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## Sampling Method | Descriptive Research

# Convenience Sampling

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Abstract

The sampling method is significant to strengthen the representativeness of the sample and the generalizability of the research results. One of the non-probability sampling techniques is convenience sampling which is a way of selecting participants from the target population based on ease of access. This descriptive article aims to define convenient sampling, explain how to frame it, and finally its potential benefits and drawbacks. This sampling technique yields several inherent benefits, including being cost-effective, less time-consuming, simple operation, etc., and also possesses different drawbacks such as being subjected to sample biases, systematic errors, not being representative enough, and no generalizability of the research findings. The study concludes with some suggestions to improve the convenience sampling technique to ensure representativeness and remove uncertainty.

Keywords: Convenience sampling, non-probability, sample bias, ease of access, generalizability

# Introduction

The sampling method plays a critical role in conducting quality research by supporting the researchers to select more representative samples and generalize the research findings. Sampling is a process of selecting a subdivision of the population in any research (Shorten & Moorley, 2014). Deming (1950) defines sampling as "the science and art of controlling and measuring the reliability of useful statistical information through the theory of probability" (p. 2). Since it is almost impossible for researchers to have the entire population participate in the research, they depend on a subcategory to collect the data. The sampling method confers significant practical benefits, including reducing the cost and expediting data collection (Lohr, 2021; Turner, 2020; Latpate et al., 2021). However, the sampling method needs to have maximum precision to ensure the least marginal errors and subjectivity, and improve the representation of the total population to a larger extent (Tyrer & Heyman, 2016). Moreover, a researcher needs to ask critical questions to select an appropriate sampling technique. For instance, the queries about the extent of sampling bias, whether to be random or non-random,



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objective or subjective and research and inference types (Berndt, 2020; Elfil & Negida, 2017; Shorten and Moorley, 2014; Tyrer & Heyman, 2016; Van Hoeven et al., 2015).

Probability sampling fails to be an adequate method when the population is hard to reach or hidden and researchers have difficulty engaging and accessing these individuals (Berndt, 2020). Hidden populations are “those who are disadvantaged and disenfranchised: the homeless and transient, chronically mentally ill, high school drop-outs, criminal offenders,…, runaways and other street people" (Lambert & Wiebel, 1990). In this regard, the researcher cannot create a sampling frame and arrive at consistent statistical analyses due to the comparatively small size of the population (Berndt, 2020). Therefore, non-probability becomes more plausible. More specifically, research scholars choose convenience sampling for its inherent benefits.

This article mainly focuses on defining convenience sampling and explaining its pros and cons in scientific research. The following research questions guide this study:

1. What is convenience sampling in scientific research?
2. How can researchers frame convenience sampling?
3. What are the inherent benefits and drawbacks of convenient sampling in scientific research?

# Defining Convenience Sampling in a Scientific Research

According to Rahi (2017), convenience sampling describes the data collection process from a research population that is effortlessly reachable to the researcher. Distinguishing between probability and non-probability sampling, MacNealy (1999) defined a convenience sample as a sampling technique that requires the researchers to go to the public "locations and ask passers-by to participate" (p. 156). Since convenience sampling basically means that the researchers utilize a sample which is readily available and they have access to, it can be applicable to almost any research. However, the term is exclusively employed if the availability of participants was the researchers’ mere concern in choosing a sample and when they could not select from many various populations and research sites (Koerber & McMichael, 2008). For example, if a university professor conducts research on teachers' professional identity development, he can select the participants from faculty working in the same university; however, if he did not work there, he would have limited access to the sample. As a result, this sampling technique “allows the researcher to complete interviews or get responses cost-effectively; however, it may be criticized for selection bias because of the difference of the target population (Rahi, 2017, p.3).

# Framing Convenience Sampling

When conducting a qualitative study, convenience sampling is frequently utilized in education and social sciences where researchers have ready access to existing target populations. This technique will be a good fit for your study a) when you plan to obtain people's perceptions and attitudes, b) if you intend to conduct a test pilot for your survey, and c) if you plan to produce hypotheses being tested in details in upcoming studies (Nikolopoulou, 2022).

Using convenience sampling is bound to the researchers' choice considering access to the research context, participants, and methodological framework (Koerber & McMichael, 2008). First of all, the researcher creates inclusion criteria and then approaches any member of the target population being available at the moment and who met the criteria. The researcher asks the participants to take part in the study and if they demonstrate consent, they will be selected and added to the sample. For instance, Golzar et al. (2022) conducted research titled "Afghan English teachers' and students' perceptions of formative assessment: A comparative analysis". The study aimed to develop a formative assessment perception scale for English university teachers and students. Moreover, it examined whether any relationship exists between the two parties. The researchers considered some inclusion criteria, including a) being a university teacher/student, b) residing in Afghanistan, and c) demonstrating a willingness to participate. They conveniently selected 91 university teachers and 125 students whom they have ready access. Upon the participants' approval, they sent an online survey.

## Benefits and Drawbacks of Convenience Sampling

Convenience sampling yields various benefits. First, the researchers can consume less effort to select the participants compared to other non-random sampling techniques. Second, convenience sampling requires the researcher to select participants at a very low cost. Third, the researchers invest less time since the sample taken from the target population is readily accessible. Finally, they do not need to prepare a list of all the population elements (Alvi, 2016). It also provides a wealth of qualitative data. This technique can provide a satisfactory sample in several situations despite its potential pitfalls.

