Journal of Leisure Research
1999, Vol. 31, No. 1, pp. 57-77

Leisure Context, Parental Control, and Resistance to Peer Pressure as Predictors of Adolescent Partying and Substance Use: An Ecological Perspective

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Using an ecological model we explored factors that contributed to the amount of time adolescents spent partying and consequent substance use. This study derived from secondary data analysis on self-report data collected on a sample of students from nine high schools. Of the approximately 9,000 students present during questionnaire administration, about 8,000 provided usable data for this study. Multiple regression analyses suggested that if adolescents perceived low levels of parental monitoring and associated with peers who used substances, they were more likely to use substances themselves. The results also suggested that spending time in unstructured social settings predicted substance use, but this process was mediated by partying. Furthermore, adolescents who spent time in unstructured social settings spent more time partying, but only if their friends were perceived to value partying and were substance users. Similarly, adolescents who spent time partying were at heightened risk for substance use, but only if they reported themselves to be open to peer influence. Thus, hanging out, a common social leisure context, does not necessarily lead to partying, and parties do not automatically lead to alcohol or drug use. In various ways, peers and resistance to peer pressure moderate these effects.

KEYWORDS: *Adolescent leisure, unstructured leisure, partying, substance use, peer influence*

Introduction

Social activities are among the most commonly pursued (and most desired) forms of leisure among adolescents (Kleiber, Caldwell, & Shaw, 1993) and occur in both structured and unstructured settings. Hanging out with friends, participating in team sports and other organized activities, and family interactions all provide various types of social experiences. The social context of leisure is important to adolescent development in that it provides opportunities for both differentiation and integration. Often, within the so-

The authors wish to thank B. Bradford Brown, Sanford Dornbusch, and Laurence Steinberg for the use of these data. Data collection was supported by grants to Laurence Steinberg and B. Bradford Brown from the U.S. Department of Education, through the National Center on Effective Secondary Schools at the University of Wisconsin-Madison, and to Sanford M. Dornbusch and P. Herbert Leiderman from the Spencer Foundation.

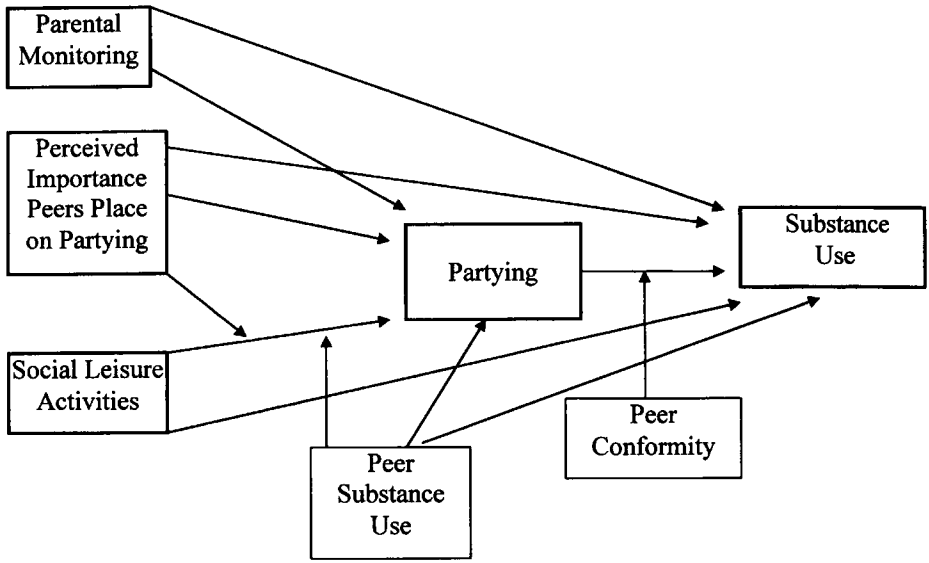

Figure 1. Ecological model predicting partying and substance use.

cial context, youth learn to manage their own experiences (Silbereisen & Eyferth, 1986) by exerting personal control over their environments and becoming autonomous in their actions. At the same time, they also learn to cooperate and establish important social negotiation skills within their peer group.

The freedom adolescents experience in leisure settings provides a catalyst for experimentation with social roles, behaviors, and ideas, all of which contribute to successful transition into adulthood. This experimentation is essential for healthy development, but also includes behaviors that might be developmentally maladaptive. For example, drinking, illegal drug use, delinquency, and sexual experimentation often occur within the context of social leisure settings (Caldwell & Smith, 1996) and in particular unstructured situations. It is in these unstructured situations in particular where the freedom to experiment is most likely to occur.

Using an ecological model we explored factors that contributed to spending time in a typical adolescent social leisure context, partying, and subsequent substance use. Specifically, we first examined the extent to which various types of social leisure settings (both structured and unstructured), parental monitoring, and peer characteristics (peer substance use and the perceived importance placed on partying) predicted the amount of time that high school adolescents spent partying. We then examined how leisure settings; parental, personal, and peer variables; and time spent partying, predicted substance use. Finally, we asked the question: Are adolescents who are resistant to peer pressure less likely to become involved in substance use even when in a social context where substance use is encouraged?

Although the drive for autonomy may be partly dispositional, the opportunity and support for youth to experience control over their environments and experiences is also influenced by peers and parents. Problem behaviors such as smoking, substance use, and delinquency are often influenced by the extent to which close peers are involved in those same behaviors (Brown, 1990; Fletcher, Darling, & Steinberg, 1995). Although peer influences peak during middle adolescence, adolescents still maintain strong emotional ties to parents (Steinberg, 1990) who continue to maintain authority by setting rules for adolescent behavior both within and outside of the home (Smetana, 1989; Steinberg, 1990). The tensions between developing autonomy, responding to peer pressure, and living up to parental expectations and rules are often played out in social leisure contexts. Peterson (1993) suggested that examining how adults structure or control the leisure activities of adolescents in an attempt to decrease the likelihood of participation in problem behaviors appears to be a productive line of inquiry. Thus, we were interested in adolescent participation in leisure activities not because of any inherent characteristics of the activities themselves, but because they provide a social context in which peer influences and personal characteristics interact, and in which parents often try to exert some control.

