



15 Famous Experiments And Case Studies In Psychology

By Chris Drew (PhD) / January 21, 2023

Psychology has seen thousands upon thousands of research studies over the years. Most of these studies have helped shape our current understanding of human thoughts, behavior, and feelings.

The psychology case studies in this list are considered classic examples of psychological case studies and experiments, which are still being taught in introductory psychology courses up to this day.

Some studies, however, were downright shocking and controversial that you'd probably wonder why such studies were conducted back in the day. Imagine participating in an experiment for a small reward or extra class credit, only to be left scarred for life. These kinds of studies, however, paved the way for a more ethical approach to studying psychology.

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Case Study Vs. Experiment

Before we dive into the list of the most famous studies in psychology, let us first review the difference between case studies and experiments.

Case Study

- It is an in-depth study and analysis of an individual, group, community, or phenomenon. The results of a case study cannot be applied to the whole population, but they can provide insights for further studies.
- It often uses qualitative research methods such as observations, surveys, and interviews.
- It is often conducted in real-life settings rather than in controlled environments.

Experiment

- [An experiment](#) is a type of study done on a sample or group of random participants, the results of which can be generalized to the whole population.
- It often uses quantitative research methods that rely on numbers and statistics.
- It is conducted in controlled environments, wherein some things or situations are manipulated.

Famous Experiments In Psychology

1. The Marshmallow Experiment

Psychologist Walter Mischel conducted the marshmallow experiment at Stanford University in the 1960s to early 1970s. It was a simple test that aimed to define the connection between [delayed gratification](#) and success in life.

The instructions were fairly straightforward: children ages 4-6 were presented a piece of marshmallow on a table and they were told that they would receive a second piece if they could wait for 15 minutes without eating the first marshmallow.

About one-third of the 600 participants succeeded in delaying gratification to receive the second marshmallow. Mischel and his team followed up on these participants in the 1990s, learning that those who had the willpower to wait for a larger reward experienced more success in life in terms of SAT scores and other metrics.

The classic marshmallow experiment, however, was debunked in a [2018 replication study done by Tyler Watts and colleagues](#). This more recent experiment had a larger group of participants (900) and a better representation of the general population when it comes to race and ethnicity. In this study, the researchers found out that the ability to wait for a second marshmallow does not depend on willpower alone but more so on the economic background and social status of the participants.



2. The Bystander Effect

In 1964, Kitty Genovese was murdered in the neighborhood of Kew Gardens, New York. It was told that there were up to 38 witnesses and onlookers in the vicinity of the crime scene, but nobody did anything to stop the murder or call for help.

Such tragedy was the catalyst that inspired social psychologists Bibb Latane and John Darley to formulate the phenomenon called [bystander effect](#) or [bystander apathy](#).

Subsequent investigations showed that this story was exaggerated and inaccurate, as there were actually only about a dozen witnesses, at least two of whom called the police. But the case of Kitty Genovese led to various studies that aim to shed light on the bystander phenomenon.

Latané and Darley tested [bystander intervention](#) in an [experimental study](#). Participants were asked to answer a questionnaire inside a room, and they would either be alone or with two other participants (who were actually actors or confederates in the study). Smoke would then come out from under the door. The reaction time of participants was tested — how long would it take them to report the smoke to the authorities or the experimenters?

The results showed that participants who were alone in the room reported the smoke faster than participants who were with two [passive](#) others. The study suggests that the more onlookers are present in an emergency situation, the less likely someone would step up to help, a [social phenomenon](#) now popularly called the bystander effect.



3. Asch Conformity Study

Have you ever made a decision against your better judgment just to fit in with your friends or family? The Asch Conformity Studies will help you understand this kind of situation better.

In this experiment, a group of participants were shown three numbered lines of different lengths and asked to identify the longest of them all. However, only one true participant was present in every group and the rest were actors, most of whom told the wrong answer.

