



## Medical Ethics

## Deception and informed consent in social, behavioral, and educational research (SBER)

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## ABSTRACT

Informed consent is the most essential part of research ethics. The requirement to explain an experiment to the participants who provide tissues/information in order to obtain their voluntary consent is absolutely necessary in any research project. It is an expression of respect regarding the autonomy of the person who participates in the experiment. Why and how is informed consent required and what if some information is intentionally withheld to facilitate the participation? This paper will briefly review the history of informed consent, discuss the components of an ethically valid informed consent and examine deception in research. Sometimes, deception is used in Social, Behavioral and Educational Research (SBER) in order to obtain accuracy information. Can this be justified? There is no doubt that, for some psychological and sociological experiments, the less the subjects know the better. The Bystander Apathy Experiment and the Milgram Experiment will be used here as examples that are discussed and analyzed. In general, deception is not acceptable in human studies. Occasionally, it is necessary to mislead the participants who are subjects of a study in order to obtain unbiased information. The Institute Review Board (IRB) must review very carefully the proposals that use deception or misrepresentation. The reasons that deception is necessary for the study purpose need to be justified in depth and there must be provision in the procedures to protect the participants. When the study is completed, it is essential that a debriefing by the investigator is provided that explains any deception or incomplete disclosure involved; this should also help the subjects to deal with any distress or discomfort experienced in the research.

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## 1. Introduction

Most students cheat in some way, usually by plagiarizing a couple of sentences or even a whole paragraph from a published paper in their term papers or reports. The regulations guarding copyright clearly prohibit plagiarizing, and plagiarizing is regarded as a breach of the author's intellectual property rights. Research is supposed to discover new scientific information in order to broaden scholastic knowledge and benefit the whole of human society. Therefore, any plagiarizing, fabrication, or falsification of data needs to be considered unethical. However, it has been revealed that occasionally researchers have deceived their study participants or intentionally omitted essential information during the consent process. One of the most famous incidents is the

Tuskegee Syphilis Study. The Stanford prison experiment by Philip Zimbardo [1] is also occasionally mentioned. These two studies were conducted in the past, but it is very likely that similar events are happening today and will happen again in the future.

Should deception be allowed in research, especially in social and behavioral studies? Some researchers believe that the most objective experimental results can only be obtained when the participants know as little as possible, or must deception be totally rejected and disallowed in research?

## 2. Deception in research

The controversial experiment carried out by Professor Hwang Woo-Suk of Korea who falsified his data in claiming his achievement of creating human stem-cell lines using cloned embryos in 2006, has promoted much discussion about deception in research, but deception in research is not new. The Tuskegee study is an example of scientists who lied to the participants about the nature

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of the research and concealed some information in order to obtain information that otherwise would have been impossible to gather.

### 2.1. Three examples of deception in research

1. The Tuskegee syphilis study was conducted from 1932–1972 in Tuskegee, Alabama, with the aim of studying the natural progression of untreated syphilis in poor rural black men. A total of 600 impoverished African American individuals who had previously contracted syphilis were recruited, and among these participants 201 were without the disease. These men were given free medical care, meals, and free burial insurance, but they were never informed about the availability of effective treatments for the disease (salvarsan and  $\beta$ -lactam antibiotics were available before and after World War II, respectively), nor did they receive such treatment [2].
2. The good samaritan behavior study, the so-called “bystander apathy experiment,” was intended to determine out how people respond to cruelty or accidents that take place in their presence. Using a prearranged model, either a person who was apparently drunk or carrying a cane would collapse in a New York subway train, the researchers observed and measured the amount of helpful intervention that was given by members of the unsuspecting public. The study was motivated after the rape and murder of Kitty Genovese, who allegedly screamed for 30 minutes while she was being brutally killed and raped, yet no one, including bystanders and neighbors, intervened or phoned the police [3].
3. The well-known Milgram experiment was an experiment on obedience to authority. This was conducted by Stanley Milgram, a Yale University psychologist, who measured the participants' willingness to obey an authority who instructed them to perform acts that conflicted with their personal conscience. This study required the volunteer participants act as teachers who would send an electric shock to the students (who were confederates of the experiment) when they gave wrong answers to the questions posed by the teacher. The participants believed that for each wrong answer the learner received actual shocks. In reality, no shocks were administered. After the confederate was separated from the participant, the confederate set up a tape recorder that played prerecorded sounds of each shock level. After a number of increases in the voltage, the actors, who were primarily students, would start banging on the wall to show their pain. The participants were assured that they would not be held responsible for any injuries, but they were told to torture the student until the correct answer was given. The aim of the experiment was to reveal how people respond to orders when those under their control suffer great pain that they themselves had to inflict [4].