Conceptual Model

The theoretical framework provided for this study is based on ecological systems theory (e.g., Bronfenbrenner, 1992, 1995). An ecological perspective is concerned with contexts, which are daily life environments, influenced by the variations and interactions of personal and situational variables, which afford either risk or opportunity (Garbarino, 1992). More specifically, ecological systems theory is a model of human development characterized by its (a) focus on understanding the processes underlying development, (b) investigation of interactions among multiple contexts in which the developing person interacts, and (c) emphasis on an active person who influences and interprets, as well as is influenced by, the environment (Bronfenbrenner, 1992). The current project exemplifies this approach to understanding the role of leisure in adolescent development by (a) focusing on the mediational role of participating in a particular type of social interaction (partying) underlying the association between parental monitoring, peer substance use, and leisure, (b) by examining how characteristics of families and peer groups moderate the relationship between spending time in particular leisure settings and partying, and (c) examining how adolescents' resistance to peer conformity can help buffer them from the association of partying and substance use. The following section reviews literature which helps us understand these various contexts vis-à-vis the variables of interest to this study.

In this paper we present a model (see Figure 1) that predicted partying, and then substance use, from peer and parental factors and leisure activity participation while controlling for grade in school. Peer influences were hypothesized to moderate the influence of participation in leisure activities on partying. Peer conformity was hypothesized to moderate the influence of

partying on substance use. While the sample was ethnically and racially diverse, there was no theoretical reason to run separate analyses comparing racial and ethnic differences. Because it has become increasingly obvious that gender differences are important to consider in an examination of both leisure and substance use, these were explored.

Related Literature

Factors Associated with Substance Use

A number of factors have been consistently related to alcohol use among adolescents. These include gender, age, grade in school, religiosity, socioeconomic status, and involvement in extracurricular activities (Gibbons, Wylie, Echterling, & French, 1986). Generally, the profile of non-drinkers includes females, younger adolescents, and those who are more religious (Gibbons et al., 1986). Although participation in social and extracurricular activities have been examined in relationship to substance use, there are inconsistencies among findings. Gibbons et al. (1986) suggested that participation in extracurricular activities is not associated with drinking. Others, however, have found that involvement in extracurricular activities may be associated with substance abuse, as well as other problematic behaviors (e.g., vandalism) (Caldwell & Smith, 1996; Swisher & Hu, 1983). Swisher and Hu (1983) examined specific types of activities and substance use and found that participation in some activities, such as active hobbies, was associated with less use of beer and stimulants. Conversely, they found that participation in social activities was associated with greater use of cigarettes, beer, marijuana, inhalants, depressants, and stimulants. Sports participation was associated with less use of cigarettes, marijuana, depressants, hallucinogens, and stimulants, but more use of beer. Caldwell and Smith (1996) found mixed results when they examined the relationship of participation in leisure activities and problem behaviors. For example, males who had a high level of participation in clubs and organizations outside of school were more likely to use drugs and alcohol, and to be involved in fighting. The reverse was true for females. These inconsistencies suggest that a deeper understanding of the leisure/social context is important.

Partying may be the "ultimate" social context of adolescents. Although partying is difficult to define and probably depends upon the age group defining the term, we felt that to adolescents, in its most general sense, partying means having a good time with a group of friends. This broad definition has been suggested by conversations with adolescents in this age range. Clearly, though, the link between partying and substance abuse to some adolescents seems obvious and has been documented in the literature (Howard, Boyd, & Zucker, 1994; Thombs, Beck, Mahoney, Bromley, & Bezon, 1994). Gibbons et al. (1986) found that the amount of time spent in social activities was predictive of frequency and amount of alcohol usually consumed, although their overall regression model had a rather low R^2. Using the experience sampling method, Larson, Csikszentmihalyi, & Freeman

(1984) also found that alcohol consumption, as well as marijuana use, was related to social contexts, although relationships differed qualitatively. Alcohol consumption was a highly social activity occurring at Friday and Saturday night parties. Marijuana use, while still a social activity, was done with one or two friends, and the context of use was not limited to a party atmosphere. Thombs and Beck (1994) identified a number of different drinking patterns which were associated with frequency and intensity of drinking. They concluded that the social facilitation context was the most common drinking environment.

Harford and Grant (1987) hypothesized that heavy drinking may be closely tied to the dynamics of the social group, as well as to other environmental and personality characteristics. Among a number of these environmental and personality characteristics, Harford and Grant found that the strongest predictor of drinking was whether male or female adolescents were in a social context where drinking was normative, a finding corroborated by some of their earlier work. In addition, they found that for females only, highly valuing autonomy from parental regulation and a low valuing of academic achievement was also predictive of drinking.

Others have also argued that leisure activities are related to problem behaviors because the social context allows one to come into contact with peers who might encourage or participate in problem behaviors. Basing their study, in part, on subcultural deviance theory, Agnew and Petersen (1989) found that hanging out and social activities were positively associated with delinquency. They interpreted their findings to mean that in unsupervised contexts, peer relationships may increase the likelihood of delinquency due to association with deviant others. Their study also suggested that time spent in organized, structured leisure activities was negatively associated with delinquency.

