Research

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# Question No: 01

## Answer: -

Sampling in research depends upon the measure of the research. It is either possible to have negative values, or it is very skewed, in which case the standard error/confidence intervals will not necessarily be informative. The larger sample size is always better - this will provide the researcher with a smaller confidence interval (Sanz-Alonso, 2018). If the researcher is only interested in estimating a mean (and not making a comparison), then much bigger problem is making sure that the population is representative (and even defining population in the first place).  For example, in the research of associations between quantitative and qualitative Job Insecurity and Well-being, the sample should be representative and well defined.

Albeit, calculating sample size is a difficult task, however, more often the sample size in research does not matter. The sample size in this mixed methods study, that intends to study the associations between quantitative and qualitative Job Insecurity and Well-being, should not necessarily to have a sample size of 21%. This is so because an underpowered study will at least have saved the researcher some money, and will serve a useful purpose as a pilot study or as a contributor to a meta-analysis. An overpowered study may allow the researcher to address additional important questions which he/she didn’t plan to address originally. Sample size calculations are extremely difficult (Whitehead, Julious, Cooper, & Campbell, 2016), and sample size is extremely sensitive to lots of parameters, the values of which is pure guesswork. This may sound cynical but really, there isn’t much of an alternative to it.

# Question No: 2

## Answer: -

The sampling method used for the current study is simple random sampling. Simple Random Sampling is the basic sampling technique where a subset or group of units (a sample) is selected from a larger group (a population). Each unit of the population has an equal chance of being selected in the sample. Each unit is chosen entirely by chance (Olken & Rotem, 1986). The sampling method in the study must not be confused with the random sample because every individual in the population has the same chance of being selected. So, in the current study sampling method is a simple random sampling. The sample in the study has a fixed priority “n” and “n” is selected from population size “N”, which, in the current research is 69,000. The elements are not grouped before selecting or attached to any other units. Simple Random Sampling is the most basic form of probability samples. The advantages and disadvantages of Simple Random Sampling are as follows:

### Advantages

* Simple Random Sampling provides ease of use and precise representation.
* It provides the researcher with the easiest way to extract a research sample from a larger population (Gupta & Shabbir, 2008).
* The sample group is comprised of the numbers drawn at random.
* Findings can be applied to the entire demographic.
* There are multiple randomness types available in Simple Random Sampling.
* Data collection is much easier in Simple Random Sampling.
* Chance of data error is much less in Simple Random Sampling.

### Disadvantages

* Sample requirement is too large.
* There must be a significant demographic at the beginning of the research.
* The conclusion drawn at the end of Simple Random Sampling is not necessarily accurate all the time. It could be inaccurate.
* When the research population or group is diverse, Simple Random Sampling does not function properly or well.
* It could cost the researcher additional money as compared to other methods.
* International bias is hard to remove from the data collection process i.e. the research process cannot limit the data that is internationally influenced.
* Owing to the variations in the perceptions of the population, future predictions are difficult to make
* Data collection in Simple Random Sampling requests information handling experience on account of the researcher.

Simple Random sampling is required where the researcher has little information about the population (Gupta & Shabbir, 2008). If the researcher has more information, then stratified sampling will be the best technique for him.

# Question No: 3

## Answer: -

### Reliability.

Reliability of the measure of variable shows how consistence the measure of the variable is. The three types of reliability of the measure of variable are as follows:

#### Internal Consistency.

This is the type of reliability that measures how consistent the responses of people are across the items of the research. All the measures used in this regard are assumed to mirror the construct, so participants’ scores on the items of the current study, so item should also be correlated to each other. One type of process used to look into the internal consistency is the split-half correlation. The items are split into two sets such as taking the top and bottom halves of the data or taking the odd and even values in the data (Green & Yang, 2015). The relationship between scores is studied and the correlation coefficient is calculated to see if these scores are related to each other. A variable that is considered to be consistent over a period of time is assumed to have a higher correlation score in case of internal consistency.

#### Test-Retest Reliability.

This is the type of reliability that intends to find the consistency of the measure over time. This measures the extent to which the measure gives the same results over a period of time, and a measure that produces different scores on a variable that is considered to be consistent over time cannot be reliable. In order to assess the test-retest reliability, any variable is measured over two different points in time and correlation is calculated among these scores (Davenport, Davison, Liou, & Love, 2015). A scatter plot can be used to calculate Pearson’s “r”. The value of correlation coefficient has to be high to conclude that the construct has measured the same variable consistently at both times.

