

INWARD VERSUS OUTWARD DIRECTED AGGRESSION IN AMERICAN
ADOLESCENTS¹

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Summary.- In a sample of over 16,000 American adolescents, a history of recently attempting suicide was associated with two measures of outward-directed aggression (carrying a weapon and physical fighting) in both females and males.

It has been common to see outwardly-directed aggression and inwardly-directed aggression as opposed behaviors, with individuals showing either one or the other type of aggression (e.g., Henry & Short, 1954). Henry and Short argued that this was true both at the societal (or aggregate level) and at the individual level. At the individual level, Henry and Short argued that, whereas physical punishment of children (and punishment by a parent who is not the source of love and nurturance) increases the chance that the child will become outwardly-aggressive, love-oriented punishment (and punishment by the parent who

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is the source of both love and nurturance) increases the chance that the child will learn to inhibit the outward expression of anger and to direct the anger inward onto the self.

At the societal level, there is good support for the hypothesis that suicide and homicide are opposite behaviors. For example, Lester (1990) found that the quality of life in nations of the world was positively associated with the suicide rate but negatively with the homicide rate.

The evidence at the individual level is not as compelling. Suicidal individuals are often very angry and aggressive. For example, Wandrei (1985) found that female attempted suicides who subsequently killed themselves showed more acting-out of anger than attempted suicides who did not kill themselves. Apter, et al (1991) compared samples of violent and non-violent psychiatric patients and found that the risk of suicide as measured by objective scales was positively associated with the risk of violence in both samples. Furthermore, the risk of suicide and the risk of violence were predicted by similar variables in both groups, variables such as impulsivity, anger and anxiety.

It is also quite common for murderers (outwardly violent individuals) to commit suicide. For example, Milroy

(1993) reported that roughly 5% to 10% of English murderers commit suicide.

Other research has found that suicidality, especially in adolescents, is associated with engaging in a variety of risk-taking and self-destructive behaviors (Lewinsohn, et al., 1995; Windle, et al., 1992), behaviors which include both harming the self and harming others.

Data to test this association at the individual level comes from the national school-based Youth Risk Behavior Survey (YRBS) carried out by the Centers for Disease Control regularly in the United States. Adolescents are asked about various risk-taking and self-destructive behaviors including carrying weapons, physical fights and attempted suicide. This data set provides an opportunity to explore the association between inwardly-directed and outwardly-directed aggressive actions in adolescents.

METHOD

The 1997 YRBS² surveyed 16,262 youths across the United States: 50.4% were male, roughly one quarter were in each of the grades 9, 10, 11 and 12, and 34.4% were white, 28.3% were black and 28.2% were Hispanic or Latino. (The survey purposely seeks to include minorities in a greater proportion than they are in the general population. The median age of the sample was 16 and the modal age 17.

² Diskette: National School-Based Youth Risk Behavior 1997. NTIS Order No. PB98-502479. NTIS, 5285 Port Royal road, Springfield, VA 22161. Telephone 703-487-4660.

Among the questions asked were ten which were used for the present study:

(1) How often do you wear a seat belt when riding in a car driven by someone else? Answer "never" or "rarely" (so answered by 22% of the sample).

(2) During the past 30 days, how many times did you drive a car or other vehicle when you had been drinking alcohol? Answer other than "0 times" (so answered by 15% of the sample).

(3) During the past 30 days, on how many days did you carry a weapon such as a gun, knife or club? Answer other than "0 days" (so answered by 19% of the sample).

(4) During the past 12 months, how many times were you in a physical fight? Answer other than "0 times" (so answered by 36% of the sample).

(5) During the past 12 months, how many times did you actually attempt suicide? Answer other than "0 times" (so answered by 9% of the sample).

(6) During the past 30 days, on how many days did you smoke cigarettes? Answer other than "0 days" (so answered by 32% of the sample).

(7) During the past 30 days, on how many days did you have at least one drink of alcohol? Answer other than "0 days" (so answered by 48% of the sample).

(8) During the past 30 days, how many times did you use marijuana? Answer other than "0 times" (so answered by 24% of the sample).

(9) During the past 30 days, how many times did you use any form of cocaine, including powder, crack or freebase? Answer other than "0 times" (so answered by 4% of the sample).

