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Timing and Chronicity of Child Neglect and Substance Use in Early Adulthood 5/10/19

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Abstract

Background: Neglect is the most common form of child maltreatment with consequences that appear to be as serious as for abuse. Despite this, the problem has received less than its due attention.

Objective: To examine the relationship between the timing and chronicity of neglect during childhood and substance use in early adulthood.

Participants and Setting: The sample consisted of a subset of 475 participants from the prospective Longitudinal Studies of Child Abuse and Neglect (LONGSCAN) consortium from five geographic areas around the U.S.

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Method: Neglect was assessed using abstracted information from CPS reports (birth-18) and self-reports of neglect (12–18). Participants completed a follow-up online survey (mean age of 24 years) that probed their use of substances.

Results: The prevalence of substance use during the past year was comparable in this high-risk sample to the general population. Latent class analysis supported the presence of three groups related to the presence and timing of neglect: Chronic Neglect, Late Neglect and Limited Neglect. Late Neglect was the pattern most strongly linked to substance use in early adulthood.

Conclusions: High-risk youth experiencing neglect beginning in mid- adolescence are especially vulnerable to later substance use. Those working with such youth and their families can play a valuable role helping ensure their basic needs are adequately met, and recognizing early signs of substance use and abuse.

Keywords

child neglect; maltreatment; adolescence; substance use; longitudinal; prospective

Introduction

Neglect remains the most common form of child maltreatment. There were 674,000 children with substantiated abuse or neglect in 2015 (U.S. Department of Health & Human Services, Administration for Children and Families, & Administration on Children Youth and Families Children's Bureau, 2019); 75% were neglected, 17% were physically abused and 8% were sexually abused. Despite striking reductions in reports of physical and sexual abuse in recent decades, reports of neglect have not substantially changed (Petersen, Joseph, & Feit, 2014; Simmel, Merritt, Kim, & Kim, 2016).

A review of 30 studies (Maguire et al., 2015) found an array of effects related to neglect, including difficulty regulating emotion, maintaining relationships with peers, and developing self-esteem (Gross, 1998; Kulkarni, Pole, & Timko, 2013; Maguire et al., 2015). Other problems include lower intelligence scores (Fishbein et al., 2009; Kantor et al., 2004), having to repeat grades (de Paúl & Arruabarrena, 1995), and requiring more special education services (Reyome, 1993) compared to non-neglected children. These early outcomes likely have implications for later development and functioning. Currie and Widom (Currie & Widom, 2010) found that adults who were neglected as children suffered worse economic outcomes than did controls; they completed fewer years in school, and neglected women were less likely to be employed, own a home or car, or have a bank account.

Two ecological-developmental theoretical perspectives – developmental psychopathology (Sameroff, 2009; Sroufe & Rutter, 1984) and the multifactorial model of complex disorders (Falconer, 1965; Lander & Schork, 1994; Tarter, 2002) – help explain the underlying processes. They suggest that individual behavior is the product of complex reciprocal interactions between characteristics of the individual and his or her life experiences. Both perspectives emphasize the dynamic nature of multiple risk and protective factors over time as they interact with the changing individual (Glantz & Leshner, 2000). Thus, they suggest that influences on behavior should be examined longitudinally, to specify temporal patterns

such as developmental timing and chronicity that may predict outcomes. These theories guided our examination of the impact of neglect at different developmental stages on later substance use.

While several research studies have examined the impact of adverse childhood experiences (ACEs), including maltreatment, subsequent alcohol, tobacco and other drug use as well as related problems in adulthood, relatively few have focused on neglect. Shin and colleagues studied prospectively a nationally representative sample of young adults that self-reported earlier neglect (Shin, Miller, & Teicher, 2013). Neglect was associated with heavy episodic drinking in early adulthood. Using the same dataset, Huang and colleagues reported that neglect was associated with illicit drug use in females, but not males, and that adolescent drug use mediated the association (Huang et al., 2011). Neglect has also been modestly associated with the onset, but not the persistence, of substance use disorders in early adulthood (Green et al., 2010; McLaughlin et al., 2010). Other studies of national samples have not, however, found neglect to be associated with subsequent alcohol and other drug use disorders, after psychiatric comorbidity was taken into account (Goldstein et al., 2013).

