
Violence at Schools

– German Report –

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Outline

- Origins of the current line of research
- Definitions of violence at schools
- Theoretical approaches
- Methodological properties
- Key Findings
 - Prevalence and Development over Time
 - Individual Characteristics
 - Other Correlates
 - Context variables
- Shortcomings
 - Theory
 - Methods

Origins of Current Line of Research

- Scientific memorandum endorsed by the Federal Government in the early 1990s suggested need for further research
- At the same time, some heavily violent incidences at German schools yielded media coverage
- Discussion caught the regional educational ministries' attention
- Many studies on offenders: local, regional, state-wide
- Some references to earlier studies in the 1970s and 1980s, but new focus

Definitions of Violence at Schools

- Intentionally initiated by students
 - Violence by teachers excluded

- On school premises
 - Way to and from school (e.g., school bus) mostly excluded

- Low intensity physical violence against fellow students
 - Mostly below the threshold of criminal law
 - Some serious behaviors
 - Amok killings and school shootings not included

- Other types of violence also assessed
 - Vandalism
 - Verbal aggression
 - Bullying, mobbing, coercion

Theoretical Approaches

- Criminology
 - A variant of juvenile delinquency

- Sociology
 - Social disintegration and anomic tendencies in society
 - Disadvantaged socio-economic settings
 - Parental violence
 - Hegemonic masculinity

- Educational research
 - Poor school climate
 - Physical neglect of school buildings and infrastructure

Methodological Properties

- Self reports of students
 - Social desirability
 - Over-reporting due to personal characteristics or group dynamic processes
- Teacher reports and other school personnel
 - Biased awareness
 - Not all events come to the teachers' attention
 - Subjective threshold for noticeable events
- Police reports
 - Willingness of victims to report to the police is limited
- Insurance data
 - Unreliable data

Methodological Properties

■ Population

- Secondary school students (age 10 through 19)
- Public schools of all three tracks
- Vocational schools to some degree
- Usually not included
 - Elementary schools
 - Private school
 - Schools for children with disabilities and special needs

Methodological Properties

■ Survey design

- Random samples of all students of a given school, county, region or country
- Paper-and-pencil questionnaires
- Administration by teacher or research assistants
- Class-room setting

- Mostly cross sectional design
- Only a few longitudinal studies

- Typically, studies adopt an etiologic approach
- Some studies on contextual factors

Methodological Properties

■ Sampling

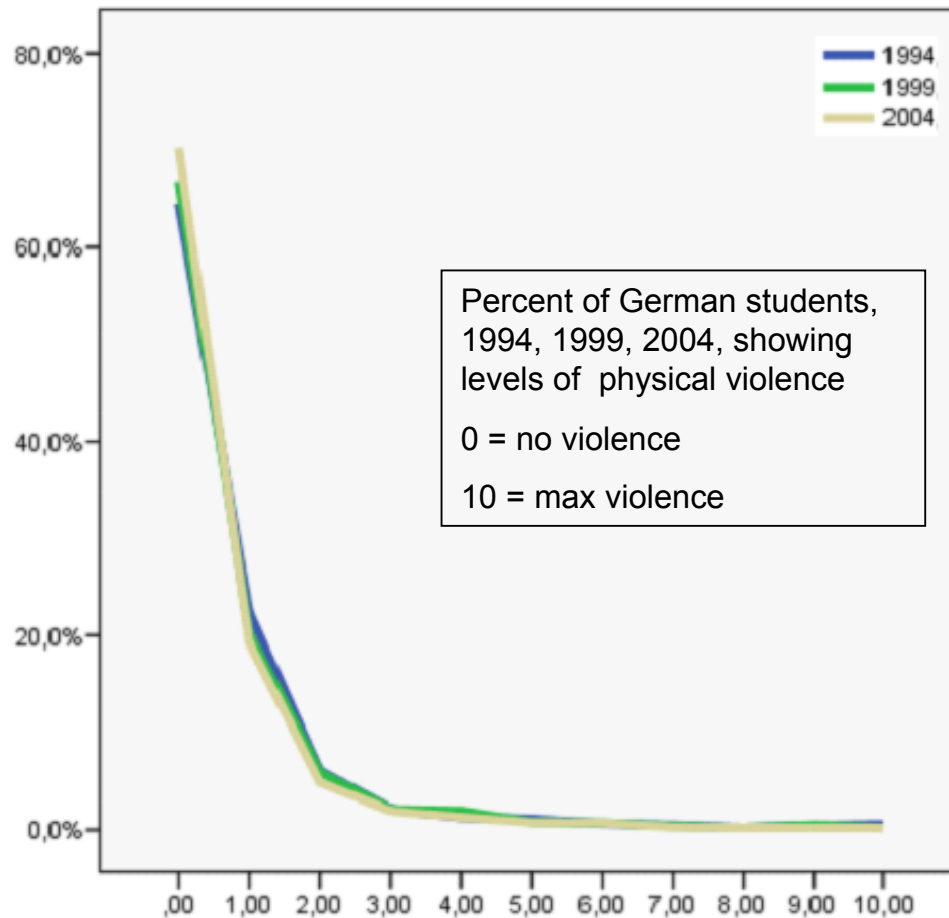
- Cluster samples of classes within schools
 - Considerable design effects (*DEFF*)
- Stratification by form/grade and type of school
 - Partial compensation for cluster effect
- Example: “vandalism” 2004 (Fuchs et al. 2008)
 - Number of students (N_1): 4512
 - Number of classes/schools (N_2): 194
 - Design effect due to clustering: 3.91
 - Design effect due to stratification: 0.85
 - Total design effect (*DEFF*): 3.31
 - Effective sample size (N_{eff}): 1362
- Sample design needs to be taken into account
 - Estimation/standard error and significance testing

