

Gender Differences in the Impact of Experiencing Bullying: Who's Worse Off?

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September, 2011

Extended abstract prepared for consideration as a poster at the Population Association of America Annual Meeting (2012).

During adolescence, interactions with peers are considered to be of increasing importance. Adverse peer relations may negatively affect adolescent well-being and adjustment, with potentially long-term influences on adult well-being (Olweus, 1992). Research indicates that experiencing bullying in school is associated with poorer psychosocial well-being among adolescents (Boulton & Hawker 2000). There is also some suggestion that the form of bullying commonly experienced by adolescents varies by gender (Wang et al 2009). Yet little work has looked at how the unique bullying experiences of adolescent males and females may differentially affect their well-being. The current study statistically tests for gender differences in the experience and impact of bullying on adolescent psychosocial adjustment using a nationally representative sample of US students in grades 6 through 10, the Health Behavior in School-Aged Children survey (HBSC). Findings suggest that experiencing bullying has a stronger negative impact on the psychosocial adjustment of adolescent females.

Increased attention has been given, in both research and the media, to bullying experienced in adolescence. Bullying, peer victimization, is a widespread problem in contemporary American schools. According to a report from the U.S. Department of Education, over 7 million US students ages 12 to 18, or 28% of such students, reported being bullied at school during the 2008/2009 school year (DeVoe & Murphy 2011). The nature of such bullying is varied, ranging from physical assaults to name calling to social exclusion. Research suggests that certain bullying forms may be more common among adolescent girls or boys (Wang, Iannotti & Nansel 2009). Additionally, a wide body of literature points to the negative impact that bullying experiences can have on indicators of adolescent well-being, such as psychosocial adjustment (see Boulton & Hawker 2000 for a review). However, few studies have tested how bullying may differentially impact the well-being of adolescent males and females using a nationally representative sample (Paquette & Underwood, 1999). Consequently we know little about potential gender differences in the impact that the unique bullying experiences of adolescent males and females may have on psychosocial adjustment.

In the current study we examine how being bullied may differ for adolescent males and females, and whether there are gender differences in the impact of these experiences on psychosocial adjustment. Using nationally representative data from the Health Behavior in School Aged Children Survey (HBSC), $n = 14,039$, we consider multiple forms of bullying to get a more robust picture of gender differences in such experiences. An understanding of how bullying impacts adolescent boys and girls, with consideration for how their experiences may vary, is critical considering the high prevalence of bullying among American youth, and its potential long-term impact on well-being (Olweus 1992).

Bullying behavior takes on different and distinct forms: physical, verbal, and relational aggression. Physical aggression involves the infliction of physical force upon the victim, an invasion or attack on his or her physical domain. Verbal victimization concerns the vocal attack or threat of attack on a victim's status or character, such as name calling. Finally, relational bullying refers to behavior employed to threaten or cause damage to peer relationships and/or social acceptance and friendship networks through social manipulation and exclusion (Cullerton-Sen & Crick, 2005). Studies point to gender differences in the experience of different forms of victimization; boys are more likely to fall victim to physical aggression, while girls are more likely to be the victims of relational bullying (e.g. Crick & Grotpeter, 1995; Cullerton-Sen & Crick, 2005; Wang et al 2009). Prior research on the psychosocial impact of bullying has had one or more notable weaknesses that have limited our current understanding in this area, including reliance on generic measures of bullying (e.g. Spriggs et al 2007; Holt & Espelage 2007) or individual indicators of bullying sub-types rather than multi-dimensional measures (e.g. Wang et al 2009), and few considerations of gender differences in the psychosocial impact of bullying experiences (e.g. Nansel et al 2001). Different forms of victimization may make additive contributions to maladjustment, affecting the adjustment of children in different ways (Kochenderfer-Ladd & Ladd 2001). The current study includes multiple measures of bullying (physical, verbal and relational) as a latent construct; such a

measurement captures multiple dimensions of bullying experiences which may affect psychosocial adjustment. Additionally, the current study explicitly tests for gender differences in the impact of bullying on adolescent adjustment, taking into consideration differences in the nature of bullying which may vary by gender.

The current study uses a structural equation modeling technique to examine the association between a latent construct of bullying and a latent construct of psychosocial adjustment and utilizes multigroup modeling to test for gender differences in this association. Data come from the US version of the Health Behavior in School-Aged Children (HBSC) Survey, a multinational, school-based, cross-sectional survey of adolescents in grades 6 through 10, sponsored by the World Health Organization. The U.S. survey utilized in this study was a nationally representative sample of children in grades 6 through 10 during the 2001/2002 school year, the latest available year of data. The analytic sample included all adolescents with at least one living parent (biological or step-parent) that they primarily resided with (N = 14,039).

