

**Your topic:** 3000 words essay on the module (research designs in health) ,on health topic ( treatment on chronic myeloid Leukaemia) by compare and contrast ,advantage and disadvantage of using two research strategies ( from denscombe 2014)(e.g. surveys, experiments, case studies etc..).Including conclusion (within my health topic, what kinds of research questions are best answered by surveys and experiments

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# Research Designs In Health

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## **Introduction**

The research topic, which is selected for this particular essay, is treatment on cancer that is chronic myeloid leukaemia. The aim of this paper is to evaluate the use of research strategies in the health care in order to analyse its application on determining the topic. In this essay, the two research strategies of health care that are used for comparing the treatment on cancer patients are surveys and experiment. In order to evaluate the strategies the features, advantages and disadvantages of both are discussed in the detail. The application of each of the research strategy on the selected topic is also provided in the essay.

## **Survey**

Survey is the research strategy in which brief interview of discussion is conducted with individuals in relation to a particular topic area. It is considered as the effective method because it helps the researcher in collecting particular and reliable information related to the topic. This research strategy can be made specific and limited or it can even be revolve around widespread or global goals. This is the reason that survey is given priority in health research because the investigator can decide whether to make survey wide or limited depending on the topic area. This is the reason that survey is given much important in health research and is considered as the effective research method that can be used for comparing the treatment on cancer (chronic myeloid leukaemia) patients (Fowler, 2013).

## **Features of Survey Strategy**

It is noticed that there are different features of survey strategy that is usually consider by the researcher at the time of using this strategy. Some of the key features of survey strategy are as follows:

## **Specific Objectives**

The core and initial phase in any survey is determining what an individual or researcher want to learn. Moreover, the objectives of the project define whom they will survey and what sort of queries they will ask. However, if the goals of the researcher are uncertain then the consequences will possibly be imprecise and it is imperative that all survey items must align with one or more of the survey goals (Monsen & Horn, 2007).

### **Straightforward Questions**

It is found that the preeminent survey items are ones that participants might comprehend and retort to directly. Furthermore, it is important from the prospect of researcher to keep the queries concise and clear and evade excessively difficult linguistic and structure in order to increase the credibility of the research to the utmost level (Phillips, et al., 2013).

### **Proper Sample**

In order to comprehend the views of a whole populace, it is imperative to collect retorts from a representative sample of that populace. Moreover, it is not vital to survey the whole population for the reason that greater sample size is not always superior. Furthermore, vigorously tracking the particular random sample all the way through follow-up calls and other modes of communication will have a massive effect on the accurateness and generalizability of their outcomes than merely increasing their sample pool.

### **Reliable and Valid**

Another important feature of survey is that authentic survey produce information that can be recreated and the substantial reviews measure the construct that they are intended to quantify.

### **Accurate Reporting of Results**

The results obtain from survey must be properly investigated and reported with a specific end goal to precisely speak to the points of view of the target population. All together for a report to be acknowledged by its target audience (group of stakeholders, for example, area division

staff, school staff, experts, understudies, and/or the group everywhere), it must be straightforward that analyst/surveyor inclination had no part in the elucidation and reporting of results. Furthermore, the credible reports incorporate both positive and negative outcomes; reports that just share the best survey results threat being ignored as public relations material and having negligible effect.

### **Advantages of Survey**

It is noticed that there are certain advantages of survey that help a researcher to get the views of people regarding the matter. Some of the key advantages of survey are as follows:

#### **High Representativeness**

It is noticed that survey gives a high level of general capacity in speaking to a huge populace. Moreover, because of the massive number of individuals who answers study, the information being collected and have a superior portrayal of the relative attributes of the overall public included in the research. When contrasted with different modes of data collection, survey are separate information that is close to the definite properties of the bigger populace (Mitchell & Jolley, 2012).

#### **Low Costs**

It is found that at the point when an individual conducting survey, they might just need to pay for the production of survey questionnaire. On the off chance that they might require a bigger specimen of the overall public, they can designate a motivation in real money or kind, which can be as low as they would easily pay. Then again, other information gathering modes, for example, focus groups and individual meetings oblige analysts to pay more that is difficult to pay at times (Bailey, 2008).

