

The Effects of Neglect on Academic Achievement and Disciplinary Problems: A Developmental Perspective¹

Kathleen A. Kendall-Tackett, Ph.D.

Family Research Laboratory, University of New Hampshire

John Eckenrode, Ph.D.

Family Life Development Center, Cornell University

The present study examines the effect of child neglect, alone and in combination with abuse, on academic achievement and school disciplinary problems for elementary, junior high and senior high students. The sample included 324 neglected children and adolescents, and a matched non-maltreated sample of 420 children and adolescents. All subjects were in grades K through 12 in a small city in New York state. The results revealed that neglected children did perform more poorly than their non-maltreated counterparts, having lower grades, more suspensions, more disciplinary referrals, and more grade repetitions, even when controlling for gender of child and SES. Neglect alone and neglect in combination with physical or sexual abuse was related to lower grades and more suspensions. The combination of abuse and neglect had a particularly strong effect on the number of disciplinary referrals and grade repetitions. Abused/neglected students in junior high had the highest number of grade repetitions. The number of disciplinary referrals continued to increase through senior high for both neglected and abused/neglected students. Interestingly, the academic performance of all subjects dropped during junior high. Neglect and neglect in combination with abuse appeared to exacerbate a decline in academic performance that occurs as children enter junior high school.

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Child neglect is the most prevalent type of all child maltreatment, yet we seem to know less about its effects than we do for either physical or sexual abuse (Dubowitz & Black, 1994). Our lack of attention to this form of maltreatment is often referred to as the “neglect of neglect.”

Although neglect has not commanded as much attention as physical and sexual abuse, previous research has revealed that neglect can have serious consequences. For example, in their longitudinal study of 267 high-risk mother-infant pairs, Egeland, Sroufe, and Erickson (1983) found that the neglected children had more difficulty performing tasks at both 42 and 56 months than either the control group or other maltreated children. The researchers concluded that neglected children in their sample had low self-esteem, “...had the most difficulty pulling themselves together to deal with various tasks... and lacked the agency necessary to cope their environments” (p. 459). By the time these children were early school age, they had deficits in cognitive performance, academic achievement, behavior in the classroom and social interactions. By second grade, all of the neglected children were in special education programs (Egeland, 1991). Overall, the neglected children demonstrated more developmental problems than any other maltreated group of children (Erickson, Egeland, & Pianta, 1989).

In two more recent studies (Eckenrode, Laird, & Doris, 1993; Leiter & Johnsen, 1994), researchers found that neglected children had the poorest school performance of all maltreated children for grades K through 12. The performance of the neglected children was compared with physically abused, sexually abused, and a group of non-abused children matched for age, sex, and family income. Leiter and Johnsen (1994) hypothesized that neglect led to learning deficits because neglectful parents would be less likely to provide a stimulating environment for the child, read to the child, supervise homework, and be involved in their child’s academic life.

Adequate school performance is an important developmental milestone, and poor school performance can have serious long-term effects. For example, Zingraff, Leiter, Johnsen and Myers (1994) found that good grades and low rates of behavior problems during elementary school reduced the risk that maltreated children will become delinquent as they mature.

A developmental approach is needed to fully understand the long-range effects of child neglect. Egeland, Sroufe and colleagues (Egeland & Sroufe, 1981; Egeland et al., 1983; Erickson et al., 1989) have already applied a developmental approach to infancy and early childhood, and noted a pattern of declining functioning in the neglected children. These researchers also noted differing patterns of problems for children who experienced neglect alone, and those who experienced neglect in combination with abuse. The results of Eckenrode et al. (1993) and Leiter and Johnsen (1994) highlight the plight of neglected children in school--the next major developmental period--and have found that these children continue to do poorly. From a developmental standpoint, however, the age range covered by these samples (ages approximately 6-18) is quite broad. Further, although Eckenrode et al. (1993) examined the

results of neglect alone versus neglect in combination with abuse, the results were reported with no differentiation by age.

The present study will examine school performance of neglected children utilizing secondary data analysis of the Eckenrode et al. (1993) data. School performance was measured by average grades in math and English, number of grade repetitions, number of discipline referrals, and number of suspensions, and was examined for elementary, junior high and senior high school students. Two key questions were considered:

- What is the developmental course for neglected children in school?
- What are the developmental effects of neglect alone versus neglect in combination with abuse?

