

Associations Between Traditional and Cyber-Bullying and Multiple Indicators of Mental Wellness in a Canadian Adolescent Sample

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Results

Prevalence of Bullying Victimization

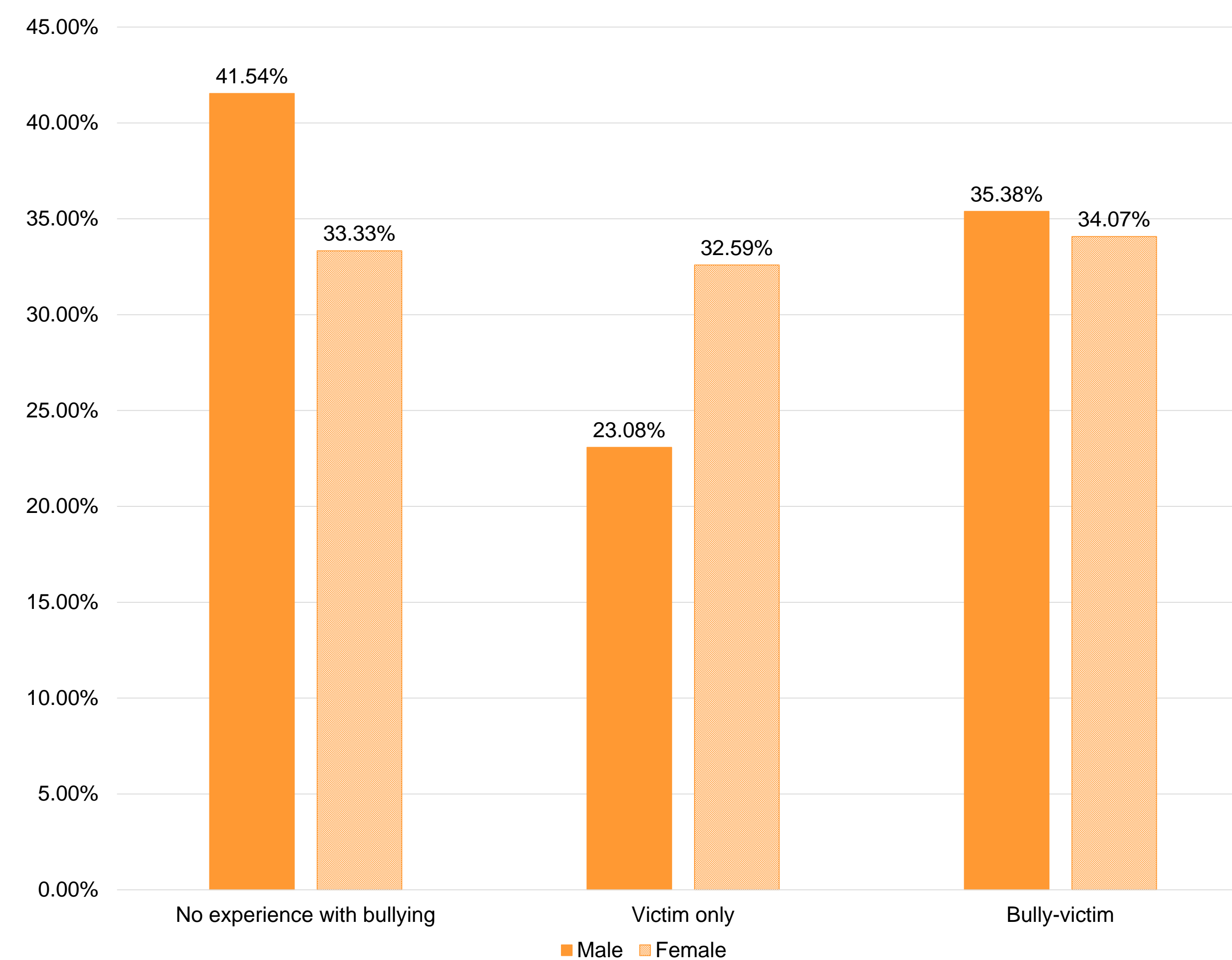


Figure 1. Prevalence of bullying victimization, by type of victimization only (no victimization, victimization only, or both victimization and perpetration) and participant sex at birth. Differences in victimization type by sex were not significant.

