



JOURNAL OF RESEARCH ON ADOLESCENCE, 20(2), 420–431 © 2010, Copyright the Author(s) Journal Compilation © 2010, Society for Research on Adolescence DOI: 10.1111/j.1532-7795.2010.00647.x

# Friday on My Mind: The Relation of Partying With Antisocial Behavior of Early Adolescents. The TRAILS Study

## René Veenstra

University of Groningen

University of Turku

# Gijs Huitsing, Jan Kornelis Dijkstra, and Siegwart Lindenberg University of Groningen

The relation between partying and antisocial behavior was investigated using a sample of Dutch early adolescents (T2: N = 1,076; M age = 13.52). Antisocial behavior was divided into rulebreaking and aggressive behavior. Using a goal-framing approach, it was argued that the relation of partying to antisocial behavior depends on the way the need to belong is realized. Girls, in early adolescence often physically more mature than boys, are likely to seek older and, thus, often more antisocial boys for partying. Unpopular adolescents are likely to be among themselves when partying, and their feeling of exclusion is likely to lead to antisocial behavior. The findings show that girls who party are indeed at a greater risk of engaging in antisocial behavior, as are unpopular girls and boys.

### INTRODUCTION

Adolescents in the United States and Europe spend large amounts of time socializing, hanging around, and partying with their friends (Fuligni & Stevenson, 1995; Larson & Seepersad, 2003). Feldman and Quatman (1988) reported that 14 is the average age at which American and European parents permit their children to go to parties. In the Netherlands, much partying takes place in public places rather than in private homes, because restrictions on adolescent drinking are not well enforced in bars and discos. For that reason, we define partying as going to bars and discos (not hanging out in the

Requests for reprints should be sent to René Veenstra, ICS, University of Groningen, Grote Rozenstraat 31, 9712 TG Groningen, The Netherlands. E-mail: d.r.veenstra@rug.nl

street or at friends' homes). Are there negative consequences of partying with regard to antisocial behavior and, if so, for whom?

Partying is something teenagers look forward to all week and an activity for which they often report their most positive emotional states (Caldwell & Darling, 1999). These positive emotions during partying may serve valuable functions for adolescents. Although friendships among peers are welcomed by adults, there is also distrust of the gathering of peers away from direct adult supervision (Larson & Seepersad, 2003). Not without reason: greater involvement in partying has been found to be associated with higher levels of deviant behavior, such as regular alcohol and drugs consumption, sexual risk-taking, and delinquency (Agnew & Petersen, 1989; Osgood, Wilson, O'Malley, Bachman, & Johnston, 1996). The question is: should all parents worry about their children's partying, or do the effects of partying on antisocial behavior only hold for certain categories of adolescents? Who is particularly at risk? The aim of this study was to answer these questions by investigating the relation of partying with antisocial behavior, using longitudinal data on early adolescents.

A useful way to approach the question is to look at the social goals served by partying (Lindenberg, 2006). For early adolescents, partying has two important features related to their goals. First, it allows them to have fun together in a context that is supportive of having fun and largely unsupervised by adults (Persson, Kerr, & Stattin, 2007). As such, it may be a good alternative for adolescents who feel excluded from the classroom. Second, it allows a greater degree of selectivity with regard to who they spend time with than the classroom does (Kiesner & Pastore, 2005). Unsupervised time by itself may not be conducive to antisocial behavior. However, the combination of unsupervised time and a particular selectivity might be.

It is very likely that everybody wants to belong and receive status and affection from others (Baumeister & Leary, 1995; Lindenberg, 1996). The classroom is an important context for achieving these goals. However, not everybody is likely to be able to achieve them in the classroom. There are two categories of early adolescents who, for different reasons, are likely to look outside the classroom for the realization of such goals. This means they are looking not just for fun when they party but also for belonging. First, in early adolescence, girls are often physically more developed than boys (Stattin & Magnusson, 1990) and they have a greater tendency to look to older boys for status and affection who are themselves physically (and socially) more developed than their male classmates (Poulin & Pedersen, 2007; Stattin, Kerr, Mahoney, Persson, & Magnusson, 2005). For partying, the basis for selectivity for many girls is thus likely to be "older boys." These older peers are likely to be more antisocial than younger ones (Caspi, Lynam, Moffitt, & Silva, 1993; Kerr, Stattin, & Kiesner, 2007; Mendle, Turkheimer, & Emery, 2007), thereby encouraging antisocial behavior in their female friends in unsupervised contexts.

