

# AGE AND ADOLESCENT DELINQUENCY

## The Changing Relationship Among Age, Delinquent Attitude, and Delinquent Activity

JOHANNES A. LANDSHEER

HARM 'T HART

*Utrecht University, the Netherlands*

---

---

Three attitudes toward delinquent activities are postulated: permissiveness toward violence, permissiveness toward acts that result in material damage, and a strictly nonpermissive attitude. It was anticipated that each attitude would be related to a different level of delinquent activity. Questionnaires were distributed to 2,918 Dutch adolescents and young adults (ages 12 to 24 years). Youths with a strictly nonpermissive attitude showed a low and stable level of delinquent activity at every age. Adolescents permissive of causing material damage displayed an intermediate level of delinquent activity, with weak age differences, whereas youths permissive of violence revealed the greatest differences across age groups. The age-attitude interaction was similar for boys and girls although boys engaged in delinquent behavior more often.

---

---

**S**ykes and Matza's (1957) neutralization theory is one of the older theories in the field of moral research. Its basic propositions are that (a) both delinquents and nondelinquents are morally committed to conventional norms but (b) delinquents differ from nondelinquents in using techniques to neutralize conventional norms when par-

---

**AUTHORS' NOTE:** *This research was funded by the Dutch Ministry of Justice and the Netherlands Research Council (NWO). We wish to thank Jos Dessens, Chris Baerfeldt, and Wim Meeus for their comments. Correspondence concerning this article should be addressed to J. A. Landsheer, Utrecht University, Faculty of Social Sciences, Department of Methodology and Statistics, Heidelberglaan 2, P.O. Box 80140, 3508 TC Utrecht, the Netherlands, Europe; e-mail: j.a.landsheer@fsw.ruu.nl.*

CRIMINAL JUSTICE AND BEHAVIOR, Vol. 26 No. 3, September 1999 373-388  
© 1999 American Association for Correctional Psychology

ticipating in morally offensive behavior. The neutralizing arguments excuse the actor, make it easier to maintain a permissive attitude toward causing damage, and facilitate delinquent behavior. Various researchers have presented data that support the neutralization theory (Mitchell & Dodder, 1984; Mitchell, Dodder, & Norris, 1990). In our earlier study (Landsheer, 't Hart, & Kox, 1994), we showed that neutralizations, reflecting a lack of concern for the damage done to others, result in differentially permissive attitudes between juvenile delinquents and nondelinquents. Generally, delinquents have a more permissive attitude than nondelinquents, with one exception: They are just as disapproving as nondelinquents where injury of persons known to themselves is concerned. Age has not been an issue in neutralization theory research although Hollinger's (1991) data indicated that neutralization techniques may work best among older adults.

Although the age-crime curve relates to the entire life span, the adolescent period that was the focus of the present study shows the most significant changes in criminal activity with age. The main changes in the prevalence of delinquent behavior seem to be tied to the adolescent years although Moffitt, Caspi, Dickson, Silva, and Stanton (1996) claimed that boys who first exhibit antisocial behavior before adolescence continue to do so during adolescence. Moffitt (1993) named this *childhood-onset* or *life-course-persistent antisocial behavior*, in contrast to adolescence-limited delinquency. This life-course-persistent delinquency occurred in about 7% of Moffitt's male sample (Moffitt et al., 1996) and seems to be related to such risk factors as attention-deficit disorder with hyperactivity (ADDH), as well as other instances of impulse-control pathologies (Loeber, 1990; Moffitt, 1993). Adolescence-limited delinquency occurred in about 24% of Moffitt's male sample (Moffitt et al., 1996) and is probably not correlated with these impulse-control pathologies. This suggests that the lack of self-control of delinquents may be differentiated into (a) a persistent lack of impulse control and (b) another form involving a temporary insufficient self-control of a less pathological, more cognitive nature, which seems to be a part of normal learning and developmental processes and is limited to adolescence. Consistent with Moffitt's distinction between life-course-persistent and adolescent-limited delinquents, the construct of self-control may hold different meaning for the two types of delinquency. One is the lack of impulse control as found in

such pathologies as ADHD. These pathologies are evident in stages before adolescence and are found to be connected to life-course-persistent delinquency (Loeber, 1990; Moffitt, 1993; Moffitt et al., 1996). A second aspect is the lack of cognitive self-control, a form of reasoning that is used to lower "the barrier that stands between the actor and the obvious momentary benefits crime provides" (Hirschi & Gottfredson, 1994, p. 9), that is, neutralization. The acquisition of cognitive self-control can be seen as an important developmental task (Tolan, 1988) and a part of normal adolescent development.

