Results of a study of physically abused elementary school children in the four urban boroughs of New York City are reported. The study recruited 106 families with a physically abused child between the ages of 8 and 12 years. A matched control sample was recruited from classmates. The abuse sample was highly representative of the New York City Register in terms of race and ethnic composition, and the abuse and control samples were demographically very well matched on a wide variety of characteristics. Data were derived from peer assessments in the classrooms, self-report, teachers, mothers or guardians, and records from Special Services for Children. Questions addressed were the following: (1) Are physically abused children more disturbed than other children? and (2) What family risk factors are associated with abuse? Findings indicated that, compared to controls, abused children show significantly more general disturbance over a wide range of behavior both at home and at school, show poorer social competence and adaptive functioning, are less preferred by other children, tend to display more aggressive behavior and less cooperative behavior to other children, and are not as discriminating in how they choose their friends. Partner abuse in the child's household significantly differentiated abusing and nonabusing families. A path model reveals two likely paths to child abuse, both of which involve substance abuse by the mother's parents and partner abuse. Concluding discussion focuses on issues of intervention. (RH)
Peer Status, Behavioral Disturbance, and Family Background Factors in Child Physical Abuse

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It is disconcerting to realize that within the past few years, even bombarded as we are by the media and our own personal observations of community life with images of violent and aggressive behavior (often among teenagers and especially, although certainly not exclusively, in poor and underserved neighborhoods), support for research, and consequently the amount of research conducted, on aggressive behavior and physical abuse has declined. However, the problem of violence has not declined, with national yearly estimates of violence between adults in families at about 16% and between parents and children at about 10% (Straus & Gelles, 1988). As this paper documents, physical abuse of children has disturbing and far-reaching consequences for them. It deserves our continuing study of its basic parameters and its effects, with an eye to determining where, in the longitudinal cycle of abuse and in the present context of children's lives, we can intervene most effectively to prevent the immediate and long-range behavioral and emotional consequences which not only affect the children themselves but which lead subsequently to disruption in the communities in which
such children become adults.

The results we are reporting come from an NIMH-funded study of physically abused elementary school children conducted throughout the four urban boroughs of New York City. The children and their families were identified over a five-year period (1985-1989) from consecutive entries on the New York State Central Register for Child Abuse in New York City and confirmed by Child Protective Services as physically abused. They were assessed in both their homes and their schools. The study recruited 106 families with a physically abused child between the ages of 8 and 12. A matched control sample was recruited from among the classmates of each of the abused children, thereby controlling for school, grade level, and neighborhood of residence. The abuse sample is highly representative of the New York City Register in terms of race and ethnic composition (5% White, 56% Black, 38% Hispanic, and 1% unclassified), and the abuse and control samples are demographically very well matched on a wide variety of demographic characteristics, including welfare status (49% of the abuse sample and 42% of the control sample is on welfare). Mean age of the children in both samples is 10 years; mothers' mean age is 36 and 37; mothers' education for both samples is less than completion of high school, with a year more schooling for the control sample; and the number of children in the home is 2.9 and 2.8. The sample includes 71% boys, but analyses of the relationship of gender to the variables of interest in the study have all been statistically nonsignificant. It should be
emphasized that since both samples are at comparable and rather severe economic disadvantage, a family stress factor which has been found to be related to abuse nationally, any differences found between the two groups of children will be more readily attributable to the specific effects of maltreatment.

The data were derived from the following sources, peer assessments in classrooms, self-report, teachers, mothers or guardians, and Special Services for Children Records. The protocol can be found in Table 1.

The first question the paper addresses is whether physically abused children are more disturbed than other children. The answer, according to our data, is clearly yes. The areas of disturbance will be taken up separately.