Second, peers who are low in popularity in the classroom are likely to look outside the class for friends with whom they can realize status and affection to some degree. Here, too, the selectivity may work in a negative way. Team sports, music, drama, and student government are all examples of school activities that involve adolescents working for collective ends, and such cooperative interdependence might foster relationships between popular and unpopular adolescents (Moody, 2001). However, lack of popularity often derives from the fact that a person hinders the goal achievement of others (Dijkstra, Lindenberg, Verhulst, Ormel, & Veenstra, 2009). Thus, peers who are low in popularity are often also limited in their ability to contribute to team goals by focusing on a collective end, following instructions, and so on. This is likely to keep them out of structured, team-like contexts. The alternative is to turn to unstructured contexts in which having fun is the main goal and supervision is minimal. Here, even low levels of social skills are likely to lead to a modicum of groupishness and a sense of belonging, especially if the adolescent jointly turns against outgroups and established rules. Partying is a prominent example of such a context. Thus, youths who feel excluded in the classroom are likely to end up together outside the classroom and encourage each other in behavior that is negative toward outgroups and established rules (Kerr et al., 2007; Twenge, Baumeister, DeWall, Ciarocco, & Bartels, 2007). Popular peers are not likely to join them (Kiesner & Pastore, 2005) for the same reasons for which they reject them in the classroom.

From the foregoing, we thus derived two testable hypotheses. First, the effect of partying on antisocial behavior is stronger for girls than for males of similar age. Second, the effect of partying on antisocial behavior is stronger for unpopular adolescents (girls and boys) than for their popular counterparts. In the following, we will test these expectations.

Finally, in order to be sure that it is partying that explains the level of antisocial behavior rather than coming from troubled homes or having antisocial tendencies, we controlled for family background (parenting practices, socioeconomic status, and family breakup) and earlier antisocial behavior (measured in preadolescence).

#### METHOD

#### Sample

The TRacking Adolescents' Individual Lives Survey (TRAILS) is a prospective cohort study of Dutch preadolescents who will be measured biennially until they are at least 25 years old. This study involves the first two assessment waves of TRAILS, which started in 2001. TRAILS is designed to chart and explain the development of mental health and social development from preadolescence into adulthood. The TRAILS target sample was preadolescents living in five municipalities in the North of the Netherlands, including both urban and rural areas (De Winter et al., 2005). Of the target sample of 2,935 children, 76.0% were enrolled in the study, yielding N = 2,230 (consent to participate: both child and parent agreed; mean age of child: 11.09, standard deviation [*SD*] = 0.55; sex: 50.8% girls; ethnicity: 10.3% children had at least one parent born in a non-Western country; parent education: 32.6% of children had a father and 37.9% a mother with a low educational level, at maximum a certificate from a lower track of secondary education). Of the 2,230 baseline participants, 96.4% participated in the second measurement wave, which was held two-and-a-half years after T1, at an average age of 13.5.

The sample used in this study was a subsample of TRAILS (Dijkstra, Lindenberg, & Veenstra, 2008). It involved the participants who were also included in the school-based peer-nominations data collection in T2, because we needed information from their friends. Peer nominations were assessed in classrooms with at least three regular TRAILS participants, leading to participation of a total of 172 classes in 34 schools in first grade (72 school classes) and second grade (100 school classes) of secondary education. In total, 1,078 regular TRAILS participants were involved in the peer nomination procedure. These 1,078 adolescents did not differ from other TRAILS participants regarding sex,  $\chi^2(1, N = 2149) = 1.17, p = .28$ , but were slightly younger (mean age 13.52, SD = 0.51, vs. 13.60, SD = 0.54), t(2085) = 3.49, p < .001, and had lower scores on rule-breaking behavior (M = -0.07, SD = 0.92 vs. M = 0.07, SD = 1.07), t(2032) = 3.35, p = .001, and aggressive behavior, (M = -0.07, SD = 0.88 vs. M = 0.07, SD = 1.11), t(2032) = 3.04, p = .002.