Results showed that the participants went for the wrong answer, even though they knew which line was the longest one in the first place. When the participants were asked why they identified the wrong one, they said that they didn't want to be branded as strange or peculiar.

This study goes to show that there are situations in life when people prefer fitting in than being right. It also tells that there is power in numbers — a group's decision can overwhelm a person and make them doubt their

judgment.



4. The Bobo Doll Experiment

The Bobo Doll Experiment was conducted by Dr. Albert Bandura, the proponent of [social learning theory](#).

Back in the 1960s, the Nature vs. Nurture debate was a popular topic among psychologists. Bandura contributed to this discussion by proposing that human behavior is mostly influenced by environmental rather than genetic factors.

In the Bobo Doll Experiment, children were divided into three groups: one group was shown a video in which an adult acted aggressively toward the Bobo Doll, the second group was shown a video in which an adult play with the Bobo Doll, and the third group served as the control group where no video was shown.

The children were then led to a room with different kinds of toys, including the Bobo Doll they've seen in the video. Results showed that children tend

to imitate the adults in the video. Those who were presented the aggressive model acted aggressively toward the Bobo Doll while those who were presented the passive model showed less aggression.

While the Bobo Doll Experiment can no longer be replicated because of ethical concerns, it has laid out the foundations of social learning theory and helped us understand the degree of influence adult behavior has on children.



5. Blue Eye / Brown Eye Experiment

Following the assassination of Martin Luther King Jr. in 1968, third-grade teacher Jane Elliott conducted an experiment in her class. Although not a formal experiment in controlled settings, *A Class Divided* is a good example of a social experiment to help children understand the concept of racism and discrimination.

The class was divided into two groups: blue-eyed children and brown-eyed children. For one day, Elliott gave preferential treatment to her blue-

eyed students, giving them more attention and pampering them with rewards. The next day, it was the brown-eyed students' turn to receive extra favors and privileges.

As a result, whichever group of students was given preferential treatment performed exceptionally well in class, had higher quiz scores, and recited more frequently; students who were discriminated against felt humiliated, answered poorly in tests, and became uncertain with their answers in class.



6. Stanford Prison Experiment

One of the most controversial and widely-cited studies in psychology is the [Stanford Prison Experiment](#), conducted by Philip Zimbardo at the basement of the Stanford psychology building in 1971. The hypothesis was that abusive behavior in prisons is influenced by the personality traits of the prisoners and prison guards.

The participants in the experiment were college students who were

randomly assigned as either a prisoner or a prison guard. The prison guards were then told to run the simulated prison for two weeks. However, the experiment had to be stopped in just 6 days.

The prison guards abused their authority and harassed the prisoners through verbal and physical means. The prisoners, on the other hand, showed submissive behavior. Zimbardo decided to stop the experiment because the prisoners were showing signs of emotional and physical breakdown.

Although the experiment wasn't completed, the results strongly showed that people can easily get into a social role when others expect them to, especially when it's highly [stereotyped](#).



7. The Halo Effect

Have you ever wondered why toothpastes and other dental products are endorsed in advertisements by celebrities more often than dentists? The Halo Effect is one of the reasons!

The Halo Effect shows how one favorable attribute of a person can gain them positive perceptions in other attributes. In the case of product advertisements, attractive celebrities are also perceived as intelligent and knowledgeable of a certain subject matter even though they're not technically experts.

The Halo Effect originated in a classic study done by Edward Thorndike in the early 1900s. He asked military commanding officers to rate their subordinates based on different qualities, such as physical appearance, leadership, dependability, and intelligence.

The results showed that high ratings of a particular quality influences the ratings of other qualities, producing a halo effect of overall high ratings. The opposite also applied, which means that a negative rating in one quality also correlated to negative ratings in other qualities.

Experiments on the Halo Effect came in various formats as well, supporting Thorndike's original theory. This phenomenon suggests that our perception of other people's overall personality is hugely influenced by a quality that we focus on.