We first looked at the children's social acceptance among their peers. For abused children, in particular, we felt that this was an extremely important area to assess. Normal development proceeds best within the context of ever-widening circles of support, beginning with the support of parents and immediate family and later during childhood broadening to include peer support (which becomes even more critical for adolescents). Therefore, we might expect that for young children whose families are a source of a disproportionate amount of stress relative to support, peer support becomes relatively more important -- possibly even taking over some of the support, teaching, and socializing functions normally accomplished by parents. If family support is the necessary foundation upon which later forms of
support are established -- specifically, if the family setting provides the modeling and teaching of appropriate social behavior necessary for developing social competence -- then children whose families are grossly socially dysfunctional may never learn the modes of behaving with others that would enable them to establish developmentally appropriate and socially desirable relations with peers.

Based on classmates' choices of which same-gender children in the class they would most and least like to spend time with, we found that the abused children were significantly less preferred than their matched control classmates \( R^2 = .13, p = .0009 \). Classifying the children into the sociometrically defined categories of popular, rejected, neglected, controversial and average social status (see Figure 1), it can be seen that although about a third of the children in both samples show average status, only half the number of abused children as control children are popular, and, conversely, about a third more abused than control children are rejected by their classmates. Additionally, although rare, twice as many abused as control children are socially neglected by their classmates.

An analysis to determine why the abused children were less preferred was then carried out with respect to shyness, leadership, fighting, sharing, verbal meanness, and attention-getting, the behaviors on which all the same-gender children in the class rated each other on a 5-point scale from "not at all" to "a whole lot more than other boys/girls" (see Table 2).
Results showed that the abused children were rated significantly lower than control children on leadership and sharing and higher on fighting, meanness and attention-getting.

To further clarify the relationship between abuse, social status and social behavior (see Table 3), it should be noted that popular children, among whom there were more control children, were characterized mainly by leadership and sharing, and socially rejected children, among whom there were more abused children, were characterized mainly by fighting and meanness.

To better understand the abused children's social dysfunction, we examined the characteristics of the children they designated as their best friends in the social network interview. Because most "best friends" named by both samples of children turned out to be classmates, we were able to examine those classmates' evaluations of our children to obtain a measure of reciprocity of the relationships. We found that abused children, more than non-abused children, tended to choose as their best friends children who did not necessarily choose them positively and even children to whom they assigned a negative or neutral evaluation when asked to characterize the way they felt about the relationship.

Looking beyond the children's socially disturbed peer relations, we also examined the children's general behavioral disturbance, their social competence at home, and their adaptive functioning in school, by having parents and teachers rate the children's behavior on comparable forms of the Achenbach Child...
Behavior Checklist, a mental health screening instrument widely used throughout the country and sensitive to levels of disturbance characteristic of children referred for mental health treatment.

Figure 2 shows the behavior ratings for the first 69 abuse/control pairs of children having complete parent and teacher protocols. Parents and teachers concur in their assessment of high levels of disturbance for both groups, but assigned significantly higher levels for the abused children. (It should be noted that teachers were not informed that one of the two children being rated had been abused or that the two children were in any way selected differently.) The disturbed behavior takes a number of forms: certainly externalizing types of disturbance, such as aggressive behavior and other conduct problems, are found to be very prevalent, which might well have been expected among physically abused children, but also found are more internalizing types of disturbance, such as emotional problems, anxiety, and depression. Coupled with this are significantly poorer ratings of social competence at home and adaptive behavior in school -- testifying generally to a wide spectrum of emotional and behavioral problems in the abused children. The findings take on special importance when we remember that, unlike most studies in the area, we are looking at a non-referred sample of cases identified from the Abuse Register, not at cases identified through any treatment agency.

In an analysis of which factors, either specific social
behaviors or more general behavioral disturbance, accounted for the differences in social status between the abused and non-abused children, we found that the social behavior the children displayed to each other was the major factor accounting for the abused children's lower social status among their peers ($R^2 = .45, p = .0001$). The general measures of behavioral disturbance did not add to the association. However, carrying the analysis further, we also found that general behavioral disturbance did account strongly for the remaining difference between the abused and non-abused children, that is, for problems other than peer social status ($R^2$ for Parent-Rated Behavior Problems = .12, $p = .0001$, and $R^2$ for Teacher-Rated Behavior Problems = .03, $p = .025$).