#### Variables

Antisocial behavior (waves 1 and 2). Rule-breaking and aggressive behavior were assessed using the Youth Self-Report (YSR) and the Child Behavior Checklist (CBCL), two commonly used questionnaires in child and adolescent psychiatric research, with good test-retest reliabilities (Achenbach, 1991a, 1991b). Both contain a list of 112 behavioral and emotional problems, which children and parents can rate as 0 = not true, 1 = somewhat or sometimes true, or <math>2 = very or often true. The reference period was the previous 6 months. In addition to the YSR and CBCL, we collected data from the teacher using the Teachers Checklist of Psychopathology. This checklist contains nine descriptions of behaviors: the descriptions were based on the variables used to measure various behaviors in the Teacher's Report Form. Response options for each description on the checklist range from 0 = not applicable to 4 = very clearly or frequently applicable. The validity was assessed among 36 teachers for 103 children. Teachers completed the Teacher's Report Form (TRF) and the Teacher's Checklist for Psychopathology (TCP) for the same children within 3 months. Pearson's correlation coefficients were .69 and .58 for aggressive and rule-breaking behavior, meaning that there was a strong association between these measures from the TRF and TCP.

The agreement between child-, parent-, and teacher-reported problems was moderate (rs = .27-.34 at wave 1; rs = .33-.41 at wave 2). We believe that all informants perceived different aspects of problem behavior, and for that reason we considered differences between informants to be meaningful (Veenstra, Lindenberg, Verhulst, & Ormel, 2009). Antisocial behavior rated as present by different informants was assumed to be more severe (more generalized) than problems rated by only one informant. Based on this assumption, we used the mean of the child, parent, and teacher scores as a measure of antisocial behavior in this study. An additional advantage of using the mean score is that it reduces the bias associated with monoinformant information.

Finally, to avoid the possibility of substance use driving the results for rule-breaking behavior, we excluded the items on use of tobacco (YSR and CBCL item 2), alcohol (item 99), and drugs (item 105) from the scales for rule-breaking behavior.

*Peer status (wave 2).* Peer status was assessed using a sociometric nomination procedure. Respondents could nominate an unlimited number of classmates on a total of 18 questions, covering a wide range of issues and behaviors. For the purpose of this study, we used the following peer nominations: popularity ("Who do others want to be associated with?") and peer acceptance ("Which classmates are your best friends?"). We used the aggregated number of nominations children received from their classmates for both peer variables.

*Partying (wave 2).* Adolescents were asked how many hours they went out in the weekend (as part of a questionnaire on leisure activities). We used the Dutch word "uitgaan," which is used for going to a bar or a disco and not for going to a friend's house or for hanging around on the street (these were included as separate items in the same questionnaire). The answer categories on an 8-point scale ranged from never, half an hour, 1 hour, and 2 hours to 7 or more hours. Thirty-eight percent of the respondents partied on the weekend.

*Parenting (wave 1).* The Egna Minnen Beträffande Uppfostran (My Memories of Upbringing) for Children (EMBU-C; Markus, Lindhout, Boer, Hoogendijk, & Arrindell, 2003) was developed to assess perceptions of parents' rearing practices by children and early adolescents. Each item was presented for both the father and the mother, with a 4-point answer scale. The EMBU-C contains the factors emotional warmth, rejection, and overprotection. The main concepts of emotional warmth are giving special attention, praising approved behavior, unconditional love, and being supportive and affectionately demonstrative. The scale for emotional warmth contains 18 items with an internal consistency of .91 for both

fathers and mothers. The factor rejection is characterized by hostility, punishment (physical or not, abusive or not), derogation, and blaming of subject (12 items, .84 for fathers and .83 for mothers). The dimension overprotection covers fearfulness and anxiety for the child's safety, guilt engendering, and intrusiveness (12 items, .70 for fathers and .71 for mothers). The answers for both parents were highly correlated (r = .79 for emotional warmth, r = .67 for rejection, and r = .81 for overprotection), so we felt it was justified to combine them. Markus et al. (2003) have reported on the validity of the EMBU-C.

