1 Introduction
In a socio-historical perspective sport has been civilized in the course of the centuries (Elias & Dunning 1982). In this process of civilization physical activity and sport have been tied to educational goals. In the public schools in Victorian England modern sport was linked to the philosophy of muscular Christianity. The essence of muscular Christianity was the belief that physical activity made a significant contribution to the development of morality and to improve the character of the young generation. Especially it was meant to institutionalize the rough and unorganised recreational activities of the students. By doing so physical activities were used by the school authorities to control the boys (Miracle & Rees 1994).
Still today the link between sport and the education pay-off is made. Politicians, sports organizations and physical educators in Germany claim that involvement in sport and physical activities generally help young people to cope with daily hazzles and tasks and to improve their social skills (cf. fig. 1).

Figure 1: Public relations campaign “Sports against violence and drugs”

One of these skills which is learned through participation in sports is the ability to abstain from violence in social interaction. Since this argumentation has hardly been questioned empirically the research aims at empirical evidence which can tell us something about the relationship between involvement in sport and the vulnerability to violence; this means to investigate the differences between “athletes” and those young people who abstain from sport.

2 Theoretical Framework
According to developmental psychologists (cf. Havighurst 1981, Harter 1996, Oerter & Dreher 1995) adolescents have to cope with specific tasks. The most prominent developmental tasks in adolescence are:
- detachment from parents,
- accepting bodily changes,
- developing one’s own set of value,
- integration into a peer group, and
- developing ideas about partnership.
Successful coping leads to a socially accepted and functional development. Unsuccessful coping can lead to different forms and functions of misbehaviour among which violence and aggression may occur.

Coping is more successful, if the individual can rely on a set of resources (Brinkhoff 1998). Embedded in a stress-theoretical model physical activity can support to open up individual resources (e.g. emotional stability, self-esteem, self-efficacy). If we accept these assumptions we can expect young people who are involved in sports to be more successful in coping with their developmental tasks (cf. fig. 2). According to these reflections involvement in sport and physical activities could be of help to reduce aggressive and violent behaviour.

![Diagram](image.png)

Figure 2: Sport as a moderating variable (adopted from Brinkhoff, 1998)

3 Methods
3.1 Participants
Data are taken from a larger cross-cultural research project comparing Germany and Israel. The sample used here (n = 3400) consists of German adolescents (12-16 years of age).

3.2 Measures
On the background of the research objective it was necessary to operationalize (1) involvement in sport and (2) violent/aggressive behaviour.

(1) Involvement in sport is usually operationalized with the help of monocausal constructs (e.g. membership in sport club; level of achievement). Since the educational impact of an involvement in sport and physical activities may derive from different aspects we used a multidimensional measurement to differentiate involvement in sport (SPHINX = Sport and Physical Activity INdeX) (comprising such aspects as time invested in sport, importance of sport, physical abilities). Involvement in sport then has been differentiated in groups of highly, middle and low physically active people.

(2) Aggressive and violent behaviour in everyday life of adolescents appears in different forms and functions. Therefore multidimensional instruments to assess e.g. attitude towards violence, delinquency, physical violence and psychological violence have been used in the research.

**Attitude towards violence**
Please give us your opinion about solving problems by using violence. This statement is …

(true, mostly true, mostly false, false)

…Our life is regulated by nothing but violence
Violence undoubtedly belongs to human nature
Violence is something absolutely normal, since it happens everywhere
An eye for an eye, a tooth for a tooth, that’s how life goes

Question: During the last six months, how often did you…

**Delinquency**
- bring weapons (guns, knives, irritant gas) along to school?
- stole things or money
- broke in somewhere or broke something open (e.g. building, car, automate etc.) in order to steal something?

**Psychological violence**
- annoy, pelt or bombard someone during lessons?
- tease others or make a fool of them?
- swear at others?

**Physical violence**
- how often have you been involved in violent fights between youngsters?
- had a fight with someone?
- fight with others?

Table 1: Sample items used to assess attitude towards violence and the dimensions of delinquency, psychological violence and physical violence (cf. Tillmann et al., 2000)

Little et al. (2002) use a differentiated concept based on the distinction between overt and relational aggression as forms. With regard to the functions of violent and aggressive behaviour Little et al. (2002) differentiate dispositional\(^1\), reactive and instrumental aggression (cf. fig. 3).

