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The contribution of gender, bullying, school connectedness and self-esteem to psychological well-being in adolescence

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Submitted

Abstract

The present study explores the joint contribution of gender, bullying, school connectedness and self-esteem to psychological well-being in adolescents. The sample consisted of 1023 adolescents (47.6% boys, 14.9±.51years) in Slovakia. Two questions on bullying, the School Connectedness Score and the Rosenberg Self-esteem Scale were used as independent variables, and the 12-item version of the General Health Questionnaire was used as a dependent variable in the present study. Boys more frequently took part in bullying others, had higher self-esteem and better psychological well-being ($p < .001$) than girls. Higher frequency of being bullied, lower school connectedness and lower self-esteem were significantly associated with worse psychological well-being in both sexes, while higher frequency of taking part in bullying others was significantly associated with worse psychological well-being only in girls. Gender, bullying, school connectedness and self-esteem were significant independent predictors of psychological well-being, with the highest contribution coming from self-esteem (19%), which explained 28% of the variance in psychological well-being. Self-esteem was found to be the most important factor contributing to the psychological well-being of adolescents. This study's findings support the significance of recognizing self-esteem as an important and potentially modifiable factor of psychological well-being in adolescents and of its integration as a component of effective school-based mental health promotion strategies for adolescents.

Keywords: adolescents, bullying, psychological well-being, school connectedness, self-esteem

Introduction

Adolescence is a period of change in the physical, mental and social worlds which are associated with adolescents' health-related behaviour and health. In this stage of life psychological well-being is one of the most significant elements related to and dynamically influencing mental health (Keyes, 2006). Worse psychological well-being in terms of depression/anxiety and social dysfunction is influenced by a wide range of factors, including gender and quality of social relations. These factors might operate and interact to increase the risk of developing mental health.

The important role gender plays in adolescence has been previously observed, and international studies have presented these differences in perceived health and health-related behaviour, as well as in various aspects of mental health (Currie et al., 2004; Mittendorfer-Rutz, 2006).

Social relations are recognized as one of the major factors influencing health during adolescence (Marta, 1997; Piko, 2000; Rigby, 2000). Surveys conducted in different countries have demonstrated that bullying as an unacceptable form of social relations is a worldwide phenomenon among children and adolescents (Rigby, 1997; Rigby, 2000; Brener et al., 2002; Currie, 2004; Due et al., 2005). Bullying may appear in many forms, including direct or indirect physical and/or psychological aggression, verbal harassment (such as cruel teasing, name calling), negative gestures and peer isolation (Scheidt et al., 2001). Specific forms of bullying vary with gender and age (King et al., 1996; Rigby, 1997; Due et al., 2005). As a study of King et al. (1996) revealed, bullying is connected with mental health. Students who had been bullied at least once during the school year tended to have fewer friends, with whom they could easily communicate, more often felt left alone at school, were more likely to feel unhappy, helpless, depressed and nervous, and more often viewed themselves as outsiders compared with those who had never been bullied¹¹. In addition, being bullied has been linked to lower self-esteem, worse mental health, staying away from school or defining the school as "never" or "hardly ever" a safe place (King et al., 1996; Rigby, 1997; Rigby, 2000). At the same, those who bully others have the tendency to dislike school and are more likely to be engaged in health-risk behaviours, such as smoking or excessive drinking (King et al., 1996; Scheidt et al., 2001).

For a deeper understanding of the influence that social relations have on adolescents, school connectedness is an important indicator. Higher school connectedness has been identified as a protective variable against emotional distress, violence and several forms of risk behaviour (King et al., 1996; Resnick et al., 1997; Bonny et al., 2000). School connectedness has also been positively associated with academic performance and self-perceived health (Bonny et al., 2000).

Understanding adolescents' behaviour could also be based on understanding of the development of self-esteem and knowing its relatedness to gender and socio-economic status (Bolognini et al., 1996). Therefore, the aims of this study were to investigate gender differences in bullying, school connectedness, self-esteem and psychological well-being and to examine their interrelations. At the same time, the joint contribution of gender, bullying, school connectedness and self-esteem to psychological well-being was investigated.

Methods

Sample

The study sample consisted of 1023 students (487 boys - 47.6%) attending 18 schools in Kosice (about 260,000 inhabitants, Eastern Slovakia). Data were collected in April - June 2003. The respondents' ages ranged from 14 to 17 years with the mean age of the whole sample at 14.95 years ($\pm .51$). The response rate of 82.6% was due to the absence of students from school on the day of data collection. The local Ethics committee approved the study.

Measures

Bullying was measured using two questions from the Health Behaviour in School-Aged Children Survey (Currie et al., 2000). In both questions – 'How often have you been bullied in the current school year?' and 'How often have you taken part in bullying others in the current school year?' – five response categories were used: 1='never', 2='once or twice', 3='sometimes', 4='about once a week', 5='several times a week'. For this study the answers were dichotomised as 1='never' and 2='at least once' in the same way as was done in the HBSC study.