8. Cognitive Dissonance

There are experiences in our lives when our beliefs and behaviors do not align with each other and we try to justify them in our minds. This is cognitive dissonance, which was studied in an experiment by Leon Festinger and James Carlsmith back in 1959.

In this experiment, participants had to go through a series of boring and repetitive tasks, such as spending an hour turning pegs in a wooden knob. After completing the tasks, they were then paid either \$1 or \$20 to tell the next participants that the tasks were extremely fun and enjoyable. Afterwards, participants were asked to rate the experiment. Those who were given \$1 rated the experiment as more interesting and fun than those who received \$20.

The results showed that those who received a smaller incentive to lie experienced cognitive dissonance — \$1 wasn't enough incentive for that one hour of painstakingly boring activity, so the participants had to justify that they had fun anyway.

Famous Case Studies In Psychology

9. Little Albert

In 1920, [behaviourist theorists](#) John Watson and Rosalie Rayner experimented on a 9-month-old baby to test the effects of classical conditioning in instilling fear in humans.

This was such a controversial study that it gained popularity in psychology

textbooks and syllabi because it is a classic example of unethical research studies done in the name of science.

In one of the experiments, Little Albert was presented with a harmless stimulus or object, a white rat, which he wasn't scared of at first. But every time Little Albert would see the white rat, the researchers would play a scary sound of hammer and steel. After about 6 pairings, Little Albert learned to fear the rat even without the scary sound.

Little Albert developed signs of fear to different objects presented to him through [classical conditioning](#). He even generalized his fear to other stimuli not present in the course of the experiment.



10. Phineas Gage

Phineas Gage is such a celebrity in Psych 101 classes, even though the way he rose to popularity began with a tragic accident. He was a resident of Central Vermont and worked in the construction of a new railway line in the mid-1800s. One day, an explosive went off prematurely, sending a

tamping iron straight into his face and through his brain.

Gage survived the accident, fortunately, something that is considered a feat even up to this day. He managed to find a job as a stagecoach after the accident. However, his family and friends reported that his personality changed so much that “he was no longer Gage” (Harlow, 1868).

[New evidence on the case of Phineas Gage](#) has since come to light, thanks to modern scientific studies and medical tests. However, there are still plenty of mysteries revolving around his brain damage and subsequent recovery.



11. Anna O.

Anna O., a social worker and feminist of German Jewish descent, was one of the first patients to receive psychoanalytic treatment.

Her real name was Bertha Pappenheim and she inspired much of Sigmund Freud's works and books on psychoanalytic theory, although they hadn't met in person. Their connection was through Joseph Breuer,

Freud's mentor when he was still starting his clinical practice.

Anna O. suffered from paralysis, personality changes, hallucinations, and rambling speech, but her doctors could not find the cause. Joseph Breuer was then called to her house for intervention and he performed psychoanalysis, also called the "talking cure", on her.

Breuer would tell Anna O. to say anything that came to her mind, such as her thoughts, feelings, and childhood experiences. It was noted that her symptoms subsided by talking things out.

However, Breuer later referred Anna O. to the Bellevue Sanatorium, where she recovered and set out to be a renowned writer and advocate of women and children.

12. Patient HM

H.M., or Henry Gustav Molaison, was a severe amnesiac who had been the subject of countless psychological and neurological studies.

Henry was 27 when he underwent brain surgery to cure the epilepsy that he had been experiencing since childhood. In an unfortunate turn of events, he lost his memory because of the surgery and his brain also became unable to store long-term memories.

He was then regarded as someone living solely in the present, forgetting an experience as soon as it happened and only remembering bits and pieces of his past. Over the years, his amnesia and the structure of his brain had helped neuropsychologists learn more about cognitive functions.

Suzanne Corkin, a researcher, writer, and good friend of H.M., recently published a book about his life. Entitled *Permanent Present Tense*, this book is both a memoir and a case study following the struggles and joys of Henry Gustav Molaison.