Parenting Factors

The role of parenting styles, parental monitoring, and other parenting factors has been examined in relationship to adolescent participation in problem behaviors (e.g., Baumrind, 1991; Simons, Conger, & Whitbeck, 1988). For example, the absence of parents or other adults at teenage parties has been the strongest predictor of intoxication frequency (Harford & Spiegler, 1983). In a description of their multistage learning model of substance abuse, Simons, Conger, & Whitbeck (1988) contended that parental monitoring and discipline influenced adolescents' access to and association with deviant peers (Patterson & Dishion, 1985; Snyder, Dishion, & Patterson, 1986; Steinberg, Darling, & Fletcher, 1995).

Peer Influences, Conformity, and Parental Influences

As Brown aptly stated: "Adolescents seem to have a passionate herding instinct" (Brown, 1990, p. 171). Brown's (1990) analysis of peer groups and

cultures emphasized three major points relevant to this paper. First, there is no monolithic youth culture; adolescents are as varied and have as diverse interests as any other person who is associated with a life stage. Second, the cliques, crowds, or other groups to which an adolescent belongs do exert, to varying degrees, influences on an adolescent's behavior. These influences, however, are variable and in many cases poorly conceptualized when studied. Finally, as demonstrated in this paper, peer influences do not operate independently of other factors in an adolescent's life.

Brown (1990) also suggested that the autonomy adolescents seek to develop limits the influence parents have on their behavior. The differential influence of parents and peers on substance use has been empirically tested in only a few studies (Fletcher, Darling, & Steinberg, 1995). Some evidence suggested that there is a self-selection bias in process so that adolescent substance users seek others who use substances (e.g., Blount & Dembo, 1984; Brown, 1990). Others suggested that peer influence to use substances goes beyond the "my friends are like me" selection bias (Billy & Udry, 1985; Dishion, Duncan, Eddy, & Fagot, 1994; Kandel, 1978) and that peers may actually act as a coercive pressure.

A longitudinal study examining parental monitoring and peer influences on substance use of both males and females provided some insight into the long term effects (in this case one year) of parental monitoring practices in relationship to peer influences (Fletcher, Darling, & Steinberg, 1995). Overall results indicated that perceptions of high parental monitoring deterred initial use of substances in both males and females, and also influenced a change in the amount or level of substance use. When peer group influences were considered, however, Fletcher et al. found that (a) peer groups had more of an influence on substance use than parental monitoring, especially among those groups where substance use was normative and heavy and (b) findings differed by gender. They concluded that drug-using peers do seem to pressure their friends into substance use, but high levels of parental monitoring may, in fact, deter or mitigate amount and level of substance use, especially in the early stages.

Hypotheses

Although the literature on social influences on adolescent substance use is rich, virtually all research on adolescent problem behaviors in the developmental psychology literature ignores the role of the social leisure context in which substance use takes place. Similarly, researchers investigating adolescent substance use within the context of leisure rarely address the parental and peer influences that enhance or undermine the potential of the leisure context for influencing adolescent behavior. The goal of this paper is to integrate these approaches to provide a fuller understanding of how the social context of leisure, characteristics of the family and peer environment,

and adolescents' openness to peer influence each contribute to adolescent substance use patterns.

The model presented in Figure 1 depicts the hypothesized relationships among the constructs of interest to this study. These are:

1. The more time adolescents spend in unstructured activities with peers, the more time they will spend partying and the higher their rate of substance use will be. It was also hypothesized, however, that the relationship between time spent in unstructured leisure settings and substance use would be mediated by time spent partying. Furthermore, spending unstructured time with peers would only be associated with more time spent partying to the extent that the peers in those settings use substances and are perceived to think partying is important. Based on the literature, a prediction as to the relationship between adolescents who spend their time in more structured leisure contexts (i.e., organized, adult run activities) and levels of partying and substance use was not possible.
2. Adolescents who perceive their parents to be more aware of their activities (i.e., who experience higher levels of parental monitoring) will spend fewer hours partying and report lower levels of substance use.
3. Adolescents whose peers engage in partying and substance use will be more likely to also engage in those activities. Specifically, it was hypothesized that both peers' actual substance use and the importance that adolescents perceive their peers to place on partying would each predict time spent partying and actual substance use.
4. The influence of spending time partying on substance use would be moderated by the adolescent's level of peer conformity. In other words, it was predicted that it is not the amount of time spent partying per se that makes adolescents more vulnerable to substance use, but rather it is their ability to act autonomously from their peers when they are in a party context.

Methods

Sample

This study derived from secondary data analysis of a larger study of non-school factors contributing to academic performance, psychosocial development, and problem behavior. It focused on family and peer relationships, crowd membership, extra-curricular activities, personality characteristics, and neighborhood residence. Respondents were drawn from a sample of all students at six high schools in northern California and three high schools in Wisconsin. The nine schools were selected to represent a range of socio-

economic (working, middle, and upper class) and ethnic backgrounds and community types (rural, suburban, urban). In Wisconsin, the schools included a small rural high school, a suburban middle school, and an ethnically diverse urban magnet school. The California schools included wealthy suburban schools, several schools that were integrated through bussing and included both very low SES minority and high/middle SES Hispanic and European-American families, and a few traditionally working class schools that also served wealthy suburban communities. In the six California schools, two were integrated through bussing, three had no bussing, and one had no bussing but was integrated by non-resident families who were allowed under California law to chose to place their children in the schools of the communities in which they were employed. One of the California working class schools was in a rural community that was being encroached on by Silicon Valley.

Self-report questionnaires were administered and completed at school during the fall and spring of 1987 and 1988, respectively.[1] Of the approximately 9,000 students present during the questionnaire administration, about 8,000 provided usable data for this study. The sample was fairly evenly divided across the four grades included in the high schools (grades 9-12) and was ethnically diverse (66% European American, 14% Asian American, 12% Hispanic, and 8% African American); 52% of the sample was female. Active consent was obtained from the adolescents and passive consent obtained from the parents. Approximately 4% of students in attendance on days of questionnaire administration chose not to participate in the study. Of particular note in this data set is the ability to identify, and thus have behavioral information on, the respondents' three to five best friends. While this is an important feature of this data set for this paper, the drawback is that if a student did not name three to five of his or her best friends, the questionnaire was omitted from analysis. It is possible that there were some students who felt uncomfortable naming their friends, thus introducing some bias in the study.