#### **Convenient Data Gathering**

It is noted that surveys might be controlled to the members through different ways. However, the questionnaires can just be sent by means of email or fax, or can be controlled through the internet. These days, the online survey technique has been the most appropriate method for collecting information from target members. Beside the convenience of information collection, investigator can easily gather information from individuals around the world (Wimmer & Dominick, 2013).

### **Precise Results**

It is noticed that as inquiries in the survey ought to experience cautious examination and setting, they give uniform demonstration to all the subjects who are to answer the questionnaires. Therefore, there is a more prominent accuracy as far as measuring the information collected (Leon, 2003).

### **Versatility of Survey**

It is found that survey research likewise has a tendency to be a solid technique of inquiry for the reason that surveys are standardized in that the same inquiries, expressed in the very same way, are postured to members. Moreover, the versatility of survey exploration is likewise an advantage and surveys are utilised by a wide range of individuals in a wide range of profession. In addition, the versatility offered by overview examination implies that seeing how to develop and manage studies is a helpful aptitude to have for a wide range of jobs. Furthermore, lawyers may utilise surveys in their endeavours to choose juries, and different associations use them to assess the viability of their endeavours, organisations use them to figure out how to advertise their commodities, governments use them to comprehend group views and needs, and lawmakers and media outlets use surveys to comprehend their constituencies (Cargan, 2007).

### **Disadvantages of Survey**

There are certain disadvantages of survey that should be consider by the researcher at the time of selecting survey as a research strategy for the reason that it would affect their overall goals and objectives of the research in a negative manner. Some of the key disadvantages of survey are as follows:

### **Inflexible Design**

It is observed that the survey was utilised by the investigator from the earliest starting point, and in addition the system for overseeing it, cannot be changed all through the procedure of information social event. Despite the fact that this inflexibility can be seen as a shortcoming of the survey technique, this can likewise be a quality considering the way that accuracy and fairness can both be practiced in the study (Leon, 2003).

### **Not Ideal for Debated Matters**

It is found that questions that bear controversies may not be unequivocally replied by the respondents in view of the presumably trouble of recalling the info identified with them. Moreover, the reality behind these debates may not be assuaged as precisely as when utilising alternative information gathering systems, for example, face-to-face interviews and so on (Wimmer & Dominick, 2013).

### **Invalidity**

However, validity can likewise be an issue with surveys for the reason that survey inquiries are standardized; in this way, it can be hard to ask something besides extremely broad inquiries that a broad scope of individuals will get it. As a result of this, survey results may not be as substantial as results got utilising systems for information accumulation that permit a researcher to all the more extensively analyse whatever theme is being concentrated on. In addition, an ineffectively stated inquiry can make respondents translate its significance in an unexpected way, which can decrease the queries dependability (Bailey, 2008).

### **Application on Topic**

It is found that most of the studies regarding the treatment of chronic myeloid leukaemia use survey strategy in order to get the views of people regarding the matter that are linked with this disease. Moreover, as indicated by preparatory results from an Australian survey of CML patients who have already had a profound molecular reaction to TKI treatment. In this considered survey, patients were gotten some information about halting their treatment if, eventually, their doctors thought it is sensible to do as such. It is noted that this considered study closed before the end of last year and got one hundred and fourteen reactions in which more than half of the respondents were female and the average age of the participants was 58 years. In addition, an immense amount of data was gathered and the outcomes are yet being examined, says foremost examiner, *Dr D.Ross*, Hematologist at SA Pathology (Robson, 2015).

It is found that the survey was conducted in two rounds. In the first round, CML patients who were being observed in the SA Pathology research center got welcome letters. Every one of these patients had a profound molecular reaction with a BCR-ABL level of 0.01 per cent or less (on the International Scale). Even though the majority of these patients were in SA, some interstate patients, for the most part those included in clinical trials, might likewise have gotten an invitation. On the other hand, in the second round of the study, individuals were welcomed through the Leukemia Foundation's CML database. There were around 60-65 respondents, from crosswise over Australia, who were interviewed at the end of 2014 (Robson, 2015).

