As part of a longitudinal study of children's social development, this study explored preschool home environments of elementary school children who were persistently bullied and victimized by their peers. Subjects included approximately 200 children randomly sampled from predominantly lower and middle socioeconomic populations. One-fourth of the children were African-American. In the summer before the children began kindergarten, researchers interviewed the child's mother about the child's home experiences, including exposure to harsh punishment, violence, aggressive role models, and marital conflict, and about the family's exposure to stressful challenging events. The children were followed for 5 years with a variety of measures obtained each year. A victim-aggression status was determined for each child using sociometric interviews with the child's classmates. Children were classified as aggressive victims, passive victims, aggressive nonvictims, and normative contrasts. Because few girls were classified in the extreme categories, analysis was limited to male subjects. Analyses revealed that third and fourth grade aggressive victim status was significantly predicted by preschool exposure to violence, marital conflict, stressful challenging events, harsh restrictive discipline, and physical harm by family members. No clear pattern regarding histories of passive victims emerged. A developmental pathway can be hypothesized in which preschool exposure to violence and aggressive role models provides boys with the opportunity to learn goal-oriented aggressive behaviors. (MM)
Antecedents of Aggression and Peer Victimization:
A Prospective Study

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The data described in this paper were collected as part of a larger investigation conducted by Kenneth Dodge (Vanderbilt University), Greg Pettit (Auburn University), and Jack Bates (Indiana University) and funded by a grant from NIMH. During the writing of this paper, I was supported by a NIMH training grant. The contributions of Jennifer Harnish, Kerry Hogan, and the faculty and students associated with Vanderbilt's Developmental Psychopathology Training Program are gratefully acknowledged.
The paper that I will present today reports a prospective investigation of the relation between children's experiences in the home and bully/victim problems in the schools. The goal of this study was to provide a description of the preschool home environments of elementary school children who are persistently bullied by their peers, and to shed some light on the developmental pathways that link particular patterns of early home and family experience to later victimization in the peer group.

In exploring the home backgrounds of bullied children, I made a distinction between victims of bullying who display a passive nonaggressive behavior pattern and victims of bullying who display high rates of aggressive behavior. My objective was to conduct a comparative analysis of the home backgrounds of these two subtypes of victimized children. In addition, I examined the early experiences of passive and aggressive victims in comparison to the early family and home experiences of both aggressive nonvictim children and children who are neither victimized nor aggressive. These comparison groups are depicted on the first slide.

My analyses of the backgrounds of these children focused on aspects of family and home environment that have been linked to difficulties in the peer group by previous researchers. One area examined was children's early exposure to violence and conflict. Based on social learning theory, and on the findings of previous researchers, I hypothesized that both aggressive victims and
aggressive nonvictims would have an early history of frequent exposure to violence and aggressive role models. I theorized that such exposure would provide these children with the opportunity to vicariously learn aggressive behaviors.

Another aspect of home background that I focused on was early exposure to harsh punitive discipline and physical abuse. There is evidence that children who have been physically abused by family members are at high risk for the development of maladaptive patterns of social information processing, such as hostile attributional biases. As a result, these children might be prone toward social behaviors that lead to rejection and victimization by peers. Accordingly, I hypothesized that both aggressive and nonaggressive victims would have an early history of exposure to physical abuse and high rates of restrictive discipline.

A final issue that I considered was the exposure of children's families to challenging events. My objective was to assess the stressfulness of the child's early home environment and to perform an exploratory analysis of the relation between exposure to life stressors and victimization in the peer group.

The data that I examined in this study were collected as part of a larger longitudinal study of children's social development. Subjects were recruited at the time of kindergarten preregistration. Two separate cohorts, each of which contained approximately 200 subjects, were selected. Both cohorts were randomly sampled from predominately lower and middle
socioeconomic populations in two geographic regions. One fourth of the children sampled were African-American and the remaining children were largely European-American. About half the subjects were male and half the subjects were female.

In the summer before the children began kindergarten, trained interviewers visited each child's home and conducted a detailed interview with the child's mother. The interviewer utilized a series of structured questions to obtain specific information about the child's experiences in the home and with the family. Based on this specific information, the interviewer completed a series of global summary ratings of the child's home environment.

For example, the interviewer asked the mother structured questions regarding the specific disciplinary strategies employed in the home, how often these disciplinary strategies were employed, and the types of child misbehaviors that were involved. Based on the mother's responses to these questions, the interviewer completed a 1-to-5 likert-type rating of the degree to which the child was exposed to harsh punitive discipline.

In a similar manner, the interviewer made global 1-to-5 ratings of the child's exposure to violence and aggressive role models, the child's exposure to marital conflict, and the exposure of the child's family to stressful challenging events. The interviewer also completed a dichotomous rating of whether or not the child had ever been physically harmed by a family member. These ratings, which are summarized on the next slide,
constituted the measures of early home environment.

