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Types of Purposive Sampling Techniques with Their Examples and Application in Qualitative Research Studies

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ABSTRACT: *The aim of the article was to review the purposive sampling types as discussed by Patton (1990) and exemplify them in line with the current trends in the studies being conducted today. The sixteen purposive sampling techniques discussed include extreme case sampling, deviant case sampling, Intensity sampling, maximum variation sampling, homogeneous sampling, typical case sampling, stratified purposeful sampling, critical case sampling, snowball or chain sampling, criterion sampling, theory-based sampling, opportunistic sampling, random purposeful sampling, sampling politically important cases, convenience sampling and mixed purposeful sampling. The article has further guided on how these are used in different topics to enable upcoming researchers be able to apply them responsibly and effectively in their studies.*

KEY WORDS: purposive sampling, qualitative, sample

Sampling and purposive sampling

Purposive sampling procedures are used in most research papers because they are found in any research paradigm and help in ensuring that quality sample is located without biases so as to increase the reliability and trustworthiness of the findings. Some scholars have come to present arguments on how sampling can be done (Cohen, Manion and Morrison, 2018 and Uprichard, 2013) but they all agree that the process is not conducted like a dream or a farmer tying to choose a cob of maize to taste and generalise to the whole farm. Therefore, the sampling types result from paradigm choices and knowledge being sought for. The sampling procedure comes from the sample to be chosen in a study which is also influenced by the population which has been selected for the study instead of interacting with the whole population, a selected number of relevant participants can be identified and used to represent the entire population which we can then call sample. What is important is that the selected numbers should have the required characteristics to stand as representative of the population

and if another researcher came to interact with the same sample, similar results can be obtained with a minimal error of less that 0.5 percent while the consistence should be significant (.00).

Choices of sampling procedures steam from ontological and epistemological matters. Uprichard (2013) adds to these a range of ontological, epistemological and logistical matters. Ontological matters concern the unit of analysis by answering the question of why choose the unit of analysis (the 'case') that has been chosen. For example, a key problem in addressing populations and samples is whether the population size and characteristics are actually known (which are needed to identify a sampling frame) and how much we know about the sample, and this may be a major difficulty in some kinds of social and educational research (Uprichard, 2013, p. 3). In simpler terms, the researcher should first question the basis and type of reality which the population has for it to stand relevant to the knowledge which is about to be realised. Ontological decisions are in this case critical in ensuring that the researchers who will interact with the document or findings do not question the reasoning being the sample which was chosen and the procedures which were used.

Sampling and its chosen procedures can be also an ontological and epistemological problem. For example, how we have any knowledge of the population and the sample (the 'cases') and what that knowledge is, from which we can proceed with some security (Uprichard, 2013 p. 4). A simpler explanation can be how many people or elements should a researcher interact with for the needed knowledge to be realised in the study is the matter of epistemological matters. Social research has individualised thinking which calls for the researcher and the experts in the field to peer review and provide a justification for the chosen sample and its procedures according to the epistemological being persuaded. Further, the researcher has the epistemological assumptions which should be brushed aside since he or she is the vision bearer regarding the assumptions that have to be considered for ontological assumptions to come to light. Therefore, personal reflection combined with understanding the epistemological direction of the objectives make the researcher to make sampling choices in a study.

In many defence meetings and candidate dissertation and thesis presentations, many people argue as to why the sample is as chosen where numbers are concerned. It should be understood that there are a number of factors which a researcher should consider in line with the ontological and epistemological direction the objectives of the study are set to achieve. Cohen, Manion and Morrison (2018:203) argue that the sample size depends on a large array of factors which include:

i. The research purposes, questions and design;
ii. The size and nature of the population from which the sample is drawn;
iii. The heterogeneity of the population from which the sample is drawn;
iv. The confidence level and confidence interval required;
v. The level of accuracy required (the smallest sampling error to be tolerated);

vi. The statistical power required;
vii. The representativeness of the population sought in the sample;
viii. The allowances to be made for attrition and non-response;
ix. The number of strata in the sample;
x. The variability of the factor under study;
xi. The number of variables included in the research;
xii. The statistics to be used;
xiii. The scales being used;
xiv. The kind(s) of sample to be used;
xv. The nature of the research (e.g. quantitative, qualitative, mixed methods).