*Socioeconomic status (wave 1).* The TRAILS database contains several variables for socioeconomic status: income level, educational level of both the father and the mother, and occupational level of each parent, measured using the International Standard Classification for Occupations. Socio-economic status was measured as the average of the five standardized items. The scale captured 61.2% of the variance in the five items and had an internal consistency of .84. Missing values (e.g., where there was only one parent in the family) did not affect the association of this scale with other variables.

*Family breakup (wave 1).* The percentage of children that lived with the same parents from birth to preadolescence was 80.5%. The group for whom this was not the case could be divided into children who had always lived with a single parent (19.5%), children whose parents underwent a divorce and who lived with a single parent since then (44.1%), and children whose parents underwent a divorce and who lived in preadolescence with two parents at least one of whom was a stepparent (36.4%).

#### Analyses

Sex differences were examined using *t*-tests: associations between variables using Pearson's correlations. Main and interaction effects of sex, SES, parenting, family breakup, peer status, and partying on antisocial behavior were tested using multiple linear regression analyses. To provide an impression of the effect size and facilitate the interpretation of the interaction effects, we used simple slope analysis (Aiken & West, 1991) by writing out multiple equations, alternating the values of the predictor variables while holding other variables to their sample means.

We used corrected-item-mean imputation to handle missing data at the item level (Huisman, 2000). At the scale level we performed multiple imputation using the MICE method of multivariate imputation (Royston, 2004). The amount of missing data was <7% for all variables. As a result of the imputations, we were able to use data of 1,013 early adolescents (all with a score on antisocial behavior at T2) in our multivariate analyses.

#### RESULTS

Descriptive analyses (available upon request) showed that girls were less engaged in antisocial behavior than boys. These sex differences in antisocial behavior were larger at T1 than at T2. Furthermore, girls perceived more emotional warmth and less rejection than boys. There were no other sex differences in the study variables.

Correlational analyses (available upon request) revealed that popularity and partying were positively associated with antisocial behavior. Some correlations differed in strength for girls and boys. For example, the correlations between partying and rule-breaking as well as aggressive behavior at T2 were higher for girls (rs = .27 and .19) than for boys (rs = .12 and .02).

Table 1 shows the results of the multivariate analyses in predicting antisocial behavior. Taking antisocial behavior at T1 into account, we did not find a sex effect on antisocial behavior at T2. SES was negatively related to antisocial behavior in early adolescence. The higher the SES of the adolescent's family, the lower the level of antisocial behavior at T2. Family breakup and parental rejection were positively related to rule-breaking and aggressive behavior. Popularity was positively related to both forms of antisocial behavior, whereas peer acceptance was negatively related to aggressive behavior.

Our two hypotheses were tested using the interaction terms of partying and sex and partying and popularity. As can be seen from Table 1, both two-way interactions were in the predicted direction and significant for rule-breaking behavior; for aggressive behavior, the interaction of partying and sex was significant. In order to ease the interpretation of these effects, predicted rule-breaking behavior scores for each combination of partying and popularity were plotted in Figure 1, for girls and boys separately. Low and high popularity were denoted by 1 SD below and above the mean. Simple slope analyses (Aiken & West, 1991) revealed that girls' partying was more strongly related to rule-breaking behavior at 1 SD below the mean of popularity (b = .247, p < .01) than at 1 SD above the mean of popularity (b = .113, p < .01). Furthermore, the effect of partying on rule-breaking behavior was only significant for low popular boys (b = .111, p < .01) and not for high popular boys. Finally, the effect of partying on aggressive behavior was .085 (p = .03) for girls and -.028 (p = .49) for boys. These findings were in line with our hypotheses.