### **Experiment**

Experiment is the scientific and systematic approach to research that makes use of one or more variables as well as measures and control changes in other variables. This strategy is

used in sciences such as psychology, sociology, biology, chemistry, medicine and others. it is regarded as the best research method for testing hypothesis that consider the relationship of cause and effect. It moves towards result by considering both practical and theoretical aspects of the research topic. Experiment is also known as the strategy in which scientist influences something in order to observe the consequences (Committee to Develop a Research Strategy for Environmental; Health and Safety Aspects of Engineered Nanomaterials; Board on Environmental Studies; Toxicology, 2012).

### **Features of Experiment**

There are different features of experiment that must be considered by the researcher at the time of conducting study by making use of this method. Some of the features are as follows:

#### **Random Assignment**

Random assignment is one of the features of experimental research strategy that makes evidence more rigorous that is certain outcome would be achieved by specific treatment. It is the process of assigning individuals at random to different groups within an experiment. One of the qualities of this feature that distinguishes true experiment from the less rigorous quasi experiments is random assignment of participants to groups. The main aim of this strategy is to make sure that group that receive diverse treatments are equal in any way that could influence the outcome (Polgar & Thomas, 2013).

#### **Control of Extraneous Variables**

Experiment studies have the characteristic of controlling extraneous variables. Relationship between the variables that are studies is confused due to these individual or environmental variables. In order to control extraneous variables, the researcher makes use of randomisation. It needs the participants of the study are selected randomly and they must even be assigned to treatment groups randomly. It is noticed that randomisation is regarded as

the integral element of experimental research method because it helps researcher in making equal treatment groups (Dyson, et al., 2005).

### **Manipulation of Treatment**

One of the significant features of experimental research is manipulation of treatment in which atleast one independent variable is manipulated. This is the phase in which the researcher decides about the variable that will serve as independent variable in the study to be manipulated and it also decides about the group of participants that are going to receive this particular treatment (Green & Thorogood, 2013).

### **Causality**

The experiment research method focuses on creating cause effect relationship among different variables. However, it is noticed that causality is not created at a constant level. The feature of causality is observed in environmental technology in comparison to socio-cultural aspects. Furthermore, causality is achievable in the laboratory settings that control relevant variables (Green & Thorogood, 2013).

### **Advantages of Experiment**

The experiment as the research strategy provides significant advantages. It provides high level of certainty due to which the changes in the outcomes of interest is attributed to the independent variable or treatment. Moreover, experiment makes use of random assignment due to which difference in the variable is attributed to the effect on topic in comparison to other variables. However, some of the common advantages of using experimental research strategy are as follows:

#### **Control over Variables**

With the help of experimental research strategy, the researcher can control independent variables. It also assists in removing the unwanted and extraneous variables due to which effective results or outcomes are ensured. Moreover, in experimental method, the control over irrelevant variables is higher in comparison to other research methods. Therefore, with the help of use this research strategy, the researcher can control the variables used in the study as per the requirement and scope of topic (Bailey, 2008).

### **Easy Identification of Cause and Effect Relationship**

One of the significant benefit of using experimental research strategy is that helps in determining the cause and effect relationship effectively. It includes manipulating variables that are independent because it helps in determining this relationship more easily (Monsen & Horn, 2007).

### **Better Results**

The experimental research makes use of experimenter and strict conditions in order to achieve better results. Experimental research is regarded as effective by the individuals because experiments can be repeated which provides the basis of checking results. Moreover, results obtained from the experiment give research confidence in relation to the study that the research is going on the right track because it provides better and effective outcomes. In addition to this, another advantage of experimental research design is that it provides insights for instruction processes, combining processes for rigidity, and conducting experiments. It also provides benefit of determining the best for the population and gives increased transferability (Cargan, 2007).

### **Disadvantages of Experiment**

The greatest drawback of experiment strategy is that it gives artificiality. It is noticed that effects that take place in an experiment under research control does not react in natural settings. Some of the significant disadvantages of this research strategy are provided below:

### **Failure to do Experiment**

One of the significant disadvantages of this research strategy is that experiments cannot be conducted at times because independent variables cannot be manipulated because of practical or ethical reasons. For example, experiments cannot be conducted in the situations in which the research is enthusiastic about the effects of certain situations such as tendency of helping others or effects of individual cultures. This is because the research is not capable of analysing the culture of an individual (Polgar & Thomas, 2013).