Neglect is a very heterogeneous phenomenon and there has been little exploration of its dimensions. One dimension concerns its timing, another is chronicity. Two competing hypotheses have been posited. Developmental psychopathology and multifactorial perspectives posit that factors occurring early in life exert a particularly strong effect on subsequent outcomes. For example, Dodge and colleagues found support for the primacy of early influences on early-onset drug use (Dodge et al., 2009). In contrast, the second hypothesis emphasizes more proximal causes of behavior (Elder, 1998). For example, researchers have found stronger effects of maltreatment during adolescence than only during childhood (Thornberry, Ireland, & Smith, 2001). There is, however, also evidence that both childhood and adolescent maltreatment contribute to adult drug use (Thornberry, Henry, Ireland, & Smith, 2010).

While recognizing advances in our knowledge concerning neglect, Boyce and Maholmes (Boyce & Maholmes, 2013) encouraged researchers to integrate child neglect research in future studies to inform prevention, treatment and policy, yet discerning the link between neglect and later substance abuse is challenging. There is often overlap between neglect and other forms of maltreatment and there are multiple potentially confounding variables. Measuring neglect is inherently difficult, as it generally involves covert acts of omission rather than overt acts of commission (Oshri, Carlson, Kwon, Zeichner, & Wickrama, 2016). Neglect has few objective criteria for measuring the risk of harm, and this heterogeneous phenomenon comprises many variant forms (Oshri et al., 2016). Moreover, child neglect research often relies on child welfare records, which do not fully capture experiences, and retrospective accounts may be influenced by recall bias (Jonson-Reid, Kohl, & Drake, 2012). To circumvent these challenges, the present study examined both child welfare and self-report data, using latent class analysis to integrate the data and probe patterns of the timing and chronicity of neglect during childhood. Using data from the Longitudinal Studies of Child Abuse and Neglect (LONGSCAN), we hypothesized that those who had experienced more chronic neglect would be at increased risk for substance use in early adulthood compared to those who were not chronically neglected or not identified as neglected. A

related objective was to probe the influence of chronicity by examining neglect during different developmental periods (childhood, adolescence) on later drug use.

Methods

Participants

LONGSCAN involved a consortium of five prospective studies of the antecedents and consequences of child maltreatment (Runyan et al., 1998). The original sample consisted of 1354 maltreated or high risk children and their primary caregivers. Two sites gathered data based on high risk status for child maltreatment based on sociodemographic and health-related data established during the perinatal period or in the first few years of life. Three sites included children who had been referred to Child Protective Services; one of them involved children in foster care.

The data presented here include a follow-up online survey examining participants' substance use as young adults (referred to as the 'young adult interview'). To be eligible, participants had to have had at least one interview at age 14, 16, or 18 and at least four interviews between ages 4 and 18. There were 1053 eligible subjects; 475 completed the follow-up survey ("Completers"). There were few statistically significant differences between Completers and those who did not complete the survey. The Northwest site had a somewhat higher percentage of Completers than the other sites (26.6% vs. 14.5%), and there were fewer Completers from the Southern site (11.2% vs. 21.6%) relative to the rest of the sample (χ^2 [df=4] = 50.60, $p < .001$). To clarify, this means that 26.6% of the Completers were from the Northwest site whereas 14.5% Non-completers were from this site. More females than males completed the survey (61.5% vs. 46.1%, χ^2 [df=1] = 29.37, $p < .001$). Child maltreatment, race/ethnicity, family income, and caregiver education, employment and marital status were not associated with completion status. The average age of completion of the young adult interview was 23.76 ($SD = 1.89$; range = 19–29).

Procedure

Data were gathered when the children were recruited at 4 to 6 years of age, and every two years until age 18, between 1991 and 2012. Data from Child Protective Services (CPS) were obtained at regular intervals. Each site's procedures were approved by its Institutional Review Board. Families were paid a nominal amount for their time and transportation.