(10) Have you ever had sexual intercourse? Answer "Yes" (so answered by 54% of the sample).

RESULTS

The Pearson correlation between attempting suicide and carrying a weapon was 0.11 and between attempting suicide and being in physical fights was 0.11. Because of the larger sample size (more than 16,000 youths), both correlations were statistically significant at the two-tailed .001 level. However, the associations were quite weak.

The responses to the ten questions were subjected to a factor analysis, using a principal components extraction and a varimax rotation, and three orthogonal (independent) factors were extracted (see Table 1).

It can be seen that Factor 2 had high loading (> 0.50) from the items concerned with carrying weapons and physical fights) while Factor 3 had a high loading for the item concerned with attempted suicide.

The results were somewhat different when examined by sex. The Pearson correlations between a recent history of attempted suicide and carrying a weapon and physical fighting were positive for both boys ($r_s = 0.15$ and 0.12 , respectively, $p < .001$) and for girls ($r_s = 0.16$ and 0.17 , respectively, $p < .001$). The results of the factor-analyses were, however, different by sex (see Table 1).

For the boys, attempting suicide was not loaded on the same factor as carrying weapons and physical fighting, whereas for the girls attempting suicide was loaded on the same factor as carrying a weapon and physical fighting.

DISCUSSION

The results indicate that behavior reflecting outward-directed aggression (carrying weapons and physical fights) is weakly but positively associated with behavior reflecting inward-directed aggression (attempting suicide) in this sample of young American youths. Thus, the results fail to provide support for the hypothesis of Henry and Short that inward and outward-directed aggression are alternative behaviors, with different developmental causes.

However, the results also failed to provide strong support for the hypothesis that inward-directed aggression (such as suicidal behavior) and outward-directed aggression (such as violence toward others) are positively associated

in adolescents. The associations were weak, accounting for only 1.4% to 2.9% of the variance.

The results for boys and girls separately, however, suggested a difference by sex. The factor-analyses indicated that inward-directed and outward-directed aggression appeared to be more strongly associated in American girls than in boys. Since physical violence is typically less common in girls than in boys (indeed, for boys, physical violence may be more the norm), engaging in physical aggression may be more likely to be a sign of distress in girls and, therefore, associated with other signs of distress, including self-destructive behavior. However, such speculation needs to be tested in future research.

It appears, therefore, that it is important to examine these types of associations in males and females separately, and any theory concerning the direction in which aggression is expressed must take into account sex differences.

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Table 1

Results of the factor analysis

All Subjects

	Factor		
	1	2	3
seat belt	0.11	0.61#	-0.24
drink and drive	0.69#	0.09	-0.02
carry weapon	0.13	0.69#	0.17
physical fights	0.11	0.68#	0.21
attempt suicide	0.01	0.06	0.87#
cigarettes	0.73#	0.09	0.16
alcohol	0.76#	0.12	0.06
marijuana	0.68#	0.21	0.14
cocaine	0.37	0.08	0.46
intercourse	0.41	0.38	0.01
% of variance	29.9%	10.7%	10.0%

Males

	Factor		
	1	2	3
seat belt	0.16	0.58#	-0.13
drink and drive	0.70#	0.11	0.05
carry weapon	0.13	0.67#	0.20
physical fights	0.10	0.70#	0.12
attempt suicide	-0.03	0.13	0.86#
cigarettes	0.72#	0.14	0.11
alcohol	0.75#	0.22	-0.01
marijuana	0.69#	0.20	0.14
cocaine	0.42	-0.01	0.56#
intercourse	0.40	0.46	0.01
% of variance	31.6%	10.5%	10.1%

Females

	Factor		
	1	2	3
seat belt	0.03	0.06	0.80#
drink and drive	0.67#	-0.03	-0.04
carry weapon	0.04	0.67#	0.18
physical fights	0.10	0.64#	0.26
attempt suicide	0.13	0.60#	-0.20
cigarettes	0.74#	0.15	0.02
alcohol	0.74#	0.10	0.07
marijuana	0.66#	0.24	0.11
cocaine	0.32	0.41	-0.32
intercourse	0.41	0.13	0.44
% of variance	27.3%	11.4%	10.2%

loading > 0.50