Figure 3: Theoretical model of form and functions of aggression (cf. Little et al. 2002)

Overt aggression is defined as verbal and physical aggression with the intention to do harm to other persons. Relational aggression refers to behaviours such as spreading rumours, gossiping, and bullying. As far as the functions of aggression are concerned “dispositional” tries to look for psychological traits, “reactive” describes aggression as a function and reaction to an offense or attack, and “instrumental” describes aggression as a means to a reach a specific goal (cf. table 2).

**Dispositional Overt Aggression**
- I’m the kind of person who often fights with others
- I’m the kind of person who says mean things to others

\(^1\) Dispositional aggression as a function of aggression is not considered to be a part of the theoretical model. Nevertheless, as part of the empirical reality it is influential on young people’s behaviour and thus it is part of the empirical measurement on basis of the construction of items.
Reactive Overt Aggression
When I’m hurt by someone, I often fight back
When I’m threatened by someone, I often threaten back

Instrumental Overt Aggression
I often start fights to get what I want
I often threaten others to get what I want

Dispositional Relational Aggression
I’m the kind of person who tells friends to stop liking someone
I’m the kind of person who tells others I won’t be their friend anymore

Reactive Relational Aggression
If others upset or hurt me, I often tell my friends to stop liking them
If others have threatened me, I often say mean things about them

Instrumental Relational Aggression
I often tell my friends to stop liking someone to get what I want
I often say mean things about others to my friends to get what I want

Table 2: Sample items used to assess the dimensions of overt and relational aggression (cf. Little et al. 2002)

Whereas traditional conceptualizations of violence and aggression seem to overemphasize “male forms” of aggressive behaviour (fighting, threatening, stealing...) this concept has the advantage to bridge the gender specific gap and to take into consideration male as well as female forms of violent behaviour (cf. Little et al. 2002).

4 Results
With the help of the empirical findings the research tries to look at the question whether there are differences between young people who are involved in sports and those who are not involved in sports. The results presented here refer to the different areas mentioned above (attitude towards violence, psychological violence, physical violence, forms and functions of aggression).

![Attitude towards violence](image)

Figure 4: The relationship between involvement in sports and attitude towards violence
With regard to the different aspects like attitude towards violence, psychological violence, and physical violence (cf. fig. 4 – 6) the results show clear and strong similarities: Violence is a male domain! Compared to girls the acceptance of violence as part of human nature, the use of psychological as well as physical violence is significantly higher in male adolescents. As far as the relationship between involvement in sport and the different facets of violence is concerned there are no significant differences. A minor tendency, however, can be seen. Boys who are highly involved in sports show a higher level of violent behaviour. Girls’ level of violent behaviour not only is lower, but also seems to be decrease with their involvement in sport.

If we use the theoretical model of the forms and functions to assess the relationship between involvement in sport and violent/aggressive behaviour the results are alike and show the following:

- overall the data reveal that there are only minor differences between adolescents who are highly involved in sport and those adolescents who are not involved in sports.
- girls involvement in sport seems to positively moderate aggressive behaviour on several aspects (overt reactive; relational instrumental “I often say mean things about others to get what I want”; overt instrumental “I often start fights to get what I want”)

![Diagram](image)

Figure 7: Analysis of variances (ANOVA). Involvement in sport and form and functions of aggression. * significant on the .05 level; ** significant on the .01 level

Interpretations of these small differences have to be very careful since none of the differences has a satisfying level of explained variance (not higher than 2%). Thus we can not assume that involvement in sport is a strong practically relevant predictor as far as the form and functions of aggressive/violent behaviour is concerned.

5 Discussion
Due to the cross-sectional nature of the data the interpretation does not allow causal explanations. However, data indicate some interesting relationships between involvement in sport and violent/aggressive behaviour.

(1) There seems to be no overall relationship between involvement in sport and the reduction of aggressive behaviour like politicians, sports organisations and physical educators want to see it.

(2) In the perspective of socialisational theorie the settings of girls sports seem a little more adequate to moderate the reduction of relational instrumental and overt instrumental aggressions

(3) Since all positive relationships explain only little variance one should be careful with generalizations.
Politicians, sports organisation and physical educators should be careful with their promises as far as the effect of involvement in sport on the reduction of aggressive and violent behaviour is concerned.

6 References