

DOCUMENT RESUME

ED 097 974

PS 007 500

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TITLE The Influence of "Misterogers Neighborhood" on  
Nursery School Children's Prosocial Behavior.  
PUB DATE Mar 74  
NOTE 15p.; Paper presented at the Biennial Southeastern  
Conference of the Society for Research in Child  
Development (3rd, Chapel Hill, North Carolina, March  
1974)

EDRS PRICE MF-\$0.75 HC-\$1.50 PLUS POSTAGE  
DESCRIPTORS \*Age Differences; \*Children; Empathy; Friendship;  
Hypothesis Testing; \*Social Behavior; \*Social  
Development; Social Values; Task Analysis;  
\*Television Research; Television Viewing  
IDENTIFIERS Misterogers Neighborhood

ABSTRACT

The impact of "Misterogers Neighborhood" on nursery school children's prosocial behavior was assessed. Specifically, two hypotheses were tested: (1) that children who viewed several "Misterogers Neighborhood" programs would evidence more prosocial behavior than would nonviewers, and (2) that young viewers would show an increase in prosocial behavior greater than that shown by older viewers. The five programs selected to test these hypotheses contained three basic prosocial themes: restitution, sharing, and empathy. One program a day was shown to 21 children, aged 3 to 6, randomly selected from a local nursery school population. Another group of 22 nursery school children who did not see the programs served as controls. After the viewers were exposed to the five programs, restitution sharing, and empathy behaviors were assessed using two separate tasks. The results indicate that children viewing network programming designed to teach prosocial behavior can benefit by viewing. However, no support was obtained for the hypothesis that younger children derive greater benefits than older children from network programming. (CS)

AUG 22 1974

U.S. DEPARTMENT OF HEALTH  
EDUCATION & WELFARE  
NATIONAL INSTITUTE OF  
EDUCATION

Paper presented at SESRCD  
Chapel Hill, March, 1974

The Influence of "Misterogers Neighborhood" on  
Nursery School Children's Prosocial Behavior

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ED 097974

PS 007500

Social scientists have long been interested in the impact of television on young children. The bulk of research in this area has concentrated on the potential harmful effects of television. However, with the advent of shows like "Sesame Street", "Misterogers Neighborhood", "Zoom" and others, many researchers have begun to concentrate on the potential benefits of television as well. These benefits can be divided into three categories: cognitive, therapeutic and prosocial (Liebert, Neale, and Davidson, 1973).

Cognitive benefits refer to the effects of shows like "Sesame Street" on children's vocabulary, numerical skills, general knowledge, and the like. Such skills can be taught successfully by television. In addition, generalization to non-stressed skills also can be achieved (Ball and Bogatz, 1970).

Therapeutic benefits refer primarily to the effects of television on the occurrence of certain harmful behaviors. Systematic desensitization procedures have been used successfully in conjunction with television to treat a variety of phobias (for references, see Bandura, 1969). Others studies also have demonstrated the potential for television to teach new and appropriate behavior to children (O'Connor, 1972; Paulos and Davidson, 1971).

Prosocial benefits refer to the effects of television on prosocial interpersonal behavior (e.g., sharing, cooperation, nurturance, etc.), and prosocial self-control behavior (e.g., rule obedience, tolerance of delay, etc.). Several studies have indicated that children can learn prosocial behavior from television (Bryan and Walbek, 1970; Stein and Bryan, 1972; Stein and Friedrich, 1972).

The impact of "Misterogers Neighborhood" on nursery school children's prosocial behavior was assessed in the present experiment. Specifically, two hypotheses were tested: first, that children who viewed several "Misterogers Neighborhood" programs would evidence more prosocial behavior than would non-viewers. Second, that young viewers would show an increase in prosocial behavior greater than that shown by older viewers.

While it may seem that there already exists ample proof for the first hypothesis, since numerous studies have demonstrated the potential for television to teach prosocial material, this is not really the case. Many such studies have used specially prepared films and/or testing situations quite similar to the viewed setting. Others have posttested immediately after the viewing session. For these reasons the external validity of many such studies is weak. Very few studies have used naturalistic environments and/or network programming to investigate the potential benefits of television (e.g., Stein and Friedrich, 1972; O'Connor, 1972).