The latent construct of bullying includes five indicators of adolescents' bullying experiences: how often in the past few months respondents were physically bullied, called names, left out, had rumors spread about them and were teased in a sexual nature. Psychosocial maladjustment is a latent construct, created using three survey items measuring aspects of depression, anxiety and life satisfaction. Additionally, several variables were included in the models as controls: age, race/ethnicity, family structure, the family affluence scale (Boyce, Torsheim, Currie & Zambon 2006), whether the respondent had at least one close friend (to control for the unique experience of social isolation), and a composite scale capturing the frequency of bullying perpetrated by respondents of the five forms of bullying (physical bullying, calling others names, spreading rumors, excluding others or teased others in a sexual nature).

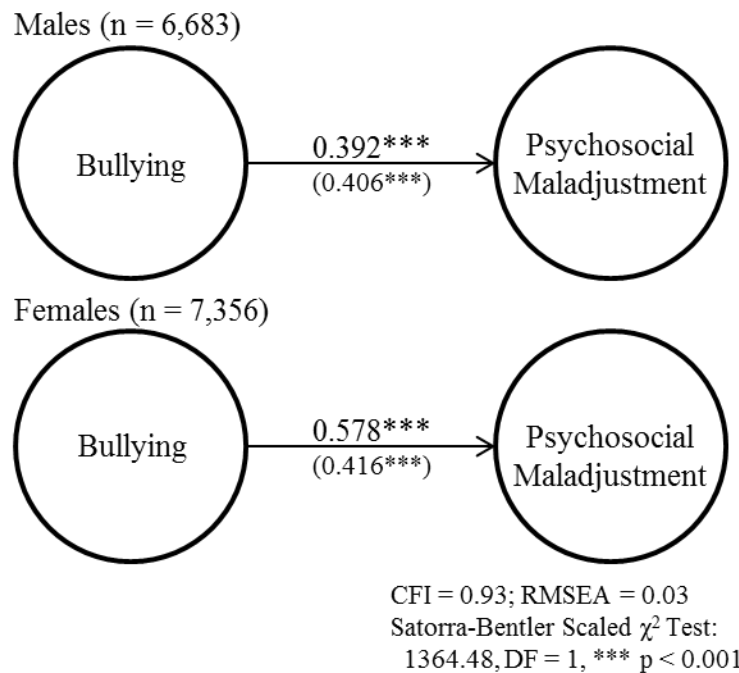
To ensure that the measurement model fit the data well for both males and females, a multi-group model was used to test for measurement invariance between genders. Preliminary findings indicate that the latent construct of bullying is different for adolescent males and females. Variation in the factor loadings suggest that more relational forms of bullying (social exclusion and rumors) are more "important" to female adolescents' bullying experiences, while the latent variable explained more of the variance in physical bullying for boys than for girls (see Table 1). Findings for the structural model find support for the hypothesized relationship between bullying and psychosocial maladjustment. Multigroup analyses (see Figure 1) indicate that this association between bullying and psychosocial maladjustment is statistically stronger for adolescent females compared to males (Satorra-Bentler scaled chi-square test = 659.23, df = 1, $p < .001$). Similar results were obtained when the measurement models are constrained to be the same for both genders. That is, bullying appears to be "worse" for adolescent females than for adolescent males. Results from these analyses suggest that additional research attention should be paid to exploring gender differences in how victimization by peers may negatively impact adolescent well-being.

Table 1. Measurement Models	Males				Females				
	Unstandardized Loadings (b)	Critical Ratio	Standardized Loadings (β)	Critical Ratio	Unstandardized Loadings (b)	Critical Ratio	Standardized Loadings (β)	Critical Ratio	
<i>Psychosocial Maladjustment (PSM)</i>	(SE)		(SE)		(SE)		(SE)		
Depression	1.00 (0.00)	*** 999.00	0.79 (0.02)	*** 37.84	1.00 (0.00)	*** 999.00	0.79 (0.02)	*** 50.26	
Anxiety	0.70 (0.03)	*** 22.45	0.54 (0.02)	*** 35.33	0.67 (0.03)	*** 25.73	0.52 (0.01)	*** 37.63	
Life Satisfaction (reverse coded)	0.91 (0.05)	*** 18.88	0.46 (0.02)	*** 27.50	0.92 (0.04)	*** 24.32	0.49 (0.02)	*** 31.95	
<i>Bullying</i>									
Called Names	1.00 (0.00)	*** 999.00	0.78 (0.01)	*** 73.38	1.00 (0.00)	*** 999.00	0.72 (0.01)	*** 52.26	
Left Out	0.88 (0.02)	*** 45.08	0.77 (0.01)	*** 75.80	0.85 (0.03)	*** 27.39	0.67 (0.02)	*** 44.58	
Physical	0.77 (0.02)	*** 32.87	0.74 (0.01)	*** 55.68	0.41 (0.03)	*** 15.77	0.53 (0.02)	*** 24.94	
Rumors	0.92 (0.02)	*** 48.22	0.79 (0.01)	*** 92.99	1.00 (0.03)	*** 33.42	0.75 (0.01)	*** 64.47	
Sex Jokes	0.83 (0.02)	*** 38.35	0.72 (0.01)	*** 59.15	0.74 (0.03)	*** 25.52	0.55 (0.02)	*** 33.92	
<i>Correlation between PSM & Bullying</i>	0.43 (0.03)	*** 16.39	0.42 (0.02)	*** 19.10	0.38 (0.02)	*** 21.02	0.43 (0.02)	*** 24.10	
<u>Unconstrained Model:</u>		<u>PSM Constrained Model</u>				<u>Bullied Constrained Model:</u>			
$\chi^2(44) = 582.85, p < .001$		$\chi^2(52) = 780.82, p < .001$				$\chi^2(54) = 1160.98, p < .001$			
RMSEA = 0.04; CFI = 0.96		RMSEA = 0.05; CFI = 0.95				RMSEA = 0.05; CFI = 0.92			
		Satorra-Bentler χ^2 test(df)				Satorra-Bentler χ^2 test(df)			
		(8) 64.32, *** p < .001				(10) 168.93, *** p < .001			