In summarizing the answer to the first question, we have found that abused children show significantly more general disturbance over a wide range of behavior both at home and at school, show poorer social competence and adaptive functioning, are less preferred by other children, tend to display more aggressive behavior and less cooperative behavior to other children, and are not as discriminating in how they choose their friends. The significance of these findings is heightened by the fact that abuse appears to contribute to disturbance over and above the effects of other stressors, since, as pointed out earlier, the children to whom the abuse cases were compared were also generally of minority status and lived, for the most part, in economically disadvantaged homes and neighborhoods. The degree
of disturbance in our control sample is in fact fairly high, with about a third of the control children receiving behavior ratings in the clinically deviant range, and yet it remains significantly below that in our demographically matched abuse group, with over half the children receiving clinically deviant ratings.

Given the fact that physical abuse produces disturbance, we need next to address the question, "What are the risk factors for abuse in these families?" Knowing the risk factors is important because it helps to identify possible junctures in the cycle of abusive behavior in families where intervention might have an increased chance of being effective.

Using the child's mother as an informant and supplementing her information with Protective Services records, we examined a set of family factors which, based upon our current reading of the literature, we believed would function to increase the probability that physical child abuse would occur in a child's household. These factors include behavior in the child's mother's household during the years that she lived with her parents as well as behavior in the child's household (see Figure 3). Simple comparisons of the proportions of abusive and non-abusive families showing these characteristics reveal the following: partner abuse in the child's household significantly differentiates the families (Chi-square = 7.857, d.f. = 1, \( p = .005 \)); dysfunctional family life in the child's household, where the adults engage in substance abuse and severe discord, marginally differentiates the families (Chi-square = 3.834, d.f. = 1, \( p = .05 \)).
substance abuse by the mother's parents and severe beating of the mother when she was a child do not differentiate between the families in any simple manner (although there is a strong presumption among many practitioners that parents who have themselves been abused tend to have abused children). A breakdown of the family dysfunction in the child's household shows only discord to differentiate singly between the groups (Chi-square = 5.085, d.f. = 1, p = .025). Drugs and alcohol may be taken as exacerbating factors.

These simple comparisons of the risk factors taken one at a time, however, do not really do justice to the complexity of the process that results finally in child abuse. If we consider all the risk factors together, we derive a clearer picture of how abusive behavior in one generation gets transmitted to the next, and we see how some variables act in concert with others to produce a higher probability of abuse than would be the case for each of the variables alone. Figure 4 illustrates the interrelationships in the form of a path model. It can be seen that there are two likely paths to child abuse. Note that both involve behaviors in the mother's family of origin (substance abuse by the mother's parents and severe beating of the mother), which, as can be seen in Figure 3 and again here, do not directly predict child abuse. One of the paths, A - B - F - H, begins with substance abuse in the mother's family, either accompanied by or followed by severe beating by her parents. This is followed by substance abuse and discord among the adults in her child's
household, leading to partner abuse in her child's household, and finally culminating in child abuse. The other path, C - F - H, also begins with substance abuse in the mother's family, followed by substance abuse and discord in her child's household, leading to partner abuse and finally to child abuse.

To summarize these findings, it can be readily appreciated that all these family variables are implicated in raising the risk for physical abuse of children even though, singly, none of them except for partner abuse, is directly and significantly related to child abuse.