Measures

CPS Reports of Neglect.—CPS reports were coded according to the Modified Multiple Classification System (English & Longscan Investigators, 1997). Neglect included Failure to Provide (FTP) and Lack of Supervision (LOS). FTP reflected caregivers failing to meet the child's physical needs related to food, clothing, shelter, medical care or hygiene. LOS reflected children not receiving adequate protection from environmental hazards. The presence of one or more CPS reports for each category was computed for each child during 0–4, 5–8, 9–12, and 13–18 years of age, regardless of whether the report was substantiated. No significant differences in behavioral outcomes have been found related to whether reports were substantiated (Hussey et al., 2005).

Self-reported Neglect.—Self-reported neglect at ages 12 and 14 was assessed using a modified version of the Multidimensional Neglectful Behavior Scale (Dubowitz et al., 2011). Using factor analysis, three subscales represented neglect at 12 and 14: Physical Needs (e.g., “How often did your parents give you enough to eat?”), Emotional Support (e.g., “How often did your parents help you when you had problems?”), and Monitoring/Supervision (e.g., “How often did your parents know what you were doing if you were not at home?”). Response options included “Never” (0), “Almost Never” (1), “Sometimes” (2), and “A Lot” (3). Scale scores represent the average of the scale items. The young adolescents rated their care during elementary school and in the past year. Cronbach’s alphas were 0.78 (12) and 0.75 (14) for Physical Needs, 0.80 (12) and 0.82 (14) for Emotional Support, and 0.62 (12) and 0.64 (14) for Monitoring/Supervision.

At 16 and 18, a shorter version of the neglect measure was used. To determine potential domains, we placed items into conceptual categories guided by the earlier findings. This resulted in four subscales at both ages (Emotional Support; Monitoring; Nurturing and Guidance; Protection from Hazards), as well as Physical Needs at 16 and Helped Plan for the Future at 18. Sample items included: “...my parents did not have enough food in the house”, “... made sure I could go to school” “...did or said things to show me they loved me”, “...helped me plan for my future”. Participants rated each item on a 4-point scale (0=strongly disagree to 3=strongly agree). An inter-item correlation matrix was computed within each subscale: if an item pair had $r > 0.70$, only one item was retained. A reliability analysis was performed on each subscale and items were deleted if their removal improved reliability. A score was computed for each subscale and an inter-scale correlation matrix was calculated. Subscales that were highly correlated were consolidated into new subscales. This resulted in four subscales at age 16 with alphas of 0.87 for Physical Needs, 0.79 for Emotional Support, 0.84 for Nurturance, and 0.75 for Protection from Hazards. At age 18, the alphas were 0.90 for Emotional Support, 0.79 for Protection from Hazards, and 0.83 for Future Planning.

Substance Use.—The young adults reported use of substances to questions adapted from the National Survey on Drug Use and Health (Substance Abuse Mental Health Services Administration, 2014): tobacco, alcohol, marijuana, cocaine, heroin, amphetamines, ecstasy, inhalants, hallucinogens, and four classes of prescription medications used non-medically (analgesics, tranquilizers, stimulants, and sedatives). Respondents indicated how often they used each substance “since age 18 and until a year ago” on a 4-point scale (1 = Never to 4 = Regularly).

Parental Substance Use was measured at age 8 by asking the primary caregiver to indicate whether s/he had ever and/or currently any of 10 substances (e.g., tobacco, alcohol, marijuana, cocaine, etc.). The number of affirmative endorsements was summed to create an index of substance use (possible range = 0 – 10). Higher values indicate a greater number of substances used.

Caregiver Demographics.—Caregivers reported household income, education and employment status at the child age 14 or 16 interview. Income represents the midpoint of the

categorical range of incomes in \$5000 increments. Caregiver education was coded as <12 years, or 12 years. Employment was coded as full or part time versus unemployed.

Caregiver Depressive Symptoms were assessed with the Center for Epidemiological Studies Depression Scale (CES-D; Radloff, 1977), a 20-item, self-report measure of depressive symptoms. The total score was utilized (range: 0–60). Higher scores indicate more depressive symptoms.

