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The Influence of Neighborhood Disadvantage and Perceived Disapproval on Early Substance Use Initiation

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Abstract

The current study examined the role of neighborhood disadvantage, perceived caregiver disapproval, and perceived peer disapproval in early initiation of substance use in a sample of 126 aggressive 9th graders (66% male; 79% African American). Findings suggested that perceived caregiver and peer disapproval as well as neighborhood disadvantage were associated with early substance use initiation. However, when associations were simultaneously examined, neighborhood disadvantage was the only factor related to early substance use initiation. Implications for findings are discussed.

Keywords

neighborhood disadvantage; disapproval; substance use initiation

Early substance use initiation is associated with an increased risk for substance abuse and abuse related problems (e.g., Hoffman, Sussman, Unger, & Valente 2006; Pitkanen, Lyyra, Pulkkinen, 2005), and therefore understanding factors that influence early initiation is important for substance abuse prevention. Ecological theories posit that many contextual factors contribute to the development of complex behavior (Bronfenbrenner, 1979; Bronfenbrenner & Evans, 2000), and as such it is important to consider a multitude of factors when attempting to understand early substance use initiation. Moreover, from a social learning perspective, the social environment (i.e., caregivers, peers, and neighborhood; Reid, Patterson, & Snyder, 2002) is believed to contribute to development of problem behavior. Indeed, there is ample research supporting the role of parental and peer influence (e.g., Kandel, 1980) as well as neighborhood influence (e.g., Smart, Adlaf, & Walsh, 1994) on adolescent substance use. However, only a handful of studies have examined the unique contributions of caregivers, peers, and neighborhood (e.g., Hawkins, Catalano, Miller, 1992), and no research has specifically examined perceived caregiver disapproval, perceived peer disapproval, and

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neighborhood disadvantage within the same model. Moreover, previous studies have primarily focused on substance use in late adolescence. It is important to understand how these factors relate to early substance use initiation, given that early initiation is associated with later more severe substance using behavior. This information would help professionals identify important targets for prevention interventions. Accordingly, the current study examined perceived caregiver and peer disapproval and neighborhood disadvantage as predictors of early initiation of substance use.

1.1. Perceived Disapproval

Empirical research suggests that perceived caregiver disapproval is an important predictor of adolescent substance use. Parental disapproval of substance use has been found to be positively associated with higher levels of youth disapproval (Wallace & Fisher, 2007) and negatively associated with actual use (Butters, 2004; Toweberman & McDonald, 1993) amongst high school students. Thus, caregiver disapproval appears to play a role in the prevention in adolescent substance use. However, caregiver attitudes are not the only influence on early substance use. Peer disapproval is also influential in substance use.

Youth perceptions of peer disapproval are related to youth disapproval of substances (Wallace & Fisher, 2007). Perceived peer use has also been associated with heavy drinking at 17 years of age (Adalbjarnardottir & Hafsteinsson, 2001) and marijuana use in adolescence (Hemmelstien, 1996). Moreover, perceived peer attitudes are associated with experimentation and frequency of drug use in adolescence (Butters, 2004; Towberman & McDonald, 1993). Yet these studies do not directly speak to the relation between perceived disapproval and early substance use initiation. Accordingly, the current study examined the effects of both perceived caregiver and peer disapproval on early substance use initiation.

1.2. Neighborhood Disadvantage

Neighborhood disadvantage also appears to be an important factor to consider when attempting to understand early substance use. Neighborhood disadvantage is a chronic stressor that has been found to lead to negative behaviors, such as substance use and abuse (Lambert, Brown, Philips, Ialongo, 2004; Hawkins, Catalano, & Miller, 1992). In fact, there is a large body of research suggesting a link between neighborhood disadvantage and adolescent substance use (e.g., Fauth, Leventhal, & Brooks-Gunn, 2007; Winstanley, Steinwachs, Ensminger, Latkin, Stitzer, & Olsen, 2008). Thus, neighborhood disadvantage appears to be another important factor to consider when examining adolescent substance use. However, previous research does not inform us about the relation between neighborhood disadvantage and early substance use initiation. Accordingly, the current study examined the association between neighborhood disadvantage and early substance use initiation.