13. Chris Sizemore

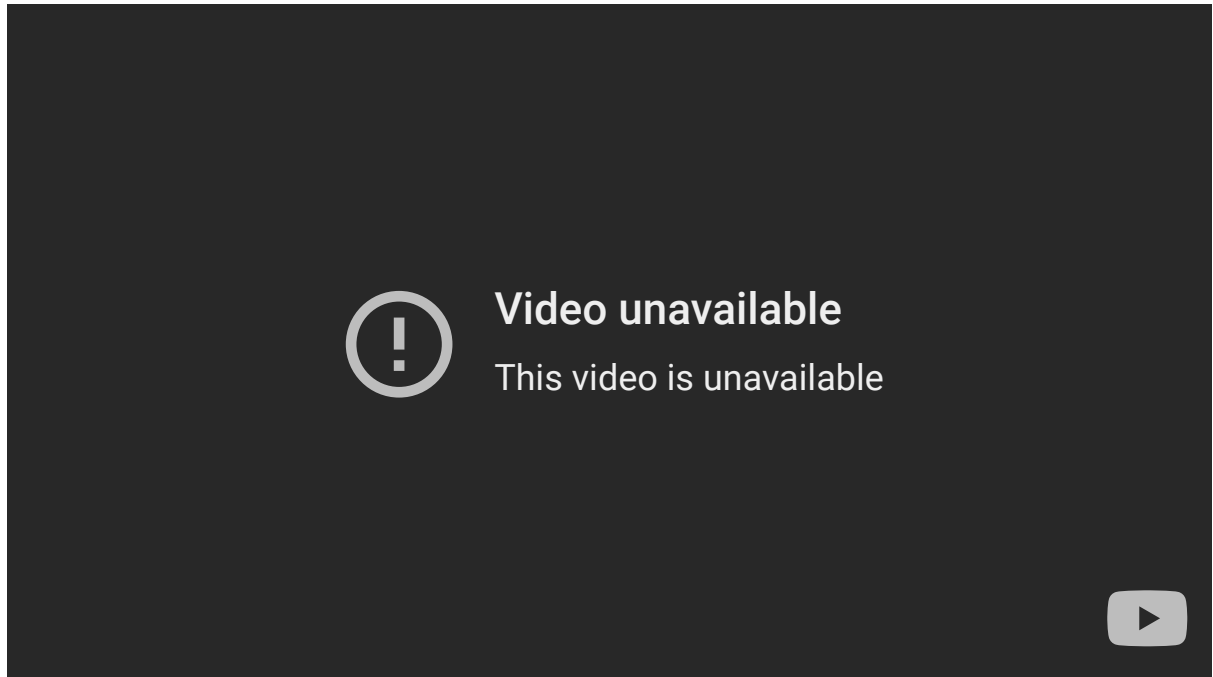
Chris Sizemore gained celebrity status in the psychology community when she was diagnosed with multiple personality disorder, now known as dissociative identity disorder.

Sizemore has several alter egos, which included Eve Black, Eve White, and Jane. Various papers about her stated that these alter egos were formed as a coping mechanism against the traumatic experiences she underwent in her childhood.

Sizemore said that although she has succeeded in unifying her alter egos into one dominant personality, there were periods in the past experienced by only one of her alter egos. For example, her husband married her Eve

White alter ego and not her.

Her story inspired her psychiatrists to write a book about her, entitled *The Three Faces of Eve*, which was then turned into a 1957 movie of the same title.