The new trend which can be added to this list is the time and pandemic dynamics which are at play in the nation and world. For instance, during the corona pandemic times, the researchers were forced to used specific sampling procedures to arrive at a given sample which were relevant due to such times when the sample was inaccessible. Meanwhile, during pre-pandemic times such would have been considered inappropriate and today we consider them as new sampling procedures.

Social research which is grounded on constructivism paradigm can be conducted on even one person or element. For example, if you would love to conduct a study on the type of food the free-range mad people eat in the community and you have one mad person in the district. You will have one participant as that is the only person with the characteristics you are looking for. Also, the sample for qualitative study should be manageable and not exaggerated because you will reach data saturation with one group before you could even finish the sampled groups. Meanwhile, a sample size of thirty is held by many to be the minimum number of cases if researchers plan to use some form of statistical analysis on their data, though this is a very small number, and we would advise very considerably more. Researchers need to think, in advance of any data collection, of the sorts of relationships that they wish to explore within sub-groups of their eventual sample. For pragmatism research, both quantitative and qualitative sample should be relevant enough to enable the findings to be considered as relevant for the selected population. It should be stated here that for quantitative research, the larger the sample the better, as this not only gives greater reliability but also enables more sophisticated statistics to be used and prove assumptions.

In the modern days of today, sampling is never as static as (Mugo and Patton, 1990) perceived it. Even in qualitative studies a sampling formular can be used to draw the sample from the population while purposive sampling procedures can then be used to arrive at the actual sample to provide epistemological ontology. The available formulars include Slovin's and online sample calculator which are freely accessible by any researcher. All these two and many others are relevant, what is significant is that the researcher should justify the choice of using the formular. The justification is not isolated from mentioning the reliability of the sample, its wider representation and the relevance of chosen sample. The two formulars are then discussed below.

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a. Slovin's formula

It is accepted that the Slovin's formula allows a researcher to sample the population with a desired degree of accuracy. Slovin's formula gives the researcher an idea of how large the sample size needs to be to ensure a reasonable accuracy of results. Slovin's Formula provides the sample size (n) using the known population size (N) and the acceptable error value (e). Fill the N and e values into the formula $n = N \div (1 + Ne^2)$. The resulting value of n equals the sample size to be used in a particular study.

Slovin's formula calculates the number of samples required when the population is too large to directly sample every member. Slovin's formula works for simple random sampling. If the population to be sampled has obvious subgroups, Slovin's formula could be applied to each individual group instead of the whole group. The formular still has purposive sampling techniques to a certain degree because the population is purposively targeted through the objectives which have to be fulfilled through that specific sample.

b. Online sample calculator

An online sample calculator is a web-based tool or application that allows users to calculate the sample size needed for a statistical study or survey. It is convenient, accessible, and easy to use. This type of calculator is often used in research, polling, and experimental design to determine the appropriate number of participants or data points required to achieve a desired level of statistical significance. This calculator can provide you with a quick and simple estimate of the sample size needed for your study, without requiring any special skills or software. The sample size is a crucial aspect of statistical studies because it influences the reliability and precision of the results. A well-chosen sample size ensures that the study has enough statistical power to detect meaningful effects or differences, and it helps control the margin of error. Therefore, an online sample calculator might prompt users to input certain parameters such as:

a. The level of confidence that the calculated sample size will capture the true population parameter. Common choices are 90%, 95%, or 99%.
b. An estimate of the proportion of the population that possesses a certain characteristic or exhibits a particular behaviour.
c. The acceptable range of error in estimating the population parameter. It is usually expressed as a percentage.