School connectedness measured using the School Connectedness Score – SCS (Bonny et al., 2000). Respondents express their feelings towards following statements: 'I feel close to people at this school'; 'I feel like I am part of this school'; 'I am happy to be at this school'; 'The teachers at this school treat students fairly'; and 'I feel safe in my school'. Possible answers are on a four-point Likert-type scale, from 1='strongly agree' to 4='strongly disagree'. The items are reverse-coded and summed, and the SCS scores range from 5 to 20. A higher score reflects higher school connectedness. Cronbach's alpha in the current study sample was .79.

Self-esteem was measured using the 10-item Rosenberg's Self-esteem Scale – RSE (Rosenberg, 1965). The scale was originally developed to measure adolescents' global feelings of self-worth and is a well-validated

general measure of global self-esteem. The items are usually scored using a four-point scale (1='strongly agree', 2='agree', 3='disagree', 4='strongly disagree'). After recoding the positive items, the total self-esteem score ranges from 10 to 40, with a higher score indicating higher self-esteem. Cronbach's alpha in the present sample was .75.

Psychological well-being was measured using the 12-item version of the General Health Questionnaire - GHQ-12 (Goldberg & Williams, 1988). Respondents indicate on a four-point scale how they have been feeling over the last four weeks in relation to each item. Likert-type scoring (0-1-2-3) is applied. Sum scores range from 0 to 36, with lower scores indicating better psychological well-being. Cronbach's alpha in the current study sample was .80.

Data analysis

Chi-square and unpaired t-tests were used to analyse gender differences in bullying, school connectedness, self-esteem and psychological well-being. Pearson's (2-tailed) correlations were calculated to examine correlations between the study variables. Multiple linear regressions were performed to examine the joint contribution of gender, bullying, school connectedness and self-esteem to psychological well-being.

Results

Gender differences

Table 7.1 shows that there were no gender differences in the frequency of being bullied during the current school year, or in school connectedness. Regarding taking part in the bullying of others, significant differences were present, with higher participation by boys. Boys reported also significantly higher self-esteem and better psychological well-being than girls.

Table 7.1 Frequency of having been bullied and taken part in bullying others, school connectedness, self-esteem and psychological well-being – gender differences

	Boys				Girls				Gender diff.
	N	%	M	SD	n	%	M	SD	
Been bullied									ns. ¹
Never	429	88.5			475	88.8			
At least once	56	11.5			60	11.2			
Taken part in bullying									*** ¹
Never	302	62.4			407	76.1			
At least once	182	37.6			128	23.9			
School connectedness	482		16.9	4.0	532		17.2	3.5	ns. ²
Self-esteem	470		29.1	3.9	527		28.1	4.2	*** ²
Psychological well-being	471		9.7	5.2	524		11.9	5.8	*** ²

Note: *** $p \leq .001$, ¹ = chi-square, ² = t-test

Correlations

The correlations between variables of social relations (bullying and school connectedness), self-esteem, and psychological well-being are presented in Table 7.2. Higher frequency of being bullied, lower school connectedness and lower self-esteem were significantly associated with worse psychological well-being in both boys and girls. Significant correlations to psychological well-being were higher for boys in frequency of being bullied and school connectedness, and in self-esteem for girls. Higher frequency of taking part in bullying others was significantly associated with worse psychological well-being only for girls.

Table 7.2 Correlations between being bullied, bullying others, school connectedness, self-esteem and psychological well-being

	Psychological well-being		
	Total sample	Boys	Girls
Being bullied	.11**	.14**	.09*
Bullying others	.06	.06	.12**
School connectedness	-.19**	-.22**	-.19**
Self-esteem	-.50**	-.43**	-.53**

Note: * $p \leq .05$, ** $p \leq .01$

Multiple linear regressions

To explore the joint contribution of gender, bullying (being bullied, taking part in bullying), school connectedness and self-esteem on psychological well-being, hierarchical multiple regressions were carried out with the psychological well-being scores as the dependent variable.

In the total sample (Table 7.3), gender explained 4% ($p < .001$) of the psychological well-being total variance, bullying an additional 2% ($p < .01$), school connectedness 3% ($p < .001$) and self-esteem another 19% ($p < .001$). In sum, after entering all the variables into the equation, the total explained variance in psychological well-being was 28%.