Method

Sample

Subjects were drawn from a population of 8569 children attending public school in a small city in New York State, grades K-12 in 1987-88. The maltreated children were located from records of the New York State Child Abuse and Maltreatment Register. From a group of 1239 children who had at least one substantiated incident of maltreatment at some point in their lives, a sample of 420 maltreated children was drawn. All children who had been either sexually or physically abused were included in the sample, but only one out of every four neglected children were included because of their high numbers on the Child Abuse Register. A comparison group of 420 non-maltreated children was drawn from the general population of school children. The comparison group was matched with the maltreated group on gender, grade in school, school, residential location, and classroom when possible. All students in both groups were in regular classrooms.

The present study focuses on neglected children ($N=324$ of the 420 maltreated children). The entire group ($N=420$) of non-maltreated children served as the comparison group. The neglected group was further divided into two groups. The "neglected only" group included only children for whom neglect without any other type of maltreatment was recorded ($N=217$). The "neglect with abuse" group ($N=107$) included those who had experienced neglect in combination with either physical abuse ($N=56$) or sexual abuse ($N=51$).

In addition to being divided into maltreatment categories, the subjects were classified as elementary ($N=481$), junior high ($N=115$), or senior high school students ($N=148$) based on the school they were *currently* attending.

Measures

Data on school performance and disciplinary problems were collected using school records, which provided information on academic performance, grade repetitions, school transfers, home moves, and disciplinary actions. Four dependent measures were used in the present study.

- 1) **Current grades in math and English.** This variable was an average of each student's current math and English grades, where 0=F and 4=A.
- 2) **Number of Grade Repetitions.** This variable indicates the total number of grade levels that subjects repeated during their entire academic career to date.
- 3) **Discipline Referrals.** This variable was the total number of discipline referrals recorded during the entire academic career to date.
- 4) **Suspensions.** This variable included the total number of suspensions the subject ever received.

Analyses

The primary analyses were 3 (grade level of subject) X 3 (neglect status) analyses of covariance for each of the four dependent measures, with sex of child and SES as covariates. SES was a dichotomous variable indicating whether the family was receiving public assistance at the time data were collected.

Upon performing the primary analyses, we unexpectedly observed that the senior high students had *lower cumulative* scores on measures such as grade repetitions, suspensions and disciplinary referrals than did their younger counterparts. There are two possible explanations for this. First, there may be cohort effects, i.e., seniors may have had different experiences as younger children than did children now in elementary or junior high school. Second, there may be selective attrition of seniors due to dropping out of school. In order to address these issues, we undertook a second set of analyses dividing seniors into two age groups. The first group was 14 to 15 year olds, to account for the possibility that the students with the poorest academic performance may have dropped out at age 16 (the legal age for leaving school in New York State). The second group consisted of the rest of the seniors (i.e., ages 16 to 20).

Results

For each of our four dependent measures there were main effects for both age and neglect status. In general, there were no interaction effects between age and neglect status; the performance of the neglected students paralleled that of the non-maltreated students but at a lower level. Specific findings are presented below. In each section, age main effects are presented first, followed by findings for neglect status, and finally the analyses for the split senior high groups.

Grades

The average grade was 2.19 ($N=609$) for combined current grades in math and English. There was a significant main effect for age of student, $F(2, 608)=63.92, p<.0001$. Grades were highest among elementary school students, regardless of neglect status ($M=2.51$), and were significantly lower for junior high ($M=1.69; t(465)=23.02, p < .0001$) or senior high school students ($M=1.80; t(434)=19.99, p < .0001$). The grades for junior and senior high students also differed significantly ($t(255)=2.29, p < .02$). The means are found on Table 1.

Similarly, the grades were lower for neglected and abused/neglected students than they were for their non-neglected counterparts ($F(2, 608)=5.56, p < .004$). The grades of neglected students ($M=1.97$) differed significantly from those of non-maltreated students ($M=2.35; t(523)=11.31, p < .0001$), as did those of abused/neglected students ($M=2.00; t(434)=9.49, p < .0001$). The grades of neglected and abused/neglected students did not differ significantly from each other, however. Interestingly, the neglected subjects' grades made a drop in junior high school that paralleled that of their non-maltreated counterparts. However, in most cases, the average grades were several tenths of a point lower for the neglected subjects at each age range. The age of subject by neglect status interaction was not significant.