A number of junctures in this cycle can be seen to be pivotal in the sense that if specific interventions were initiated at these points, it would lessen the probability of child abuse occurring. The first is, of course, partner abuse. Households where physical violence occurs among the adults are risky for children -- not only in the sense that the children witness the violence, which has its own detrimental effects on them, but because the children are likely to be targeted as well. Discordant households, particularly those with the exacerbating behaviors of alcohol and drug abuse, are likely to lead to partner abuse and subsequently to child abuse. Such families need to be identified before that happens and helped to resolve their disputes and, of course, to reduce their dependence on alcohol and drugs. Therefore, in cases reported to the Registry, where we think that child abuse has occurred (even though it might be too late for primary prevention), and where, during the initial
investigation by caseworkers, a mother has indicated substance abuse and violence in her family during her own childhood, therapeutic family intervention in her current household should always be offered. Our data clearly show that in such cases an abused child's family is likely also to be severely discordant, with possible violence occurring among the adult members of the family as well. For such families, a range of specific interventions will need to be available. These should include not just parent training, although that is clearly needed in confirmed cases of abuse, but training in problem solving, conflict resolution, anger control, and other relevant techniques available to mental health workers. The preventive services component of our child protective system needs to be augmented by expanded mental health services targeted at families and family functioning, rather than just at individuals, if we want to prevent abuse against children.

Intervention aimed at preventing or stopping child abuse is, however, not enough, because, as our data demonstrate, abuse has detrimental effects on children which need to be remedied as well.

Unlike the case in dealing with some types of children's mental health problems, the abusive family can not automatically be expected to be helpful in the child therapeutic process. Indeed, it is likely that even with a cooperative family, not all of the abused child's problems can be properly solved in the family context. So, clearly, it is necessary to arrange to treat
children in other contexts as well as at home. The most likely contexts are, of course, school and the clinician’s office. Our findings of poor peer relations, as well as more general behavioral disturbance, suggest that interventions based in school would be especially efficacious for these children. Unfortunately, in part because of the various interpretations having to do with the legality of sharing information on the Registry, schools very often do not even know which children are abused, let alone have the authority or the resources to develop a treatment program for them. Surely this is a problem in which social services, schools and mental health providers need to cooperate in devising and testing interventions for children. The child development literature is beginning to report regularly on the development of assessment strategies and behavioral treatment for socially disabled children which would be applicable in both clinical settings and classrooms. There is also a large clinical literature on the assessment and treatment of conduct disordered children, and now, a growing literature on depression in children. We would like to suggest a much closer working relationship among the agencies which are likely to be involved in the problem of child abuse — a working relationship that is informed by the research findings emerging from the current developmental literature.

One of the things we have learned about the amelioration of social, and indeed many other, behavioral disorders is that the therapeutic intervention must be carried beyond the clinical
setting into the child's natural environment if generalization is to be assured and long term efficacy improved. It is our strong conviction that without the sharing of information and professional skills among the disciplines and institutions dealing with abused children, many of these children will remain untreated and their problems unidentified until adolescence, when those problems will surface in the form of community disruption, at which point an entirely different set of solutions will need to be brought to bear on the problem -- most very costly and, in the long run, a lot less likely to achieve positive results.
Reference

Footnote

This paper is based on a presentation titled, "Prediction of behavioral disturbance in children based on a family history of child abuse," at the 2nd Annual Research Conference of the New York State Office of Mental Health, Albany, December 6th, 1989. The research has been supported in part by Research Grant # RO1 MH38814 and by Clinical Research Center Grant MH 30906-10 from the National Institute of Mental Health. The authors gratefully acknowledge the dedicated and indefatigable assistance of Luz Alvarado, Louis Caraballo, and Albert Ortega, who collected all the data in the schools, and of Denise Alvarez and Marjorie Matthieu, who interviewed parents in homes all over the city. Our thanks also go to the New York State Department of Social Services, to New York City Special Services for Children, to the New York City Board of Education, to the District Superintendents and liaison people in 25 school districts, and to the principals and teachers in over 100 public and parochial schools and classrooms. Requests for reprints should be addressed to Suzanne Salzinger, Ph.D., Box 114, New York State Psychiatric Institute, 722 West 168 Street, New York, NY 10032.
Table 1
Data Sources and Protocols