However, when the values are entered, the calculator performs the necessary statistical calculations, often using formulas such as the one mentioned earlier, to determine the recommended sample size for the study. Thus, the online tools provide a convenient way for researchers, students, and professionals to quickly obtain sample size estimates without manually performing complex statistical calculations. They are accessible through web browsers and are user-friendly, making them valuable resources in the planning stages of research projects.

To use online calculators effectively for sample size determination, there is need to follow some guidelines and precautions as provided by LinkedIn (2024). There is need to:

- have a clear and specific research question and hypothesis, and a good understanding of the relevant literature and theory
- choose an online calculator that matches your study type, design, and outcome, and that uses valid and reliable formulas, assumptions, and data sources
- check the credibility and quality of the online calculator, and look for references, citations, or validations of its methods and results
- enter the parameters of your calculation carefully and realistically, and be prepared to justify and explain them
- interpret the results of the online calculator critically and cautiously, and consider the uncertainty and variability of the sample size estimate.
- compare and contrast the results of the online calculator with other methods or sources of sample size determination, and be open to revise or refine your calculation as your study progresses.

2 Types of purposive sampling techniques

Purposeful sampling selects information rich in cases for in-depth study. Size and specific cases depend on the study purpose. For a number of years, the research community has been depending on the 16 different types of purposeful sampling proposed by Patton (1990) and these are the ones which have been discussed with practical examples relating to the lives and research of today and relating them to African topics and ways of sampling.

Extreme case sampling

This calls for the researcher to sample the cases which are successful in that context of the study and those who are the best amongst the whole sample. By extreme, the researcher can sample the teachers who have made the learners pass and learn from their best practices. Also, we can learn from the most successful business persons on how they have succeeded. For example, if you want to learn on how to catch criminals, you have to collect data from the best criminal investigator in town and the best prosecutor. Therefore, purposive sampling under extreme case sampling you have to purposively pick the best for your study to have valid findings relevant to the study questions.

deviant case sampling

This is a type of sampling technique which is opposite to extreme as this target the least or worst on the scale to learn from and understand from their experiences. In deviant case sampling, the researcher is also meant to learn from the sample which is perceived as not doing well and not succeeding. For instance, in order to understand why learners are not performing well in a particular school, the researcher can collect data from the teachers who handled such learners and specifically the teachers whose subjects learners failed. This will

make the researcher use deviant sampling to arrive at such teachers since their results have diverted from the normal curve and are below expectations.

Intensity sampling
This is information rich cases that manifest the phenomenon intensely, but not extremely, such as good students, poor students, above average/below average. In other words, this type of sample is rather mixed and relevant to the topic at hand and does not limit participation to few individuals. It cuts across race, social class, religion and believes in having participation from mixed abilities. In case you want to collect data from marketeers on their business experiences, you just have to go sample the marketeers you will find and do not consider their status, education and other biographical data. What is key is that they are part of the general marketeer population.

Maximum variation sampling
In this type of sampling, the researcher targets participants who have the same characteristics but have different experiences which are unique to each other. The same characteristics maybe age, religion, gender and education while they come from different homes and backgrounds. For instance, the researcher may be collecting views of student on a given topic from selected schools in a district. In these selected schools, the researcher may pick girls and boys from each school who are in a particular grade while their home environment, upbringing, religion, age and gender are different from each other. Their schools are also different thereby providing a variation in the sample while the common characteristics would have been met. Such a sample bring about better data since the participants are coming from different areas whose general characteristics are different but are relevant to the researcher. The key issue in this type of technique is that the researcher needs to have more participants of such variations included in the study and researched from. This allows researcher to gain as much insight from as many angles as possible.