The three broad areas of parental influence, peer influence, and personal characteristics were measured as follows. *Parental monitoring* was assessed by a standard monitoring questionnaire (Patterson & Stouthamer-Loeber, 1984). Students responded to the stem "How much do your parents REALLY know" for four situations: "Where you go at night? How you spend your money? What you do with your free time? Where you are most afternoons after school?" Responses were coded on a three point response format, with 1 representing "Don't know" and 3 represented "Know a lot" (Cronbach's alpha = .80).

Peer influence was measured in two ways: one was perceptual and the other was based on friends' actual behavior. Adolescents were asked to in-

[1]Although these data are from the late 1980s, the relationships under investigation in the paper are presumed to be the same today as they were then.

dicate how important they felt their friends thought it was to "party and be wild" (1 = not at all important, 4 = extremely important). In addition, adolescents identified up to five best friends. Because most peers identified were also in our study population, information about these friend's substance use could be obtained from their questionnaire data. Peer substance use was computed by averaging the substance use scores of each friend identified. Only those adolescents for whom data could be obtained from at least three friends were included in the analysis.

Participation in *social leisure activities* was measured two ways to differentiate between two types of social contexts: structured, organized activities and unstructured, informal activities (e.g., hanging out). Participation in structured, organized activities was measured as a combination of the number of hours per week a student reported participating in: (a) non-school based organized activities such as going to a club meeting (scouts, 4-H, youth groups, ethnic clubs, etc.); in taking lessons or practicing dance, music, etc.; sports; and time spent in religious activities; and (b) school-sponsored extracurricular activities. Unstructured, informal social activities (hanging out with friends) were measured by taking the average number of hours spent per week in hanging out with friends and spending time with a boy/girlfriend.

Peer conformity, measuring susceptibility to peer pressure, was assessed by students' responses to five hypothetical scenarios in which they indicated the degree to which they would go along with their peers who encouraged various problem behaviors (adapted from Berndt, 1979). The respondents reported on the likelihood that they would engage in the activity. The situations included shoplifting, cheating on an exam, partying when parents aren't home, 'stealing' a car for a joyride, and buying a fake ID. Response options included (1) "definitely would," (2) "probably would," (3) "probably would not," or (4) "definitely would not" (Cronbach's alpha = .75).

There were two dependent measures, *partying* and *substance use,* with the latter being the final outcome variable. Students were asked to indicate how many hours per week they engaged in each of a number of activities using a six point scale which represented participation from 0 hours to 20 or more hours (i.e., "Here are some things student may do after school and on weekends. Mark the number of HOURS PER WEEK you spend in each activity. If there is something you never do, mark "NONE" for that activity"). Thirteen activities were listed, one of which was "party." Thus, partying was a single item measure. Substance use was measured using three items asking respondents to report how often they had (a) used alcohol (b) smoked marijuana, or (c) used a drug other than marijuana since the beginning of the school year. The response format was a four point scale from 1 = never to 4 = often. Based on the work of Shedler & Block (1990) and Baumrind (1991) a substance use typology was created that had 5 classifications: nonuser, experimental alcohol user, experimental marijuana user plus alcohol, regular user of alcohol or marijuana, and regular hard drug plus alcohol user. These five categories were used as a linear measure of substance use.

Results

Descriptive Data

About 35% of the adolescents spent less than 3 hours per week in unstructured social activities with friends, but almost 57% spent between 3 and 15 hours per week hanging out with friends. Almost half of the adolescents spent 7 hours a week or less in organized, structured activities whereas practically 24% spent close to 15 hours per week in these activities; 13% spent up to 20 hours per week. Although about 30% of the students reported no time spent partying, 33% reported partying 1-4 hours per week, and 20% indicated partying 5-9 hours per week. There was a direct linear relationship between number of hours spent partying and involvement with substance use; the greater the number of hours spent partying, the heavier the involvement with substance use ($F = 383.97, 4, 6746; p = .000$). For example, the heaviest users of alcohol and drugs reported spending and average of 5.97 hours partying per week, whereas experimental users of alcohol reported spending 3.44 hours per week partying. Nonusers reported an average of 1.60 hours per week partying.

Intercorrelations among variables under investigation are presented in Table 1. Although most of the correlations were significant, none were high enough to suggest mulitcolinearity problems.

Analysis Strategy

The analysis strategy consisted of a series of planned multiple regression equations, split by gender, while controlling for grade. Blocks of variables were entered into the equation until the entire model was specified. This strategy allowed for examination of the contribution of the various types of variables (e.g., parental, personal, peer, leisure) in the model. Thus, to predict partying, year in school was entered first, the parental monitoring variable was entered next, followed by a block of variables representing the social and leisure activities, followed by a block of variables representing peer influences. Finally, the interactions of unstructured social leisure and peer substance use and unstructured social leisure and perception of peers' value of partying were entered (Table 2). These two interactions were considered important because they tested influence of context in conjunction with peer influence. That is, the question of whether the amount of time spent in unstructured, social leisure activities (i.e., hanging out) was directly related to the amount of time spent partying or whether this relationship was moderated by peer behaviors and values was examined.