### AGE AND THE PREDICTION OF DELINQUENCY

Hirschi and Gottfredson's (1983) view that "the age distribution of crime cannot be accounted for by any variable or combination of variables currently available to criminology" (p. 554) has generated considerable debate (Baldwin, 1984; Gottfredson & Hirschi, 1988; Hirschi & Gottfredson, 1984; Tittle, 1988) as well as empirical research. Shavit and Rattner (1988) presented data supporting Hirschi and Gottfredson's position. Tittle and Ward's (1993) findings also supported the thrust of the hypothesis, albeit with minor deviations. They stressed the importance of including adolescence, a period of exceptional change, when studying delinquent development.

Analysis by Steffensmeier and his colleagues (Steffensmeier, Allan, Harer, & Streifel, 1989; Steffensmeier & Streifel, 1991) of the FBI's Uniform Delinquency Reports showed that the age distributions for delinquent behaviors such as fraud and gambling differ strongly from the age distributions of burglary and vandalism, indicating that age distribution may be behavior specific. Steffensmeier et al. (1989) assumed that the age curves for lucrative delinquent activities (such as gambling) not only peak much later but tend not to decline with age.

Gottfredson and Hirschi (1988) made a strong claim that the age-crime relationship is invariant and persistent regardless of sex, race, country, and other demographic variables. The criminal career approach allows for a closer look at age-crime variability because it allows a general demographic account of the frequency as well as the participation, onset, and termination of offensive behavior (Blumstein & Cohen, 1987; Blumstein, Cohen, & Farrington, 1988). It also

includes the influence of specific life events on these aspects of criminality (Horney, Osgood, & Marshall, 1995; Osgood, Johnston, O'Malley, & Bachman, 1988). Horney et al. (1995) found that involvement in crime is not stable over the short term and may be related to local life circumstances such as the breakup of relationships and changes in the use of alcohol and drugs. Similarly, Osgood et al. (1988) reported that the pattern of increase and decrease of delinquent involvement during adolescence and early adulthood is more complex than the age-crime curve suggests and cannot be sufficiently explained by single general tendencies. Farrington (1995) discussed psychological risk factors such as hyperactivity, impulsivity, and low intelligence, which are relevant to the prediction of delinquency. Impulsivity, low intelligence or educational attainment, poor parenting, antisocial family members, and poverty, both singly and in interaction with one another, may contribute in some way to the development of offending. However, main effects have been studied more intensively than possible interaction effects.

Hirschi and Gottfredson's (1994) theory of self-control states "that variation of self-control is established early in life, and that differences between individuals remain reasonably constant over the life course" (p. 2). They see self-control as the barrier that stands between the actor and the obvious momentary benefits that delinquency provides. That is, a sufficient level of self-control is required before one can decide not to exploit opportunities for delinquency. The development of self-control and independence also may be seen as a developmental task for the adolescent (Tolan, 1988). Whereas family relations change from direct parental control toward more lax control and a relationship in which opinions and attitudes are allowed to differ, adolescents are expected to develop their own sense of responsibility and self-control. At the same time, some children may have lasting problems with impulse control, which may limit the possibility of developing a sufficient level of self-control in the adolescence phase.

A permissive attitude reflects a lack of concern about the damage done to others, which in turn, indicates a lowered barrier to exploit delinquent opportunities. If Hirschi and Gottfredson's (1994) postulation that the effects of age on delinquency "are independent of level of self-control" (p. 14) holds, we might expect the same for levels of permissiveness, as this construct is related to self-control. A permissive

attitude toward causing damage to others also indicates a tolerant attitude toward committing offenses. Following the invariability thesis of Hirschi and Gottfredson, we would expect similar age curves, with a peak of delinquent activity in late adolescence, regardless of permissive attitude. In addition, similar differences between the two genders might be expected irrespective of permissive attitude. Thus, although age, gender, and attitude differences might be expected, no interaction effects between gender and attitude or between age and attitude would be anticipated.