Homogeneous sampling
Patton (1990) indicated that homogeneous sampling reduces variation, simplifies analysis, facilitates group interviewing. Like instead of having the maximum number of nationalities as in the above case of maximum variation. Homogeneous sampling is that type of sampling which regroups the sample into similar characteristics and then take them as independent sample within the main sample. For instance, the researcher may sample grade 12 learners and within this sample, the participants can be regrouped according to gender as boys and girls from the main sample or according to those who perform better and those who perform badly, and this is what we call homogeneously. Since the regrouped sample is with regards to common trends, this is what we call homogeneous sampling.

Typical case sampling
It involves taking a sample of what one would call typical, normal or average for a particular phenomenon. It is useful when a researcher is looking to investigate a phenomenon or trend as it compares to what is considered typical or average for members of a population. Typical

case sampling, therefore, focuses on the average population within a case, context, event, or place. The researcher avoids including extreme sampling or deviant cases which can dilute the purpose. For instance, when a researcher is exploring the views of teachers of language on the use of learner centred pedagogies in grade 12 classes, typical case sampling will pin point the teachers of language in grade 12 classes in the entire school. Teachers not teaching language in grade 12 classes are deviant cases and cannot be included in the study. This justification makes the researcher understand that as much as the population samples teachers of language in a school, typical case sampling enables the researcher to pick the specific sample which is relevant to the study at hand.

Stratified purposeful sampling

This illustrates characteristics of particular subgroups of interest and facilitates comparisons between the different groups. Stratified sampling means to divide the sample into groups or categories according to the similarities or differences which they exhibit in a study. For instance, if you want to find out how a learner performs in class, the research should use the results of the learners and create three strata being, those who perform the least, average performers and top performing students and interview them or hold focus group discussions separately. The view from these three strata can now be compared and analysed based on the learner's performance.

Critical case sampling

Patton (1990) stated that critical case sampling permits logical generalization and maximum application of information to other cases like "If it is true for this one case, it is likely to be true of all other cases. One case is chosen for investigation because researchers believe that by investigating it, insights into other similar cases will be revealed. You must have heard statements like if it happened to so and so then it can happen to anybody. Or if so and so passed that exam, then anybody can pass. For instance, instead of looking for all patients who were admitted with COVID 19 and survived on ventilators, you can interview a fraction of such and generalise the findings to others. Therefore, critical case sampling calls for the identification of the sample and hand pick it, collect data from them and generalise the findings to others since they have the same characteristics.

Snowball or chain sampling

This involve the identification of one participant who is relevant to the study and that participant should lead you to another participant who is of the same characteristics until the planed sample is achieved. Patton (1990) noted that the researcher identifies one case of interest from people who know people who know what cases are information rich. The argument is that when you find one participant, he or she will tell you where you can get more others and the chain continues. An example is when you want to investigate the causes of a riot at a particular school which happened in 2015, the researcher will identify one participant who will then lead the researcher to others until the sample required is fulfilled.

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Criterion sampling
This type of sampling calls for the researcher to set a specific criterion which should be followed for participants to take part in the study. criterion sampling differs from one study to the other and its implementation is according to the study set research question and available population. For instance, if you are researching on the reasons which people forward, "I order to divorce", the criteria set for such a study is to be either divorced or counsellor for divorces. These participants will be handpicked for such reasons because the criterion is set to enable the relevant data to be collected. This method of sampling is very strong in quality assurance since the data to be generated will be from reliable sources.

Theory based sampling.
Finding manifestations of a theoretical construct of interest so as to elaborate and examine the construct. Confirming and disconfirming cases Elaborating and deepening initial analysis like if you had already started some study, you are seeking further information or confirming some emerging issues which are not clear, seeking exceptions and testing variation. To exemplify, using the social constructivism theory of zone of proximal development principle by Vygotsky, the researcher can assume that every child learns through interaction with others. Therefore, the sample can be limited to friends of a targeted sample so that they can easily interact and learn from such. This is the more reason researchers conduct ethnographic studies because they want to learn from the experts with the notion that the closer you get to the participants, the better you come to understand them and generate the knowledge of the study. Therefore, it should always be known that theory-based sampling is used in every study when coming up with participants for each objective.