The model for substance use followed this same strategy of entering blocks of variables until the entire model was specified. As can be seen in Table 3, both a mediating and a moderating model were examined. The mediation model tested whether or not the addition of partying changed the nature of the relationships between the independent variables (parental monitoring, peer influences, and social leisure contexts) and the dependent

TABLE 1

Intercorrelations among Variables in the Model Split by Gender (female scores on top of diagonal, males on bottom)

	1	2	3	4	5	6	7	8	9
Party	**1.000**	**.426**	**−.053**	**−.171**	**.484**	**.047**	**.422**	**.343**	**.367**
Substance Use	**.450**	**1.000**	**−.147**	**−.294**	**.293**	**−.169**	**.390**	**.611**	**.504**
Grade	**−.110**	**−.213**	**1.000**	***.035***	**−.094**	**.058**	**.053**	**−182**	−.024
Parent Monitor	**−139**	**−.217**	***.040***	**1.000**	**−120**	**156**	**−164**	**−156**	**−.295**
Unstruc. Leisure	**.522**	**.247**	***−.132***	***−.049***	**1.000**	**.160**	**.229**	**.250**	**.277**
Struct. Leisure	**.101**	**−.129**	.012	**.160**	**.237**	**1.000**	**−.048**	**−.160**	**−.077**
Peer partying	**.398**	**.390**	.009	**−.133**	**.224**	**−.073**	**1.000**	**.364**	**.425**
Peer Sub. Use	**.362**	**.578**	**−.313**	**−.113**	**.225**	**−.147**	**.326**	**1.000**	**.358**
Peer conform	**.371**	**.488**	−.020	**−.236**	**.244**	**−.046**	**.441**	**.309**	**1.000**

Bolded numbers are significant; italicized and bolded are significant at $p < .05$, the other bolded numbers are significant at $p < 005$.

TABLE 2
Time Spent Partying Regressed on Parental Monitoring, Peer Characteristics, and Social Leisure Context, Controlling for Grade

Predictors	MALES		FEMALES	
	r	*B*[a]	*r*	*B*
(Constant)		2.517**		2.518**
Grade	−.110	−.009	−.053	−.024
Parental Monitoring	−.139	−.166**	−.171	−.081**
Social Leisure Context				
Unstructured Leisure	.522	.427**	.484	.406**
Structured Leisure	.101	.121**	.047	.042
Peers				
Value Partying	.398	.408**	.422	.419**
Substance Use	.362	.275**	.343	.192**
Interactions				
Unstructured leisure × Peer Substance		.070*		−.013
Unstructured leisure × Value Partying		.040		.066*

*$p < .05$
**$p < .01$
[a]Unstandardized regression coefficients computed on standardized variable scores (*z*-scores)

TABLE 2 (Continued): Model Summary

Model		*R*	*R* Square	Adjusted *R* Square	Change Statistics: *R* Square Change	*F* Change	*df*1	*df*2	Sig. F Change
Male	1	.104	.011	.010	.011	11.313	1	1034	.001
	2	.202	.041	.039	.030	32.189	1	1033	.000
	3	.506	.256	.253	.216	149.420	2	1031	.000
	4	.643	.414	.410	.158	138.336	2	1029	.000
	5	.647	.418	.413	.004	3.635	2	1027	.027
Female	1	.062	.004	.003	.004	5.746	1	1482	.017
	2	.174	.030	.029	.026	40.373	1	1481	.000
	3	.473	.224	.222	.194	184.693	2	1479	.000
	4	.610	.372	.369	.148	173.955	2	1477	.000
	5	.612	.375	.371	.003	3.040	2	1475	.048

Model 1 Predictors: Year in School
Model 2 Predictors: Year in School, Parental Monitoring
Model 3 Predictors: Year in School, Parental Monitoring, Social Leisure Context
Model 4 Predictors: Year in School, Parental Monitoring, Social Leisure Context, Peers
Model 5 Predictors: Year in School, Parental Monitoring, Social Leisure Context, Peers, Interactions

TABLE 3

Substance Use Regressed on Parental Monitoring, Peer Characteristics, Social Leisure Context, Time Spent Partying, and Peer Conformity Controlling for Grade

Predictors	MALES			FEMALES		
	r	*B*[a]	*B*	*r*	*B*[a]	*B*
(Constant)		1.844**	1.839**		1.866**	1.831
Grade	.213	.024	.042	.147	.083**	.081**
Parental Monitoring	−.217	−.148**	−.080**	−.294	−.129**	−.083**
Social Leisure Context						
Unstructured Leisure	.247	.106**	−.001	.293	.107**	.018
Structured Leisure	−.129	.009	−.020	−.169	−.026	−.028
Peers						
Value Partying	.390	.214**	.069*	.390	.207**	.084**
Substance Use	.578	.455**	.364**	.611	.473*	.414**
Partying	.450		.219**	.426		.159**
Peer Conformity	.488		.281**	.504		.213**
Partying X Peer Conformity			.128**			.103**

*$p < .05$

**$p < .01$

[a]Unstandardized regression coefficients computed on standardized variable scores (*z*-scores)

TABLE 3 (Continued): Model Summary

Model		*R*	*R* Square	Adjusted *R* Square	Change Statistics: *R* Square Change	Change Statistics: *F* Change	Change Statistics: *df*1	Change Statistics: *df*2	Change Statistics: Sig. *F* Change
Male	1	.160	.026	.025	.026	25.761	1	979	.000
	2	.249	.062	.060	.036	37.646	1	978	.000
	3	.344	.119	.115	.057	31.503	2	976	.000
	4	.588	.346	.342	.227	168.971	2	974	.000
	5	.618	.382	.378	.036	57.153	1	973	.000
	6	.649	.421	.417	.039	66.334	1	972	.000
	7	.659	.435	.429	.013	22.799	1	971	.000
Female	1	.165	.027	.026	.027	39.734	1	1423	.000
	2	.273	.075	.073	.047	72.843	1	1422	.000
	3	.374	.140	.137	.065	53.622	2	1420	.000
	4	.622	.387	.384	.247	285.823	2	1418	.000
	5	.639	.408	.405	.021	51.314	1	1417	.000
	6	.661	.437	.433	.028	71.467	1	1416	.000
	7	.668	.446	.443	.010	24.746	1	1415	.000