## METHOD

### PARTICIPANTS

During the period of September to November 1991, a nationwide sample of adolescents, members of an existing Dutch panel, were approached for a study of adolescent development. Data for this study were collected as part the Utrecht Study of Adolescent Development (USAD) (Meeus & 't Hart, 1993). The sample consisted of 2,918 youths, aged 12 to 24. INTERACT, an organization for consumer research, maintains a household panel of 10,000 households, from which our respondents were drawn. The household panel was a two-stage sample. First, a random selection of municipalities was chosen, with inclusion probabilities equal to their relative size. Households were drawn from the registration of all addresses in the Netherlands, provided by the Dutch Postal Services. Addresses where nobody was living and institutions such as military camps and nursing homes were omitted. Households including no Dutch speakers or persons who could read and write also were excluded. The present sample of youths was drawn from the households at random in such a way that each youth had an equal chance of inclusion in the sample.

The representativeness of the sample was checked using youth studies of the Dutch Central Bureau of Statistics, the Social and Cultural Planning Agency, and the Ministry of Justice. No differences between the current sample and these others were found with respect to the following variables: age, province, degree of urbanization, religion, frequency of going to church, and self-reported criminal

behavior. Youths living on their own were underrepresented; they had a low crime rate.

## PROCEDURE

Oral questioning of each youth lasted about 1 hour followed by the distribution of written questionnaires to be returned in postpaid envelopes. The questionnaires dealt with delinquent behavior, attitudes toward delinquent behavior, political and societal attitudes, health, well-being and personal development, relationships within the family, school achievement, and professional career. A total of 2,777 youths returned the questionnaires with 2,706 of them answering all the questions. There were 1,251 male and 1,455 female participants ranging in age from 12 to 24 ( $M = 18.05$ ,  $SD = 3.50$ ) with 10.6% males and 11.0% females in the 12 to 14 age group, 14.2% males and 16.1% females in the 15 to 17 age group, 11.9% males and 12.9% females in the 18 to 20 age group, and 9.6% males and 13.7% females in the 21 to 24 age group.

## INSTRUMENTS

Delinquent activity was measured as the self-reported frequency of 28 delinquent acts committed during the previous year with the behaviors ranging from shoplifting to burglary and the use of violence.<sup>1</sup> The scale had a reliability of .68 (Cronbach's alpha). Delinquent activity was assessed during the oral questioning phase of the data collection.

The 18 questions used for the measurement of permissiveness toward causing damage to others (Landsheer et al., 1994) were part of the written questionnaire given to the respondents. The permissive response categories were: (a) *I would find it tolerable*, (b) *I would not mind*, and (c) *I would find it intolerable*. The instrument has been restricted to two factors, using Cattell's scree test. Table 1 presents the items and the loadings on the two factors of permissive attitude toward delinquent behavior that results in material damage and permissive attitude toward delinquent behavior that results in physical injuries.

The following items were removed: item 8 because of its low factor loadings ( $< .50$ ), items 16 and 17 because of their low seriousness, and item 12 because its content matched the other items insufficiently. The

**TABLE 1: Factor Loadings for the Permissive Attitude Scale**

<i>Item Number</i>	<i>Item Text</i>	<i>Factor 1</i>	<i>Factor 2</i>
10	A youngster deliberately damages a bicycle wheel of a stranger.	.76	.21
15	A youngster deliberately sets fire to a wastebasket.	.75	.13
16	A youngster deliberately smashes a window in an empty building.	.74	.08
11	A youngster steals small change from a stranger.	.74	.21
14	A youngster deliberately damages a stranger's motor bike.	.72	.26
18	A youngster slashes a bus seat with a knife.	.67	.25
2	A youngster sells goods which you know to have been stolen.	.64	.08
13	A youngster steals a considerable amount of money (more than fl 50,-) <sup>a</sup> from a stranger.	.63	.37
1	A youngster buys goods which you know to have been stolen.	.62	.04
17	A youngster takes a bus ride without paying the fare.	.61	.01
8	A youngster sells drugs to a stranger. You know that the drug is addictive.	.45	.37
5	A youngster deliberately injures someone known lightly with a knife.	.02	.84
7	A youngster deliberately injures someone you know seriously with a knife, leading to hospitalization of the victim.	-.01	.83
3	A youngster threatens someone known with a knife.	.03	.81
6	A youngster deliberately injures a stranger lightly with a knife.	.31	.68
9	A youngster deliberately injures a stranger seriously with a knife, leading to hospitalization of the victim.	.29	.67
1	A youngster steals a considerable amount of money (more than fl 50,-) <sup>a</sup> from someone you know.	.21	.63
4	A youngster threatens a stranger with a knife.	.35	.62

NOTE: Factor 1 is permissive attitude toward causing material damage; the eigenvalue was 6.96. Factor 2 is permissive attitude toward violence; the eigenvalue was 2.63.  
a. This is the equivalent of approximately \$30 in U.S. currency.