1.3. The Current Study

In sum, the current study examined the influence of perceived caregiver and peer disapproval and neighborhood disadvantage on early substance use initiation. The current study advances previous research by simultaneously examining the influence of these factors on early substance use initiation (by 9^{th} grade). All 3 factors were expected to contribute to early initiation of substance use; however, it was unclear which factor(s) would be most strongly related to early initiation.

2. Methods

2.1. Participants and Procedures

Participants come from a larger longitudinal study designed to evaluate the Coping Power intervention for childhood aggression (see Lochman and Wells, 2002). This study included the control groups (N = 126) of the larger study so that findings were not affected by the intervention. Children (66% male) were recruited into the study at the end of 4th grade (mean age = 10.4 years, SD = .51) and data were collected annually over 6 years. Caregivers were compensated $40 and children were compensated $10 for their participation. The study maintained an 87% retention rate. The racial composition of the sample was 79% African-American, 17% Caucasian, and 4% of other ethnicities. Caregivers were mostly mothers (90%), and based on Hollingshead index of social status (Hollingshead, 1975), 17.74% of the families were unskilled workers, 15.32% were semi-skilled workers, 14.52% were skilled workers, 29.84% were minor professionals, and 22.58% were major professionals.

2.2. Measures

2.2.1. Substance Use Initiation—Alcohol, tobacco, and marijuana use was assessed using 3 child self-reported yes-no items from the Center for Substance Abuse Prevention (CSAP) Student survey (Pentz, Dwyer, MacKinnon, Flay, Hansen, and Wang, 1989). A sample item is “Have you EVER had a drink of alcohol”. If students responded positively to any of the 3 items they were coded as having initiated substance use by 9th grade.

2.2.2. Perceived Caregiver Disapproval—Perceived caregiver disapproval of alcohol, tobacco, and marijuana use was assessed using child self-reports of 3 items from CSAP Student survey (Pentz et al., 1989). A sample item is “How would your parents feel if they found out you smoked cigarettes, or used chewing tobacco, snuff or dip sometimes?” Internal consistency of this measure was modest in the current sample (α = .65). Mean scores were computed and used for analyses.

2.2.3. Perceived Peer Disapproval—Perceived peer disapproval was assessed using child self-reports of 3 items that were included in the CSAP Student survey (Pentz et al., 1989). A sample item is “If your friends found out that you smoked cigarettes or used chewing tobacco, snuff or dip, how do you think they'd feel?” Internal consistency of this measure was high in the current sample (α = .85). Mean scores were computed and used for analyses.

2.2.4. Neighborhood Disadvantage—Participants' homes were geo-coded into aggregated census tracts using 2000 Census data. For the current subsample, 22 neighborhoods were represented, with the number of children per neighborhood ranging from 1 to 16. High values indicate high levels of neighborhood disadvantage.

3. Results

3.1. Descriptive Statistics

Correlations, means, and standard deviations are reported in Table 1. Fifty-seven percent of participants reported having tried substances by the 9th grade. Perceived caregiver and peer disapproval and neighborhood disadvantage were all associated with substance use.

3.2. Random Effects Regression Model

A random effects regression model using the PROC GENMOD procedure was estimated in order to take into account the nesting of children within neighborhood. Substance use initiation was simultaneously regressed on perceived caregiver approval, perceived peer approval,

neighborhood disadvantage, gender, and race. As seen in Table 2, race was marginally significantly related to substance use initition[1], such that Caucasian youth were more likely to have tried substances than African American youth. Neighborhood disadvantage was also related to substance use initiation, such that high levels of neighborhood disadvantage were associated with an increased likelihood of substance use initiation by 9th grade. However, all other variables were unrelated to substance use initiation.[2]

4. Discussion

The current study examined the role of perceived caregiver and peer disapproval and neighborhood disadvantage on early substance use initiation. Consistent with research examining substance experimentation and use in late adolescence (e.g., Butters, 2004), perceived caregiver and peer disapproval were negatively associated with early substance use initiation. However, when simultaneously examining these risk factors, neither perceived caregiver or peer disapproval were significantly related to early substance use initiation. Findings suggest that although perceived caregiver and peer disapproval is associated with early substance use initiation at the bivariate level, perceived disapproval is not the strongest predictor of early substance use initiation.