### 2.2. Ethical questions arising from these experiments

1. The researchers in charge of the Tuskegee experiment lied to the participants regarding the nature of study and deprived them of the right to receive effective syphilis treatment. This study, when discovered, resulted in a hearing on Capitol Hill, Washington, DC, USA, that eventually resulted in the Belmont Report. The aim of this report was to ensure that human protection in experiments must be observed. This experiment is a typical example of deception in research where the true nature of the study is concealed and the participant is deprived of basic human rights. Such experiments violate the duty of the researcher to always protect their participants from harm. This example asks us to think about why the participants were lied

to and why the participants were denied the right to receive effective treatment.

2. The good samaritan experiment was a social and behavioral study that intended to determine if people really are apathetic. This study concealed from the public that it was participating in a study and that the person playing the victim was an actually an actor who wasn't actually hurt. It used a degree of deception so that the true reactions of the individuals could be observed. Some have argued that unless some deception was deployed, no reliable information could have been obtained because the experiment could not have been performed any other way. Nevertheless, the public did not know what was happening and was being taken advantage of without being asked for their consent. Furthermore, the situation was prearranged without public knowledge. Is this kind of experiment fair to everyone, and why was the public not informed? Those who responded had been misled and information was collected about them without their consent.
3. The Milgram experiment was an attempt to determine how those accused at the Nuremberg Trials could justify their claims that they were only obeying the orders of the Nazi authority. The participants who were recruited as teachers were not informed that the electric shock and the painful sounds they heard from the students were actually artificial. In fact, they were deceived throughout the whole process, but they became important tools that helped to discover how human conscience reacts when a fellow human being suffers from pain that is inflicted by one's self. Furthermore, the experiment explored how commands from an authority that requested their total obedience affected these participants' rational reasoning when seeing that the other participants were suffering from the pain that they themselves had inflicted. Those participating as teachers were never told everything about the study, so information was not adequately provided. The consent that was obtained was insufficient.

### 3. What is deception and why is it used?

Deception refers to any action designed to mislead others by distorting, falsifying, or misinforming individuals so that they are manipulated to react in a certain manner. It can be carried out in a variety of different ways, such as dissimulation, propaganda, beguilement, mystification, and other approaches. According to Anderson's study, deception consists of the following forms [5]:

1. Lies: to make up information or give information that is false or very different from the truth.
2. Equivocations: to make an ambiguous or contradictory statement.
3. Concealment: to omit important or relevant information in order to mislead the participant or public.
4. Exaggerations: to overstate or extend the truth to a further degree; for instance, telling the participant that participation in the experiment will benefit their health.
5. Understatements: to minimize or scale down facts or the truth.

Some of these forms overlap, but they always have one thing in common: they purposely mislead the participants. A frequently asked question when discussing deception is, “Why do individuals lie?” Does deception bring any pleasure or any interest to the person who deceives? People are sensitive to how they look and how other people think of them, therefore many will disguise themselves either to hide something or to exaggerate something in order to make themselves feel better or more comfortable. If people appear to be sincere and earnest when asking a favor, they may

have a better chance of receiving a positive response. Deception can really pay off and, therefore, it almost becomes a part of daily life. If we ask students if they have ever cheated on examinations, the answer is predictably negative. However, if we ask the question in a different way that will not cause embarrassment in order to save face or imply any punishment, some students may admit to cheating.

This “face saving” mentality of human kind has propelled researchers, especially those in the social and behavioral sciences, to design their research questionnaires in a skillful way that does not go straight to the point. Instead, questions are modified somewhat to make sure that the participants respond candidly. Here, we see deception coming from both sides. The researchers may pose a question in a polite neutral way, yet the participant may also conceal their true selves by giving the answer they are comfortable giving. Based on the abovementioned examples, some scientists have argued that white lies are allowed in research.