"Misterogers Neighborhood" was selected for study because it is a network show which is designed to teach young children prosocial behavior. Previous work has indicated it is, at least, partially effective in this regard (Stein & Friedrich, 1972).

Age was chosen as a variable because previous studies of television and prosocial behavior generally have not paid much attention to the ages of children in their samples, even though there are several studies which indicate that age may be an important variable. These studies, which did not employ models, found an increase in altruism with age (Ugurel-Semin, 1952;

Handlon and Gross, 1959; Midlarsky and Bryan, 1967; Staub and Feagans, 1969). However, several studies which used models failed to find an age related increase in altruism. In his review of this literature, Krebs (1970) speculated that younger children may be influenced more by models than older children, thus offsetting any developmental increase.

Five "Misterogers" programs were selected to test these hypotheses. These shows contained three basic prosocial themes: restitution, sharing, and empathy. The programs were shown, one each day, to 21 children, aged 3 to 6. The children were randomly selected from a local nursery school population. Another group of 22 nursery school children who did not see the programs served as non-viewing controls.

All viewing took place in the nursery school, with the children viewing the programs in groups of 8 to 12. The prosocial themes were presented in monologues and songs by Fred Rogers and his guests and in the context of stories presented by puppets in the "Neighborhood of Make Believe" segment of the show. An example of the restitution theme is contained in the following story presented by the puppets. A dog in the "Neighborhood of Make Believe" ate all the pies at a restaurant. Afterwards, the dog was sorry, but didn't know how to replace the pies. Someone suggested, that since the dog couldn't make pies, he make toast as repayment, which in fact he did. The other two themes of sharing and empathy were presented either in a similiar fashion or by Fred Rogers discussing them with the viewers.

After all the viewers had been exposed to the programs, the prosocial behavior of all the children was assessed in two separate

tasks. The first task, which assessed the restitution theme, involved the children dividing 5 gumballs between themselves and a friend. Children were instructed to place the gumballs into two clear plastic tubes, one for themselves and one for their friend. However, the friend's tube had a broken bottom, so when the child picked it up, the gum "accidentally" spilled onto the floor. Both how the children suggested E handle this situation, and the number of their own gumballs they were willing to give to their friend were used as indicators of the child's willingness to make restitution. For those children who didn't respond initially, E presented several alternatives courses of action and let the child select one.

The second task, which assessed the sharing theme, involved the children choosing between a pair of cards, each card containing a different division of goodies (various candies and coins) between themselves and their friends. An example of this task is shown in Figure I. As you can see, choice A represents a sharing choice (i.e., each child gets the maximum number of goodies available) while choice B represents a non-sharing choice. In all there were 10 pairs of cards similar to these. Each child was presented the entire series, with the order of presentation randomized. The number of sharing choices the child made was used as an indication of the child's willingness to share.

The influence of the empathy theme was assessed by having two observers rate the children's empathic verbalizations during each of these tasks.

Analyses of the results of the first task revealed that viewers did indeed evidence more restitution behavior than non-

viewers. Before the "accident" (gumballs spilling), there was no difference between the viewers and nonviewers with regard to the gumball division (See Table 1), as children in both groups tended to divide the first 4 gumballs evenly (2 for s and 2 for friend) and keep the last one for themselves. However, after spilling the friend's gumballs, a clear and significant change was observed. Only one viewer refused to share his remaining gumballs with his friend, while 9 nonviewers refused to share. These data are presented in Table 2.

There were no significant age differences, nor any significant age X viewing interaction on this task.

The results of the second task, involving the sharing and non-sharing choices of cards, are presented in Figure 2. Analysis of variance revealed no significant main effects or interactions for the number of choices made by adults. However, it is interesting to note the differential effect of viewing for younger boys and older girls; the younger boys improved with viewing, while the reverse was true for the older girls. Further analysis, involving a subdivision of age in 3, 4, and 5 year olds, revealed significant viewing X sex and age X sex interactions. However, since this procedure reduces many cell entries to less than four, more subjects will have to be tested before any firm conclusions can be drawn.