Neighborhood Disadvantage was found to be strongly and robustly associated with increased risk for early substance use initiation, which is consistent with previous research (e.g., Hawkins, Catalano, and Miller, 1992). From an ecological perspective, the larger environment in which a child is embedded will influence the development of behavior (Bronfenbrenner, 1979; Bronfenbrenner & Evans, 2000). It may be that disadvantaged neighborhoods provide a model in which substance using behavior is viewed as an acceptable behavior (Reid, Patterson, & Snyder, 2002), thus leading to early substance use initiation. Living in disadvantaged neighborhoods is associated with fewer prosocial recreational activities and substances are more readily available than in more advantaged neighborhoods (e.g., Lambert et al, 2004; Wallace & Muroff, 2002), increasing children's risk for early substance use initiation. Thus, findings suggest the need to target neighborhood disadvantage for the prevention of early substance use initiation.

4.1. Limitations and Conclusions

There are limitations regarding the generalizability of the current study that need to be noted. The current sample was comprised of a sample of high risk aggressive children, and relations may not be consistent across other sample types. The current sample was also predominantly African American, which is representative of the region in which the data was collected. Nonetheless, findings should be replicated in a more culturally diverse sample. An additional limitation of the study is the modest internal consistency associated with perceived caregiver approval of substance use measure. Note, however, that findings were in the expected direction. Nonetheless, findings should be replicated using a more internally consistent measure of perceived caregiver disapproval.

Despite limitations, the current study has implications for intervention. Although caregiver and peer disapproval is associated with substance use initiation when considered individually, findings suggest that neighborhood disadvantage is a particularly important factor to target for intervention. Findings may suggest the need to target: the accessibility of substances within neighborhoods in addition to general disorganization and disadvantage of neighborhoods. If we can limit children's access to substances as well as attempt to improve the quality of

[1]Alcohol, tobacco, and marijuana were originally examined independently; however, findings were similar across the substances. Accordingly, a composite measure was created and used in analyses.
[2]Interactions between independent variables were examined; however, no significant interactions were indicated.

neighborhood (e.g., provide extracurricular activities for youth), then we may be able to reduce the risk for early substance use initiation. Furthermore, parents and communities may need to monitor what children are exposed to within their neighborhood as well as educate children on the negative effects of what they see within the neighborhood. Perhaps if children are further exposed to the negative effects of substance use they may delay substance use initiation, ultimately decreasing the risk for substance use and abuse problems.

Future directions in research should include exploring the mechanisms (e.g., accessibility of substances and whether or not the child has witnessed drug use and drug sales) found within disadvantaged neighborhoods that may account for the relation between disadvantaged neighborhoods and early substance use. This information could help to even further refine prevention and intervention programs.

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Table 1

Correlations, Means, and Standard Deviations of Study Variables

	1	2	3	4	5	6
1. Neigh Disad						
2. Caregiver Disapp	-.08					
3. Peer Disapp	-.05	.43*				
4. Sub Use Init	.17+	-.21*	-.25*			
5. Gender	.09	.01	.15	-.03		
6. Race	.37*	.03	.06	-.04	.15	
M	.42	2.56	.70	.57	1.34	1.83
SD	1.00	.60	.54	.50	.48	.38

Note. Neigh disad = neighborhood disadvantage, Caregiver disapp= perceived caregiver disapproval, Peer disapp= perceived peer disapproval; Sub use init = substance use initiation by 9th grade; gender: male = 1, female = 2; race: Caucasian = 1, African American = 2;

* $p < .05$,

+ $p < .07$

Table 2

Simultaneous Regression Model

	B	SE	χ^2
Gender	-.02	.09	.06
Race	-.26	.14	3.60†
Perceived Caregiver Disapproval	-.10	.08	1.56
Perceived Peer Disapproval	-.14	.09	2.43
Neighborhood Disadvantage	.10	.05	4.30*

* $p < .05$,

† $p < .07$.