resulting scale had reliability coefficients of .87 for Factor 1 and .84 for Factor 2. The two factors allowed the sample to be split into four distinct attitude groups based on permissiveness (a scale score of 1 or higher) or strict nonpermissiveness (a zero score) toward causing material damage and toward causing physical injury. Of the 2,706 youths who answered all of the questions, 622 were strictly non-

permissive, 1,643 were permissive only toward causing material damage, 6 were permissive only toward causing physical injuries, and 435 were permissive toward both material damage and physical injuries. The last two groups were combined to create a group that was permissive of violence. In this way, permissive attitude toward delinquency was differentiated into three categories: (a) permissive of violence, (b) permissive of causing material damage, and (c) strictly nonpermissive.

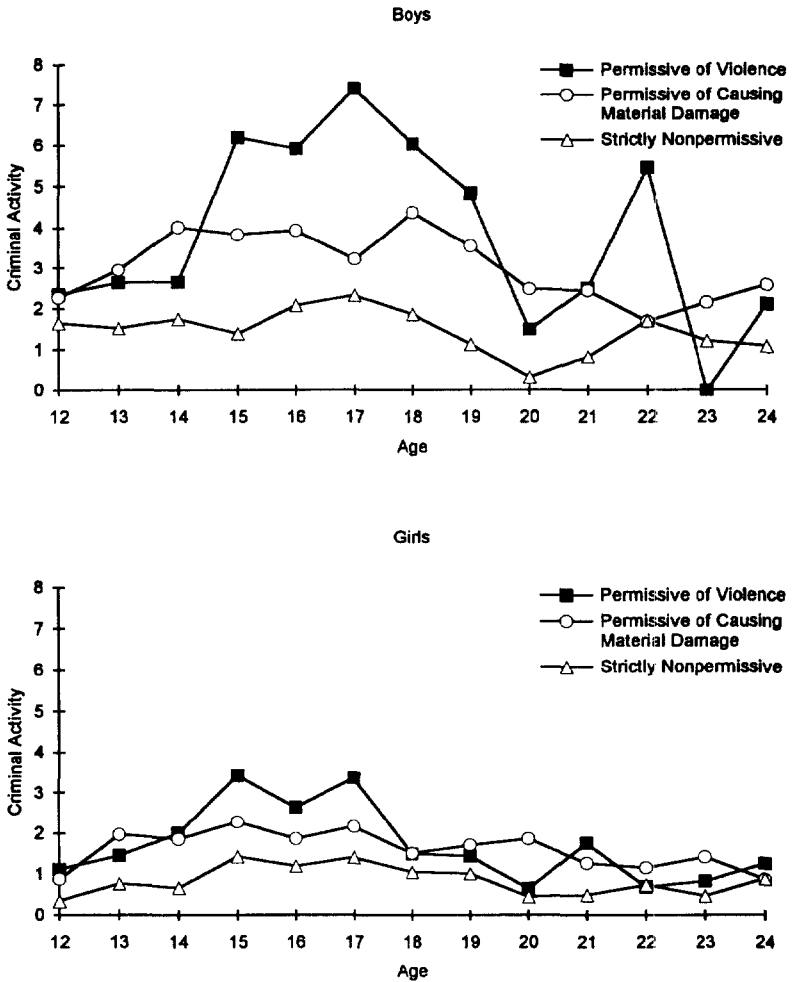
## RESULTS

The mean scores of delinquent activity by age and attitude groups for male and female youth are compared in Figure 1. Means and standard deviations of delinquent activity are presented in Table 2.

As can be seen in Figure 1, the mean differences in delinquent activity among the attitude groups were quite large in the 15 to 17 age group but smaller at other ages. There were significant main effects of age,  $F(12, 2628) = 6.48, p < .001$ ; attitude,  $F(2, 2628) = 39.60, p < .001$ ; and gender,  $F(1, 2628) = 128.94, p < .001$ . Both the age-attitude interaction,  $F(24, 2628) = 2.02, p = .01$ , and the gender-attitude interaction,  $F(2, 2628) = 8.52, p < .001$ , were significant, whereas the age-gender interaction was not. There was no significant three-way interaction.  $R$  was .34, indicating that the proportion of variance in delinquency accounted for by the variables gender, age, and attitude in a linear model was .12. In a regression model, age and gender accounted for about 9% of the variance, whereas age and gender in combination with attitude accounted for 12% of the variance.