Adolescent Behavior Problems.—At age 14 (or age 16 if missing), caregivers completed the Child Behavior Checklist (CBCL; Achenbach, 1991). The CBCL is a well-standardized measure of child internalizing and externalizing problems. The caregiver indicates the extent to which each of 113 behaviors is characteristic of the child. For the current study, the Total Problems raw score was used. Higher scores indicate greater problems.

Life Events.—Caregivers completed the Life Events Scale for Children (Knight, Smith, Martin, & Investigators, 2009). Endorsement of positive events (8 items), negative events (18 items) and total events (26 items) were summed to create three separate scores.

Young Adult Report of Exposure to Intimate Partner Violence and Aggression (IPVA) is a project developed measure borrowing heavily from the Conflict Tactics Scale (Partner to Partner; Strauss, 1979) with a focus on psychological and physical aggression. The IPVA asks respondents to indicate whether they witnessed each of six events prior to the age of 18. Sample items include “Before you were 18, did you observe the adults in your home yell or scream at each other?”, “...kick, bite, hit with a fist, or hit with something?” Any affirmative response was considered indicative of IPVA exposure in childhood and/or adolescence.

Data analyses—Given the longitudinal nature of the study, missing data was evident for target study variables. The percentage of missing data varied by variable and time-point, with the highest amount being for Parental Monitoring at age 12 (30.2% missing) and Nurturing at age 16 (24.9% missing). Missing data for the early adult substance use variables was 9.5%. Missing values analyses were conducted to identify whether or not patterns of missingness were systematic. No statistically significant differences were found for those missing (vs. not missing) data on any of the target study variables or demographics (all p s >.01).

Latent class analysis (LCA) was used to derive classes or patterns of timing of neglect. Neglect was indexed by dichotomous (Yes/No) CPS reports of FTP and/or LOS, at ages 0–4, 5–8, 9–12, and 13–17. In addition to these indicators of neglect, participants rated the extent to which their needs were met on the self-reported neglect subscales described above. Thus, each LCA used 25 indicators to best describe neglect classes and 2, 3 and 4 classes were tested. Models were estimated using MPlus 7.1 (Muthén & Muthén, 2014). Classes added iteratively to determine which model best fitted the data.

To determine the optimal number of classes, each model was evaluated using the Akaike information criteria (Akaike, 1974), sample size-adjusted Bayesian information criteria

(Schwarz, 1978), the Bootstrapped Likelihood Ratio Test (BLRT; (Arminger, Stein, & Wittenberg, 1999; McLachlan & Peel, 2000; Ramaswamy, DeSarbo, Reibstein, & Robinson, 1993), and Entropy (Ramaswamy et al., 1993). The AIC and sBIC are descriptive fit indices; smaller values indicate a better model fit. The BLRT compares the fit of a target model (e.g., a 2-class model) to a comparison model that specifies one less class (e.g., a 1-class model). The p-value generated for the BLRT indicates whether the solution with more classes ($p < .05$) or fewer classes ($p > .05$) fits better. Entropy is a measure of how well classes can be distinguished. In addition to these indices, each model was evaluated for interpretability. Conditional response probabilities were interpreted for the dichotomous CPS variables and conditional response means for the self-reported neglect subscales.

After the best-fitting model was determined, categorical and continuous sociodemographic variables associated with class membership were explored using the R3Step approach in MPlus (Asparouhov & Muthén, 2014). This approach simultaneously estimates the best-fitting LCA solution while evaluating the associations between class membership and variables of interest, thus reducing bias because the uncertainty of the best-fitting class solution is accounted for. This approach was also used to test for differences in individual drug outcomes as a function of neglect class in regression models. Site, sex and race/ethnicity were dummy-coded and entered simultaneously into these regression models; parental substance use was added as a continuous covariate. Because the individual drug outcomes displayed non-normality, the Maximum Likelihood Robust procedure in MPlus was used to estimate all models. This approach adjusts for both the non-normality and missing data.

Results

Overall model and descriptive fit indices for the LCA are presented in Table 1. These suggested that the 4-class solution best fit the data, although one class contained only 3% of the sample. This typically indicates that the class is spurious, and by implication the solution may not best represent the data. Given this, and that the statistics/fit indices and interpretability of the 3-class solution were reasonable, this solution was deemed optimal.