The children were then followed for five years with a variety of measures being obtained each year. For the current presentation, my focus will be on the measures of victim/aggression status obtained while the children from the first cohort were in the fourth grade, and the children from the second cohort were in the third grade.

Victim/aggression status was assessed using sociometric interviews that were conducted in each of the classrooms that contained study children. For these interviews, children were asked to nominate up to 3 peers of either sex who fit a number of behavioral categories. Three of the interview items assessed victimization and three items assessed aggression. These items are depicted on the next slide.

For each child, I generated an aggression score from the total number of nominations received for the aggression items and a victimization score from the nominations received for the three victimization items. These scores were standardized within classroom. The categorization scheme depicted in the next slide was then used to assign children to one of four groups: aggressive victims were defined as children whose aggression z-score and victim z-score were both at least 1.0; passive victims were defined as children whose victim z-score was at least 1.0 and whose aggression z-score was less than 1.0; aggressive nonvictims were defined as children whose victim z-score was below 1.0 and whose aggression z-score was at least 1.0;
normative contrasts were defined as children whose victim z-score and aggression z-score were both below 1.0.

This categorization scheme was applied to both the males and females in the study sample. However, the number of girls classified in the extreme categories was quite small. As a result, I decided to focus my analyses on males only. Therefore, the results and conclusions that I present should not be generalized to females.

As the next slide shows, eight boys were classified as aggressive victims, 18 boys were classified as nonaggressive victims, 23 boys were classified as aggressive nonvictims, and 121 boys were classified as normative contrasts.

A series of analyses of variance was then conducted to examine the relation between the preschool home experiences of these boys and their elementary school aggression/victim status. These analyses produced an interesting pattern of results that is not wholly consistent with my initial hypotheses.

As depicted in the next slide, preschool exposure to violence significantly predicted third and fourth grade aggression/victim status. Ratings of early exposure to violence were greater for the aggressive nonvictim group than for the other three groups. Surprisingly, the ratings of aggressive victims did not differ from the ratings of the remaining groups. Thus, my hypothesis that early exposure to violence would provide a context for the learning of aggressive behaviors was supported for the aggressive nonvictims but not for the aggressive victims.
As the next slide shows, the relation between preschool exposure to marital conflict and third and fourth grade aggression/victim status was also significant. Ratings of early exposure to marital conflict were higher for the aggressive victim group than for the remaining three groups.

My analyses of the ratings that assessed exposure to stressful challenging events produced a similar pattern of findings. As depicted in the next slide, elementary school victim/aggression status was significantly predicted by preschool exposure to stressful events. Families of aggressive victims experienced significantly more life stressors than did the families of the remaining groups. These analyses suggest that aggressive victims were boys who had early exposure to stressful home environments.

As is presented in the next slide, ratings of early exposure to harsh restrictive discipline were also significantly higher for the aggressive victim group than for the other three groups. In addition, the incidence of physical harm by family members was substantially higher for the aggressive victim group than for the other three groups. Indeed, as the next slide indicates, the incidence of physical abuse for the aggressive victim group was more than three times the incidence for any other group. These data suggest that there is a strong relation between early exposure to physical abuse and harsh discipline, and later problems with peer victimization and aggressive behavior. It should be noted, however, that the number of aggressive victims
examined here is relatively small.

The results of these analyses are summarized in the next slide. Aggressive nonvictims had early histories of exposure to violence and aggressive role models. Aggressive victims were boys whose early histories included stressful home environments, martial conflict, harsh restrictive discipline, and physical harm. No clear pattern of early experiences emerged for the passive victims.

What do these findings tell us about processes linking early experiences in the home to later aggression and victimization in the peer group? I'd like to begin answering this question by focusing on my findings regarding aggressive nonvictims. In this study, aggressive nonvictims were boys who had experienced early exposure to aggression and violence. This result is consistent with a social learning perspective on the development of aggressive behavior. According to such a perspective, children who are exposed to aggressive role models might learn that violence is efficacious and is associated with positive outcomes. These children would then learn a subtype of aggressive behavior that is not motivated by anger but rather is oriented toward achieving particular goals. Theorists have labeled this type of nonangry aggressive behavior as "proactive aggression."

The next slide presents a hypothesized developmental pathway between the early home and family experiences of the aggressive nonvictims and their later social behavior. I hypothesize that
preschool exposure to violence and aggressive role models provided these boys with the opportunity to learn goal oriented aggressive behaviors. These behaviors were then implemented and rewarded in the elementary school peer group. Accordingly, aggressive nonvictims developed a behavior pattern that is characterized by proactive aggression.