Methodological Properties

■ Response rates

- Traditionally high (75+ percent)
 - Support from local and regional authorities
 - Parental consent acquired passively
 - Absentees not a serious problem in Germany
- Declining response rates
 - Restrictions from school authorities
 - Written consent from parents required

Key Findings – Prevalence and Development over Time



Year	Physical violence (mean)
1994	.71
1999	.67
2004	.56

$p < .05$

0 = no violence

10 = max violence

Hard core group:
2-3 percent

Key Findings – Individual Characteristics

Physical violence against fellow students	
By gender	
Male students	.99
Female students	.27
By age group	
9 through 13	.59
14 through 17	.79
18 and over	.57
By unemployment	
At least one parent unemployed	.89
No unemployment in family	.68
By type of school	
Lower track	.95
Lower intermediate track	.75
Higher intermediate Track	.72
Higher track	.31
Violence in the family (“bashed by parents”)	
Never	.57
Seldom	.76
From time to time	1.29
Often	1.42
Very often	2.22

Note: $p < .001$ for all effects.

- Gender
- Age group
- SES of family
- Type of school
- Violence in the family

Fuchs 2008

Key Findings – Other Correlates

- Individual characteristics
 - Gang membership
 - Media consumption
 - Immigrant status

- Contextual variables
 - School climate
 - Composition of class/school
 - Segregation of living quarters
 - Properties of municipality/neighborhood

Key Findings – Context Variables – Social Disintegration

Table 4: Multilevel regression models for physical violence against schoolmates

	Model 1	Model 2	Model 3	Model 4
Individual level variables				
Sex (female)		-.64 ***	-.61 ***	-.61 ***
Age (9 through 13) [#]		-.00	.01	.01
Age (18 and older) [#]		-.27 ***	-.20 **	-.20 **
Poor (family income) ^{##}		.44 ***	.46 ***	.46 ***
Rich (family income) ^{##}		.12 *	.11 *	.11 *
Disintegration		.17 ***	.15 ***	.14 ***
Anomie		.04 *	.04 +	.03 +
Insecurity		.15 ***	.13 ***	.13 ***
Class level variables				
Proportion of female students in class			-.04	-.03
Average index value per class of disintegrated pupils			.07 *	.14 ***
Average index value per class of anomie			.01	.03
Average index value per class of insecurity			.09 **	.13 ***
School level variables				
School type 2 (lower intermediate track) ###			-.31 **	-.31 **
School type 3 (higher intermediate track) ###			-.12	-.12
School type 4 (higher track) ###			-.24 **	-.23 **
Log likelihood	-6,381.42	-6,164.85	-6,152.20	-6,151.96
Variance on level 2	.18	.09	.06	.06
Residual variance, level 1	1.25	1.14	1.14	1.14

Note: N₁ = 4,081; N₂ = 191; 67,8 % of level-2 variance explained by model 4; + p < .1; * p < .05; ** p < .01; *** p < .001. Random intercept regression models estimated using the routine xtmixed as embedded in STATA 10 Intercooled. # Reference category for age: 14 through 17; ## reference category for income: middle; ### reference category for school type: lower track school.

