

Cyber Risk & Resilience

Investigating the demographic and psychosocial antecedents of cyberbully-victim behavior

Michaela Brady, MSc

Who are bully-victims?

- One in four students (25.7%) were found to be involved in cyberbullying both as bully and victim.²⁹
- However, prevalence is difficult to define and varies widely.³¹
- Bully-victims employ previous perpetrators' tactics in their own interactions, whether in-person or online.
- Binary perception of bullying roles, and lack of awareness leads to oversight of this most vulnerable group, and ineffective intervention programmes.^{20, 40}

Theoretical Underpinnings and Key Terms

- **Moral Disengagement:** The emotional disconnection between one's actions and their effects on others.⁴²
- **Cognitive Appraisal:** Evaluating what happens to oneself based on how an experience affects their wellbeing.²⁴
 - **Problem-focused Coping:** Change the actual terms of the troubled person-environment relationship
 - **Emotion-focused Coping:** Regulating emotional distress.
 - **Confrontive Coping:** Detrimental, impulsive, reactive.
- **Cyclic Process Model:** Victim is harmed online, turns to social media to produce antisocial content, their content reinforces cyberbullying within their networks.¹²
- **Emotion Regulation:** A coping mechanism with negative or positive behaviours¹²
 - **Negative:** Blaming others or oneself, ruminating, catastrophizing
 - **Positive:** Acceptance, putting things in perspective, refocusing on positive thoughts, learning from the situation.

Predictive Factors

- **Gender:** Unclear which is more likely to fall into a cyberbully-victim cycle; often males.^{4, 13, 22, 35}
- **Depression:** More likely to engage in confrontive coping and escape-avoidance, harming interpersonal relationships both off- and online.²⁵
- **SES & Maladaptive Parenting:** Low SES, reduced access to technology, abusive and non-abusive home environments.^{1, 3, 6, 10, 20, 25, 37, 38}

Research Questions

1. What are the factors that predispose an individual to become a cyberbully-victim?
2. Do these factors differ from those of “pure” cyberbullies and pure cybervictims?
3. What are the optimal preventative strategies to address the identified factors?

The background features a series of concentric circles in light gray, some solid and some dashed, creating a ripple effect. A solid blue speech bubble is centered on the page, pointing downwards.

Methodology

Study Design

Survey:

- **Part 1:** Adolescent questionnaire, 16 items, on bullying behaviours and victimization experiences.
- **Part 2:** Strengths and Difficulties Questionnaire (SDQ) for caregivers.¹⁸
 - **Externalising problems:** conduct and hyperactivity problems
 - **Internalising problems:** emotional and peer problems

Participants:

- Adolescents aged 14-15 & their caregivers in England, Scotland and Wales
- Total sample: 763 dyads
- 53.6% male, 46.4% female

Procedure: Part 1

Variable	Criteria
is_bully	Rated the frequency of cyberbullying actions as 4 (“2 or 3 times a week”) or higher to all of first 8 questions
is_bullied	Rated the frequency of cybervictimisation as 4 (“2 or 3 times a week”) or higher to all of latter 8 questions

Procedure: Part 2

- **Multinomial Logistic Regression:** an analysis method to explain the relationship between a response variable with more than two categories (in this case, bully, victim, bully-victim, and neither) and several quantitative variables (gender, SES, and SDQ scores for externalising and internalising problems)
- **Odds Ratios (ORs)** calculated with 95% confidence intervals.
- **Significance** tested at $\alpha = 0.05$

Hypotheses

1. High externalising = pure cyberbully
2. High internalising = pure cybervictim
3. Both high externalising and high internalising = cyberbully-victim

Null Hypothesis: There is no relationship between these predictive factors and one's cyberbullying role

The background features a series of concentric circles in light gray, some solid and some dashed, creating a ripple effect. In the center, there is a blue speech bubble with a white border. The text "Results and Discussion" is written in white inside the bubble.

Results and Discussion

Results: Descriptive Stats

Bully	Victim	Assigned Group	Count	Gender (%)		SDQ Scores		Externalising Problems		Internalising Problems	
				Female	Male	Mean	SD	Mean	SD	Mean	SD
1	0	Bully	17	4 (23.5%)	13 (76.5%)	33.8	9.19	17.6	5.1	16.2	4.48
0	1	Victim	29	15 (51.7%)	14 (48.3%)	35.5	7.52	17.4	4.97	18.1	4.45
1	1	Bully-Victim	82	32 (39%)	50 (61%)	39.3	7.91	19.6	3.87	19.7	4.55
0	0	Neither	635	303 (47.7%)	332 (52.3%)	28.4	6.47	14.5	3.5	13.95	3.78