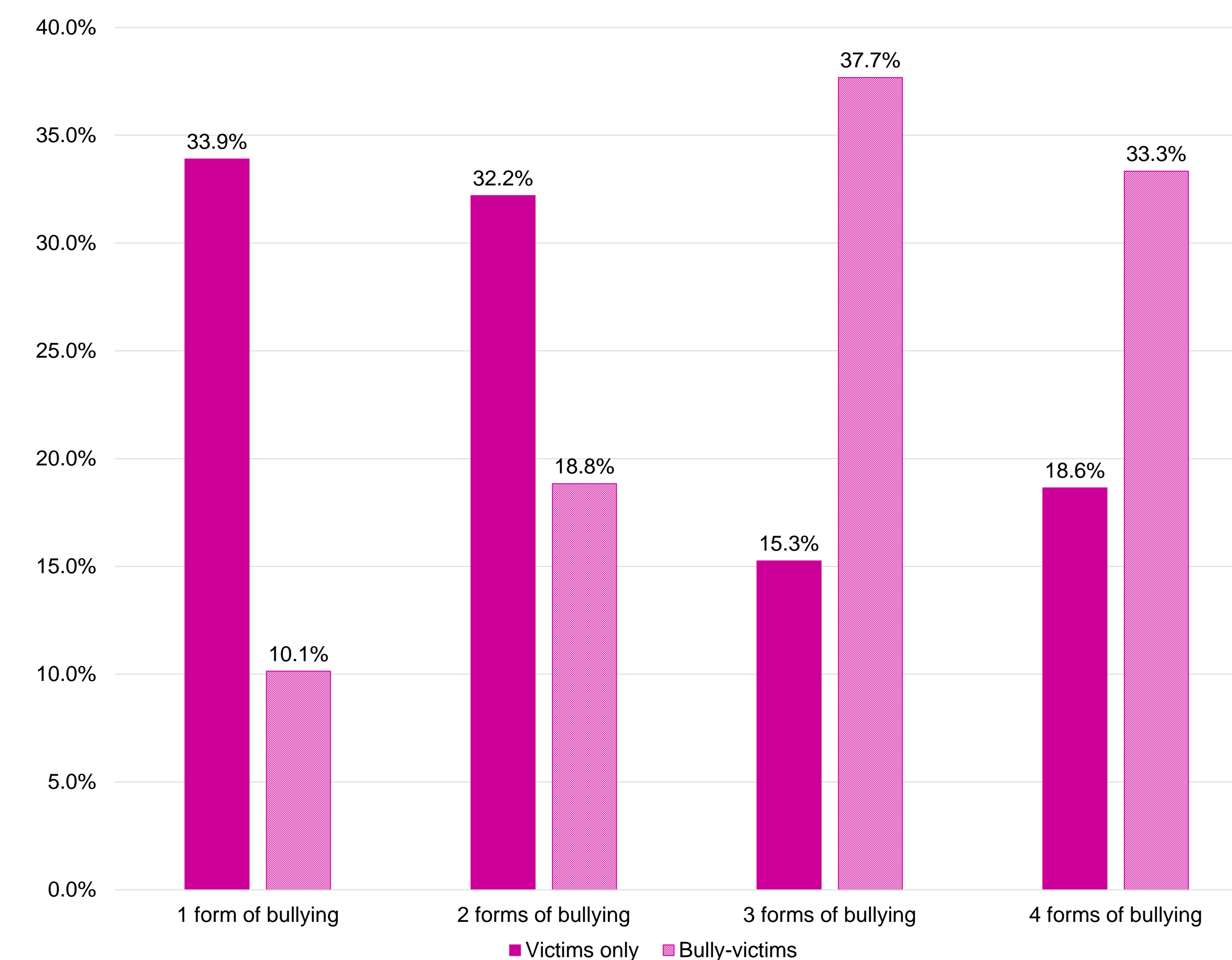


Figure 2. Number of forms of bullying victimization experienced, by victimization status. Bully-victims were significantly more likely to experience 3 or 4 forms of bullying than victims only ($X^2(3, N=128)=19.21, p<.001$).

