

Observational research

Observational research is non-experimental research. Other kinds of non-experimental studies are correlational study, survey, interview and the case study which might include data collecting through interviews. In these kinds of studies, it is not possible to determine a cause-effect relationship because the researcher does not control the variables. It might be possible to find correlations between observed variables, but this does not indicate the direction of a cause.

Essentially, an observation requires a researcher to enter a situation where some behaviour of interest is likely to take place, to watch the nature and frequency with which particular forms of behaviour occur, and to make a record of what is observed. Eventually, the record of observations is used to help answer a particular research question. However, it is not always so clear what is meant by observational research. According to *Coolican* (1990), "there is an ambiguity in the use of the term 'observational' in research literature. It can refer to the use of observation as a technique for gathering data about behaviour in a study, which might in general be referred to as an experimental design. On the other hand, 'observational' might refer to the overall design of a study, in contrast to a controlled experiment".

It is clear, then, that the term 'observation' can be misleading. **Bandura** (1965) used observation as a technique in an experimental setting. In the notorious Bobo doll study, he used controlled observations to record amounts of aggression shown by children after they had watched an adult model being rewarded, unrewarded or punished for aggression. Each child was then observed in an identical play setting with an identical doll. This experimental setting can be compared to a field setting where observers study aggressive behaviour of children in the playground. In such a setting there is not the strict control over timing, position and analysis of filmed records of behaviour as in the experimental setting. However, many contemporary researchers find the experiment setting too artificial and they argue that behaviour studied out of context is meaningless.

Observation does not just mean casually watching something, because issues such as definition of units of behaviour or observations, structure, procedure, interpretation and recording are crucial. In an observational study the emphasis is on the overall nature of the study being non-experimental and on simply observing the naturally and freely occurring behaviour of people, with or without their knowledge. Some common reasons for conducting observational studies instead of experiments are that experiments may seem too artificial and lack ecological validity, and that sometimes observation is the only possible way to study a certain thing.

There has been an increasing concern among psychologists in recent year about quantitative research methods and the consequence is a growing number of strictly qualitative studies in mainstream psychology. The term qualitative is used here to mean 'non-numerical', i.e. we are dealing with verbal descriptions instead of information through numbers like in quantitative research methods. However, the distinction between the two styles of research is not so clear-cut, because a large part of quantitative research also generates much description, and many qualitative studies also generates numerical data. It is more correct to say that it is a matter of relative emphasis. *Reason and Rowan* (1981) criticised the over-use of quantitative methods claiming that..."there is too much measurement going on. Some things that are numerically precise are not true; and some things, which are not numerical, are true. Orthodox research produces results which are statistically significant but humanly insignificant; in human inquiry it is better to be deeply interesting than accurately boring."

Several observational techniques lend themselves rather better to qualitative research than does the experimental. Some examples of largely qualitative observation studies are:

1. The case study (which itself raises the issue of the relative values of nomothetic research (where a plurality of participants is involved) and idiographic research (which is, generally, the in-depth study of a single individual or event).
2. Clinical observation (as used by for example Piaget, Rogers and Freud).
3. The diary method (this involves the daily recording of the behaviour of a specific person)
4. Content analysis (this involves reducing qualitative data to quantified form in for example analysis of media messages for propaganda, children's books etc. for gender stereotypes, toilet

graffiti over a period of time (Bruner and Kelso 1980), television advertisements or soap drama for gender roles or violent themes or acts, personal advertisements for desiring a partner, comics for use of stereotypes etc. A crucial aspect of content analysis is the development of an appropriate coding system.

Systematic observation: Observation may seem easy at first hand, but conducting a fully rigorous scientific observation is not as easy as it might seem. One of the first challenges is being very clear about what exactly it is that you are observing. Try going to your local shopping centre or bus station, sitting on a bench, and writing down what you can see. You'll quickly find that there is too much going on; which is why we automatically can pay attention to some things and not to others. This is why we need to be very precise about what kind of data to gather and how.