The convenience sampling technique inherently possesses various drawbacks. Sampling biases and systematic errors may occur in this type of sampling. In this regard, Convenience samples were contaminated by bias from non-coverage and self-selection if empirical studies utilize non-probability convenience samples despite succeeding in evading non-coverage and gaining a sampling frame including a random pool of subjects, the researchers most often cannot discharge self-selection since people decide at will whether they fill up the survey or participate in the interview. In addition, the p-value cannot be meaningfully interpreted (Hirschauer et al., 2020). Alvi (2016) also argued that target population categories are comprehensive enough to be divided into an unlimited number of categories within themselves that are comparatively dissimilar from each other and cannot be representative of one another. Moreover, the variability of the participants in the sample can be controlled or measured. Since the population under study is quite familiar, the researcher may be enticed to generalize. However, the research findings cannot be generalized beyond the sample when using this technique (Acharya et al., 2013). Because of the above drawbacks, researchers often consider convenience sampling as a research limitation (Koerber & McMichael, 2008).

Table 1

*Convenience Sampling Technique Benefits and Drawbacks*

| No | **Benefits** | **Drawbacks** |
|---|---|---|
| 1 | It requires little effort since the researcher is not involved in the complications of utilizing a randomized sample (Alvi, 2016). | It is subjected to sampling biases and systematic errors (Alvi, 2016). |
| | It is very cost-effective (Alvi, 2016). | The p-value cannot be meaningfully interpreted (Hirschauer et al., 2020). |
| 2 | It requires little time investment since the sample is readily accessible (Alvi, 2016). | The target population categories are broader enough to be divided into countless categories within themselves that are comparatively different from<br>Each other cannot be representative of one another (Alvi, 2016). |
| 3 | There is no need for a list of all the population elements (Acharya et al., 2013). | Variability cannot be measured or controlled. |
| 4 | This technique provides a wealth of qualitative data (Alvi, 2016). | Results from the data cannot be generalized beyond the sample (Acharya et al., 2013; Koerber & McMichael, 2008). |

# Closing Remarks

Convenience Sampling is a non-probability sampling technique commonly used in both quantitative and qualitative research. Due to requiring little effort, cost, time investment, and its simple operation, many researchers tend to prefer this sampling technique. However, it inherently possesses different drawbacks, including being subjected to sampling biases and systematic error, not being able to interpret the p-value meaningfully, not being representative of the total population, not controlling the variability, and not ending in the generalizability of the results beyond the sample.

If researchers carefully conduct the research using a convenience sampling technique and controlling biases and uncertainty, it produces useful data. Convenience sampling can be improved by evaluating and controlling the sample's representativeness, including diversity, and using other data. First, the researchers need to reduce biases when selecting the participants and improve the research usefulness by evaluating and controlling the representativeness of a sample. Second, the researchers also can add diversity to mend convenience samples by obtaining diversification through distributing questionnaires at different times and locations to achieve an appropriate cross-section of the target population. Finally, using more data is the other way to control bias and uncertainty. The researchers could integrate more data by using larger samples (Skowronek & Duerr, 2009).

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# References


Acharya, A. S., Prakash, A., Saxena, P., & Nigam, A. (2013). Sampling: Why and how of it. *Indian Journal of Medical Specialties*, *4*(2), 330-333. DOI: 10.7713/ijms.2013.0032

Berndt, A. E. (2020). Sampling methods. Journal of Human Lactation, 36(2), 224-226. DOI: 10.1177/0890334420906850

Deming,W. E. (1950). *Some theory of sampling*. Dover.

Elfil, M., & Negida, A. (2017). Sampling methods in clinical research; an educational review. *Emergency*, *5*(1), 1-3.

Hirschauer, N., Grüner, S., Mußhoff, O., Becker, C., & Jantsch, A. (2020). Can p-values be meaningfully interpreted without random sampling?. Statistics Surveys, 14, 71-91. DOI: 10.1214/20-SS129

Koerber, A., & McMichael, L. (2008). Qualitative sampling methods: A primer for technical communicators. *Journal of business and technical communication*, *22*(4), 454-473. DOI: 10.1177/1050651908320362

Lambert E. Y, Wiebel, W.W. (1990). *The Collection and Interpretation of Data from Hidden Populations.* United States National Institute on Drug Abuse.

Latpate, R., Kshirsagar, J., Gupta, V. K., & Chandra, G. (2021). *Advanced Sampling Methods*. Springer Singapore.

Lohr, S. L. (2021). *Sampling: design and analysis*. Chapman and Hall/CRC.

MacNealy, M. S. (1999). Strategies for empirical research in writing. Addison Wesley Longman.

Nikolopoulou. K. (2022). What is convenience sampling? Definition & examples. Retrieved from https://www.scribbr.com/methodology/convenience-sampling/.

Rahi, S. (2017). Research design and methods: A systematic review of research paradigms, sampling issues and instruments development. *International Journal of Economics & Management Sciences*, *6*(2), 1-5. DOI: 10.4172/2162-6359.1000403

Shorten, A., & Moorley, C. (2014). Selecting the sample. *Evidence Based Nursing*, *17*(2), 32–33.

Skowronek, D., & Duerr, L. (2009). The convenience of nonprobability: Survey strategies for small academic libraries. *College & Research Libraries News*, *70*(7), 412-415.

Turner, D. P. (2020). Sampling methods in research design. *Headache: The Journal of Head and Face Pain, 60*(1), 8-12. DOI: 10.1111/head.13707

Tyrer, S., & Heyman, B. (2016). Sampling in epidemiological research: Issues, hazards and pitfalls. *British Journal of Psychiatry Bulletin*, *40*, 57–60. DOI: 10.1192/pb.bp.114.050203

Van Hoeven, L. R., Janssen, M. P., Roes, K. C. B., & Koffijberg, H. (2015). Aiming for a representative sample: Simulating random versus purposive strategies for hospital selection. *BMC Medical Research Methodology*, *15* (90). DOI: 10.1186/ s12874-015-0089-8