Results: Effects of SES, Gender, and SDQ Composite Scores

Group	SES			Gender			Externalising Problems			Internalising Problems		
	SE	P-value	Odds Ratio (95% CI)	SE	P-value	Odds Ratio (95% CI)	SE	P-value	Odds Ratio (95% CI)	SE	P-value	Odds Ratio (95% CI)
Bully	0.081	0.08	1.153 (15.4%)	0.6	0.24	0.492 (-50.8%)	0.081	2.8×10^{-2}	1.196 (19.6%)	0.0746	8.6×10^{-1}	1.013 (1.3%)
Victim	0.066	0.44	1.052 (5.2%)	0.419	0.39	1.434 (43.4%)	0.061	1.9×10^{-1}	1.083 (8.3%)	0.0516	1.5×10^{-3}	1.178 (17.8%)
Bully-Victim	0.045	0.01	1.123 (12.3%)	0.294	0.44	1.253 (25.3%)	0.043	1.1×10^{-5}	1.207 (20.7%)	0.0368	4.9×10^{-6}	1.183 (18.3%)

Results: Effects of Externalising Problems


Group	SES				Gender				Externalising Problems			
	SE	P-value	Odds (95% CI)	Ratio	SE	P-value	Odds (95% CI)	Ratio	SE	P-value	Odds (95% CI)	Ratio
Bully	0.08	0.09	1.146 (14.6%)		0.601	0.25	0.502 (-49.8%)		0.059	1.7x10 ⁻³	1.203 (20.3%)	
Victim	0.064	0.4	1.056 (5.6%)		0.405	0.21	1.659 (65.9%)		0.047	1.6x10 ⁻⁵	1.23 (22.6%)	
Bully-Victim	0.043	0.003	1.138 (13.8%)		0.283	0.21	1.423 (42.3%)		0.033	0.00x10 ⁰	1.376 (37.6%)	

Results: Effects of Internalising Problems


Group	SES				Gender				Internalising Problems			
	SE	P-value	Odds (95% CI)	Ratio	SE	P-value	Odds (95% CI)	Ratio	SE	P-value	Odds (95% CI)	Ratio
Bully	0.08	0.13	1.128 (12.8%)		0.587	0.11	0.387 (-61.3%)		0.054	1.9x10 ⁻²	1.13 (13.3%)	
Victim	0.065	0.52	1.043 (4.3%)		0.4	0.53	1.284 (28.4%)		0.040	1.3x10 ⁻⁷	1.24 (23.6%)	
Bully-Victim	0.044	0.03	1.1 (10%)		0.276	0.6	0.865 (-13.5%)		0.028	0.00x10 ⁰	1.32 (32%)	

Discussion


1. High externalising problem scores = higher likelihood of exhibiting cyberbully behaviour



2. High internalising problem scores = higher likelihood of exhibiting cybervictim behaviour



3. High scores for both externalising and internalising problems = greater likelihood of exhibiting cyberbully-victim behaviour



Discussion

Demographic factors:

- SES significantly affected cyberbully-victims, with those from wealthier backgrounds being more likely to fit this role.
- Gender differences only appeared when isolating **internalizing problem** scores, with cyberbully-victims more likely to be male, bullies more likely to be male.

What can be done?

- Schools: Implement anti-cyberbullying education programmes that acknowledge the cycle of cyberbullying and cyber victimisation, and/or train counsellors in how to mediate online conflict among their students, and publicise to the student body that complaints about cyberbullying are taken seriously.
- Government & Law Enforcement: Reconsider implementing a UK Cyberbullying Act, as existing legislation is insufficient. Train law enforcement in online activity **and** developmental psychology.
- Platforms: Offer clearer avenues of help and support to cyberbully-victims, rather than blocking and deactivating users when they eventually bully others.
- Everyone: Approach online aggressors with empathy rather than ridicule, present ways to regulate emotional responses