We repeated the analysis restricting the senior high group to 14 to 15 year olds, and found a significant main effect for age ($F(2,505)=33.53, p<.0001$) and a marginally significant effect for neglect status ($F(2,505)=2.79, p<.063$), but no significant age by neglect status interaction. These same main effects were also found when the senior group was restricted to the 16 to 20 year olds: main effects for age ($F(2, 555)=44.36, p<.0001$) and neglect status ($F(2, 555)=4.12, p<.017$). For both groups of neglected students, grades improved between junior and senior high school, while a similar rebound was not evident among the non-maltreated students.

Table 1

Comparison of Neglected and Non-maltreated Children on Average Grades in Math and English

AGE OF CHILD					
NEGLECT TYPE	ELEMEN-TARY	JUNIOR HIGH	SENIOR HIGH		
			<i>All Seniors Ages 16-20</i>	<i>Ages 14-15</i>	
NON-MALTREATED	2.67 (N=202)	1.96 (N=62)	1.89 (N=85)	2.10 (N=33)	1.71 (N=52)
NEGLECT ONLY	2.32 (N=97)	1.37 (N=35)	1.65 (N=43)	1.92 (N=12)	1.50 (N=31)
NEGLECT & ABUSE	2.26 (N=54)	1.34 (N=16)	1.77 (N=15)	1.75 (N=5)	1.75 (N=10)

Number of Grade Repetitions

The total number of grades repeated ranged from 0-2, with a grand mean of .30 ($N=698$). There was a significant age of subject main effect, $F(2, 696)=10.96, p<.0001$. In general, junior high school students had the highest number of grade repetitions ($M=.44$), and were significantly higher than either elementary school students ($M=.24; t(588)=22.47, p<.0001$) or senior high students ($M=.39; t(235)=3.56, p<.0001$). The means are found in Table 2.

Table 2**Comparison of Neglected and Non-maltreated Children on Number of Grade Repetitions**

NEGLECT TYPE	AGE OF CHILD				
	ELEMEN-TARY	JUNIOR HIGH	SENIOR HIGH	<i>All Seniors Ages 16-20</i>	<i>Ages 14-15</i>
NON-MALTREATED	.14 (N=258)	.32 (N=59)	.29 (N=77)	.17 (N=30)	.36 (N=47)
NEGLECT ONLY	.35 (N=132)	.49 (N=35)	.58 (N=36)	.40 (N=10)	.65 (N=26)
NEGLECT & ABUSE	.42 (N=72)	.80 (N=15)	.43 (N=14)	.00 (N=6)	.75 (N=8)

There was also a significant main effect for neglect status, $F(2, 696)=9.17, p<.0001$. The highest number of grade repetitions was for abused/neglected students ($M=.48$). This number was significantly higher than for non-maltreated ($M=.20; t(494)=28.84, p<.000$) and neglected only students ($M=.41; t(303)=5.65, p<.0001$). The number of grade repetitions for neglected students also differed significantly from the non-maltreated students ($t(596)=23.75, p<.0001$).

Similarly, when the senior high group was restricted to 14 to 15 year olds, there were main effects for both age ($F(2,612)=8.93, p<.0001$) and neglect status ($F(2,612)=3.65, p<.026$), and a marginally significant interaction, $F(4,612)=2.28, p<.059$. This appeared mainly due to there being no repetitions among the small group of 14 to 15 year old students who were both abused and neglected. Similarly, for the 16 to 20 year olds, there were age ($F(2, 640)=17.08, p<.0001$) and neglect status main effects ($F(2, 640)=11.07, p<.0001$), but no interaction.

Number of Disciplinary Referrals

The number of disciplinary referrals for subjects' entire academic career ranged from 0-46, with a mean of 1.40 ($N=744$). There was a significant main effect of age of subject, $F(2,742)=25.15, p<.0001$, with junior high students receiving significantly more disciplinary

referrals ($M=2.89$) than elementary students ($M=.68$; $t(595)=3.19, p<.002$). Senior high students also received significantly more referrals than did elementary school students ($M=2.55$; $t(628)=2.77, p<.006$), but the number of referrals for junior and senior high students did not differ significantly from each other. The means for these analyses are found in Table 3.