Adolescents who subscribed to conventional norms (i.e., nonpermissive attitude) were the least actively delinquent, whereas youth who had more permissive attitudes were more actively delinquent. Figure 1 shows clearly that the relationship between delinquent attitude and delinquent activity was different for different age groups. Expressed as the correlation between attitude and delinquent activity in each gender-age group (see Table 3), the relationship between permissive attitude and delinquent activity was strongest for boys at ages 15 to 19 and at age 22.





**Figure 1: Criminal Activity by Age and Attitude Groups for Boys and Girls.**

The girls showed a somewhat different pattern, with the relationship between permissive attitude toward delinquency and delinquent activity being strongest at ages 12, 14 to 17, and 18 (see Table 3). Thus, the link between attitude and behavior was not stable and changed with increasing age.

**TABLE 2: Mean Criminal Activity for Male and Female Adolescents, Categorized by Age and Attitude.**

Age		Attitude Permissive of					
		None		Material Damage		Violence	
		Males (n = 218)	Females (n = 404)	Males (n = 754)	Females (n = 889)	Males (n = 279)	Females (n = 162)
12	<i>M</i>	1.65	0.34	2.26	0.87	2.35	1.11
	<i>SD</i>	3.03	0.76	2.84	1.80	2.85	1.64
13	<i>M</i>	1.52	0.76	2.95	1.97	2.63	1.44
	<i>SD</i>	3.47	1.64	3.48	3.44	3.98	2.03
14	<i>M</i>	1.75	0.65	4.02	1.85	2.66	2.00
	<i>SD</i>	2.72	1.27	4.72	3.20	2.73	2.12
15	<i>M</i>	1.39	1.42	3.84	2.27	6.19	3.42
	<i>SD</i>	2.50	3.00	4.50	3.77	5.58	4.73
16	<i>M</i>	2.08	1.19	3.94	1.87	5.92	2.63
	<i>SD</i>	3.77	1.77	4.17	2.82	6.15	3.68
17	<i>M</i>	2.33	1.40	3.23	2.16	7.41	3.36
	<i>SD</i>	2.80	2.65	4.29	3.12	6.70	7.14
18	<i>M</i>	1.87	1.04	4.37	1.51	6.03	1.50
	<i>SD</i>	2.56	1.46	4.04	2.51	6.51	2.57
19	<i>M</i>	1.14	1.00	3.56	1.71	4.83	1.43
	<i>SD</i>	1.79	1.98	4.07	2.85	5.26	1.62
20	<i>M</i>	0.33	0.44	2.48	1.87	1.50	0.63
	<i>SD</i>	0.97	1.08	3.04	2.94	2.10	1.19
21	<i>M</i>	0.83	0.49	2.44	1.26	2.50	1.75
	<i>SD</i>	1.85	1.23	4.00	2.49	2.08	2.36
22	<i>M</i>	1.71	0.73	1.69	1.15	5.46	0.67
	<i>SD</i>	2.93	1.46	2.72	1.87	6.54	1.21
23	<i>M</i>	1.22	0.46	2.15	1.41	0.00	0.82
	<i>SD</i>	1.22	1.29	3.03	2.33	0.00	1.47
24	<i>M</i>	1.08	0.88	2.58	0.86	2.11	1.25
	<i>SD</i>	1.44	1.84	2.97	1.72	2.21	1.26

The three attitude groups showed clear differences in delinquent activity. A secondary analysis of the age-attitude interaction revealed that adolescents with the attitude permissive of violence displayed considerable differences in delinquent activities with age in contrast to the group permissive of causing material damage,  $F(12, 2628) = 3.78, p < .001$ . The age differences associated with this latter attitude did not significantly differ from those of the adolescents who were strictly nonpermissive,  $F(12, 2628) = 0.58, ns$ . In other words, the age curve was most pronounced for youths who were permissive of

**TABLE 3: Correlations Between Permissive Attitude and Delinquent Activities for Boys and Girls of Various Age Groups**

Gender	Age Group												
	12	13	14	15	16	17	18	19	20	21	22	23	24
Boys	.10	.09	.03	.32**	.24**	.31**	.26**	.24**	.14	.14	.31**	.08	.14
Girls	.20*	.11	.17*	.16*	.14*	.15*	.06	.09	.13	.18*	.06	.12	.02

\* $p < .05$ . \*\* $p < .01$ .