#### DISCUSSION

Youths spend a great deal of time engaged in different leisure activities. Unstructured and unsupervised activities, such as hanging out, have been linked to antisocial behavior. However, findings from recent studies suggest

	Rule-Breaking Behavior T2			Rule-Breaking Behavior T2			Aggressive Behavior T2			Aggressive Behavior T2		
	В	SE	р	В	SE	р	В	SE	р	В	SE	р
Rule-breaking behavior T1	0.407	.037	**	0.414	.036	**						
Aggressive behavior T1							0.488	.033	**	0.489	.033	**
Sex $(1 = boys)$	0.039	.058		0.034	.057		-0.058	.054		-0.060	.054	
SES	-0.060	.030	*	-0.052	.030	*	-0.097	.029	**	-0.092	.029	**
Family breakup	0.206	.073	**	0.192	.073	**	0.188	.069	**	0.181	.069	**
Parental emotional warmth	- 0.016	.033		- 0.017	.033		0.012	.032		0.011	.032	
Parental rejection	0.065	.036	*	0.061	.036	*	0.097	.035	**	0.095	.035	**
Parental overprotection	- 0.006	.034		- 0.009	.034		- 0.015	.033		- 0.016	.033	
Popularity	0.123	.029	**	0.133	.029	**	0.142	.028	**	0.146	.028	**
Peer acceptance	-0.019	.029		-0.021	.029		-0.047	.028	*	-0.047	.028	*
Partying	0.096	.030	**	0.180	.042	**	0.020	.028		0.085	.040	*
Partying $\times$ Sex				-0.136	.058	**				-0.113	.056	*
Partying × Popularity				- 0.067	.028	**				- 0.031	.027	
Adjusted R <sup>2</sup>	26.2%			26.5%			35.2%			35.3%		

TABLE 1 Rule-Breaking and Aggressive Behavior of Early Adolescents: Main Effects of Study Variables and Interactions With Partying

Note. N = 1,013.

\*\**p* < .01; \**p* < .05 (one-tailed).

All continuous variables are standardized. The *B* parameters can be interpreted as standardized coefficients.

that the link is not a simple one (Poulin & Pedersen, 2007; Stattin et al., 2005). Different youths seem to be influenced in different ways by the environment, but many questions remain concerning for whom particular leisure activities are associated with problem behavior. This study added to this understanding. It was focused on how partying, as a particular form of mostly unstructured and unsupervised leisure activity, relates to antisocial behavior.

The important finding was that the effect of partying on antisocial behavior could be predicted quite well on the basis of the presumed goal pursuit of early adolescents. We argued that partying is a mostly unsupervised activity in which adolescents can relax and have fun. Partying also



FIGURE 1 Graphical presentation of the two-way interaction of partying and popularity in relation to rule-breaking behavior for girls and boys.

allows greater selectivity than the classroom context in deciding who one wants to be with. For two categories of early adolescents, however, this selectivity is likely to lead to antisocial behavior.

First, early adolescent girls are often more physically mature than their male counterparts and prefer to realize their goal of belongingness with older

boys. However, older boys are often more antisocial in their behavior than their younger counterparts and are likely to exert a negative influence on the girls in unsupervised time together (see also Arndorfer & Stormshak, 2008; Stattin et al., 2005). We indeed found that partying was more strongly related to antisocial behavior for girls than for boys.

Second, children who lack the skills of contributing to collective ends and often thwart the goal pursuit of others in the classroom are likely to be rejected and have to realize a sense of belonging outside the classroom. They are thus likely to seek contexts that are social but, because they are not structured, are also not demanding with regard to abilities to contribute to collective ends. In such contexts, a sense of belonging is greatly enhanced by turning against outgroups and established rules without much interference from supervising adults (Kerr et al., 2007; Twenge et al., 2007). Partying is a prototype of such a context. This should hold for both unpopular girls and boys. While we were not able to test the goal assumptions directly, we tested the hypotheses derived from them and we showed that the negative effect of partying on antisocial behavior was associated with girls, but not with boys, and with unpopular peers (girls and boys), although only for rule breaking.

Our study has a number of limitations. One limitation is that we only had peer information from a subsample of TRAILS. This probably weakened the associations detected in our analyses, and it limits the generalizability of our findings to some degree. Second, we did not directly measure the need to belong and the ability to satisfy this need in the classroom. Third, most of our predictors came from T1, but our measures of partying and peer status only existed for T2. Future longitudinal research, including measures of maturity and affiliation with older boys, should allow a more rigorous test of the theory expounded in this paper. Another limitation is that we know little about the activities of adolescents during partying. We did not explicitly measure their goals, nor did we trace with whom they go out or the degree to which their antisocial behavior actually happens in the context of partying. In future research, it would be necessary to answer these questions. We should collect more information about what happens and why they have Friday on their minds all week.