Model 1 Predictors: Year in School
Model 2 Predictors: Year in School, Parental Monitoring
Model 3 Predictors: Year in School, Parental Monitoring, Social Leisure Context
Model 4 Predictors: Year in School, Parental Monitoring, Social Leisure Context, Peers
Model 5 Predictors: Year in School, Parental Monitoring, Social Leisure Context, Peers, Partying
Model 6 Predictors: Year in School, Parental Monitoring, Social Leisure Context, Peers, Partying, Peer Conformity
Model 7 Predictors: Year in School, Parental Monitoring, Social Leisure Context, Peers, Partying, Peer Conformity, Interaction

variable (substance use). The moderational models tested whether the relationship between the time adolescents spent partying was the same for those who were more or less resistant to pressure.

Model Testing

Time Spent Partying. Table 2 reports the results of the multiple regression model predicting time spent partying from parental monitoring, social leisure, and peer characteristics controlling for grade as well as the correlations between each individual variable and time spent partying. As described under analysis strategy, we used hierarchical linear regression. Table 2 reports only the final model (that is, with all sets of variables entered). Also included in Table 2 is the model summary, which includes statistics for each of the steps of the regression analysis, including change score statistics. The overall predictive power of the model to predict time spent partying was moderate (males adj. R^2 .413; females adj. R^2 .371). As predicted, adolescents who reported lower levels of parental monitoring perceived partying to be important to their friends, and those who had friends with higher levels of substance use spent more time partying. Adolescents who spent more time in unstructured social settings also spent more time partying. Furthermore, males (but not females) who spent more time in structured leisure activities spent more time partying as well. For both males and females, the addition of the social leisure context and peer influence contributed most to the explained variance (see R^2 change scores in the Model Summary, Table 2).

As hypothesized, the extent to which time spent in unstructured social settings was associated with partying depended upon characteristics of the adolescents' peers. For males, the relationship between spending time in unstructured social leisure settings (i.e., hanging out) and partying was greatest among those whose friends had higher levels of substance use. However, the relationship between the amount of time males spent in unstructured settings and time spent partying was not moderated by the perceived importance of partying to friends. Females showed a different pattern. The relationship between spending time in unstructured settings and partying was greatest among those females who reported that partying was important to their friends. Actual peer substance use did not moderate the unstructured social leisure—partying relationship. Thus, interactions suggested two things: (a) the influence of time spent in unstructured social leisure contexts on partying was dependent on with whom the adolescent associated, and (b) that males and females differed in the way in which their peers influenced them.

Substance Use. The next steps in the analysis were to (a) examine the relationship between parental monitoring, peer characteristics, and the social leisure context on adolescent substance use, (b) test whether the relationship between the social leisure context and substance use was mediated through time spent partying, and (c) test whether openness to peer influence moderated the relationship between time spent partying and actual

substance use. The predictive power of the models are moderate (R^2 = .429 for males and .443 for females). As seen in Table 3, and as predicted, although adolescents who spent more time in unstructured leisure contexts exhibited higher levels of substance use (columns 2 and 5), this relationship was mediated through time spent partying (columns 3 and 6). Note that although males who spent more time in structured leisure settings spent more time partying (Table 2), they did not show higher levels of substance use (Table 3). The model summary is presented for the final model only (columns 3 and 6).

Peer conformity was both a predictor of adolescent substance use as well as a moderator of the relationship between partying and substance use. Adolescents who reported being more open to peer influence (i.e., who had higher levels of peer conformity) reported higher levels of substance use and were particularly vulnerable to partying. Thus, adolescents who conformed to peer pressure and who spent time partying were more likely to drink and use substances than non- conforming adolescents who spent an equal amount of time partying. Adolescents scoring low on conformity had lower levels of substance use regardless of how much time they spend partying. In essence, resistance to peers buffered adolescents from the influence of a social context strongly supportive of substance use.

Discussion

It is in the fertile social leisure context, away from direct parental control, where adolescents seem most likely to experiment with who they are and confront developmental tensions: being an individual or one of the crowd, participating in healthy leisure or engaging in health compromising behaviors. The results from this study provide further insight into the factors that might contribute to, or inhibit, participation in problem behaviors such as substance use. Using an ecological model, we were able to pay heed to Silbereisen and Todt's (1994) assertion that the importance of developmental contexts is not in their independent effects, but in how they interact. For example, although we found that (a) if adolescents perceived low levels of parental monitoring and associated with peers who used substances, they were more likely to use substances themselves and (b) time spent partying mediated the effect of unstructured social settings predicting substance use, most important to this study were the interactions we found.

In this study, it was not so much the unstructured, informal social leisure contexts that increased risk of problem behavior per se, but rather the risk depended on characteristics and perceptions of the adolescent and peer group. Adolescents who spent time in unstructured social settings were likely to spend more time partying, but *particularly* if the friends with whom they associated were perceived to value partying and were substance users. Similarly, adolescents who spent time partying were at heightened risk for substance use, but *particularly* if they reported themselves to be open to peer influence. Thus, hanging out, a common social leisure context, does not

necessarily lead to partying, and parties do not automatically lead to alcohol or drug use. In various ways, peers and resistance to peer pressure moderate these effects.

Although the results of this study suggested that unstructured social leisure is most critical to understanding the processes through which adolescents become involved in substance use, these results also raise questions about the role of structured activities. In the present study, when both structured and unstructured activities (contexts) were included in the mix, the influence of structured activities became non-significant. This finding adds some insight toward understanding the contradictory findings reported in the literature. For example, participation in sports and other organized activities have been linked both to positive development (e.g., Larson & Kleiber, 1993) and to higher levels of substance use and other problem behaviors (e.g., Caldwell & Smith, 1996). Other literature has reported evidence of a curvilinear relationship between sports participation and problem behavior: low and high levels of participation have been linked with high levels of substance use, but at moderate levels of participation, substance use decreased (Smith & Darling, 1997).