Conditional response means and probabilities for the 25 neglect variables by class are presented in Table 2. Based on the conditional response means for the self-report measures, class 1 had lower values (more neglect) for Emotional Support, Physical Needs, Nurturance, and Protection from Hazards at age 16, as well as for Emotional Support and Future Planning at 18. The conditional response probabilities for CPS reports did not help define this class; all values were relatively low and comparable to the other two classes. The class, composed of 120 participants or 25% of the sample, will be referred to as the Late Neglect class.

Class 2 had lower values (more neglect) for self-reported neglect at all 4 time points. These variables had lower values for: (a) Parent Monitoring and Emotional Support at ages 12 and 14, (b) Emotional Support, Physical Needs, Nurturance, and Protection from Hazards at 16, and (c) Emotional Support and Future Planning at 18. The conditional response probabilities for the CPS reports did not define this class either; all values were relatively low and

comparable to the other classes. This class included 64 participants or 15% of the sample and will be referred to as the Chronic Neglect class, reflecting experiences during adolescence.

Class 3 had higher values (less neglect) for all self-reported neglect measures at all 4 time points. Moreover, this class had the lowest proportion of participants with a FTP CPS reports (0–4 years) compared to the other classes. Class 3, composed of 289 participants or 60% of the sample, will be referred to as the Limited Neglect class.

Table 3 describes sociodemographic characteristics of the three neglect groups. The only significant difference observed was that the Chronic Neglect group was more likely than the Limited Neglect group to have a CPS report at any age ($p < 0.02$). There were no significant differences by neglect classes regarding income, caregiver depression, adolescent life events and childhood exposure to intimate partner violence or aggression (all $p > 0.05$).

Finally, regression models were run to predict substance use “since you turned 18 up until 12 months ago.” Table 4 displays the means for substance use by neglect group. Significantly more drug use was reported by the Late Neglect group relative to the Limited Neglect group for tobacco, alcohol, marijuana, cocaine and heroin. The Late Neglect group also reported more heroin use compared to those in the Chronic Neglect group. No significant differences were found between the Chronic and Limited Neglect groups for any of the drug outcomes (all $p > .05$).

Discussion

There were different patterns in terms of the timing of neglect in this high-risk sample of children who were maltreated or at risk for maltreatment. Of importance, the largest group was the one with relatively little evidence of neglect, based on both CPS and self-report data. Indeed, the youth ratings of relationships with their parent or primary caregiver were quite positive. This does not however preclude the possibility of neglect; neglected children might not know what to expect and might not perceive themselves to be lacking care or supervision. As expected, a small subgroup experienced chronic neglect. Neglect is generally construed to be an ongoing pattern of needs not being met, and it is a form of maltreatment that can be especially recalcitrant to intervention (Child Welfare Information Gateway, 2013). Interestingly, there was a group who self-reported neglect in several domains starting in mid-adolescence. Earlier on, their trajectories resembled those of the Limited Neglect group, but starting in mid-adolescence they approximated those in the Chronic Neglect group. We were unable to discern what contributed to this shift. For example, recent life events and changes in their financial situation did not differ among the groups. Future research should probe this apparent phenomenon.

In contrast to the self-report data, the distinctions among groups were less clear regarding CPS reports. The Limited Neglect group did however have the fewest reports. CPS reports are a relatively crude measure of maltreatment; youths’ perceptions of their experiences and unmet needs are likely to be more sensitive indicators of possible neglect.

Our primary aim was to probe differences among the Neglect groups with regard to substance use in early adulthood. We selected this period to capture the time when substance use is likely to peak. The past-year prevalence estimates observed in this study are mostly comparable to what is found among the general population of young adults aged 21–25 in the United States, with the exception of slightly higher marijuana use (44.4% vs. 35.1%) (Center for Behavioral Health Statistics and Quality, 2016). It is difficult to compare estimates directly without adjusting for sex, race/ethnicity, residence and employment status, since drug use varies by such factors. Notably, almost a quarter of the sample had engaged in nonmedical use of prescription analgesics, which is not surprising given the current national epidemic (Hsu, McCarthy, Stevens, & Mukamal, 2017). Clearly, there is a need to prevent such use and to better identify and intervene with individuals who might be in need of addiction treatment.