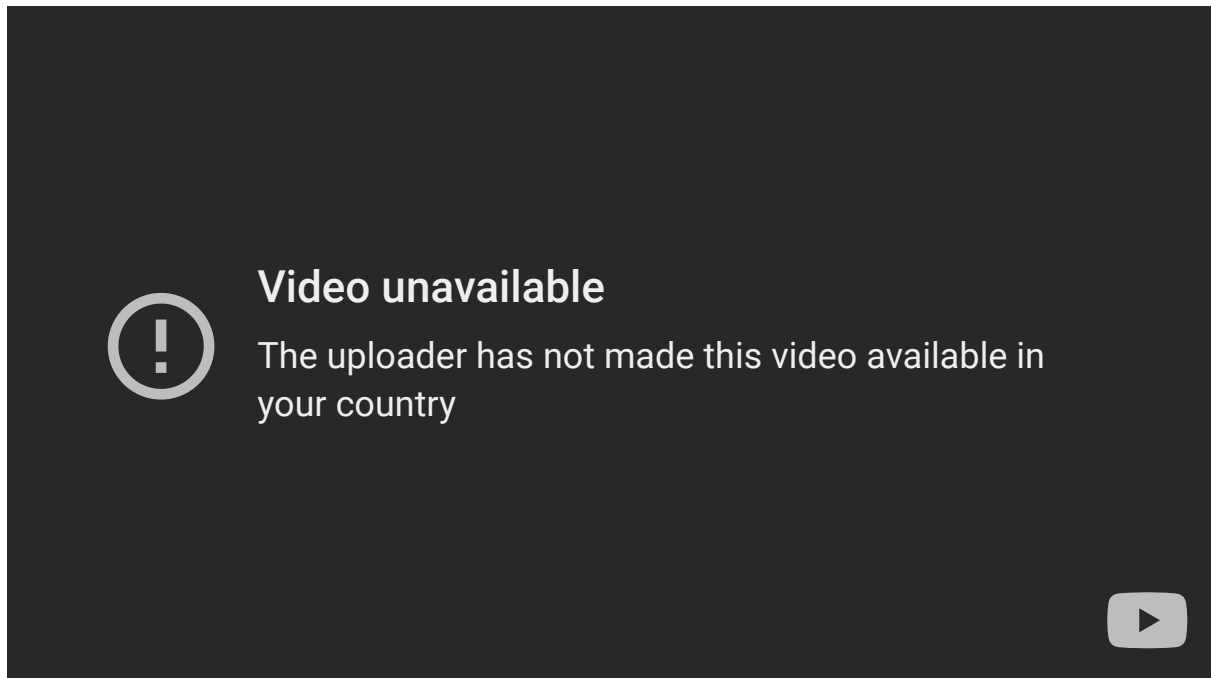
14. David Reimer

When David was just 8 months old, he lost his penis because of a botched circumcision operation.

Psychologist John Money then advised Reimer's parents to raise him as a girl instead, naming him Brenda. His gender reassignment was supported by subsequent surgery and hormonal therapy.

Money described Reimer's gender reassignment as a success, but problems started to arise as Reimer was growing up. His boyishness was not completely subdued by the hormonal therapy. When he was 14 years old, he learned about the secrets of his past and he underwent gender reassignment to become male again.

Reimer became an advocate for children undergoing the same difficult situation he had been. His life story ended when he was 38 as he took his own life.



15. Kim Peek

Kim Peek was the inspiration behind *Rain Man*, an Oscar-winning movie about an autistic savant character played by Dustin Hoffman.

The movie was released in 1988, a time when autism wasn't widely known and acknowledged yet. So it was an eye-opener for many people who watched the film.

In reality, Kim Peek was a non-autistic savant. He was exceptionally intelligent despite the brain abnormalities he was born with. He was like a walking encyclopedia, knowledgeable about travel routes, US zip codes, historical facts, and classical music. He also read and memorized approximately 12,000 books in his lifetime.



Conclusion

This list of experiments and case studies in psychology is just the tip of the iceberg! There are still countless interesting psychology studies that you can explore if you want to learn more about human behavior and dynamics.

You can also conduct your own mini-experiment or participate in a study conducted in your school or neighborhood. Just remember that there are ethical standards to follow so as not to repeat the lasting physical and emotional harm done to Little Albert or the Stanford Prison Experiment participants.

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