The raw data gathered in an observational study can come in the form of **visual** (video (moving picture or still) observations through a one-way mirror; **audio** (tape recording of spoken observations as behaviour occurs), or **written** (notes, ratings made on the spot).

In all cases, data must be coded or categorised in order to analyse them, and the researcher must operationalise any measures being used. Observers also need a system where they can note down the frequency of the behaviour in focus and perhaps also the time etc. There may also be a rating scale (used for assessment of some kind of behaviour) or a coding system where particular positions of parts of the body are matched with a set of graphic symbols.

Observers can't observe everything, so they have to decide exactly what kind of behaviour they'll observe. They may conduct 'time sampling', i.e. observe for certain periods, 'point sampling', i.e. observe each individual's current category of behaviour before moving on to the next individual, or 'event sampling', and i.e. observe a specific event every time it occurs.

Systematic observation requires

- The selection of one type or form of behaviour for study.
- The construction of an observational system. This involves putting together a set of precise and relatively objective definitions of the various forms, which the target behaviour can take, and the situations under which observations are to be made.
- A sampling procedure for the collection of data must be specified (continuous observation, time sampling, point sampling).

Reliability of observational techniques

Researchers need reliable records and this can be achieved by correlating their results with those of other observers to produce an estimate of inter-observer - or inter-rater reliability. This reliability estimate may be low if there is observer bias. Because each person's view is unique and our perception is affected by many factors, there may be differences in how an observer reports certain behaviour. In order to achieve inter-rater reliability a standardised coding system and training of the observers.

It may be an advantage that several observers work at the same time, and sometimes independent observers are used. This has the advantages that one observer might notice what the other missed, and further, it allows the researcher to become aware of the amount of agreement between the observers. It is a standing joke among traffic police that twenty witnesses to an accident will have seen twenty different accidents. Observers often interpret what they have seen completely differently, and our memories are often adjusted until they fit with our interpretations. On the other hand, if different observers agree on what they have seen, it can be judged as reasonably valid. Inter-observer reliability is the amount of agreement between the different observers' report of the same phenomenon. If the correlation is of .8 or more, it is considered to be reliable. If the correlation is low, either there has been too much going on for one person to observe or the observers have been influenced by personal bias or expectations.

An example of a procedure for collection of data concerning an observation of aggressive behaviour in children

Child	Hits or shoves unprovoked	Hits or shoves following peers	Hits or Shoves in retaliation	Shouts at others unprovoked	Shouts at others following peers	Shouts at others in retaliation
A						
B						
C						

Example of Coding gender stereotypes in children's' book according to categories (stereotypes): content analysis

	Nurturant		Emotional		Aggressive		Active	
	Male	Female	Male	Female	Male	Female	Male	Female
Book 1								
Book 2								
Book 3								
Etc.								
Total								
Percentage								

Controlled and naturalistic observation

Researchers try to control their data gathering as far as possible, and they can do this especially in laboratory studies. However, lab studies are said to be artificial by many researchers so they prefer naturalistic observations where everyday behaviour is being observed in its natural setting.

Naturalistic observation: people/animals are observed in their natural environment. It can be researcher observing child behaviour in a kindergarten, shoppers in a shopping centre or students' behaviour in a school etc. An advantage of this is **ecological validity** and it is preferred when other approaches would be impossible or unethical but not all behaviour is exhibited in specific settings and there may be **reactivity** involved. Ethical considerations concerning whether the appropriateness to observe strangers without their knowledge.

Controlled observation: Researchers have set up a situation (an experiment, for example, to see how mothers and children interact in specific situations). Advantage: researchers have control but disadvantage: less ecological validity.