In other instances, we also find deceptive tactics that are employed during war; for example, camouflage may be used to trick the enemy. Animals also use this technique to fool predators and protect themselves. A security company may publicly announce that it will ship a large gold shipment down one route, while in reality it will take a different route. Deception comes in many forms.

#### 4. Can deception in research be justified?

Is it possible to justify deception in research? Does something that is regarded as justifiable mean that it is ethical? As mentioned above, some researchers, especially those in the fields of the social and behavioral sciences, believe that skillful deception without any potential harm to the participants should be contextually allowed in order to ensure the objectivity and accuracy of the research being performed. As in the case of Milgram’s experiment, if the participants (i.e., the teachers) were told beforehand that the electric shocks were not real, the results would not have been reliable, and thus the whole experiment would have been meaningless. Therefore, in certain types of research, sometimes measures need be taken to ensure that the participants are not fully aware of all of the procedures and the design of the research. There are, however, those who oppose using deception in research because they regard such deception as a violation of good faith and of the individuals’ trust in scientists, as well as being a breach of ethics. The debate still goes on, but here are the primary reasons in favor and against deception in research.

##### 4.1. Arguments in favor of the use of deception in research

1. Using deception is the only way to obtain certain kinds of information. Prohibiting all deception in research will “have the egregious consequence of preventing researchers from carrying out a wide range of important studies” [6].
2. Those who do not object to the use of deception note that there is always a constant struggle to balance the study findings so that deception is not harmful to the participants. Christensen, who understands the struggle to balance findings, stated “the need for conducting research that may solve social problems and the necessity for preserving the dignity and rights of the research participant have been found throughout the review of the literature” and that the research participants do not perceive that they are harmed and do not seem to mind being misled [7].
3. In order to acquire reliable and unbiased research results, especially in psychological experiments, the less that the subject knows, the better.

##### 4.2. Arguments against the use of deception in research

1. Any deception in research is inappropriate and takes advantage of the implicit trust and obedience given by the participants to the researcher. When the participant volunteers to participate, their dignity must be preserved and should not be taken for granted. Deception can strongly affect the reputation of the individual laboratories and the scientific profession, thus contaminating the pool of participants[8].
2. If the subjects in the experiment are suspicious of the researcher, they are unlikely to behave as they normally would and the researcher’s control of the experiment is then compromised.
3. The values that research ethics rely on include integrity, accuracy, efficiency, and objectivity [9].

#### 5. Informed consent in experimental research

The most essential part of a research study’s credibility lies in obtaining informed consent from the participants. Any experiment must obtain consent from the participants prior to the study. For the informed consent to be ethically valid, it must include these components:

1. Disclosure: The potential participant must be fully informed of the purpose, method, rationale of the research, the procedures the participants will go through, and any possible benefits. In addition, the potential of any reasonably foreseeable risks, stresses, and discomforts must also be disclosed. A guarantee of privacy and confidentiality needs to be provided to the participant. The informed consent document must also include the compensation and medical treatments that are available in case research-related injuries occur. The name and phone number of the person responsible also need to be made available.
2. Comprehension: The participant must understand what has been explained and must be given the opportunity to ask questions. The informed consent document must exclude any technical terms and be plainly written in language that an eighth grade student could easily understand.
3. Voluntariness: The participant’s consent to participate in the research must be voluntary and free of any coercion or allurements.
4. Competence: The participant must be competent enough to understand what is going on and be capable of giving consent. If the participant is not competent due to mental status, disease, or emergency, a designated surrogate may provide consent if it is in the participant’s best interest to participate.
5. Consent: The potential human participant must authorize his/her participation in the research study, preferably in writing, although at times oral consent may be acceptable.