Model 4 includes group centered individual level variables.

■ Model 4:

- Data 2004
- Individual Characteristics
 - Sex
 - Age
 - Income
 - Disintegration
 - Anomie
 - insecurity
- Properties of class
 - Proportion of female students
 - Mean disintegration
 - Mean anomie
 - Mean insecurity

Key Findings – Context Variables – Municipality

	Model 1	Model 2	Model 3	Model 4
Individual level variables				
Sex (female)		-.46 ***	-.41 ***	-.41 ***
Age (9 thru 13) [#]		-.10 ***	-.12 ***	-.11 ***
Age (18 and older) [#]		-.13 ***	-.12 ***	-.13 ***
Parents unemployed		.13 **	.12 **	.12 **
Self-rated labor market expectations (1 = "very good"; 4 = "very poor")		.06 ***	.05 ***	.05 ***
"bashed by parents" (1 = "never" to 5 "very often")		.03 **	.02 **	.02 **
"slapping for poor school grades" (1 = "never" to 5 "very often")		.05 ***	.05 ***	.05 ***
Class level variables				
Proportion of female students			-.07 ***	-.07 ***
Proportion of student who were bashed by parents			.02	.03
Proportion of students who were slapped by parents for poor school grades			.05 *	.05 *
School level variables				
School type 2 (lower intermediate track) ^{###}			-.13 ***	-.14 **
School type 3 (higher intermediate track) ^{###}			-.19 ***	-.18 ***
School type 4 (higher track) ^{###}			-.30 ***	-.29 ***
Municipality level variables				
Size of town (number of inhabitants)				.06 *
Unemployment rate among people up to age 20				-.03 *
Education aid rate provided by the Youth Welfare Office (children remain inside the family)				-.05 +
Education aid rate provided by the Youth Welfare Office (children are taken out of the family)				-.02 *
Crime rate				.03 *
Model specifications				
Log likelihood	-17,035.29	-16,190.13	-16,132.60	-16,138.66
Variance on level 2	.117	.077	.051	.048
Residual variance on level 1	.886	.847	.847	.847

Note: N₁ = 12,337; N₂ = 537; ICC = .12; +p < .10; * p < .05; ** p < .01; *** p < .001.
Maddala-R² for model 4 = .14; 59% of level-2 variance explained by model 4.

■ Model 4:

- Data 1994-2004
- Individual Characteristics
- Properties of class/school
 - Proportion of female students
 - Parental violence
- Properties of municipality
 - Size of town
 - Activities by local Youth Welfare Office
 - Crime rate

Fuchs 2008

Shortcomings – Theory

- Lack of theoretical model
 - Several correlates of violence have been assessed, however, so far no integrated view
 - Rational choice models and disintegration theory have been applied, however, an integrated model has not been achieved
 - Violence is not only related to personal characteristics of the perpetrators
 - Context variables are important: Class, school, neighborhood
 - Violence evolves in a micro-social setting

Shortcomings – Theory

- No uniform concept of violence at schools
 - So far, most studies make use of their own concepts and measurement instruments for violence at schools
- Causal relation not proven (for some variables)
 - E.g., media consumption, gang membership
- Unclear relation of violence, school and society
 - Violence at schools mirrors violence in society?
 - Violence at schools fans out to society?

Shortcomings – Methods

- Elementary schools not included
- Cluster sample design mostly neglected in analysis
 - Correct computation of standard errors and confidence intervals
 - Assessment of contextual properties using multilevel analysis
- Cannot differentiate school level and class level
 - Need for more sophisticated sample designs
- No national study available
 - State wide or regional studies only
- Mostly cross-sectional studies
 - Longitudinal study needed (panel or trend)
- Prevention and intervention studies sometimes not evaluated

End

Thank you

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