Non-participant observation means that the researcher is not part of the group being observed as inparticipant observation where the researcher becomes part of the target group. This decreases reactivity and increases ecological validity but the researcher may lose objectivity (observer bias) and it is not ethical (since the participants have not been asked in any way) and it can be dangerous. One famous study of participant research is the investigation of a cult by Festinger, Riecken and Shacter (1956). The researchers wanted to test Festinger's theory of 'cognitive dissonance' joined a cult that believed that the world was scheduled to end on a specific date, and got to know the cult members. Because of this they were able to talk with the members and see how their

beliefs changed when the world did not end (Festinger called this an example of cognitive dissonance). Deception is used in participant observation, because some information cannot be obtained without it. However, it is essential that the researcher respect the individual's privacy and the rule of confidentiality (see below for more details on this study).

In unstructured observations, the researcher will record all relevant behaviour, there is not a checklist, the behaviour to be studied is to a large extent unpredictable and observer reliability is difficult or impossible to estimate.

In **structured observations**, the researcher will record specific predetermined features of behaviour, he uses a checklist that has been developed before the observation, observer reliability is possible to estimate, and the behaviour to be studied can be predicted.

Examples of observational studies

- Sex role stereotyping in television, children's books etc. (content analysis)
- Violence in children's TV programmes (content analysis)
- 'The matching hypothesis' in marriage photos
- Female and Male preferences in Lonely Heart columns (sociobiological theory investigated)
- Prejudice/discrimination in newspapers (content analysis)
- Influence of sex on prosocial behaviour (see below).
- Children behaviour in a play ground (aggression)
- Cognitive development of children (e.g. Piaget's observational studies of children)

One example of an observational study dealing with the issue of prosocial behaviour One variable which has been found to influence prosocial behaviour is the sex of the person needing help and assistance. In the USA Pomazal and Clore (1973) set of an experiment in which a car was parked at the side of the road and either a male or a female confederated pretended to be jacking up the car or change a flat tyre. The confederate did not look in the direction of passing cars or make any gestures for them to stop. The researchers found that the female confederate was offered assistance by approximately one in four of the cars passing. The male confederate was offered assistance by only one in fifty of the cars passing. Those stopping to help were almost all males. Another study by West, Whitney and Schnedler (1975) used a car by the side of the road with the bonnet raised. Again females were offered assistance much more frequently than males and almost all of the people who stopped to assist were males.

Festinger, Riecken and Schacter (1956) . In the 1950s the social psychologist Leon Festinger read a newspaper report about a religious cult that claimed to be receiving messages from outer space predicting the end of the world in the form of a great flood. Festinger and some co-workers joined the group and posed as converts to the case, but they actually performed a participant observation of the cult who thought they were to be rescued by a flying saucer when the rest of a city in the US was to be destroyed. The cult members had actively publicised the prophecies, and in some cases had sold their houses and resigned from jobs. The researchers wanted to see what happened to the cult members when the world did not go under. The theory of cognitive dissonance predicted that the cult members would eventually change their cognitions or their behaviour when there was no dissonance between their cognitions. When the date arrived and there was no flood, some of the group members coped with it with an additional belief: their prayer had saved the city and other members simply left the cult. This confirmed the theory of cognitive dissonance. Eventually the cult members went their separate ways.

Evaluation of dissonance theory: The theory of cognitive dissonance (that two psychologically inconsistent cognitions will cause dissonance and make the individual try to reduce it by attitude change) see people as rationalising, trying to appear rational to both oneself and to others. Criticism has come from many parts, for example from (Tedeschi and Rosenfield, 1981) who argue

that much attitude change is seen as an attempt to avoid social anxiety and embarrassment or to protect the positive view of one's own identity. Accordingly, the roots of tension hypothesised by Festinger may be in people's social concerns with how others might evaluate them and how they should evaluate themselves. But in spite of this and other challenges "cognitive dissonance theory remains one of the most widely accepted explanations of attitude change and many other social behaviours". (Hogg and Vaughan, 1995).

Some links that can be used to explore observational research.

- [Content analysis of media texts](#) (many good examples on gender)
- [A content analysis of gender differences in children's advertising](#) (article that could be used as background)
- [A site with content analysis of women in the media](#)
- [A site with content analysis of images of youth in television](#)

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