

# What is meant by a double-blind randomized controlled trial essay sample

[Sociology](#), [Social Issues](#)



## **Introduction**

The double-blind randomized controlled trial is an experimental procedure where neither the experiments subject nor the person conducting it has any information about the unique aspects of the experiment.

A double blind randomized controlled trial aims at measuring and comparing the outcomes that presents themselves from two or more clinical interventions. A single intervention will serve as a standard to compare or as the control in the experiment. The involved participants in the experiment will receive interventions in an organized random manner so that they all have the characteristics which are similar at every start of comparing them. Randomization is achieved using many procedures and it must be noted that double blind randomized controlled trials are not in a position to answer all clinical questions (Norton, 2008).

Double blind randomized controlled trial is among the simplest, most influential and a revolutionary tool that is very common in the field of research especially in the field of psychology. The individual subjects who are involved in the randomized controlled trial are called participants or study populations. It is not a mandatory for the study population to be ill since the experimental study is undertaken also in a healthy population. Investigators in this case are defined as individual who have the responsibility of designing the study, administering interventions, assessing results and giving analysis and interpretation.

In Double blind randomized controlled trial, clinical interventions are also referred to as clinical maneuvers and they involves diagnostic tests, therapeutic and preventive measures and screening tests. In an example,

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patients with rheumatoid arthritis will be the participants, and interventions will be the ibuprofen drug that will be administered in the experiment where participants will receive the anti-inflammatory drug.

Double blind randomized controlled trial will aims at measuring and comparing events that are either present or absent after the controls are given the intervention. These occurrences are known as outcomes.

Measuring the outcomes in Double blind randomized controlled trial is referred as quantitative studies.

In an experimental procedure to compare ibuprofen and perfecta fen, the investigators can decide to make pain be the main outcome and it will be measured according to patients who will achieve relief in a week after the drug was administered to them in treatment. Since the randomized controlled trial is based on comparison, the study is known as comparative studies.

They are considered experiments since investigators have the power to influence the amount, route and frequency and also the type of interventions that a participant goes through. Double blind randomized controlled trials are quantitative, comparative, and controlled experiments where a bunch of investigators will investigate a series of people randomly selected.

A double blind randomized control trial has share unique characteristics with other studies. The features include random allocation to groups, rational and the study objectives, methodologies used, research questions and answers that are expected, and finally, the recommendations and conclusions.

Despite of the method being one of the best suitable in research designs, it is not a guarantee that it is a panacea to answer the questions that are

brought forward in the experimental procedure.

Double-blind randomized controlled trials are ideal studies that are designed in a way that they will answer questions that are connected to the implications of healthcare interventions impossible to undergo moderations. The noun, “ interventions” is commonly used in the field of healthcare but its definition remains unclear. Most researchers refer to the term as having the meaning of treatment. The best meaning of intervention is considered to be the clinical manoeuver that is subjected to the study population and it have effects on their health status. The interventions may include preventive strategies, diagnostic tests, screening programs, and sensitization and education.

Double-blind randomized controlled trials can have questions that are considered to be inappropriate. These are questions that are interconnected to characteristics of healthcare and the investigators cannot influence their outcome. This involves issues intertwined in the etiology and natural history of disease conditions. In an example, it is inappropriate when the investigator designs an experiment where the participants will be randomized to either smoke or not to for a given span of time and a comparison to determine the frequency of cancer in smokers and those who do not smoke is done.

Before a researcher decides to carry out a Double-blind randomized controlled trial he must put into considerations any other study design that is more accurate in answering the clinical questions in the experimental procedure. The investigators must be alert in the process of the study and they must be keen to note the aspects that arises in double-blind RCTs. The

experiment is very important in issues involving healthcare but it's not a solution to all problems and it cannot answer all clinical questions in a particular study.

A Double-blind randomized controlled trial is also a subject to assumptions. It makes an assumption that the medical and non-medical effects that results as an outcome of clinical changes are independent. This has a meaning that a certain factor has no any effect to another factor. This is a problem since the chances of factors not influencing outcomes of other factors is very difficult to proof. A change might overlap each other and a big placebo response will limit the level of change to appear due to medication.

Therefore, the investigators are left in a position to limit the response of placebo.

The random allocation of participants will reduce selection bias but it does not shield the study from other types of biases. A bias is defined as any factor that diverts the aspects of truth in results of an experiment. The investigators believe that a properly conducted double blind RCT with a strong aspect of randomization will be consistent in similar experiments conducted in another setting.

