

Developmental psychology: Bandura, Ross and Ross (1961)

Transmission of aggression through imitation of aggressive models

INFORMATION: Earlier studies demonstrated that children readily imitate behaviour in the presence of an adult model. This study aimed to test if imitative responses would generalise to new settings in the absence of that model. **Hypotheses:** 1. Children shown aggressive models will show more imitative aggressive behaviour than those shown non-aggressive or no models. 2. Children shown non-aggressive, subdued models will show less aggressive behaviour than those shown aggressive or no models. 3. Children would imitate behaviour of same-sex model more than model of opposite sex, with boys showing more imitative aggression than girls, especially with male aggressive model.

METHOD: Participants: 72 children; 36 boys and 36 girls, (mean age 52 months). Two adults acted as models; 1 male, 1 female. **Procedure:** Participants divided into control group (24 participants) and 8 experimental groups of 6 participants (total 48 participants). Experimental and control groups were matched individually on basis of pre-existing levels of aggression. Half experimental groups exposed to aggressive models, half to non-aggressive models with half observing same-sex model, others opposite-sex model. Children shown into room and played with potato prints/pictures while model played for 10 minutes in: (a) subdued manner (non-aggressive condition); (b) aggressive toward Bobo doll (aggressive condition); or (c) no model present. Children then subjected to mild arousal (stopped from playing with attractive toys), before being led to another room containing aggressive and non-aggressive toys. For 20 minutes observers recorded imitation behaviour of aggressive model (physical and verbal aggression, non-aggressive speech), partial imitation behaviour of aggressive model, non-imitative physical and verbal aggression and non-aggressive behaviour.

RESULTS: Children in aggressive model condition showed significantly more imitation of the model's physical and verbal aggression and non-aggressive speech than other conditions, and generally showed more partial imitation and non-imitative physical and verbal aggression. Those in non-aggressive condition showed little aggression, but not always significantly less than controls. Children who saw same-sex model were significantly more likely to imitate in some categories (e.g., boys imitated more for physical, verbal, non-imitative aggression).

CONCLUSION: Findings support social learning theory idea that behaviour can be acquired through observation only.

Experimental design	Laboratory experiment using matched pairs design. Directional (one-tailed) hypothesis as it specifies which conditions are expected to produce the greatest imitative aggressive behaviour. Independent variable is type of model (aggressive, non-aggressive and no model/control). These are categorical variables. Dependent variable was the amount of imitative behaviour and aggression shown.
Experimental method & sampling	Participants were first matched individually on the basis of pre-existing levels of aggressive behaviour in social interactions in the nursery school. On the basis of these scores, participants were arranged in triplets and then randomly assigned to the aggressive, non-aggressive or control condition.
Apparatus/materials	The children played with various toys. Aggressive toys included a 3-foot-high Bobo doll, a mallet, dart guns and non-aggressive toys included a tea set, dolls and colouring paper.
Qualitative/quantitative measures	Ordinal data analysed using Friedman's two-way analysis of variance by ranks, t-tests and Lindquist (1956) type III analysis of variance.
Controls	Fairly well controlled study since it used match pairs design, tried to match participants for pre-existing levels of aggression. Behaviour was also observed by more than one person (inter-scorer reliability .9).
Confounding variables	Findings may be due to demand characteristics. Children observing the aggressive model may have believed that they were expected to behave aggressively too. The Bobo doll was also a novelty item of interest to the children. Cumberbatch (1990) found children unfamiliar with the doll were 5 times more likely to imitate aggressive behaviour against it compared to those who had previously played with the doll. Also, the experimenter was present during the experimental session which may have affected behaviour.
Ethics	There is the ethical problem that aggression was both induced and taught to children. The children may have been frightened by the experimental situation, observing an adult stranger's aggression.
Ecological validity	Ecological validity is low as uses artificial acts of aggression towards a doll rather than real life situation with a real person. It fails to distinguish between real aggression and play-fighting (Durkin, 1995).
Usefulness of research	Research supports social learning theory; behaviour can be acquired through observation rather than direct experience and reinforcement is not necessary for learning to occur. These findings have important implications for the effects of violence observed by children (e.g. on TV, films).