Understanding the relationship between structured and unstructured leisure contexts and characteristics of the peer group might help us understand the inconsistencies in the literature on the influence of structured leisure activities on problem behavior. A fruitful avenue of future research might be understanding the impact of organized leisure on unstructured social leisure such as hanging out with friends. At the obvious level, organized activities provide a context for continued social interaction. After practice, or after the activity, adolescents typically go somewhere and hang out. Our finding that males who engaged in structured activities also spent more time partying is consistent with this idea, although the female pattern was not.

The role of adults in structured activities is worth investigating. Brown (1990), for example, suggested that through formal, structured leisure activities such as sports or clubs, adults actually help create peer groups. Depending upon social norms in the structured leisure setting and the role of adults, participation in these activities may put adolescents into more or less contact with peers supportive of substance use.

Finally, it might simply be that the influence of the informal, social leisure context overshadows the influence of structured contexts, particularly for females. What happens in informal social leisure contexts is a powerful force to a developing adolescent. Understanding these processes is critical to understanding the role that sports, extracurricular activities, and other structured settings play in promoting or preventing substance use among adolescents.

The strength of associations between parent, peer, and person influences and substance use underscores the importance of peers. Steinberg, Darling, and Fletcher (1995) have argued that, in adolescence, parental influence on problem behaviors becomes more distal and is mediated through

influence of the internalization of parental values, adolescent characteristics, and peer group membership. They argued that adolescents who experienced greater warmth and control from their parents and whose parents had greater knowledge of their activities were more likely to internalize parental values and to have the qualities (e.g., orientation towards school and away from deviance) that allowed them to select and be selected into friendship groups supportive of adult values. Membership in such peer groups lead to lower involvement in substance use. In their study, peers were seen to reinforce, rather than undermine, parental influences. Although our results are consistent with this model, they also suggest an additional mechanism through which parents may exert influence on adolescents: through their influence on adolescent participation in structured and unstructured leisure settings. Because the parenting literature has primarily ignored the importance of leisure, focusing instead on the emotional relationships between parent and child and only indirectly examining leisure through parental rule-setting and control attempts, little is known about these processes.

Finally, further study is needed to understand differences in how peers influence the relationship between leisure settings and partying. Our results suggested that although peers moderated the relationship between time spent in unstructured settings and time spent partying, the relationship is moderated for males by their peer's behavior, and for females by their belief that partying is important to their friends. There are several alternative explanations for these findings, and it is unclear which will be supported by future research. It is possible, for example, that because parental monitoring is higher for females than for males (Steinberg, 1990), hanging out with friends will only lead to more partying when females push harder for permission to participate—e.g., when they think partying is important in maintaining relations with peers.

Alternatively, because males tend to associate with larger groups than do females (Savin-Williams & Berndt, 1990) and tend to experience more pressure to drink, males whose friends drink may be more likely to socialize with them in partying settings, while females may tend to socialize in smaller groups unless partying is important to their friends. More likely, it may be that the behavioral measure of peer substance use in this study captured the male's "party friends" better than for the females. Both males and females tend to nominate same-sex peers as their closest friends. But, the people with whom adolescents party tend to be close male friends for males, but friends of a boyfriend for females. Thus, females who indicated that it was important to their 'friends' that they get wild or party may have been referring to a different group of friends (i.e., their boyfriends' friends or crowd) than the people whom they nominated as their five closest friends.

Social activities are the most valued and common forms of adolescent leisure. Although this study provided only a cross-sectional glimpse at the adolescent leisure context and relied on analysis of secondary data so that all constructs could not be measured as desired, it did provide a unique

glimpse into how three elements of an adolescent's life and the context of social leisure work together to predict adolescent substance use. In addition, this research strengthens the literature on the influence of peers on substance use by relying on substance use information from the adolescents' closest peers themselves, rather than relying upon the adolescents' perception of their friends' substance use behaviors. It is only by understanding how social influences, person characteristics and perceptions, and social context come together that we can fully understand the processes through which adolescents become involved in and sustain the use of drugs and alcohol. More research is needed that integrates the study of how adolescents feel about themselves and their social world and what they actually do if we are to develop a full understanding of the processes through which adolescents negotiate the transition to adulthood.

References

Agnew, R., & Petersen, D. M. (1989). Leisure and delinquency. *Social Problems, 36*(4), 333-351.

Baumrind, D. (1991). The influence of parenting style on adolescent competence and substance use. *Journal of Early Adolescence, 11,* 56-95.

Berndt, T. J. (1979). Developmental changes in conformity to peers and parents. *Developmental Psychology, 15,* 608-616.

Billy, J. O., & Udry, J. R. (1985) Patterns of adolescent friendship and effects on sexual behavior. *Social Psychology Quarterly, 48,* 27-41.

Blount, W. R., & Dembo, R. (1984). The effect of perceived neighborhood setting on self-reported tobacco, alcohol, and marijuana use among inner-city minority junior high school youth. *International Journal of the Addictions, 19,* 175-198.

Bronfenbrenner, U. (1992). Ecological systems theory. In R. Vasta (Ed.) *Six theories of child development: Revised formulations and current ideas* (pp. 187-249). London: Jessica Kingsely Pub., Ltd.

Bronfenbrenner, U. (1995). Developmental ecology through space and time: A future perspective. In P. Moen, G. H. Elder Jr., K. Luscher (Eds.) *Examining lives in context: Perspectives on the ecology of human development* (pp. 619-647). Washington, D.C.: The American Psychological Association.