Bullying Victimization & Mental Wellness

	Victims only vs. No victimization (n=131)		Bully-victims vs. No victimization (n=141)	
	b (95% CI)	B	b (95% CI)	B
Hope	-2.32 (-4.42, -0.21)*	-0.19	-1.97 (-4.03, 0.043)^	-0.17
Youth purpose	-1.35 (-4.24, 1.53)	-0.083	-2.69 (-5.33, -0.038)*	-0.18
Psychological distress	-2.53 (-4.35, -0.72)**	-0.23	-3.80 (-5.54, -2.05)***	-0.35
Coping strategies: active coping, planning & positive re-framing	-0.066 (-1.57, 1.44)	-0.008	-0.40 (-1.77, 0.98)	-0.052
Coping strategies: denial, venting, behavioral disengagement & self-blame	1.46 (-0.52, 3.44)	0.13	1.86 (-0.16, 3.88)^	0.16
Coping strategies: emotional & instrumental support	0.14 (-1.40, 1.69)	0.017	0.71 (-0.77, 2.19)	0.089
Coping strategies: acceptance, self-distraction & mindfulness	0.30 (-1.00, 1.60)	0.042	-0.67 (-1.88, 0.55)	-0.098
Emotional well-being	-1.97 (-3.12, -0.82)**	-0.28	-1.97 (-3.03, -0.91)***	-0.30
Social well-being	-2.60 (-5.01, -0.20)*	-0.18	-2.67 (-4.88, -0.47)*	-0.20
Psychological well-being	-2.80 (-5.38, -0.21)*	-0.19	-2.31 (-4.60, -0.024)*	-0.17

*p < .10; **p < .05; ***p < .01; ****p < .001. Note. Dependent variables are listed in the far left column. Presented data show the association between the dependent variable and bullying status, and are derived from linear models controlling for race, SES, family structure, pubertal development and sex. The comparison group was adolescents reporting no bullying behaviors (perpetrated or experienced) at pre-test. Higher scores on all scales indicate better mental wellness. For coping, higher scores indicate more use of those methods. B=standardized regression coefficient.

Background

- Bullying in adolescence is a global public health problem¹
 - In Canada, approximately 16% of males and 15% of females aged 11-15 report being bullied at school at least twice in the past few months²
 - Cyber-based bullying (i.e., bullying behaviors that use electronic or online modalities) is also common in Canada
 - Approximately 14% of Canadian adolescents aged 10-17 report being cyberbullied at least once in the past month³
- Adolescents may experience bullying victimization only, or may be both victims and bullies (i.e., bully-victims)
- Both traditional- (i.e., face-to-face) and cyber-bullying are associated with adverse mental health outcomes for victims and bully-victims
 - Research in this area has focused primarily on internalizing and externalizing symptoms⁴⁻⁷, but the concept of mental health is much broader than these distress states⁸
 - Given the relationship-based nature of bullying,⁹ it is likely that victimization is related to multiple aspects of mental health

Objective

- Examine the associations between traditional and cyber-bullying and multiple indicators of mental wellness (hope; purpose; psychological distress; coping; and emotional, social and psychological well-being) for victims and bully-victims in a sample of Canadian adolescents

Method

Participants: Adolescents in Grades 9 and 10 (n=212) from Southwestern Ontario (67.0% female; 75.9% White; mean age=15.5)

Procedure: Participants were drawn from the pre-test of a randomized controlled trial of an out-of-class time healthy relationships program. Data were collected in July 2014.