### **Develops Artificial Situations**

Experimental research strategy controls irrelevant variables, which serves as the disadvantage of the method. This depicts the fact that experiment has the tendency of initiating situations that are artificial (Dyson, et al., 2005).

### **Subject to Human Error**

This is the biggest disadvantage of experimental research method that it is subjected to human error, which affects the efficiency of the results. This means that experimental research can give rise of irrelevant or vague results because the experiments are conducted by the individuals, which are highly prone to errors or mistakes (Bailey, 2008).

### **Others**

Some other disadvantages of experimental research strategy includes unreliable samples, personal bias, artificial results and the outcomes that can be implemented on one certain situation. It is difficult to manipulate the outcomes of the experiment effectively, which is also the drawback of the method. Moreover, measuring human response is also difficult part

of the method that researcher has to face in order to reach on reliable results and conclusions. Furthermore, it is observed that results of the experiment do not have the capability of being generalised into real life situations (Sim & Wright, 2000).

### **Application on Topic**

Many of the studies on treatment of chronic myeloid leukaemia have made use of experiment as the research strategy for collecting data and analysing results. It is noticed from the study of Chen (2010) that in order to analyse the treatment of chronic myeloid leukaemia they made use of experiment as the research strategy. In this study, they conducted an experiment to illustrate challenges and solutions in the current research on this cancer. The experiment was performed on mice in which three types of mice models were used which includes BCR-ABL transgenic model, the retroviral bone marrow transduction model and human xenograft NOD/SCID mouse model. The result achieved from experiment shows that Alox5 plays vital role in the development of CML. This depicts the fact that experiment is the effective research strategy that can be used for reaching on reliable results for the studies on CML.

### **Conclusion**

The discussion above shows that survey focus on answering quantitative research questions within the health topic of chronic myeloid leukaemia. The research questions that need evaluation of the perceptions, attitude, and behaviour of the individuals in relation to the topic are answered best by making use of survey. While on the other hand, it is observed from above discussion that experiments answer hypothesis instead of research question. However, the type of hypothesis that is answered by experiments within health topic of chronic myeloid leukaemia must include atleast on experimental condition (treatment) and one control condition (no treatment).

## References

- Bailey, K., 2008. *Methods of Social Research*. 4 ed. s.l.:Simon and Schuster,.
- Cargan, L., 2007. *Doing Social Research*. s.l.:Rowman & Littlefield.
- Chen, Y., 2010. Critical molecular pathways in cancer stem cells of chronic myeloid leukemia. *Leukemia*, 24(9), pp. 1545-1554.
- Committee to Develop a Research Strategy for Environmental; Health and Safety Aspects of Engineered Nanomaterials; Board on Environmental Studies; Toxicology, 2012. *A Research Strategy for Environmental, Health, and Safety Aspects of Engineered Nanomaterials*. Washington: National Academies Press.
- Dyson, Simon, Brown & Brian, 2005. *Social Theory And Applied Health Research*. England: McGraw-Hill Education.
- Fowler, F. J., 2013. *Survey Research Methods*. s.l.:SAGE Publications.
- Green, J. & Thorogood, N., 2013. *Qualitative methods for health research*. s.l.:Sage.
- Leon, J. J., 2003. *Survey Research: In-person, Mail, Telephone and Web Methods*. s.l.: Streamline Surveys Inc.
- Mitchell, M. & Jolley, J., 2012. *Research Design Explained*. 8 ed. s.l.:Cengage Learning.
- Monsen, E. R. & Horn, L. V., 2007. *Research: Successful Approaches*. s.l.:American Dietetic Associati.
- Phillips, P. P., Phillips, J. J. & Aaron, B., 2013. *Survey Basics*. s.l.:American Society for Training and Development.
- Polgar, S. & Thomas, S. A., 2013. *Introduction to Research in the Health Sciences*. 6 ed. Melbourne: Elsevier Health Sciences.
- Robson, T., 2015. *THE ROAD'S BEEN TOUGH BUT NOW TERRY'S CREATING NEW POSSIBILITIES*, s.l.: CML NEWS.
- Sim, J. & Wright, C., 2000. *Research in health care: concepts, designs and methods*. s.l.:Nelson Thornes.
- Wimmer, R. & Dominick, J., 2013. *Mass Media Research*. 10 ed. s.l.:Cengage Learning.