#### Inter-rater Reliability

A number of measures in the behavioral studies involve a significant amount of decision of an observer or a rater. If different observers are consistent in their observation or rating, there is high inter-rater reliability. A higher score on the correlation between scores of different raters will mean that there is higher inter-rater reliability. As far as this study is concerned, this aspect is not relevant to our study.

### Validity

As discussed above, the measures used to represent a particular measure should be reliable in measuring the same concept over time, however, this aspect is incomplete until the researcher considers the validity measures along with the reliability ones (Heale & Twycross, 2015). An extremely reliable measure may be considered completely invalid by the researchers. A person who believes that the length of index fingers of the people will have an impact on their self-esteem will get a high score on the test-retest reliability but the validity of such a study will be very low.

# Question No: 4

## Answer: -

Demographic information provides data regarding research participants. Besides, demographic is necessary for the determination of whether the individuals, in a particular study, are a representative sample of the target population for generalization purposes. Demographic data collection includes anything that identifies and differentiates the population sample, and is important when building out a dataset as well as performing research. Demographic data collection is important in the current research application because the research model has an undue advantage of learning some factual features about the data that can aid in precise prediction or categorization (Ponto, 2015). Taking a deep dive, in the application of the current study opinion of the public matters, so demographic information plays a crucial role in the research.

Demographic data is necessary as it is used to analyze the samples’ characteristics. In the current research demographic data relates to the particular group within the population of the research. Demographic data can be used as a control variable in the research if the researcher has the reason in the research to do so. On the contrary, if researcher does not find any rationale for using demographic data as control variable, then demographic data can be used as a moderating variable.

Demographic data conceptualizes and measures the variables that could be potential confounds. For that purpose, demographic data can be used as a moderating variable, and moderating variables, in fact, are independent variables that research evaluates along with at least one other independent variable (Romanillos, Zaltz Austwick, Ettema, & De Kruijf, 2016). This can be done in factorial ANOVA or regression. ANOVA is more convenient when both predictors are categorical; regression works better if both predictors are quantitative. Variables moderate the effects of eachother (Ponto, 2015). Sometimes it just makes sense to designate one variable as a “cause” and the other as “moderator”. In a gender by the amount of crowding ANOVA, if there is a gender by crowding interaction, we would probably say that gender moderates the effect of crowding; or, that the effects of low, medium, high levels of crowding are different for males than they are for females.

# Question No: 5

## Answer: -

The research design of the current study is mixed i.e. the research used both qualitative, and quantitative methods. The most important question that is worth answering; to what extent both approaches – qualitative and quantitative – can be combined in research. The answer simply depends upon what the researcher means by “combined”. Individual quantitative and qualitative research projects should be integrated into a larger system of research, in which the two modes of research inform each other (Morse, 2016). To combine quantitative and qualitative research in this way makes each form of research more powerful, and the larger system of research becomes a cycle that never ends but leads consistently to new questions.

It is important not to try to amalgamate quantitative and qualitative study within a particular project. Qualitative and quantitative methodologies require vastly different research contexts to be successful. Quantitative methods need tightly controlled conditions, but qualitative methods need open conditions in order to access authentic content. Sampling methods for quantitative and qualitative projects are necessarily different.

In practice, quantitative and qualitative methods often do get combined. Generally, this takes place in order to satisfy competing demands from within the organization; that lacks the discipline to prevent research projects from devolving from methods of gathering information, and developing insight into tools for exercising political control (Morse, 2016). The amalgamation of quantitative and qualitative research design in particular projects, instead of being considered as the coordination of these separate sets of methodologies, should be viewed as an unfortunate but politically-necessary compromise.

The two methods are suitable for different needs in research. Precisely, qualitative research categorizes the research items. The researcher sort things into categories that he believes are useful so that he can use quantitative research methods (Patten & Newhart, 2017). In quantitative study the researcher counts them so that he can see how prevalent the things in each category are, and to see if he can correlate them. Inevitable, after things are counted, the researcher discovers that the things he counted couldn't help him answer his research question.

### Advantages

* Mixed method research can offset the deficiencies present in qualitative and quantitative research design.
* All available tools can be used for data collection by the researcher. The benefit of using all available tool is that it provides the researcher with an in-depth perspective of the research question.
* Both inductive and deductive rationale can be used in mixed-method research design.
* The chances for personal bias in mixed method research are slim, as compared to qualitative or quantitative research design.

### Disadvantages

* Mixed method research design is more time consuming than qualitative or quantitative research design.
* The researcher will look for more sources for data collection in mixed-method design.
* The presentation of the methodology has to be comprehensible for the audience. If the methodology is not clear then the audience wouldn’t be able to comprehend the finding and procedures.

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