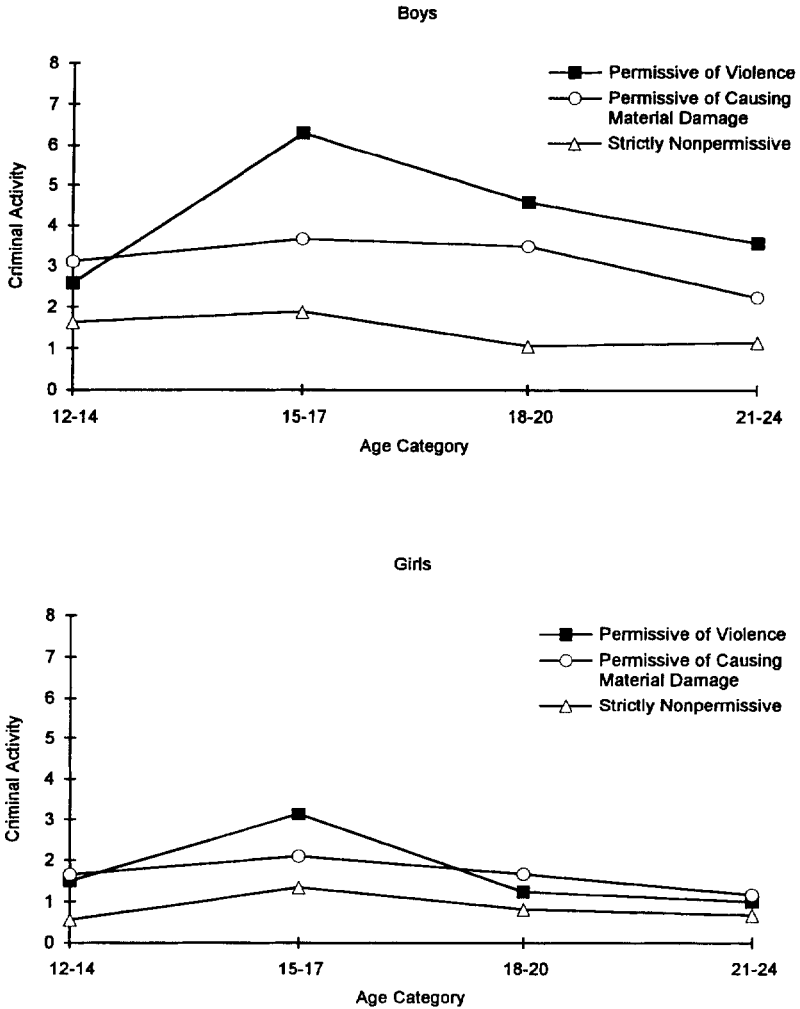
violence. When this group was removed, the attitude-age interaction became insignificant,  $F(9, 2256) = 0.93, ns$ .

Roughly, four distinctive stages can be discerned (see Figure 2): early adolescence (12 to 14), with an increase in delinquent activity; midadolescence (15 to 17), with a high rate of criminal activity; late adolescence (18 to 21), with a decline of criminal activity; and early adulthood, with a lower and more stable level of delinquent activity. (There were certain irregular departures from this age categorization for which we could find no satisfactory explanation other than sample deviations.) This age categorization was used to take a second look at the age-attitude differences. When predicting delinquent activity, attitude had a strongly different effect in the 12 to 14 age group than in the 15 to 17 age group,  $F(2, 2628) = 11.11, p < .001$ . This interaction effect between age and attitude was found to be somewhat smaller in a comparison between the adjacent 15 to 17 and 18 to 20 age groups,  $F(2, 2628) = 3.70, p < .05$ , and was not significant in a comparison between late adolescence (18 to 20) and early adulthood (21 to 24).

Figure 2 also illustrates a consistent difference between girls and boys for all attitude groups with regard to delinquent activity. This figure shows more clearly than Figure 1 that the age curves of the two genders were roughly similar in shape, with boys showing consistently higher levels of delinquent activity for every age and for every attitude group.

## DISCUSSION

The results of the present study showed a significant interaction effect between age and attitude with respect to delinquent activity. The



**Figure 2: Criminal Activity by Age Categories and Attitude Groups for Boys and Girls.**

age distribution of delinquent activity varied across different attitude groups. Only the adolescents who were permissive of violence showed a clear age curve, whereas the adolescents with other attitudes show slighter age differences. Adolescents who were permissive of violence determined the larger part of the age differences in

delinquent activity. Indeed, when this group was removed, the attitude-age interaction became insignificant. Other research (e.g., English, 1993; Farrington & West, 1993; Wolfgang, Figlio, & Sellin, 1972) has consistently shown that a minor group is responsible for the larger part of delinquent activity. This criminally active group can at least in part be identified by its attitude toward the consequences of crime. An interesting question for further research is whether the group of life-course-persistent delinquents (Moffitt, 1993) will more often have the attitude permissive of violence, which also seems to be the attitude that is most consistent with a lack of impulse control.