Primary Measures:

- Bullying
 - Any experience of physical, verbal, social and/or electronic bullying in the past month (PREVNet Bullying Evaluation & Strategies Tool)
 - Participants were classified as either a victim (*victims only*) or a victim and a perpetrator (*bully-victims*)
- Mental wellness
 - Hope – The Children’s Hope Scale (Snyder et al., 1997)
 - Purpose – Revised Youth Purpose Survey (Bundick et al., 2008; Steger et al., 2006)
 - Psychological distress – K6 (Kessler et al., 2002)
 - Coping – Brief Coping Orientation for Problem Experiences (COPE; Carver, 1997)
 - Emotional, social and psychological well-being – Mental Health Continuum-Short Form (MHC-SF; Keyes, 2005, 2006)

Analysis: Data were analyzed using linear regression models for each mental wellness dependent variable. Regression models controlled for race, socio-economic status, family structure, pubertal development and sex.

This study was reviewed and approved by the CAMH Research Ethics Board

Discussion

- Both victims only and bully-victims reported greater psychological distress and poorer emotional, social and psychological well-being than non-victims in this sample of 9th and 10th grade students
 - Victims only reported less hope than non-victims
 - Bully-victims reported less purpose in life than non-victims, as well as somewhat greater use of coping strategies involving denial, venting, behavioral disengagement and self-blame and somewhat less hope
 - Other preliminary analyses suggest some differences in outcomes by whether or not electronic victimization was experienced (vs. physical victimization only); will explore this in subsequent work
- When compared directly, there were no significant differences in outcomes between victims only vs. bully-victims
 - In combination with other results, this suggests that in this sample, victims and bully-victims experienced similar mental wellness deficits
- Data are cross-sectional, and so do not support directionality of associations; future study with longitudinal data that looks at holistic mental wellness is encouraged
- Results continue to underscore the critical role bullying plays in adolescent well-being, and the need for ongoing efforts to determine effective ways to prevent these experiences

References

- Craig W, Harel-Fisch Y, Fogel-Grinvald H, Dostaler S, Hetland J, Simons-Morton B et al. A cross-national profile of bullying and victimization among adolescents in 40 countries. *Int J Public Health*. 2009;54:216-224.
- Chester KL, Callaghan M, Cosma A, Donnelly P, Craig W, Walsh S, Molcho M. Cross-national time trends in bullying victimization among children aged 11, 13 and 15 from 2002 to 2010. *Eur J Public Health*. 2015;25:61-64.
- Beran T, Mishna F, McInroy LB, Shariff S. Children’s experiences of cyberbullying: A Canadian national study. *Children Schools*. 2015;37:207-214.
- Arsenault L, Bowes L, Shakoor S. Bullying victimization in youths and mental health problems: ‘Much ado about nothing’? *Psychol Med*. 2010;40:717-729.
- Bonanno RA, Hymel S. Cyber bullying and internalizing difficulties: Above and beyond the impact of traditional forms of bullying. *J Youth Adolescence*. 2013;42:685-697.
- Nansel TR, Craig W, Overpeck MD, Saluja G, Ruan J. Cross-national consistency in the relationship between bullying behaviors and psychosocial adjustment. *Arch Pediatr Adolesc Med*. 2004;158:730-736.
- Turner MG, Exum ML, Brame R, Holt TJ. Bullying victimization and adolescent mental health: General and typological effects across sex. *J Crim Just*. 2013;41:53-59.
- World Health Organization [WHO]. Mental health: A state of well-being. WHO website. http://www.who.int/features/factfiles/mental_health/en/. Updated August 2014. Accessed August 26, 2015.
- Craig W, Pepler DJ. Understanding bullying: From research to practice. *Can Psychol*. 2007;48:86-93. (note: measurement references presented in the Results are available from the first author)

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