Opportunistic Sampling
This involves is a type of sampling which makes the researcher to include new participants as the study is being conducted or during data collection as a result of new development whilst in the field. For instance, a researcher goes to investigate the type of counselling which pastors offer to couples in church when they want to divorce and finds that pastors are not part of the counsellors but their spouses. The researcher then has to add the spouses in the sample after learning this reality. This is very common in areas where the researcher is not familiar with, like African communities.

Random purposeful sampling
Patton (1990) stated that this adds credibility when the purposeful sample is larger than one can handle. It reduces judgement within a purposeful category. But it is not for generalizations or representativeness. This is a type of purposive sampling which picks participants from a larger group and are streamlined to specific numbers which are manageable for qualitative study. For instance, you may need to collect data on the prevalences of smoking in secondary schools. Your population will be too large to settle on few participants. Therefore, you have to deal with the guidance teacher who will isolate few participants who you will deal with in such cases. So, from the many students or pupils, you

have been helped by the guidance teacher who has performed a random purposive sampling to meet the researcher's specifications for the study.

Sampling politically important cases

This is a type of sampling which is targeted at politically aligned participants so that they can give views on the topic at hand which is political in nature. The participants are usually political figures whose input is very relevant for the study to be completed. For instance, when a researcher is comparing political violence between the immediate past political party and the current ruling party, the researcher has to make appointments to meet the executive leadership of the previous ruling and the current ruling parties so that their sides of the story can be told. These participants are sampled because they are politically important cases for the study and their contribution is what will make the researcher draw conclusions.

Convenience sampling

It is the type of sampling where the researcher handpicks the participants who he or she feels are relevant to the study and are near to his site. This reduces expenses and saves on time as well as reduces chances of data collection inconveniences to places where you cannot be welcomed. The researcher choses a site, sample, participants and research instruments because they are convenient for certain purposes. It should be noted that this is unprofessional in researcher as there is likely to be high chances of data manipulation since the participants are known to the researcher and the coverage may be limited hence data quality might be compromised too. For instance, a researcher wants to learn on the effects of suffering from malaria in the Zambian context and you go to research from your neighbours since you know they have once suffered from malaria. As much as you may collect data, the credibility will be highly questionable, and its authenticity will not be reliable.

Mixed purposeful sampling

This combines various sampling strategies to achieve the desired sample in line with the research objective parameters of the study. This helps in triangulation, allows for flexibility, and meets multiple interests and needs (Patton, 1990). When selecting a sampling strategy, it is necessary that it fits the purpose of the study, the resources available, the question being asked, and the constraints being faced. This holds true for sampling strategy as well as sample size as these are key.

3 Conclusion

This article concludes that purposive sampling has its own advantages of getting data from the sample you are sure of to provide the best experiences since you know its characteristics. The beauty with this sampling type is that the participants are handpicked by the researcher due to the relevant knowledge and experience the researcher has on the sample and topic. On the contrary, the demerit is that participants may give you wrong experiences since you know each other and at times, they may not just help you conduct the research. Therefore, it

should be noted that the sixteen purposive sampling techniques needs to be utilised in order to avoid sample bias and ensure relevant data is collected for the study.

REFERENCES

Cohen, L. Manion, L and Morrison, K. (2018). *Research Methods in Education. (8 ed.).* Routledge: New York.

https://www.linkedin.com/advice/0/what-advantages-disadvantages-using-online-calculators

Patton, M. Q. (1990). *Qualitative evaluation and research methods.* SAGE Publications: Newbury Park London New Delhi.

Uprichard, E. (2013). Sampling: bridging probability and non-probability designs. *International Journal of Asocial Research Methodology*, 16 (1), pp. 1–11.