1. Children were assessed by peers in their classrooms.
   - Sociometric status (Peer nomination)
   - Peer ratings of children's social behavior

2. Children assessed themselves in interviews.
   - Children's social networks

3. Children were assessed by teachers.
   - Teacher Child Behavior Checklist (Achenbach)

4. Children were assessed by their mothers or guardians.
   - Parent Child Behavior Checklist (Achenbach)

5. Home environment was assessed by interviews with mothers at home.
   - Family interaction in child's household
   - History of family interaction and high risk life events in mother's family of origin

6. Special Services for Children records.
   - Child abusive behavior in family when child abuse was reported and investigated.
Table 2

Peer Social Behavior Ratings for Abused and Control Children

<table>
<thead>
<tr>
<th>Behavior</th>
<th>Abuse (N=70)</th>
<th>Control (N=68)</th>
<th>P</th>
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</thead>
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<tr>
<td></td>
<td>M</td>
<td>M</td>
<td></td>
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<tr>
<td>Shyness</td>
<td>1.83</td>
<td>1.86</td>
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<tr>
<td>Leadership</td>
<td>2.15</td>
<td>2.60</td>
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<tr>
<td>Fighting</td>
<td>2.73</td>
<td>2.25</td>
<td>.007</td>
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<tr>
<td>Sharing</td>
<td>2.58</td>
<td>3.04</td>
<td>.0005</td>
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<tr>
<td>Meanness</td>
<td>2.56</td>
<td>2.13</td>
<td>.01</td>
</tr>
<tr>
<td>Attention-getting</td>
<td>2.72</td>
<td>2.39</td>
<td>.003</td>
</tr>
</tbody>
</table>

5-point scale, where 1 = "not at all" and 5 = "a whole lot more than other boys/girls"
Table 3
Means of Peer Social Behavior Ratings
for Five Social Status Groups

<table>
<thead>
<tr>
<th>Social Behavior</th>
<th>Popular</th>
<th>Rejected</th>
<th>Neglected</th>
<th>Controversial</th>
<th>Average</th>
<th>p level</th>
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</thead>
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<td>Shyness</td>
<td>1.67</td>
<td>1.90</td>
<td>2.06</td>
<td>1.66</td>
<td>1.89</td>
<td>NS</td>
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<tr>
<td>Leadership</td>
<td>3.05</td>
<td>1.87</td>
<td>2.09</td>
<td>2.67</td>
<td>2.48</td>
<td>.0001</td>
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<tr>
<td>Fighting</td>
<td>2.05</td>
<td>3.04</td>
<td>2.07</td>
<td>2.80</td>
<td>2.20</td>
<td>.0001</td>
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<tr>
<td>Sharing</td>
<td>3.40</td>
<td>2.23</td>
<td>2.90</td>
<td>2.97</td>
<td>2.98</td>
<td>.0001</td>
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<tr>
<td>Meanness</td>
<td>2.10</td>
<td>2.79</td>
<td>1.79</td>
<td>2.51</td>
<td>2.13</td>
<td>.0001</td>
</tr>
<tr>
<td>Attention-getting</td>
<td>2.47</td>
<td>2.69</td>
<td>2.44</td>
<td>2.61</td>
<td>2.48</td>
<td>NS</td>
</tr>
</tbody>
</table>
Fig. 1. Number of abused and control children in each social status category.
Fig. 2. Achenbach behavior ratings (Mean T-scores; N=69 pairs).
Fig. 3. Comparisons of abuse and control samples on family risk factors for child physical abuse.
Partner Abuse in Child's Household

Substance Abuse + Severe Discord among Adults in Child's Household

Severe Beating of Mother in Her Family of Origin

Substance Abuse by Mother's Parent(s)

Child Physical Abuse

Fig. 4. Path model describing the relationship between family violence and child physical abuse.