The double blind RCT is the only study that allows researchers to balance the prognostic aspects that are not known at the baseline. The studies can also be designed in a way that they will spawn empirical evidence that will improve on the design, the ways of reporting, dissemination and use in healthcare settings (Jadad, & Enkin, 2007). It is important for investigators to note that there are a lot of instances where the method is inappropriate, unnecessary, insufficient and unable to act as a problem solver in problems

that are important.

A double-blind randomized control trial is acceptable in the field of medicine as a scientific objective method, that when accurately carried out, will produce outcomes that are free from bias. Its validity is based on the discrepancies that exist between the experimental procedure and the evidence found. The types of bias that are associated with the study include selection bias, masking bias, investigator self-selection and consent bias.

Randomized controlled trials are significant in psychological research since they are reflected as a gold level standard that can proof various research techniques where therapies and treatments are needed by scientific community. In a psychological double blind experiment, the researcher and the participants do not know who is supposed to be at the experiment group or control group. In other words, the participants and the experimenters are not in a position to determine which persons are to receive actual supplement, and which one to get a placebo. This is a suitable trial to eliminate unconscious and conscious bias by the participants and the experimenters; hence the results are unlikely to be biased.

In a situation involving double blind experiments, this trial can be used to watch against the expectancy of both the subject and the researcher or the investigator. For example, 37 gram chocolate bar could be administered to a participant. In this case, neither the participant nor the researchers are aware of such an experiment, consequently the source placebo effects actually take place during the trials. At this level, the participant and the researcher are able to consider that a strong new treatment is being tested. In this case the expectations of the experimenter are realized and hence

motivated the researcher in conducting further experiments.

In the double blind trial, a researcher is able to assign a series of figures to the “ old treatment” or “ new treatment” in psychological research. The subsequent researcher is therefore able to determine the figure but they are not in a position to determine what those figures are assigned to. Therefore, the second researcher cannot directly, or otherwise, tell the participant and cannot quit to patent pressure to administer the new treatment (Norton, 2008). This system also enables a more realistic distribution of ages and sexes of the participants. Therefore, the double blind trials are regularly referred in psychological research because they have capacity to yield more accurate results.

Randomized controlled trials are effective in helping the researcher to make decisions based on the questions like, if I have a disorder Y, is treatment d or c appropriate in treating that disorder? In many experiments it is important to consider the alternative treatment and randomized trials are effective on determining the effectiveness of the treatments. In our case, the researcher is able to determine whether dark chocolate or cocoa have significant effects on the neuropsychological functioning and cardiovascular health (Matthews, 2006).

Since the researchers are not familiar with drug being tested, the controlled randomized double blind trial helps him to administer the drug tested in small amounts of prescription to counter side effects. In the preliminary psychology there are values that have to be broadly recognized in order to get accurate results. These values include expectations, desires and beliefs that subconsciously determine how individuals perceive things. Therefore,

the trials explain the rationale under which various studies are conducted under double blind conditions. There is appealing experiential support that portrays the attitude and the expectation of the experimenters that contributes a great effect on the results of the experiment conducted. Another unique advantage of the random assignment in psychological research is the fact that they provide easy evaluation of the data. The researcher is able to evaluate where the interference itself, centrally to the other factors, causes the observed outcome (Ogden, 2008). The random assignment in the large number of the participants to either control group or intervention group enhances elimination of the systematic differences between the characterized groups. Therefore, the trial ensures that that the subsequent differences in outcome, between control and intervention group, can be confidently credited to the interposition only.

In many cases, the randomized controlled trial has various advantages that are involved in the assignment. Random assignment enhances evenly distribution, across conditions, of the known and unknown individuals and other characteristics that have impact on the interested outcome. Random assignment also levels the impact of the nonspecific process, not fundamental to the interference whose influence is under test. Nonspecific processes of the study involve participation effects, positive expectations, receiving attention, being assessed and self-monitoring among others. These assignments and the application of the control situation ensure that any extraneous dissimilarity not due to the interference is either randomized or controlled experimentally (American Psychiatric Association, 2000). This enables the outcome of the study to be causally ascribed to variations



between the control conditions and interference. Generally, the use of the randomized controlled trial provides the researcher with the confidence that the variations in outcome between control and treatment were essentially triggered by the treatment. This is because; random assignment is able to level the groups on all other variables.

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