

## CORE STUDY #2: SAAVEDRA & SILVERMAN 2002 (BUTTON PHOBIA)

### Aim:

- To investigate the role of classical conditioning (particularly evaluative learning) on the development of a phobia by using exposure therapy.
- ★ **Evaluative learning** - a form of classical conditioning wherein attitudes towards stimuli are considered to be the product of complex thought processes and emotions which lead an individual to perceive or evaluate a previously neutral stimulus negatively. Attitudes acquired through evaluative learning may be harder to change than more superficial associations.

### Background:

Psychologists proposed the idea of phobias being learned like other behaviors by evaluative learning meaning that the removal of the fear and disgust feelings towards a stimulus would help the individuals unlearn the phobia and would act as a treatment. Other studies hadn't investigated the role of disgust when looking at the treatment for a phobia, only fear.

### Method:

#### Participants:

- One 9-year-old Hispanic-American boy who was part of the Child Anxiety and Phobia Program at Florida International University (Research method: case study)
  - The boy and his mother gave informed consent for the case study to be conducted and the mother provided written consent for the study to be recorded
  - The boy met the DSM-IV (Diagnostic and Statistical Manual 4th Edition (the current edition for 2023 is DSM-5)) criteria for a specific phobia of buttons
  - ★ **Phobia** - the irrational persistent fear of an object or event which poses little real danger but creates anxiety and avoidance in the sufferer.
- Background of the phobia: the phobia began when the child was 5 years old. He ran out of buttons while making a poster board and went to a large bowl of buttons sitting on the teacher's desk. His hand slipped and the entire bowl of buttons fell on him. The boy described the experience as very distressing and since then had an aversion to buttons. His symptoms included:
- ↳ Having difficulty dressing for school (not wanting to touch his uniform which had buttons)
  - ↳ Focusing on avoiding things that had buttons or *could have* touched buttons
  - ↳ Being preoccupied with button thoughts at school decreases his concentration
- **Why was this not considered to be OCD?**
- ↳ Because the child did not fit the DSM-IV criteria for obsessive-compulsive disorder, but the criteria for the specific phobia for buttons.

#### Design and procedure:

##### Therapy:

- The child was treated with two different exposure-based therapies: positive reinforcement therapy and then imagery exposure
  - The first treatment, positive reinforcement:
    - ↳ Was based on the mother providing positive reinforcement if the child completed the tasks presented (gradual exposure to buttons)
    - ↳ Had sessions lasting for 30 minutes with the boy alone, and then 20 minutes with both the boy and his mother
    - ↳ Was an 'in vivo' exposure therapy meaning that it included physical interaction with the distressing stimuli. The boy was presented with increasing amounts of different types of buttons, and his reactions and remarks were recorded (qualitative data), as well as the distress ratings he gave the buttons after the therapy (quantitative data)
- Before the first session, the boy was told to rank certain types of buttons on a disgust hierarchy called the "Feelings thermometer". It was a 9-point scale with ratings from 0 to 8.
- ↳ The scale included different types of buttons which the boy was asked to rate based on how disgusted he felt.

Table of stimuli presented and the rating the boy gave:

Stimuli	Distress rating
Large denim jean buttons	2
Small denim jean buttons	3
Clip-on denim jean buttons	3
Large plastic buttons (colored)	4
Large plastic buttons (clear)	4
Hugging Mom when she wears large plastic buttons	5
Medium plastic buttons (colored)	5
Medium plastic buttons (clear)	6
Hugging Mom when she wears medium plastic buttons	7
Small plastic buttons (colored)	8
Small plastic buttons (clear)	8

- The second treatment, imagery exposure:
  - ↳ Was an 'imagery cognition' exposure rather than 'in Vivo exposure. It utilized visualization techniques including getting the boy to imagine buttons falling on him, and telling him to consider how they looked and smelled.

→ *Why these questions?*

Prior interviews with the boy revealed that he found buttons "disgusting" and also that they "smelled bad".

- ↳ The imagery exposure pictures went from images of large buttons to smaller buttons, in line with the ratings the boy gave on the distress scale.

- ★ **Self-control** - a form of cognitive behavioral therapy. It involves using 'self-talk'; the individual is taught to recognize difficult situations, acknowledge troubling thoughts, and consider alternative, positive thoughts.

Results:

*Positive reinforcement therapy results:*

- The boy was able to complete all the tasks listed in the fear hierarchy
- The boy also approached buttons with a more positive attitude. An example of this was that the boy was able to handle larger numbers of buttons during the later sessions
- **HOWEVER:** the boy's subjective ratings of distress increased (mostly between the second and third sessions). By the fourth session, most of the distress ratings had increased above the original ratings.
- Ratings that had originally been 6 or 7 were now 7 or 8
- Despite the boy's attitude changing to becoming more positive, his feelings of disgust, fear, and anxiety increased.
  - WHY?
    - ↳ This finding is consistent with the theory of evaluative learning, which is that despite the apparent behavioral change, evaluative reactions will remain unchanged or even increase.

*Imagery exposure therapy results:*

- This therapy was shown to be successful in reducing the boy's distress ratings.
- This can be illustrated in his response to the prompt to imagine "hundreds of buttons falling all over his body":
  - ↳ Before therapy: 8
  - ↳ Midway through therapy: 5
  - ↳ End of therapy: 3

*Overall:*

- Following the treatment, 6 and 12 months follow-ups were conducted.
- In these sessions, the boy reported feeling minimal distress over buttons and no longer met the diagnostic criteria for the specific phobia of buttons
- His attitude towards buttons also no longer affected his daily functioning and he was now able to wear his school uniform which had small, clear plastic buttons on it, a stimulus which he had rated the highest on the distress scale.

Conclusions:

- Emotions and cognitions relating to disgust are important in the learning of new responses to phobic stimuli
- Imagery exposure can have a long-term effect on reducing the distress associated with a specific phobia as it tackles the negative evaluations

Evaluation:

**A strength of this study is that it is a highly detailed case study done on just one person.** This means that the results of the study are precise and detailed, focusing on one unique case and allowing other researchers to see how a rare disorder can affect an individual. This increases the validity of the results of the study.

**Another strength of this study is that it could be argued that the study was ecologically valid.** This is because it was conducted in the form of therapy assessments, which by nature are standardized. And, given the boys' unique psychological state, it was not an unusual possibility that the boy may need therapy. This increases the validity of the findings of the study.

**A weakness of this study, however, is that it lacks generalisability.** This is because it was only conducted on one "Hispanic-American 9-year-old boy", and so the results cannot be generalized to other populations of children of different ethnicities or ages. The boy's case was also unique, as button phobia is a rare phenomenon, and so the results of the therapy cannot be generalized to the wider population of people with button phobia.

**Another weakness of this study is that the responses given by the boy could be subjective.** There was no way for the researchers to fully determine whether the boy's feelings of anxiety and disgust actually decreased or if he was only giving desirable answers to leave the therapy as soon as possible. This reduces the validity of the findings of the study.

Issues and debates:

This study supports the learning approach and the nurture side of the nature/nurture debate.

*Use of children:*

- The child was put under stress to complete the therapy (protection)
- **HOWEVER,** informed consent was given by both the child and the mother, as well as a signed consent form by the mother - informed consent cancels out protection breach