Thus, the current results suggest that attitudinal differences can contribute to understanding age differences in criminal activity. Within the domain of cross-sectional research, we have shown that the age-crime relationship during adolescence varies across attitude groups and that the relationship itself between criminal behavior and permissiveness toward the consequences of crime changes. If our measurements of changes in attitudes represent more general cognitive/psychological changes, this may be important for an improved understanding of the development of delinquency during adolescence. Of course, it would not be correct to interpret a decrease in the aggregate rates as reflecting a decrease in individuals' offense frequency (Blumstein et al., 1988). Within criminal career research, it is strongly emphasized that studying criminal careers requires longitudinal data of individuals. When there are changes in any variable over time, especially when the effects differ across ages, data from an age cross section will provide a distorted representation of changes with age (Blumstein et al., 1988). We fully subscribe to this view and are working on more complex models for analysis than we have presented in this study. Nevertheless, our current results show that even with cross-sectional data, it can be shown that there is more variability than can be explained by Hirschi and Gottfredson's invariability thesis. We would also like to stress the importance of using statistical models such as multiple analysis of variance (MANOVA) models that allow the study of interaction effects between attitude and age in relation to criminality, even when both attitude and criminal behavior have a curvilinear relationship with age. These models are more suitable for the study of curvilinear variability than are, for instance, regression or LISREL models. Permissive attitude accounted for an extra 3% of the

variance in a linear model containing attitude in addition to age and gender. An improvement of 33% of the variance accounted for is considerable, especially because these models probably underrepresent the curvilinear relations concerned.

The increase of delinquent activity from age 12 to 17 is persistent. As suggested by Tolan (1988), our assumption is that this is caused by more lax social control when self-control is still inadequate. A puzzling question is why those permissive of violence become so much less actively delinquent from age 17 to 20 and why older adolescents who hold this attitude are even less actively delinquent. If this is indeed the group with the least self-control, that is, those who take least account of the damage to others, why should their delinquent activity diminish? One assumption is that those youth who are the most actively delinquent also have the highest chance of getting caught, which may reduce the level of their delinquent activity. Because we asked the juveniles whether they were caught during the course of their most recent delinquent acts, we have an indication of the effectiveness of direct social control. We analyzed the data of 1,345 cases who had been actively delinquent during the past year. The results revealed that the effectiveness of direct social control decreased with increasing age from age 12 onward,  $F(12, 1279) = 6.53, p < .001$ . That is, the chance of getting caught decreased. This finding is consistent with other research indicating that offenders are not deterred by the fear of apprehension and punishment alone (Decker, Wright, & Logie, 1993; Kraus, 1976). Our data suggest that direct social control of delinquent behavior becomes less effective with increasing age, which makes it unlikely that the decrease in delinquent activity can be explained by the chance of being caught. However, our current data do not allow insight into the relationship between being caught and delinquent activity at a subsequent age.

When age is taken into account, the rise and decline of delinquent activity in the group permissive of violence is equivalent for boys and girls. Where the two other attitudes are concerned, the greater stability of criminal activity over age is also equivalent for boys and girls. If we double the activity figures for girls, the differences between boys and girls become statistically nonsignificant, and the interaction between gender and delinquent activity disappears as the differences are

equalized. This suggests that the gender difference in delinquent activity is a general difference and that the relationship between delinquent attitude and delinquent behavior shows a similar gender difference, with boys showing consistently higher levels of delinquent activity.

The striking changes that occur during adolescence merit greater attention from criminological researchers. As the current study indicates, the attitudinal/cognitive development of adolescents and its relationship to delinquent activity are particularly deserving of such increased attention.