Table 3
Comparison of Neglected and Non-maltreated Children on Total Discipline Referrals

NEGLECT TYPE	AGE OF CHILD				
	ELEMEN-TARY	JUNIOR HIGH	SENIOR HIGH <i>All Seniors 16-20</i>	<i>Ages 14-15</i>	<i>Ages</i>
NON-MALTREATED	.57 (N=271)	1.95 (N=62)	1.78 (N=87)	1.53 (N=34)	1.94 (N=53)
NEGLECT ONLY	.72 (N=137)	3.56 (N=36)	3.27 (N=44)	2.15 (N=13)	3.74 (N=31)
NEGLECT & ABUSE	1.01 (N=73)	4.88 (N=17)	4.65 (N=17)	1.33 (N=6)	6.45 (N=11)

There was also a significant main effect for neglect status, $F(2, 742)=7.84, p<.0001$. Subjects who were neglected ($M=1.71$) or abused/neglected ($M=2.21$) had more disciplinary referrals than their non-maltreated counterparts ($M=1.03$). None of these pairwise comparisons was significant, however, possibly due to a high Mean Square Error. There was a marginally significant age of subject by neglect status interaction, $F(4, 742)=2.08, p<.082$, which appears to reflect the larger increase in referrals between elementary school and junior high for the two neglected groups in comparison to the non-maltreated students.

When the senior high group was restricted to the 14 to 15 year olds, there was a main effect for age ($F(2,644)=22.92, p<.0001$), and a marginally significant effect for neglect status ($F(2,644)= 1.98, p<.14$). There was no significant interaction. In contrast, when the senior high group was restricted to the 16 to 20 year olds, there was a main effect for both age ($F(2,$

689)=28.03 $p<.0001$) and neglect status ($F(2, 689)=9.59, p<.0001$, and a significant age by neglect status interaction ($F(4, 689)=2.74, p<.028$). For non-maltreated students, the number of disciplinary referrals leveled off after junior high, but for neglected and abused/neglected students, the number continued to increase through senior high.

Number of Suspensions

The total number of suspensions students had ranged from 0-28, with a mean number of .27 ($N=737$). A significant age main effect, $F(2, 735)=32.36, p<.0001$, revealed the highest number was for the junior high school students ($M=1.06$). This number was significantly higher than the number of suspensions for elementary ($M=.02; t(591)=11.66, p<.0001$) and senior high students ($M=.45; t(259)=4.53, p<.0001$). The number of suspensions for senior high students was also significantly higher than for elementary school students ($t(621)=4.94, p<.0001$). The means are found in Table 4.

Table 4

Comparison of Neglected and Non-maltreated Children on Total Number of Suspensions

AGE OF CHILD					
NEGLECT TYPE	ELEMEN- TARY	JUNIOR HIGH	SENIOR HIGH		
			<i>All Seniors</i>	<i>Ages 14-15</i>	<i>Ages 16-20</i>
NON- MALTREATED	.02 ($N=270$)	.45 ($N=62$)	.30 ($N=87$)	.24 ($N=33$)	.33 ($N=54$)
NEGLECT ONLY	.01 ($N=135$)	1.67 ($N=36$)	.50 ($N=42$)	.17 ($N=11$)	.61 ($N=31$)
ABUSE & NEGLECT	.04 ($N=72$)	2.00 ($N=17$)	1.13 ($N=16$)	1.00 ($N=5$)	1.09 ($N=11$)

A main effect for neglect status, $F(2, 735)=8.35, p<.0001$, indicated a significant difference in the number of suspensions for neglected ($M=.38; t(631)=2.78, p<.0006$) and abused/neglected students ($M=.52; t(533)=4.05, p<.0001$) compared to their non-maltreated counterparts ($M=.14$). There was no significant difference in number of suspensions between neglected and abused/neglected students, however.

A significant age of subject by neglect status interaction, $F(4, 735)=5.0, p<.001$, revealed that neglected students in junior or senior high had many more suspensions than their non-maltreated counterparts, while in elementary school the number was equally low in all groups. This pattern was similar to that observed for disciplinary referrals.

The analysis with the 14 to 15 year olds revealed significant main effects for age ($F(2,639)=30.86, p<.0001$), and for neglect status ($F(2,639)=4.42, p<.012$), and a significant age by neglect status interaction ($F(4,639)=5.12, p<.0001$). The analysis for the 16 to 20 year olds also revealed main effects for age ($F(2,683)=32.10, p<.0001$) and neglect status ($F(2,683)=7.29, p<.001$), and a significant age by neglect status interaction ($F(4, 683)=4.96, p<.001$).