Our study also has a number of strengths. We used a large-scale, longitudinal dataset with self-, parent, and teacher reports of antisocial behavior and peer nominations for acceptance and popularity. Another strength is the explicit derivation of our hypotheses from goal-framing theory. A third strength is that we identified partying as a possible contributor to the closing of the gap between boys and girls with regard to antisocial behavior in early adolescence (Moffitt, Caspi, Rutter, & Silva, 2001). As our findings show, the sex difference in antisocial behavior was about a half *SD* at age 11; it dwindled to one-fifth of an *SD* at age 13.5. Thus, girls and boys differ minimally in antisocial behavior in early adolescence. Given the greater impact of partying on girls regarding antisocial behavior, it may well be a contributor to closing the gap.

The findings also show that unpopular girls and boys who party are at a greater risk of engaging in rule-breaking behavior. By taking into account family background and earlier antisocial behavior, we ruled out some obvious alternative explanations of reverse causality, namely, that antisocial preadolescents from problematic families were more likely to party and that these factors rather than partying (in combination with sex and popularity) explained the level of antisocial behavior in early adolescence. To conclude, this study shows that partying leads to negative outcomes, but only for girls and unpopular adolescents.

#### REFERENCES

- Achenbach, T. M. (1991a). *Manual for the Child Behavior Checklist/4-18 and 1991 Profile*. Burlington, VT: University of Vermont.
- Achenbach, T. M. (1991b). *Manual for the Youth Self-Report and 1991 Profile*. Burlington, VT: University of Vermont.
- Agnew, R., & Petersen, D. M. (1989). Leisure and delinquency. Social Problems, 36, 332-350.
- Aiken, L. S., & West, S. G. (1991). *Multiple regression: Testing and interpreting interactions*. Newbury Park, CA: Sage.
- Arndorfer, C. L., & Stormshak, E. A. (2008). Same-sex versus other-sex best friendship in early adolescence: Longitudinal predictors of antisocial behavior throughout adolescence. *Journal* of Youth and Adolescence, 37, 1059–1070.
- Baumeister, R. F., & Leary, M. R. (1995). The need to belong: Desire for interpersonal attachments as a fundamental human-motivation. *Psychological Bulletin*, 117, 497–529.
- Caldwell, L. L., & Darling, N. (1999). Leisure context, parental control, and resistance to peer pressure as predictors of adolescent partying and substance use: An ecological perspective. *Journal of Leisure Research*, 31, 57–77.
- Caspi, A., Lynam, D., Moffitt, T. E., & Silva, P. A. (1993). Unraveling girls' delinquency: Biological, dispositional, and contextual contributions to adolescent misbehavior. *Developmental Psychology*, 29, 19–30.
- De Winter, A. F., Oldehinkel, A. J., Veenstra, R., Brunnekreef, J. A., Verhulst, F. C., & Ormel, J. (2005). Evaluation of non-response bias in mental health determinants and outcomes in a large sample of pre-adolescents. *European Journal of Epidemiology*, 20, 173–181.
- Dijkstra, J. K., Lindenberg, S., & Veenstra, R. (2008). Beyond the class norm: Bullying behavior of popular adolescents and its relation to peer acceptance and rejection. *Journal of Abnormal Child Psychology*, 36, 1289–1299.
- Dijkstra, J. K., Lindenberg, S., Verhulst, F. C., Ormel, J., & Veenstra, R. (2009). The relation between popularity and aggressive, destructive, and norm-breaking behaviors: Moderating effects of athletic abilities, physical attractiveness, and prosociality. *Journal of Research on Adolescence*, 19, 401–413.
- Feldman, S. S., & Quatman, T. (1988). Factors influencing age expectations for adolescent autonomy: A study of early adolescents and parents. *Journal of Early Adolescence*, 8, 325–343.
- Fuligni, A. J., & Stevenson, H. S. (1995). Time use and mathematics achievement among American, Chinese, and Japanese high-school-students. *Child Development*, 66, 830–842.
- Huisman, M. (2000). Imputation of missing item responses: Some simple techniques. *Quality and Quantity*, 34, 331–351.