These components clearly indicate that any experiment must be fully explained in terms of its purpose, methods, extent of the experiment, and details regarding any possible positive or negative effects to the participant. Informed consent that does not include these thorough disclosures is not complete. A deceptive research study cannot possibly receive full informed consent because the researcher is hiding its true purpose from the subject, either to prevent rejection by the participants or to allow the designed deceptive research protocol to be carried out smoothly. If the participant gives consent when there is incomplete information, this consent is questionable because there may be a hidden agenda by the researchers. Consent under this type of cloud results in misinformation that can harm people. From this point of view, any

deception in research should not be approved by any institutional review board because it fails to satisfy the requirement of protecting the human participants. The primary concern of the investigator should be the safety of the research participants. Any possible risk must be explained and made known, and the scientific investigator must obtain informed consent from each research participant. The participant should have the right to carefully consider the risks and benefits and to ask any pertinent questions. In this context, informed consent should be seen as an ongoing process, not a singular event or a mere formality.

## 6. Informed consent in social and behavioral research

There is a concern that if the institutional review board takes a hard stand on reviewing the protocols of a social and behavioral study, many research projects will be blocked by such high moral standards. Athanassoulis and Wilson of Keele University, England, argue that in some circumstances withholding some information from the research participants can be ethically acceptable because “there are certain kinds of research that cannot be done without deception and in some instances providing a thorough information about the study will invalidate the result because it may lead the participants to modify their behavior in light of this information.” They argue that rejecting deception in research is too extreme and suggest that institutional review boards focus on why sometimes withholding information from the participants is reasonable and necessary for the research to be accurate [10].

Sokol draws the conclusion in his article on dissecting deception that whether withholding information is deceptive in a given circumstance depends on three things [11]:

1. The agent's intention;
2. What expectations would normally be considered reasonable under the circumstances;
3. Whether the attempted deception is successful.

Two cases presented by Ananassoulis and Wilson invite deliberation regarding whether conditional deception is acceptable in social and behavioral research [10].

1. A real but modified case presented by Rucola proposes a study to measure the salad-eating habits of the general public. She will ask members of the public to fill out a questionnaire on their general eating habits over a period of time, and from this material she will gather information on salad consumption. Her consent form explains that she is carrying out research on eating habits but will not mention that she is only interested in salad consumption because she is worried that revealing this fact will distort the results if people know that she is measuring salad-eating habits. Given the assumptions about healthy eating and the benefits of eating salad, her subjects will either change their eating habits or inaccurately report their eating habits.
2. A fictional case presented by John proposes to set up a relatively inconspicuous unattended camera in a room in which healthcare professionals break bad news to patients. He will analyze the communication and the body language of both participants and write a paper on the best way to break bad news. He proposes to seek consent from all of the healthcare professionals involved in the study; however he does not want to scare the patients beforehand so he will tell them that he is only interested in how doctors talk to patients and will not specifically mention the issue of breaking bad news. All of the patients' names will be concealed and he will destroy the tapes as soon as he has completed the study.

These two cases are similar in that disclosure of the precise purpose of the study is hidden in both cases. The principal investigator's real intention, in terms of research, is concealed because if the real intention was made known the participants would most likely alter their behaviors. In both cases, the principal investigator deliberately withholds relevant information and intentionally misleads the participants for the sake of the study itself.

Deception can also be explained as representing one's work as something other than what it really is. Deception varies in degree. A low degree of deception may consist of a researcher giving the participant limited knowledge about the research so that he or she will respond naturally. A high degree of deception may consist of the researcher lying about the purpose of the study or about his or her reasons for participation in a particular group.

The two cases can be categorized as low degrees of deception, but whether or not they are considered low or high degrees of deception they are hard for some ethicists to swallow. Inadvertent deception is already regarded as unforgivable, let alone intentional deception. In social and behavioral research, intentional deception is defined as (1) withholding information in order to get subjects to participate in something that they might otherwise decline, (2) using deceptive instructions and manipulations in laboratory research, and (3) concealing and staging manipulations in field research [12]. Those who condone deception still argue that researchers need deception in order to assure the validity of a given study and its value to the scientific community [13].

Debriefing is required upon the completion of experiments, and the American Sociological Association's (ASA) code of ethics requires that investigators debrief participants who have been deceived [14].

Researcher must debrief the participants at the conclusion of the study about the true purpose of the study and interview them about their experiences. This allows the researcher to assess any concerns that participants might have had about the research. The principal investigator can gather the participants together to do a group debriefing or choose to gradually reveal the deceptive nature of the study to each individual. The explanation of why the experiment had to proceed this way should be given and the results of the experiment should be shared with them. There should be an explanation as to why it was necessary in order to prevent any shock. The most important aspect of the debriefing is that the participants do not leave with negative feelings about the research.