### NOTE

1. The instrument is available from the first author.

### REFERENCES

- Baldwin, J. D. (1984). Thrill and adventure seeking and the age distribution of crime: Comment on Hirschi and Gottfredson. *American Journal of Sociology*, *90*, 1326-1330.
- Blumstein, A., & Cohen, J. (1987). Characterizing criminal careers. *Science*, *237*, 985-991.
- Blumstein, A., Cohen, J., & Farrington, D. P. (1988). Criminal career research: Its value for criminology. *Criminology*, *26*, 1-35.
- Decker, S., Wright, R., & Logie, R. (1993). Perceptual deterrence among active residential burglars: A research note. *Criminology*, *31*, 135-147.
- English, K. (1993). Self-reported crime rates of women prisoners. *Journal of Quantitative Criminology*, *9*, 357-382.
- Farrington, D. P. (1995). The development of offending and antisocial behavior from childhood: Key findings from the Cambridge study in delinquent development. *Journal of Child Psychology and Psychiatry*, *36*(6), 929-964.
- Farrington, D. P., & West, D. J. (1993). Criminal, penal and life histories of chronic offenders: Risk and protective factors and early identification. *Criminal Behavior and Mental Health*, *3*, 492-523.
- Gottfredson, M., & Hirschi, T. (1988). Science, public policy, and the career paradigm. *Criminology*, *26*, 37-55.
- Hirschi, T., & Gottfredson, M. (1983). Age and the explanation of crime. *American Journal of Sociology*, *89*, 552-584.
- Hirschi, T., & Gottfredson, M. (1984). All wise after the fact learning theory, again: Reply to Baldwin. *American Journal of Sociology*, *90*, 1330-1333.
- Hirschi, T., & Gottfredson, M. (1994). *The generality of deviance*. New Brunswick, NJ: Transaction Publishing.

- Hollinger, R. C. (1991). Neutralizing in the workplace: An empirical analysis of property theft and production deviance. *Deviant Behavior, 12*, 169-202.
- Horney, J., Osgood, D. W., & Marshall, I. H. (1995). Criminal careers in the short-term: Intra-individual variability in crime and its relation to local life circumstances. *American Sociological Review, 60*, 655-673.
- Kraus, J. (1976). Juvenile delinquency and the psychology of general deterrence. *International Journal of Social Psychology, 22*, 112-119.
- Landsheer, J. A., 't Hart, H., & Kox, W. (1994). Delinquent values and victim damage: Exploring the limits of neutralization theory. *British Journal of Criminology, 34*, 44-53.
- Loeber, R. (1990). Development and risk factors of juvenile antisocial behavior and delinquency. *Clinical Psychology Review, 10*, 1-41.
- Meeus, W., & 't Hart, H. (1993). *Jongeren in Nederland* [Youths in Netherland]. Amersfoort, the Netherlands: Academische Uitgeverij.
- Mitchell, J., & Dodder, R. A. (1984). Types of neutralization and types of delinquency. *Journal of Youth and Adolescence, 12*, 307-318.
- Mitchell, J., Dodder, R. A., & Norris, T. D. (1990). Neutralization and delinquency: A comparison by sex and ethnicity. *Adolescence, 25*, 487-497.
- Moffitt, T. E. (1993). Adolescence-limited and life-course-persistent antisocial behavior: A developmental taxonomy. *Psychological Review, 100*, 674-701.
- Moffitt, T. E., Caspi, A., Dickson, N., Silva, P., & Stanton, W. (1996). Childhood-onset versus adolescent-onset antisocial conduct problems in males: Natural history from ages 3 to 18 years. *Development and Psychopathology, 8*, 399-424.
- Osgood, D. W., Johnston, L. D., O'Malley, P. M., & Bachman, J. G. (1988). The generality of deviance in late adolescence and early adulthood. *American Sociological Review, 53*, 81-93.
- Shavit, Y., & Rattner, A. (1988). Age, crime and the early life course. *American Journal of Sociology, 93*, 1457-1470.
- Steffensmeier, D., Allan, E. A., Harer, M. D., & Streifel, C. (1989). Age and the distribution of crime. *American Journal of Sociology, 94*, 803-831.
- Steffensmeier, D., & Streifel, C. (1991). Age, gender, and crime across three historical periods: 1935, 1960, and 1985. *Social Forces, 69*, 869-894.
- Sykes, G. M., & Matza, D. (1957). Techniques of neutralization: A theory of delinquency. *American Sociological Review, 22*, 664-670.
- Tittle, C. R. (1988). Two empirical regularities (maybe) in search of an explanation: Commentary on the age/crime debate. *Criminology, 26*, 75-85.
- Tittle, C. R., & Ward, D. A. (1993). The interaction of age with the correlates and causes of crime. *Journal of Quantitative Criminology, 9*, 3-53.
- Tolan, P. H. (1988). Delinquent behaviors and male adolescent development: A preliminary study. *Journal of Youth and Adolescence, 17*, 413-427.
- Wolfgang, M. E., Figlio, R. M., & Sellin, T. (1972). *Delinquency in a birth cohort*. Chicago: University of Chicago Press.