- Kerr, M., Stattin, H., & Kiesner, J. (2007). Peers and problem behavior: Have we missed something? In R. C. M. E. Engels, M. Kerr, & H. Stattin (Eds.), *Friends, lovers, and groups: Key relationships in adolescence* (pp. 125–153). London: Wiley.
- Kiesner, J., & Pastore, M. (2005). Differences in the relations between antisocial behavior and peer acceptance across contexts and across adolescence. *Child Development*, 76, 1278–1293.
- Larson, R., & Seepersad, S. (2003). Adolescents' leisure time in the United States: Partying, sports and the American experiment. New Directions for Child and Adolescent Development, 99, 53–64.
- Lindenberg, S. (1996). Continuities in the theory of social production functions. In H. Ganzeboom
  & S. Lindenberg (Eds.), Verklarende sociologie: Opstellen voor reinhard wippler (pp. 169–184).
  Amsterdam: Thela Thesis.
- Lindenberg, S. (2006). Prosocial behavior, solidarity, and framing processes. In D. Fetchenhauer, A. Flache, A. P. Buunk, & S. Lindenberg (Eds.), *Solidarity and prosocial behavior. An integration of sociological and psychological perspectives* (pp. 23–43). Berlin: Springer.
- Markus, M. T., Lindhout, I. E., Boer, F., Hoogendijk, T. H. G., & Arrindell, W. A. (2003). Factors of perceived parental rearing styles: The EMBU-C examined in a sample of Dutch primary school children. *Personality and Individual Differences*, 34, 503–519.
- Mendle, J., Turkheimer, E., & Emery, R. E. (2007). Detrimental psychological outcomes associated with early pubertal timing in adolescent girls. *Developmental Review*, 27, 151–171.
- Moffitt, T. E., Caspi, A., Rutter, M., & Silva, P. A. (2001). Sex differences in antisocial behavior: Conduct disorder, delinquency, and violence in the Dunedin longitudinal study. Cambridge, UK: Cambridge University Press.
- Moody, J. (2001). Race, school integration, and friendship segregation. *American Journal of Sociology*, 107, 679–716.
- Osgood, D. W., Wilson, J. K., O'Malley, P. M., Bachman, J. G., & Johnston, L. D. (1996). Routine activities and individual deviant behavior. *American Sociological Review*, 61, 635–655.
- Persson, A., Kerr, M., & Stattin, H. (2007). Staying in or moving away from structured activities: Explanations involving parents and peers. *Developmental Psychology*, 43, 197–207.
- Poulin, F., & Pedersen, S. (2007). Developmental changes in gender composition of friendship networks in adolescent girls and boys. *Developmental Psychology*, 43, 1484–1496.
- Royston, P. (2004). Multiple imputation of missing values. Stata Journal, 4, 227–241.
- Stattin, H., Kerr, M., Mahoney, J. L., Persson, A., & Magnusson, D. (2005). Explaining why a leisure context is bad for some girls and not for others. In J. L. Mahoney, R. Larson, & J. S. Eccles (Eds.), Organized activities as contexts of development: Extracurricular activities, after-school and community programs (pp. 211–234). Mahwah, NJ: Erlbaum.
- Stattin, H., & Magnusson, D. (1990). Pubertal maturation in female development. Hillsdale, NJ: Erlbaum.
- Twenge, J. M., Baumeister, R. F., DeWall, C. N., Ciarocco, N. J., & Bartels, J. M. (2007). Social exclusion reduces prosocial behavior. *Journal of Personality and Social Psychology*, 92, 56–66.
- Veenstra, R., Lindenberg, S., Verhulst, F. C., & Ormel, J. (2009). Childhood-limited versus persistent antisocial behavior: Why do some recover and others do not? The TRAILS Study. *Journal of Early Adolescence*, 29, 718–742.