Discussion

The results revealed that neglected children did indeed fare more poorly in school than did their non-maltreated counterparts, and that performance markedly decreased in the transition from elementary school to junior high. These were robust effects and held true even when controlling for the effects of gender and SES. Neglect alone was equally detrimental to grades and number of suspensions as was neglect in combination with physical or sexual abuse. The combination of abuse and neglect was detrimental in terms of number of disciplinary referrals and grade repetitions.

Math and English grades dropped for all subjects in junior high, but even more so for neglected and abused/neglected students than for non-maltreated students. These findings are consistent with Leiter and Johnsen's (1994) that neglected children are more likely to show deficits in school performance. The drop in grades that occurred for all students in junior high has also been noted in previous research on adolescence. For example, Sroufe, Cooper, and DeHart (1992) note that grades typically drop when students enter middle school. Some of the explanations for this phenomenon include more difficult classes and grading, the process of changing from one school to another, and in many cases, the onset of puberty (Entwisle, 1990). The presence of neglect appears to exacerbate the potential stressfulness of these changes. The neglected students may have cognitive deficits, but also difficulty "pulling themselves together" and coping with new situations, as researchers have found with young children (Egeland, et al., 1983).

The results for grade repetitions and disciplinary referrals presented a more complicated picture. With cumulative measures such as these, we would expect that the oldest students would have the highest frequencies. We would not expect that the senior high students would *lose* numbers of these events. In order to determine whether the lower numbers of grade repetitions and disciplinary referrals were due to selective attrition from the sample, we first analyzed the data for seniors less than age 16. Since students can drop out of school at age 16, we assumed we would have a broader band of student performance with the younger students (presumably, the students with the poorest performance would drop out at age 16, leaving behind only the “better” students). We found the opposite of what we expected--the younger seniors had fewer repetitions, discipline referrals and suspensions than the older seniors. These findings suggest a cohort effect for the 14 to 15 year olds, possibly due to a change in policy that might have resulted in a lower total number of both disciplinary referrals and grade repetitions.

Our findings on number of suspensions remain our most difficult to explain. Even with the divided senior-high age group, the junior high students still had substantially more suspensions than did their senior-high counterparts. To consider a possible cohort effect, we examined the number of suspensions the current junior high and senior high students received in both elementary school and junior high. Both groups had a low number of suspensions in elementary school. However, there was a substantial difference between the groups in the number each had in *junior* high. Among the current seniors, only 2% had more than two suspensions while in junior high, with the highest number being 8. Among the current junior high students, however, a full 8% had more than 2 suspensions and 6% had more than 4. Among this top 6% ($N=7$), the number of suspensions ranged from 5 to 28. This particular group of junior high students may indeed be different in an unknown way, or may reflect a change in district policy with regard to suspensions.

Another goal of the present study was to determine if there was an additive effect of maltreatment in combination with neglect. The combination of abuse and neglect seemed to have the most deleterious impact on disciplinary referrals and grade repetitions. However, our analysis had some limitations because of the nature of the data. Because of the relatively small numbers of subjects who had experienced neglect in combination with either sexual abuse or physical abuse, we combined them, which gave a crude measure of whether there was an additive effect. In doing so, we lost information on the differential effects of physical abuse and sexual abuse in combination with neglect. The impact of abuse combined with neglect should be addressed in future studies with larger samples of children who have experienced either sexual abuse and neglect, or physical abuse and neglect.

The results of the present study have implications for timing of interventions. Junior high appears to be a particularly problematic time for neglected and abused/neglected children. To be most effective, these problems should be anticipated and primary prevention programs should be implemented in elementary school. Along these same lines, school personnel at junior

high schools should be alerted to the fact that a drastic increase in behavior problems and a decline in grades may be a sign not only of abuse, but also a history of neglect that had not previously been identified.

In conclusion, child neglect is often ignored because it is more commonplace, and does not seem as “serious” as other types of maltreatment. The present study, however, demonstrated that neglect does have a serious impact on children’s abilities to perform in school, whether it occurs alone or in combination with other forms of maltreatment--and these effects are too serious to ignore.

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