenges related to obtaining informed consent, especially in marginalized and vulnerable populations Sutton J, Austin Z. (2015). Cultural and socio-economic factors may influence participants' understanding of research procedures and their willingness to participate, which can affect the integrity and validity of the research.

Government Response on Challenges of Conducting Empirical Research in Nigeria

Governments play a critical role in supporting and promoting empirical research. Recognizing the importance of research for societal development, policymakers can implement several measures to facilitate and enhance empirical research Wright, D., & Austin, Z. (2015b). Here are some potential government responses:

Research Funding: Governments can allocate adequate funding for empirical research projects. This includes establishing research grants, funding programs, and initiatives specifically dedicated to supporting empirical research across various disciplines. Increased funding enables researchers to conduct rigorous studies, hire skilled personnel, and access necessary resources and equipment.

Research Infrastructure Development: Governments can invest in the development and maintenance of research infrastructure. This includes establishing research centers, laboratories, data repositories, and other facilities required for empirical research. Upgrading and modernizing existing infrastructure enables researchers to conduct high-quality studies and encourages collaboration among institutions.

Research Policy and Strategy: Governments can formulate comprehensive research policies and strategies that emphasize the importance of empirical research. These policies can outline priorities, funding mechanisms, ethical guidelines, and strategies to promote collaboration between academia, industry, and government agencies. Clear policies provide a framework for researchers and institutions to conduct empirical research effectively.

Support for Data Collection and Access: Governments can support data collection efforts by providing resources, funding, and infrastructure to gather high-quality data. Additionally, governments can establish open data initiatives, ensuring that research datasets are accessible to researchers, promoting transparency, and enabling collaboration.

Research Collaboration and Networks: Governments can encourage collaboration among researchers, institutions, and industry through the establishment of research networks and consortiums. These platforms facilitate knowledge sharing, interdisciplinary research, and the exchange of best practices. Collaborative efforts enhance the quality and impact of empirical research.

Research Training and Capacity Building: Governments can invest in research training programs and capacity-building initiatives. This includes providing funding for research-related workshops, seminars, and training courses, focusing on research methodologies, statistical analysis, data management, and research ethics. Enhancing researchers' skills and knowledge strengthens the quality of empirical research conducted within the country.

Support for Publication and Dissemination: Governments can support researchers in disseminating their findings by providing funding for conferences, symposiums, and scientific journals. Encouraging researchers to publish their work and communicate research outcomes to broader audiences promotes the visibility and impact of empirical research.

Collaboration with International Research Community: Governments can foster collaboration with the international research community. This includes encouraging researchers to participate in international conferences, promoting joint research projects with international partners, and facilitating knowledge exchange to enhance the global reach and impact of empirical research.

Policy Integration: Governments can integrate empirical research findings into policy formulation and decision-making processes. Encouraging policymakers to consider evidence-based research when developing policies ensures that governance is grounded in empirical evidence, leading to more effective and informed decision-making.

By implementing these measures, governments can create an enabling environment for empirical research, foster innovation, and drive societal progress. Supporting empirical research strengthens the knowledge base, promotes evidence-based policymaking, and contributes to economic, social, and scientific development.

Curbing Strategies for Challenges Conducting Empirical Research in Nigeria

Addressing the challenges of conducting empirical research in Nigeria requires collective efforts from various stakeholders Uzochukwu B, Onwujekwe O, Mbachu C, Okwuosa C, Etiaba E, Nyström ME, Gilson L.(2016); Nyström, M.E., Karlton, J., Keller, C. et al.(2018) Key solutions include:

Increased Research Funding: Government, private organizations, and international collaborations should allocate more resources to research funding, enabling researchers to undertake comprehensive studies.

Enhanced Research Infrastructure: Investments should be made in improving research infrastructure, including well-equipped laboratories, libraries, and data repositories, facilitating efficient data collection, analysis, and storage.

Capacity Building and Training: Researchers should receive training in research methodologies, data collection techniques, and research ethics, promoting adherence to international standards and best practices.