References

- Boulton, Michael, Peter Smith and Helen Cowie. 2010. "Short-term Longitudinal Relationships between Children's Peer Victimization/Bullying Experiences and Self-Perceptions: Evidence for Reciprocity" *School Psychology International* 31(3): 296-311
- Boyce, William, Torbjorn Torsheim, Candace Currie and Alessio Zamboni. 2006. "The Family Affluence Scale as a Measure of National Wealth: Validation of an Adolescent Self-Report Measure" *Social Indicators Research* 78:473-487
- Crick, Nicki R. and Jennifer K. Grotpeter. 1995. "Relational Aggression, Gender and Social-Psychological Adjustment" *Child Development*. 66(3):710-722
- Cullerton-Sen, Crystal and Nicki R. Crick. 2005 "Understanding the Effects of Physical and Relational Victimization: The utility of Multiple Perspectives in Predicting Social-Emotional Adjustment" *School Psychology Review*. 34(2):147-160
- DeVoe, Jill and Christina Murphy. August 2011. *Student Reports of Bullying and Cyber-Bullying: Results from the 2009 School Crime Supplement to the National Crime Victimization Survey*. U.S. Department of Education: National Center for Education Statistics (NCES) <http://nces.ed.gov/pubs2011/2011336.pdf>
- Holt, Melissa K. and Dorothy L. Espelage. 2007. "Perceived Social Support among Bullies, Victims, and Bully-Victims" *Journal of Youth and Adolescence*. 36:984-994
- Kochenderfer-Ladd, Becky and Karey Skinner. 2002. "Children's Coping Strategies: Moderators of the Effects of Peer Victimization?" *Developmental Psychology* 38(2): 267-278

Figure 1: Gender Differences in the Impact of Bullying on Psychosocial Maladjustment



Notes: The difference between the coefficients for males and females is statistically significant at the $p < 0.001$ level (see text). Unstandardized coefficients are reported, standardized coefficients are in parentheses. Results are based on unweighted data; *** $p < 0.001$ Controls included in the models (age, race/ethnicity, family structure, family affluence scale, whether the respondent has at least one close friend, and the respondent's frequency of bullying others).

References, cont'd

- Nansel, Tonja R., Mary Overpeck, Ramani S. Pilla, W. June Ruan, Bruce Simons-Morton and Peter Scheidt. 2001. "Bullying Behaviors Among US Youth: Prevalence and Association with Psychosocial Adjustment" *Journal of the American Medical Association*. 285(16):2094-2100
- Olweus, Dan. 1992. "Victimization by Peers: Antecedents and Long-Term Consequences". In Rubins, KH and JB Asendorf, eds. *Social Withdrawal, Inhibition, and Shyness in Childhood*. Hillsdale, NJ: Erlbaum, pp 315-338
- Paquette, Julie A. and Marion K. Underwood. 1999. "Gender Differences in Young Adolescents' Experiences of Peer Victimization: Social and Physical Aggression" *Merrill-Palmer Quarterly*. 45(2):242-266
- Spriggs, Aubrey, Ronald J. Iannotti, Tonja Nansel and Denise Haynie. 2007. "Adolescent Bullying Involvement and Perceived Family, Peer and School Relations: Commonalities and Differences Across Race/Ethnicity" *Journal of Adolescent Health* 41:283-293
- Wang, Jing, Ronald Iannotti and Tonja Nansel. 2009. "School Bullying Among Adolescents in the United States: Physical, Verbal, Relational, and Cyber" *Journal of Adolescent Health* 45:368-37