Table 7.3 Multiple regression analysis: gender, bullying, school connectedness and self-esteem on psychological well-being

	Step 1	Step 2	Step 3	Step 4
1 Gender	.20***	.21***	.21***	.21***
R ² change (F_{change})	.04 (39.52***)			
2 Been bullied		.10**	.07*	.02
Taken part in bullying		.08*	.07*	.04
R ² change (F_{change})		.02 (9.36***)		
3 School connectedness			-.20***	-.09***
R ² change (F_{change})			.03 (35.51***)	
4 Self-esteem				-.45***
R ² change (F_{change})				.19 (250.71***)
Total R² (adjusted)	.04	.06	.09	.28

Note: displayed values are betas (β), * $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$

Discussion

The present paper addresses the question of whether gender, bullying, school connectedness and self-esteem might operate individually and cumulatively in affecting the psychological well-being of adolescents. Adolescent boys took part significantly more frequently in the bullying of others, reported significantly higher self-esteem and better psychological well-being than girls. Higher frequency of being bullied, lower school connectedness and lower self-esteem were significantly associated with worse psychological well-being in boys as well as in girls, but higher frequency of taking part in bullying others was significantly associated with worse psychological well-being only in girls. Gender, bullying, school connectedness and self-esteem were significant independent predictors of psychological well-being, with self-esteem providing the greatest contribution to the total variance explained in psychological well-being.

Gender differences in bullying, school connectedness, self-esteem and psychological well-being

Present findings of gender differences in bullying can be compared with the results of the HBSC 2001/2002 study, where evidence showed that

in all countries boys reported bullying others more frequently than girls (Currie et al., 2004).

Regarding school connectedness, the present study did not show significant gender differences, a point that differs from the findings of previous studies. The HBSC study (King et al., 1996) revealed that girls were more likely than boys to express positive attitudes toward their school. Contradictory to this, in a survey of American adolescents (Bonny et al., 2000), boys reported significantly higher school connectedness than girls. As can be seen, the relation between school connectedness and gender is inconsistent across studies (Bonny et al., 2000; Whitlock, 2003).

As for gender differences in self-esteem, the present study results are consistent with most of the other studies in this field, with higher self-esteem for boys compared to girls (Bolognini et al., 1996; Modrcin-Talbott et al., 1998; Huurre & Hillevi, 2000; Geckova, 2002; Birndorf et al., 2005). Also, gender differences in psychological well-being were found across countries, with better psychological well-being in boys (Huurre & Hillevi, 2000; Piko & Fitzpatrick, 2001; Tait et al., 2003; Sweeting & West, 2003; Rigby et al., 2007). The same significant gender differences were found in the present sample.

Effects of gender, bullying, school connectedness and self-esteem on psychological well-being

The results of Rigby et al. (2007) show that in Australian adolescents, more frequent peer victimization was significantly associated with relatively poor mental health, and their joint contribution to the total variance in psychological well-being was 17% in boys and 27% in girls (GHQ-28). The analyses of Australian middle adolescents showed that depression, anxiety and self-esteem were significantly associated with psychological well-being. This model accounted for 68% of the variance (Tait et al., 2003). This higher percentage of variance could also be explained by the fact that the depression/anxiety dimension is included in the GHQ-12 itself (Allison et al., 2005; Sarkova et al., 2006). More frequent peer victimization contributed significantly to relatively poor mental health for both sexes in South Australian students, with a closer relation to psychological well-being of girls (Rigby, 2000). Considering gender, bullying, school connectedness and self-esteem as important factors for mental health during adolescence, it is interesting to study their mutual influence on psychological well-being. In present study sample, all these factors were significantly associated with psychological well-being, with the highest contribution coming from self-esteem: 28% of the total variance was explained in psychological well-being with the model of the present study. While the impact of school connectedness on psychological well-being was greater for boys, the impact of self-esteem was greater for girls. These

findings could be explained by the fact that the psychological well-being of adolescent boys might be more influenced by extrinsic factors such as relations to peers, family or school support, while the psychological well-being of adolescent girls might be more influenced by intrinsic factors such as own body image or emotional well-being. From our analysis it can also be concluded that when adolescents feel lower school connectedness and have lower self-esteem, the likelihood of worse psychological well-being is higher than if only one of those variables is affected.

Strengths and limitations

The strength of our study stems from its focus on the joint contribution of several aspects of adolescents school life. The study has some limitations, however. The first one is its cross-sectional design. As in other studies on bullying, another weak point of our study lies in the interpretation of questions on bullying among adolescents, because a clear definition of bullying is missing from the questionnaire. However, the questionnaires were completed in classrooms, where the situation was better controlled and less open to bias than in the case of mailed questionnaires. In addition, using two questions to measure bullying should be extended with various forms of bullying behaviour.

Implication for school health

The study findings lead us to hypothesise on causal relations between higher frequency of taking part in the bullying of others, lower school connectedness, lower self-esteem and worse psychological well-being among adolescents, but to confirm these pathways a future longitudinal study is required. Identifying the combination of factors leading to worse psychological well-being is an important starting point for developing school-based intervention strategies. The study findings recognise self-esteem as an important and potentially modifiable factor of psychological well-being among adolescents and support the significance of its integration as a component of effective school-based mental health promotion strategies for adolescents in preventing or decreasing bullying.

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