Ethical Guidelines and Oversight: Strengthening the implementation of ethical guidelines and establishing oversight bodies can ensure the protection of human subjects and enhance the credibility of research outcomes.

Collaboration and Networking: Encouraging collaboration between researchers, institutions, and international partners can facilitate knowledge sharing, resource pooling, and the exchange of best practices.

Conclusion

Conducting empirical research in Nigeria poses significant challenges, including limited research funding, inadequate research infrastructure, data collection difficulties, ethical considerations, and political instability. These challenges can hinder the progress and quality of research outcomes, limiting the potential for valuable contributions to knowledge and development in the country. However, by recognizing and addressing these challenges, researchers and stakeholders can work towards creating an environment conducive to high-quality empirical research in Nigeria.

Recommendations:

Advocacy and Policy Reform: Stakeholders, including researchers, academic institutions, and professional associations, should advocate for policy reforms to address the challenges of conducting empirical research. Engaging policymakers and raising awareness about the importance of research funding, infrastructure development, and ethical considerations can drive positive change.

By implementing these recommendations, Nigeria can create an enabling environment for empirical research, empowering researchers to overcome challenges and make valuable contributions to knowledge, policy, and sustainable development in the country.

References

- Barrett, Peter, Alberto Treves, Tigran Shmis, Diego Ambasz, and Maria Ustinova. 2019. *The Impact of School Infrastructure on Learning: A Synthesis of the Evidence*. International Development in Focus. Washington, DC: World Bank. doi:10.1596/978-1-4648-1378-8
- Be, I., Okoduwa, S. I. R., Akabuogu, E. P., Okoduwa, U. J., Enang, I. A., Idowu, O. O., . . . Onyemachi, D. I. (2021). Focused Research on the Challenges and Productivity of Researchers in Nigerian Academic Institutions Without Funding. *Frontiers in Research Metrics and Analytics*, 6. <https://doi.org/10.3389/frma.2021.727228>
- Chiang, I. A. (2015, October 13). Overview of Survey Research. Retrieved from <https://opentextbc.ca/researchmethods/chapter/overview-of-survey-research/>

INTERNATIONAL JOURNAL OF RESEARCH AND REVIEWS IN SOCIAL AND APPLIED SCIENCES

ISSN: 2931 - 7853 | www.caarnjournals.com | Volume 10. Issue 1. (JULY 2023)

Chukwu, Ebue, Obikeguna, Arionu and Agbawodikeizu (2016) Challenges of Research and Human Capital Development in Nigeria. *Journal of Education and Practice*, Vol.6, No.28, 2015

General sampling considerations. (n.d.). Retrieved from <https://www.fao.org/3/y2790e/y2790e05.htm>

Goundar, S. (2012). Chapter 3 - Research Methodology and Research Method. *ResearchGate*. Retrieved from https://www.researchgate.net/publication/333015026_Chapter_3_-_Research_Methodology_and_Research_Method

Hamed Taherdoost. (2021) Data Collection Methods and Tools for Research; A Step-by-Step Guide to Choose Data Collection Technique for Academic and Business Research Projects. *International Journal of Academic Research in Management (IJARM)*, 2021, 10 (1), pp.10-38. fahal-03741847

Nnodim, j. (2022) Emerging Challenges of Research in Nigeria. *Acta Scientific Clinical Case Reports* 3.5 (2022): 01.

Nowell, L., Norris, J. M., White, D. L., & Moules, N. J. (2017). Thematic Analysis. *International Journal of Qualitative Methods*, 16(1), 160940691773384. <https://doi.org/10.1177/1609406917733847>

Nyström, M.E., Karlun, J., Keller, C. *et al.* Collaborative and partnership research for improvement of health and social services: researcher's experiences from 20 projects. *Health Res Policy Sys* 16, 46 (2018). <https://doi.org/10.1186/s12961-018-0322-0>

Oliver, K., Lorenc, T., & Innvær, S. (2014). New directions in evidence-based policy research: a critical analysis of the literature. *Health Research Policy and Systems*, 12(1). <https://doi.org/10.1186/1478-4505-12-34>

