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AUTHOR Trautwein, Ulrich  
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ABSTRACT

Problem behavior is a widespread phenomenon in schools. The present paper examines the consequences of problem behavior (disruptive behavior, physical aggression) in grade 7 on psychosocial adjustment (self-esteem and social self-concepts) in grade 10, controlling for psychosocial adjustment. Results suggest that problem behavior in grade 7 had positive effects on psychosocial adjustment. These effects were found particularly in students with low initial self-concepts. Thus, problem behaviors seem to be one behavioral option that students with low self-concepts use to deal with their self-defeating attitudes. (Contains 22 references.) (GCP)

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by

Ulrich Trautwein

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# Psychosocial consequences of adolescents' problem behavior in school

Ulrich Trautwein  
Max Planck Institute for Human Development

## Purpose

Problem behavior is a widespread phenomenon in schools. The present paper examines the consequences of problem behavior (disruptive behavior, physical aggression) in grade 7 on psychosocial adjustment (self-esteem and social self-concepts) in grade 10, controlling for prior psychosocial adjustment.

## Theoretical framework

Problem behavior in school has recently received much attention from educators, parents, students, and researchers (e.g., A. Kaplan, Gheen, & Midgley, 2002; Ma, 2002; Olweus, 1995). Many studies have documented the detrimental impact of being the victim of bullying (e.g., Egan & Perry, 1998; Marsh, Parada, Yeung & Healey, 2001). The psychosocial consequences for perpetrators are less clearly established, however. The present study examines the effects of problem behavior on change in self-concept.

Self-concept is widely regarded as an especially important indicator of psychological well-being (e.g., Kagan, Moore & Bredekamp, 1995). The self-concept is a person's evaluation of his or her own competencies and qualities. A person's general self-view is called "self-esteem" or "self-worth" (Harter, 1999; Rosenberg, 1965). Because self-evaluations pertain to a variety of different aspects of a person, self-concept should be conceptualized multidimensionally (Marsh & Hattie, 1996; Shavelson, Hubner, & Stanton, 1976). Salient student self-evaluations (see Harter, 1999; Marsh, 1993) include their competencies in academic subjects (e.g., math self-concept), their standing in the peer group (e.g., self-concept of acceptance and self-concept of assertion), and their evaluation of their bodily characteristics (appearance self-concept).

Several studies have addressed the influence of problem behavior on self-concept development. H. B. Kaplan (1975, 1978) argued that the emphasis placed on academic achievement in the school environment has detrimental effects on the self-concepts of some adolescents. In his self-enhancement hypothesis, Kaplan (1975, 1978) described deviant behavior as a strategy used by such adolescents – to some extent successfully – to ease their self-rejecting feelings. Research into the postulated effects of students' engagement in problem behavior has produced contradicting results. Using path analyses, McCarthy and Hoge (1984) found small negative effects of problem behavior on self-concept development. Mason (2001) examined the relation between problem behavior and self-esteem with growth-

curve models; the results can be interpreted as supporting the theory that problem behavior has a positive impact on self-esteem development. Similarly, Marsh et al. (2001) found problem behavior to positively influence later self-esteem.

The present study is aimed at replicating and extending previous longitudinal research. First, different forms of problem behaviors (disruptive behavior vs. physical aggression) are analyzed separately. Second, the effects of problem behavior are examined not only as regards change in self-esteem, but also as regards change in social self-concepts. Third, several other variables (e.g., achievement, peer status) that may be relevant to self-concept development are included in the data analyses and therefore controlled. Fourth, hierarchical linear modeling (Bryk & Raudenbush, 1992) is used to process the hierarchically clustered data.

### Method

Participants. Data were supplied by 4305 students in 203 classes participating in the large-scale longitudinal project on Learning Processes, Educational Careers, and Psychosocial Development (BIJU). The BIJU study is conducted at the Max Planck Institute for Human Development in Berlin, Germany. Schools of all school types were sampled in four federal states. Two classes were randomly chosen from each participating school. All students in these classes who agreed to participate were sampled. Data from only two waves of data collection (T1: end of grade 7; T2: end of grade 10) are considered here. On both occasions, students worked on several achievement tests and responded to a variety of questionnaires. More detailed descriptions of the BIJU study can be found elsewhere (e.g., Marsh, Köller & Baumert, 2001; Schnabel, Alfeld, Eccles, Köller, & Baumert, 2002).