Even analysis of each of the pairs of cards separately failed to reveal any differences. Evidently, on this task there was remarkable similarity between viewers and nonviewers choices. None of the choices revealed any difference which even approached significance. Two observer's ratings of the children's verbalization

during Tasks I and II were taken. The first rating reflected "how well the child verbalized his (or her) own feelings." The raters used a 5 point scale, with a 1 meaning the child demonstrated no verbalization ability and a 5 meaning the child demonstrated a great deal of verbalization ability. The mean ratings are presented in Figure 3A. A significant age difference was observed; older children possessing a greater ability to express their feelings. No significant effect for viewing or for the viewing x age interaction was observed.

The second rating reflected the amount of empathy or the verbal consideration shown by the child toward the friend. This was measured by the same scale. These mean ratings are presented in Figure 3B. No main effect for age or for the viewing x age interaction was observed. The main effect for viewing was marginally significant, however.

In general, our first hypothesis, that children who view "Misterogers Neighborhood" will evidence more prosocial behavior than nonviewers, is supported. This is especially true for the restitution task, although somewhat less so for the empathy ratings, and not true at all for the sharing task. The results of the empathy ratings are somewhat surprising. We doubted whether a series of five 1/2 hour programs would exert much influence upon children's empathetic verbalization. Presumably, if the program were to focus upon empathetic behavior for an extended period of time (several weeks or months) clearer differences between viewers and nonviewers would result.

The lack of any clear cut results on the sharing task is somewhat puzzling. This could be due to any of several reasons, all

speculative at this time. One possibility is that the task may have been too removed from anything contained in the program (i.e., the task did not allow the children to practice or transfer the pro-social lessons they'd learned). A second possibility is that children might have become confused by one of the programs. This particular program attempted to show viewers some things that need not be shared, such as a "favorite pillow." It is conceivable that the children might have felt that anything they treasured did not need to be shared, and, thus, they did not need to share the highly valued "goodies" either. A third possibility is that our task is not a sensitive measure of sharing, and that another measure might have been more sensitive.

The second hypothesis, that younger viewers would show more of an increase in prosocial behavior than older viewers, received little or no support. This was true for both the tasks and the empathy ratings, although some hints of significant trends were obtained with the sharing task.

It occurred to us that perhaps the failure to find differences between the younger and older children may have been due to attentional or memory factors. However there were not any significant attention differences between younger and older children while viewing the program, nor were there any retention differences as measured by a series of questions about the program after all viewing was completed.

Failure to find support for this hypothesis may also be due to another reason, namely that the age range of our sample was too small to adequately test this hypothesis. However to increase the age range for the viewer of this program would probably create more

problems, as the show is not really aimed at older children.

In summary, this study does support the hypothesis that children viewing network programming designed to teach prosocial behavior can benefit by viewing. However, no support for the hypothesis that younger children derive greater benefits than older children from network programming was obtained.



Figure 1. Structure of sharing on primary and secondary levels.

Figure 1. Structure of sharing on primary and secondary levels. The diagram illustrates two social structures. The left structure, labeled 'Friend' and 'Self', shows six circles arranged in a 2x3 grid. The right structure, labeled 'Friend' and 'Self', shows three circles arranged in a vertical line. A horizontal line connects the bottom of both boxes. The circles are drawn with dashed lines.

	Self	Friend
Non-witnesses	2.94	2.14
Witnesses	2.77	2.25

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Table 1: The mean number of pencils kept by subjects (self) and given to their friends (friend) before the "accident"

	Self	Friend
Non-witnesses	2.94	2.14
Witnesses	2.77	2.25

$F(1, 10) = 7.31, p < .01$

Results of the 2x2x2 ANOVA showed a significant main effect of witness status,  $F(1, 10) = 7.31, p < .01$ , indicating that witnesses kept fewer pencils than non-witnesses. There was also a significant main effect of condition,  $F(1, 10) = 10.00, p < .01$ , indicating that subjects kept fewer pencils in the accident condition than in the control condition. The interaction between witness status and condition was also significant,  $F(1, 10) = 10.00, p < .01$ , indicating that the difference between witness and non-witnesses was larger in the accident condition than in the control condition.



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Viewers

... of ... during Tasks I and II

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Viewers

Viewers

... during Tasks I and II

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