Onwujekwe, O., Uguru, N., Russo, G. *et al.* Role and use of evidence in policymaking: an analysis of case studies from the health sector in Nigeria. *Health Res Policy Sys* 13, 46 (2015). <https://doi.org/10.1186/s12961-015-0049-0>

Oribhabor, C. B., & Anyanwu, C. A. (2019). Research Sampling and Sample Size Determination: A practical Application. *ResearchGate*. Retrieved from https://www.researchgate.net/publication/336723498_Research_Sampling_and_Sample_Size_Determination_A_practical_Application

Pelz, P. B. (n.d.). Chapter 5 Research Design | Research Methods for the Social Sciences. Retrieved from <https://courses.lumenlearning.com/suny-hccc-research-methods/chapter/chapter-5-research-design/>

Ponto, J. (2015, April 1). Understanding and Evaluating Survey Research. Retrieved from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4601897/>

S, S. (2018, November 19). Difference Between Qualitative and Quantitative Research (With Comparison Chart) - Key Differences. Retrieved from <https://keydifferences.com/difference-between-qualitative-and-quantitative-research.html>

INTERNATIONAL JOURNAL OF RESEARCH AND REVIEWS IN SOCIAL AND APPLIED SCIENCES

ISSN: 2931 - 7853 | www.caarnjournals.com | Volume 10. Issue 1. (JULY 2023)

- Snyder, H. R. (2019). Literature review as a research methodology: An overview and guidelines. *Journal of Business Research*, *104*, 333–339. <https://doi.org/10.1016/j.jbusres.2019.07.039>
- Sociological Research: Designs, Methods. (n.d.). Retrieved from <https://www.cliffsnotes.com/study-guides/sociology/sociological-research-methods/sociological-research-designs-methods>
- Sutton J, Austin Z. Qualitative Research: Data Collection, Analysis, and Management. *Can J Hosp Pharm*. 2015 May-Jun;68(3):226-31. doi: 10.4212/cjhp.v68i3.1456. PMID: 26157184; PMCID: PMC4485510.
- Uneke, C.J., Okedo-Alex, I.N., Akamike, I.C. *et al*. Institutional roles, structures, funding and research partnerships towards evidence-informed policy-making: a multisector survey among policy-makers in Nigeria. *Health Res Policy Sys* **21**, 36 (2023). <https://doi.org/10.1186/s12961-023-00971-1>
- Uzochukwu B, Onwujekwe O, Mbachu C, Okwuosa C, Etiaba E, Nyström ME, Gilson L. The challenge of bridging the gap between researchers and policy makers: experiences of a Health Policy Research Group in engaging policy makers to support evidence informed policy making in Nigeria. *Global Health*. 2016 Nov 4;12(1):67. doi: 10.1186/s12992-016-0209-1. PMID: 27809862; PMCID: PMC5095957.
- Uzochukwu, B., Mbachu, C., Onwujekwe, O., Okwuosa, C., Etiaba, E. et al. (2016) Health policy and systems research and analysis in Nigeria: examining health policymakers' and researchers' capacity assets, needs and perspectives in south-east Nigeria.. *Health & Justice*, 14(1) <http://dx.doi.org/10.1186/s12961-016-0083-6>
- Vasileiou, K., Barnett, J., Thorpe, S. J., & Young, T. (2018). Characterising and justifying sample size sufficiency in interview-based studies: systematic analysis of qualitative health research over a 15-year period. *BMC Medical Research Methodology*, *18*(1). <https://doi.org/10.1186/s12874-018-0594-7>
- What Is Empirical Research? Definition, Types & Samples. (2023, May 12). *Research.com*. Retrieved from <https://research.com>
- Wright, D., & Austin, Z. (2015). Qualitative Research: Data Collection, Analysis, and Management. *The Canadian Journal of Hospital Pharmacy*, *68*(3). <https://doi.org/10.4212/cjhp.v68i3.1456>
- Wright, D., & Austin, Z. (2015b). Qualitative Research: Data Collection, Analysis, and Management. *The Canadian Journal of Hospital Pharmacy*, *68*(3). <https://doi.org/10.4212/cjhp.v68i3.1456>