Instruments. Students responded to two items assessing the frequency of their engagement in disruptive behavior (“annoy teachers on purpose”; “give rude answers”) and physical aggression (“beat up others who annoyed me”; “damage school property”). A German version of the Rosenberg (1965) self-esteem scale was used to assess self-esteem at both T1 and T2. Moreover, social self-concept of acceptance in the peer group (example item: “I am quite popular with my class mates”) and social self-concept of assertion (example item: “I’m not as good as others in getting my way”) were collected at both measurement points. Moreover, several independent variables from T1 were included in the study: Students reported their math and German self-concepts (example item: “I’m just not good at math”) and indicated the quality of their relationship with their parents (example item: “My parents are not interested in what I think and do”). All scales proved to be sufficiently reliable. In addition, the peer status (acceptance, dominance, and rejection) of each student was established using peer nomination techniques. Achievement in a standardized math achievement test served as an indicator of students’ scholastic achievement. The socio-economic background was classified according to the schema provided by Treiman (1977). On the class level, type of school (academic track vs. vocational track), regional background, and the mean level of problem behavior (aggregated individual data) were included.

Data analysis. Data analyses in educational research often have to deal with complex data structures. In the present sample, students were nested within classes, which were nested within school and types of schools. In order to deal with these hierarchically structured data, multilevel regression analyses were conducted using the HLM 5 program (Raudenbush, Bryk, Cheong, & Congdon, 2000).

Missing values are a pervasive methodological problem in psychological research (Allison, 2001), especially in longitudinal studies. Classical strategies such as listwise deletion can result in biased estimates. In the present study, multiple imputation using NORM 2.03 (Schafer, 1999) was used to estimate missing values, resulting in five data sets. These five data sets were analyzed simultaneously using HLM 5. Because variables were  $z$ -standardized, the beta-weights produced by the HLM analyses can be approximately interpreted as standardized regression coefficients.

### Results

Students' self-esteem and social self-concept of acceptance and assertion (T2) were predicted using the independent variables (T1) detailed above. In all analyses, T1 self-esteem and social self-concept were controlled for. Analyses were performed separately for the two types of problem behavior. Of the control variables, math self-concept and German self-concept contributed to positive change in self-concept. Moreover, peer status variables had differential effects, with dominance positively affecting self-concept of assertion and rejection leading to lower self-concept of acceptance. Social self-concepts and self-esteem evidenced a reciprocal relationship. On the class level, only the type of school was significantly related to changes in social self-concepts, with students in the academic track displaying more positive trajectories.

For the present study, the effects of problem behaviors are most interesting. Individual engagement in disruptive behavior had a positive effect on both self-concept of acceptance ( $\beta = .09, p < .05$ ) and self-concept of assertion ( $\beta = .13, p < .01$ ). Physical aggression had a main effect on self-concept of assertion ( $\beta = .07, p < .01$ ). In addition, the interaction term Self-concept of Assertion  $\times$  Physical Aggression ( $\beta = -.07, p < .05$ ) significantly predicted self-concept of assertion at T2; this indicates that especially students with low initial self-concept profited from engagement in acts of physical aggression. Similarly, self-concept of acceptance at T2 was predicted by a significant Self-concept of Acceptance  $\times$  Physical Aggression interaction ( $\beta = -.06, p < .05$ ). When predicting self-esteem, the regression coefficients of problem behaviors did not reach significance, although the pattern of results was similar to those reported for self-concepts of acceptance and assertion.

## Discussion

The results lend support to Kaplan's (1975, 1978) self-enhancement hypothesis, but limits its predictive validity to domain-specific social self-concepts. Problem behavior (disruptive behavior, physical aggression) in grade 7 had positive effects on psychosocial adjustment (social self-concepts) in grade 10 when controlling for prior psychosocial adjustment. These effects were found particularly in students with low initial self-concepts. Thus, problem behaviors seem to be one behavioral option that students with low self-concepts use to deal with their self-defeating attitudes.

The present study indicates the importance of distinguishing between different forms of problem behavior. Disruptive behavior evidenced a main effect, whereas physical aggression mainly had positive effects for students with initially low self-concepts. Future research should explore the antecedents of these different forms of problem behavior in more detail and analyze possible mediating mechanisms.

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Contact:

Ulrich Trautwein  
 Max Planck Institute for Human Development  
 Lentzeallee 94  
 14195 Berlin  
 Germany  
 E-mail: Trautwein@mpib-berlin.mpg.de  
 Phone: ++49-30-82406451



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Organization/Address: <i>Max Planck Institute for Human Development Leuteallee 94, 14195 Berlin, GERMANY</i>	Telephone: <i>++ 49 - 30 - 82406451</i>	FAX: <i>++ 49 - 30 - 82406490</i>
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