The finding linking child neglect to later substance use is consistent with other research showing significant associations between child maltreatment and young adult substance use and related problems (Carliner et al., 2016; Dubowitz et al., 2016). The refined approach to measuring neglect in this prospective longitudinal study offers a more nuanced and valuable view. For example, very little research has probed neglect during adolescence; rather, the primary focus has been on younger children. Despite their increasing autonomy, adolescents remain quite dependent on their caregivers in many respects. In this context, it is striking that the Late Neglect group appeared at highest risk for substance use in early adulthood, even compared to those chronically neglected throughout early childhood and adolescence. We speculate that those in the Chronic Neglect group might have learned previously to be more self-reliant and perhaps less likely to perceive and/or experience later deficiencies in their care. This might have led to adoption of “adult-like” roles and responsibilities that are associated with less likelihood of substance use (Staff, 2010). A sudden or late onset of neglect may actually be more traumatic than consistent neglect. It is also possible that limited power was an issue for substances that were used infrequently, although this was not the case for tobacco, alcohol and marijuana.

This study has some limitations. There is the possibility that the relationship between neglect and substance use was confounded by unexamined variables. We did however probe several such candidates (e.g., life events, caregiver depression, and parental substance use) and found no differences across neglect groups. Social desirability was likely diminished by using an audio computer assisted self-interview format (Black & Ponirakis, 2000; Turner et al., 1998). Self-report data are however limited to participants’ perceptions and what they are willing to disclose. CPS data are subject to several biases (English & Longscan Investigators, 1997; Hampton & Newberger, 1985; Lane, Rubin, Monteith, & Christian, 2002). We partly addressed this by using a refined coding schema based on CPS narratives (Barnett, Manly, & Cicchetti, 1993; English, Bangdiwala, & Runyan, 2005; Zuravin, 2001), although this still relies upon what was documented by CPS caseworkers.

The study also has strengths. The repeated measurement of neglect throughout childhood, consisting both of self-report by adolescents as well as the CPS data, offer a longitudinal and prospective view of children’s experiences, and a nuanced understanding of the timing and chronicity of neglect. The prospective study design allows for discerning the temporal

relationship with later substance use. However, further research is needed to understand the possible impact of neglect on substance use outcomes even farther into adulthood. In addition, the diversity of the sample in terms of the degree of risk and different geographic regions are also strengths.

Despite a common perception that neglect is relatively benign (Dubowitz, 1994), this study points to its seriousness given the link with substance use in early adulthood. It appears that neglect beginning in mid-adolescence deserves special attention. This period is commonly a challenge for parent-youth relationships. Those working with adolescents can play a valuable role by being sensitive to their needs, recognizing when their needs are not being adequately met (i.e., neglect), and helping ensure that these are better addressed. Added attention may be especially important for high-risk youth such as those who have been maltreated or are at risk for this problem. In addition, there is a need to identify risky behaviors such as substance use and abuse early in order to facilitate engagement in effective interventions.

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Table 1.

Model fit indices

Solution	AIC	sBIC	Entropy	BLRT (<i>p</i>)
1 class	8133	8167		
2 class	7096	7152	.91	<.001
3 class	6679	7003	.85	<.001
4 class	6385	6482	.85	<.001

Notes.

BLRT = Bootstrapped Lo-Mendell Rubin Test, AIC = Akaike

Information Criterion, sBIC = sample size-adjusted Bayesian Information Criterion

Table 2.

Conditional response means and proportions for 3-class solution.