Brown, B. B. (1990). Peer groups and peer cultures. In S. S. Feldman & G. R. Elliott (Eds). *At the threshold: The developing adolescent* (pp. 171-198). Cambridge, MA: Harvard University Press.

Caldwell, L. L., & Smith, E. A. (1996). Adolescent problem behavior and leisure participation. Paper presented at the 8th Canadian Congress on Leisure Research, Ottawa, Ontario, May 9-12.

Dishion, T. J., Duncan, T. E., Eddy, J. M., & Fagot, B. I. (1994). The world of parents and peers: Coercive exchanges and children's social adaptation. *Social Development, 3,* 255-268.

Fletcher, A., Darling, N., & Steinberg, L. (1995). Parental monitoring and peer invfluences on adolescent substance use. In J. McCord (Ed.) *Coercion and punishment in long-term perspectives* (pp. 259-271). New York: Cambridge University Press.

Garbarino, J. (1992) (Ed.) *Children and families in the social environment* (2nd ed.). NY: Aldine de Gruyter.

Gibbons, S., Wylie, M. L., Echterling, L., & French, J. (1986). Situational factors related to rural adolescent alcohol use. *The International Journal of the Addictions, 21*(11), 1183-1195.

Harford, T. C., & Grant, R. F. (1987). Psychosocial factors in adolescent drinking contexts. *Journal of Studies on Alcohol, 48*(6), 551-557.

Harford, T. C., & Spiegler, D. L. (1983). Developmental trends of adolescent drinking. *Journal of Studies on Alcohol, 44,* 181-188.

Howard, J., Boyd, G. M., & Zucker, R. A. (1994). Overview of issues. *Journal of Research on Adolescence, 4*(2), 175-182.

Kandel, D. (1978) Homophily, selection, and socialization in adolescent friendships. *American Journal of Sociology, 84,* 427-436.

Kleiber, D. A., Caldwell, L. L., & Shaw, S. A. (1993). Leisure meanings among adolescents. *Loisir & Societe/Leisure and Society, 16,* 99-114.

Larson, R., Csikszentmihalyi, M., & Freeman, M. (1984). Alcohol and marijuana use in adolescents' daily lives: A random sample of experiences. *The International Journal of the Addictions, 19*(4), 367-381.

Larson, R., & Kleiber, D. A. (1993). Free time activities as factors in adolescent adjustment. In P. Tolan, & B. Cohler (Eds.), *Handbook of clinical research and practice with adolescents.* New York: Wiley.

Patterson, G. R., & Dishion, J. (1985). Contribution to families and peers to delinquency. *Criminology,* 23, 63-79.30.

Patterson, G. R., & Strouhamer-Loeber, M. (1984). The correlation of family management practices and delinquency. *Child Development, 55,* 1299-1307.

Peterson, A. C. (1993). Creating adolescents: The role of context and process in developmental trajectories. *Journal of Research on Adolescence, 3,* 1-18.

Savin-Williams, R. C., & Berndt, T. J. (1990). Friendship and peer relations. In S. S. Feldman & G. R. Elliott (Eds). *At the threshold: The developing adolescent* (pp. 277-307). Cambridge, MA: Harvard University Press.

Shedler, J., & Block, J. (1990). Adolescent drug use and psychological health: A longitudinal inquiry. *American Psychologist, 45,* 612-630.

Silbereisen, R. K., & Eyferth, K. (1986). Development as action in context. In R. K. Silbereisen et al. (Eds.), *Development as action in context* (pp. 3-16). Berlin, Heidelberg: Springer-Verlag.

Silbereisen, R. K., & Todt, E. (1994). *Adolescence in context: The interplay of family, school, peers, and work in adjustment.* New York: Srpinger-Verlag.

Simons, R. L., Conger, R. D., & Whitbeck, L. B. (1988). A multistage social learning model of the influences of family and peers upon adolescent substance abuse. *The Journal of Drug Issues, 18,* 293-315.

Smetana, J. G. (1988). Adolescents' and parents' conceptions of parental authority. *Child Development, 59,* 321-335.

Smith, R. C. & Darling, N. (1997, August). *Extracurricular activity participation as a buffer against stress and adversity.* Poster presented at the American Psychological Association 1997 Annual Meetings.

Snyder, J., Dishion, T. J., & Patterson, G. R. (1986). Determinants and consequences of associating with deviant peers during pre-adolescence and adolescence. *Journal of Early Adolescence, 6,* 29-43.

Steinberg, L. (1990). Autonomy, conflict, and harmony in the family relationship. In S. S. Feldman & G. R. Elliott (Eds). *At the threshold: The developing adolescent* (pp. 277-307). Cambridge, MA: Harvard University Press.

Steinberg, L., Darling, N., & Fletcher, A., with Brown, B. B. & Dornbusch, S. M. (1995). Authoritative parenting and adolescent adjustment: An ecological journey. In P. Moen, G. Elder, Jr., & K. Luscher (Eds.), *Examining lives in context: Perspectives on the ecology of human development* (pp. 423-466). Washington, D.C.: American Psychological Association.

Swisher, J. D., & Hu, T. (1983). Alternatives to drug abuse: Some are and some are not. In T. J. Glynn, C. G. Leukefeld, & J. P. Ludford (Eds.), *Preventing adolescent drug abuse: Intervention strategies* (pp. 141-152). Rockville, MD: National Institute of Drug Abuse.

Thombs, D. L., & Beck, K. H. (1994). The social context of four adolescent drinking patterns. *Health Education Research: Theory and Practice, 9,* 13-22.

Thombs, D. L., Beck, K. H., Mahoney, C. A., Bromley, M. D., & Bezon, K. M. (1994). Social context, sensation seeking, and teen-age alcohol abuse. *Journal of School Health, 64*(2), 73-79.