The goal of debriefing is to correct the unethical nature of deception by being honest about what the study is really about and correct any problems. However, the act of debriefing can cause problems in and of itself. Some participants may be angered and embarrassed when the truth is revealed. Some will harbor negative feelings and a mistrust of researchers caused by a scientific study that is different from what they thought. Thus, some debriefings can foster more negative feelings. Therefore, the ASA states in their code of ethics [14]:

- (a) Sociologists do not use deceptive techniques (1) unless they have determined that their use will not be harmful to research participants; is justified by the study's prospective scientific, educational, or applied value; and that equally effective alternative procedures that do not use deception are not feasible, and (2) unless they have obtained the approval of institutional review boards or, in the absence of such boards, with another authoritative body with expertise on the ethics of research.
- (b) Sociologists never deceive research participants about significant aspects of the research that would affect their willingness to participate, such as physical risks, discomfort, or unpleasant emotional experiences.

- (c) When deception is an integral feature of the design and conduct of research, sociologists should attempt to correct any misconception that research participants may have no later than at the conclusion of the research.
- (d) On rare occasions, sociologists may need to conceal their identity in order to undertake research that could not practicably be carried out were they to be known as researchers. Under such circumstances, sociologists should undertake the research only if it involves no more than minimal risk to the research participants and if they have obtained approval to proceed in this manner from an institutional review board or, in the absence of such boards, from another authoritative body with expertise on the ethics of research. Under such circumstances, confidentiality must be maintained unless otherwise set forth in 11.02(b).

## 7. Conclusion

Deception in research is unethical because the spirit of research requires a high moral standard. Medical ethics has reiterated the importance of integrity and justice, and the protection of the participant should always be of the utmost concern. Those that condone soft deception indicate that, at times, deception in social and behavioral research has no alternative, therefore consideration of the circumstances and context is important. This consideration coincides with the Chinese way of decision-making that looks into the element of circumstance, for instance, under what situation the act is obligedly committed, rather than appealing to law and regulation only [15]. Having said this, we must still remember that

deception, misinformation, distortion, equivocation, and beguilement in research cannot be accepted.

## References

- [1] Zimbardo P. *The Lucifer effect: understanding how good people turn evil*. New York: Random House; 2007.
- [2] Jones J. *Bad blood: the Tuskegee syphilis experiment*. New York: Free Press; 1981.
- [3] Hudson JM, Bruckman AS. The bystander effect: a lens for understanding patterns of participation. *J Learn Sci* 2004;13:165–95.
- [4] Stanley M. *Obedience to authority*. New York: Harper & Row; 1974.
- [5] Guerrero L, Anderson P, Afifi W. *Close encounters: communication in relationships*. 2nd ed. Los Angeles: Sage Publications; 2007.
- [6] Kimmel AJ. In defense of deception. *Am Psychol* 1998;53:803–5.
- [7] Christensen L. Deception in psychological research: when is its use justified? *Pers Soc Psychol Bull* 1988;14:664–75.
- [8] Ortmann A, Hertwig R. The question remains: is deception acceptable? *Am Psychol* 1998;53:8067.
- [9] Steneck NH. *Introduction to the responsible conduct of research (Chinese version)*. Taipei: United University System; 2007. p. 23.
- [10] Athanassoulis N, Wilson J. When is deception in research ethical? *Clin Ethics* 2009;4:44–9.
- [11] Sokol D. Dissecting deception. *Camb Q Healthc Ethics* 2006;15:457–64.
- [12] Baumrind D. Research using intentional deception: ethical issues revisited. *Am Psychol* 1985;40:165–74.
- [13] Cook KS, Toshio Y. A defense of deception on scientific grounds. *Soc Psychol Q* 2008;71:215–21.
- [14] American Sociological Association. 12.05 Use of deception in research. American Sociological Association: "Code of Ethics." Washington DC: American Sociological Association. Available online at: <http://www.asanet.org/galleries/default-file/Code%20of%20Ethics.pdf>; 1999 [accessed 21.10.2008].
- [15] Tai MC. A confucian perspective on bioethical principles in ethics consultation. *Clin Ethics* 2007;2:201–7.