	Late Neglect	Chronic Neglect	Limited Neglect
Self-reported neglect			
Physical Needs elementary 12	2.92	2.66	2.94
Parental monitoring elementary 12	2.79	2.12	2.87
Emotional support elementary 12	2.57	2.08	2.72
Physical needs elementary 14	2.91	2.57	2.96
Parental monitoring elementary 14	2.80	2.01	2.87
Emotional support elementary 14	2.57	1.97	2.74
Emotional support 16 (continuous: values from 0–3)	1.93	2.04	2.65
Physical needs 16 (continuous: values from 0–3)	2.26	2.37	2.88
Nurturance 16 (continuous: values from 0–3)	2.00	2.06	2.66
Protection from hazards 16 (continuous: values from 0–3)	2.06	2.25	2.51
Emotional support 18 (continuous: values from 0–3)	1.81	1.82	2.45
Future Planning 18 (continuous: values from 0–3)	1.71	1.79	2.47
Protection from hazards 18 (continuous: values from 0–3)	2.58	2.73	2.83
Objective CPS reports of Neglect			
Failure to provide 0–4	.46	.52	.36
Failure to provide 5–8	.20	.21	.13
Failure to provide 9–12	.14	.15	.10
Failure to provide 13–18	.11	.08	.04
Lack of supervision 0–4	.22	.28	.27
Lack of supervision 5–8	.21	.22	.15
Lack of supervision 9–12	.15	.14	.07
Lack of supervision 13–18	.11	.11	.03

Note.

All self-report measures of neglect ranged from 0–3, with *lower* scores indicating more neglect.

Table 3.

Neglect Groups by Sociodemographic Characteristics.

	Overall Sample	Late Neglect	Chronic Neglect	Limited Neglect	p-value
N	473	120	64	289	
% of sample		25%	15%	60%	
Sex					.80
Male	38.5%	38.3%	42.2%	37.7%	
Female	61.5%	61.7%	57.8%	62.3%	
Site					.06
Eastern	24.3%	18.8%	27.3%	20.0%	
Midwestern	16.7%	15.6%	18.3%	13.3%	
Southeastern	11.2%	4.7%	12.8%	10.8%	
Southwestern	21.1%	29.7%	17.0%	26.7%	
Northwestern	26.6%	31.3%	24.6%	29.2%	
Race/Ethnicity					.16
White	28.3%	29.7%	27.7%	29.2%	
Black	52.4%	45.3%	55.0%	50.0%	
Hispanic	5.3%	12.5%	3.8%	5.0%	
Other	14.0%	12.5%	13.5%	15.8%	
CPS Report (0–17)					.02
Yes	68.5%	73.3%	79.7%	64.0%	
No	31.5%	26.7%	20.3%	36.0%	
Caregiver Employment Status ^I					.12
Employed (Full- Part-Time)	40.9%	48.7%	41.9%	37.5%	
Unemployed					
Caregiver Education ^I					.47
0–11 Years	26.1%	30.4%	24.2%	27.7%	
12+ Years	73.9%	69.6%	75.8%	75.3%	
Family Income (\$) ^I	M=29,472 SD=16,081	M=27,909 SD=16,298	M=32,254 SD=15,928	M=28,481 SD=16,000	.24
Caregiver Depressive Symptoms ^I	M=11.21 SD=10.23	M=11.63 SD=10.02	M=11.72 SD=10.13	M=10.36 SD=11.21	.77
CBCL Total Problems Score ^I	M=28.03 SD=23.64	M=33.64 SD=21.07	M=31.60 SD=19.44	M=28.86 SD=17.52	.08

^IMeasured when the youth was either 14 or 16 years of age.

Table 4.

Means for Individual Drugs by Neglect Groups.

	Late Neglect	Chronic Neglect	Limited Neglect
Tobacco	2.68 ^a	2.28	2.16 ^a
Alcohol	2.92 ^a	2.77	2.60 ^a
Marijuana	2.50 ^a	2.22	2.01 ^a
Cocaine	1.34 ^a	1.14	1.10 ^a
Heroin	1.23 ^{ab}	1.03 ^a	1.02 ^b
Amphetamines	1.29	1.28	1.08
Ecstasy	1.46	1.17	1.19
Inhalants	1.11	1.03	1.02
Hallucinogens	1.29	1.00	1.08
Non-medical Use of Prescription Medications			
Analgesics	1.50	1.58	1.35
Tranquilizers	1.21	1.16	1.13
Stimulants	1.25	1.23	1.12
Sedatives	1.11	1.19	1.04

Note.

Similar superscripts indicate groups that significantly differed ($p < .05$). All analyses controlled for sex, race/ethnicity, study site, and parental substance use.