Different developmental processes are probably involved for the aggressive victim group. As I discussed, the aggressive victims in this study had early histories which included stressful family environments, physical abuse, exposure to harsh restrictive discipline, and exposure to marital conflict. Some theorists have argued that such a pattern of experiences could lead children to develop a view of the world as a hostile dangerous place. These children would then tend to view ambiguous social situations as threatening or provocative. Accordingly, they might develop a behavior pattern that is characterized by inappropriate anger and reactive aggression.

The next slide presents an application of this theoretical perspective to my findings regarding the early home environments of aggressive victims. I hypothesize that these boys developed hostile attributional biases because of their preschool exposure to abuse and harsh discipline. These hostile attributional biases may have led aggressive victims to display high rates of angry reactive aggression during their initial encounters with their elementary school peers. As a result, these boys were targeted for rejection and abuse by their peers.
One assumption underlying the proposed developmental pathways that I have presented is that aggressive victims and aggressive nonvictims display fundamentally different types of aggression. More specifically, I have suggested that aggressive nonvictims are boys who display high rates of proactive aggression whereas aggressive victims are boys who display high rates of angry reactive aggression. Results of data analyses that I have recently conducted, but do not have time to present today, do seem to support this suggestion. Nonetheless, the issue of the specific subtypes of aggression displayed by victims will certainly require further study and I am currently involved in an investigation that focuses on this issue.

Before making my concluding comments, I want to say a few words about passive victims. As I discussed earlier, no clear pattern emerged regarding the histories of passive victims. It seems that the type of early experiences that I focused on in this study do not characterize the early home environments of passive victims. However, my colleagues and I have recently completed a contrived play group study of the behavioral antecedents of victimization. One finding that emerged from this study is that, for nonaggressive children, submissive social behavior is an important antecedent of bully/victim problems. Thus, we might further our understanding of the early home environments of passive victims by focusing on relations between particular patterns of early home experience and submissive social behavior in the peer group. Research conducted by Dan
Olweus might be relevant here. Olweus described evidence that early exposure to maternal overprotectiveness and paternal negativism is linked to later passive behavior and victimization in the peer group.

I'd like to conclude by acknowledging that there are clear limitations to the data and analyses that I have discussed here today. Moreover, the hypothetical developmental models that I have discussed are based on assumptions that reflect my own theoretical biases and have been derived from a relatively limited base of empirical data. It is clear, however, that further research on these issues is warranted and it is my hope that the hypotheses that I have presented today will facilitate the efforts of future researchers.
Comparison Groups

Aggressive Victims

Passive Victims

Aggressive Nonvictims

Nonaggressive Nonvictims
(Normative Contrasts)

Hypotheses

Aggressive victims - exposure to violence, harsh discipline, physical harm

Passive victims - exposure to harsh discipline, physical harm

Aggressive nonvictims - exposure to violence
MEASURES OF EARLY HOME ENVIRONMENT

1-to-5 ratings of:

Exposure to violence and aggressive role models
Exposure to marital conflict
Exposure to life stressors
Exposure to harsh punitive discipline

Dichotomous Yes/No Rating

Has child been physically harmed by a family member?
Victim Items

Gets hit and pushed by other kids

Gets picked on by other kids

Gets teased by other kids

Aggression Items

Starts fights

Gets mad easily

Mean to other kids
Categorization of Subjects

Aggressive Victims

Aggression z-score of at least 1.0
Victim z-score of at least 1.0

Passive Victims

Aggression z-score less than 1.0
Victim z-score of at least 1.0.

Aggressive Nonvictim

Aggression z-score of at least 1.0
Victim z-score less than 1.0

Normative Contrasts

Aggression z-score less than 1.0
Victim z-score less than 1.0
Early Exposure to Violence

Child Type

F(3,157) = 5.20, p < .005

Contrast
Early Exposure to Marital Conflict

Mean Rating

Child Type

AGG V
NONAGG V
AGG NV
CONTRAST

F(3,144) = 2.63, p = .05
Early Exposure to Life Stressors

F(3,165) = 3.30, p < .05
Early Exposure to Restrictive Discipline

\[ F(3, 168) = 2.76, p < .05 \]
Exposure to Physical Harm

Proportion Harmed

Child Type

AGG V
NONAGG V
AGG NV
CONTRAST

5/8
2/17
4/22
22/112
Results

Aggressive Nonvictims

Exposure to violence and aggressive role models

Aggressive Victims

High incidence of physical harm by family members

Exposure to harsh restrictive discipline

Exposure to life stressors

Exposure to Marital Conflict

Passive Victims

No clear pattern
EARLY EXPOSURE TO VIOLENCE

SOCIAL LEARNING
AGGRESSION WORKS!

PROACTIVE AGGRESSION
IN THE PEER GROUP

REINFORCEMENT

CHRONIC AGGRESSIVE BEHAVIOR
HARSH DISCIPLINE AND PHYSICAL HARM

HOSTILE ATTRIBUTIONAL BIAS

REACTIVE AGGRESSION

PEER REJECTION AND VICTIMIZATION