References

1. Arseneault L, Hussain A. Taking a stand against bullying: Addressing mental health problems from within — Findings from a policy lab. The Policy Institute at King's College London; 2018. Retrieved from: <https://blog.esrc.ac.uk/2018/05/15/taking-a-stand-against-bullying-addressing-mental-health-problems-from-within/>
2. Ashktorab Z, Vitak J. (2016) Designing Cyberbullying Mitigation and Prevention Solutions through Participatory Design With Teenagers, presented at the 2016 CHI Conference, San Jose, CA, USA, May 2016.
3. Barlett CP, Fennel M. Examining the Relation Between Parental Ignorance and Youths' Cyberbullying Perpetration. Psychol Pop Media Cult; 2016. DOI: 10.1037/ppm0000139
4. Bauman S, Toomey R, Walker JL. Associations among bullying, cyberbullying, and suicide in high school students. J Adolesc. 2013; 36(2). DOI: 10.1016/j.adolescence.2012.12.001
5. Best P, Manktelow R, Taylor BJ. Online communication, social networking and adolescent wellbeing: A systematic narrative review. Child Youth Serv Rev 2014; 41. DOI: org/10.1016/j.childyouth.2014.03.001
6. Çakır O, Geszgin DM, Ayas, T. The Analysis of the Relationship between Being a Cyberbully and Cybervictim among Adolescents in Terms of Different Variables. International Journal of Progressive Education. 2016; 12(3), 134-154. Retrieved from: <http://www.inased.org/v12n3/ijpev12n3.pdf>
7. Cross D, Shaw T, Hadwen K, et al. Longitudinal impact of the Cyber Friendly Schools program on adolescents' cyberbullying behavior. Aggress Behav 2015; 42(2). DOI: 10.1002/ab.21609
8. The Cybersmile Foundation. Legal Perspective. Retrieved from <https://www.cybersmile.org/advice-help/category/cyberbullying-and-the-law>
9. The Cybersmile Foundation. Stop Cyberbullying Day Survey 2017. Retrieved from <https://www.cybersmile.org/wp-content/.../Stop-Cyberbullying-Day-Survey-2017.pdf>
10. Davies HC. Learning to Google: Understanding classed and gendered practices when young people use the Internet for research. New Media Soc 2017; 20(8). DOI: 10.1177/1461444817732326
11. Del Rey R, Casas JA, Ortega-Ruiz R. The impacts of the CONRED Program on different cyberbullying roles. Aggress Behav 2015; 44(2). DOI: 10.1002/ab.21608
12. Den Hamer A, Konjin EA. Can emotion regulation serve as a tool in combating cyberbullying? Pers Individ Diff 2016; 102. DOI: 10.1016/j.paid.2016.06.033
13. Demos. Quarter of Young Brits confess to 'bullying or insulting' someone online 2017. Retrieved from: <https://www.demos.co.uk/press-release/quarter-of-young-brits-confess-to-bullying-or-insulting-someone-online/>
14. Duggan M. Online Harassment 2017. Pew Research Center. Retrieved from <http://www.pewinternet.org/2017/07/11/online-harassment-2017/>
15. Edwards L, Brown I. Data Control and Social Networking: Irrevocable Ideas? In: Matwyshyn A ed. *Harboring Data: Information Security, Law and the Corporation*. Stanford: Stanford University Press; 2009, pp. 202-227.
16. Englander E, Donnerstein E, Kowalski R, et al. Defining Cyberbullying. Pediatrics. 2017; 140 (Supplement 2). DOI: 10.1542/peds.2016-1758U
17. Gamez-Gaudix M, Gini G. Individual and class justification of cyberbullying and cyberbullying perpetration: A longitudinal analysis among adolescents. J Appl Psychol 2016; 44. DOI: 10.1016/j.appdev.2016.04.001
18. Goodman A, Goodman R. Population mean scores predict child mental disorder rates: validating SDQ prevalence estimators in Britain. J Child Psych Psychiatry 2011; 52(1). DOI: 10.1111/j.1469-7610.2010.02278
19. Goodman A, Lamping DL, Ploubidis GB. When to use broader internalising and externalising subscales instead of the hypothesised five subscales on the Strengths and Difficulties Questionnaire (SDQ): data from British parents, teachers and children. J Abnorm Child Psychol 2010; 38:1179-1191.
20. Hellfeldt, K., López-Romero, L., & Andershed, H. Cyberbullying and Psychological Well-being in Young Adolescence: The Potential Protective Mediation Effects of Social Support from Family, Friends, and Teachers. International Journal of Environmental Research and Public Health 2019. doi:10.3390/ijerph17010045
21. Holfeld B, Mishna F. Longitudinal Associations in Youth Involvement as Victimized, Bullying, or Witnessing Cyberbullying. Cyberpsychol Behav, Soc Netw 2018; 21(4). DOI: 10.1089/cyber.2017.0369
22. John A, Glendenning AC, Marchant A, et al. Self-Harm, Suicidal Behaviours, and Cyberbullying in Children and Young People: Systematic Review. J Med Internet Res 2018; 20(4). DOI: 10.2196/jmir.9044
23. Kirk DA. Calling out Call-Out Culture. 2018. Retrieved from <https://medium.com/s/story/calling-out-call-out-culture-dresses-mental-health-and-the-destructive-nature-of-online-shaming-1eaac4e164a>
24. Lazarus RS, Folkman S. Transactional theory and research on emotions and coping. Eur J Pers 1987; 1(3). DOI: 10.1002/per.2410010304
25. Lereya T, Copeland WE, Costello J et al. Adult mental health consequences of peer bullying and maltreatment in childhood: Two cohorts in two countries. Lancet Psychiatry 2015; 2(6). DOI: 10.1016/S2215-0366(15)00165-0
26. Lereya T, Samara M, Wolke D. Parenting behavior and the risk of becoming a victim and a bully/victim: A meta-analysis study. Child Abuse and Negl 2013; 37(12). DOI: 10.1016/j.chiabu.2013.03.001
27. Macmillan A. Why Instagram is the Worst Social media for Mental Health. TIME Health 2017. Retrieved from <http://time.com/4793331/instagram-social-media-mental-health/>
28. Miner AS, Milstein A, Hancock JT. Talking to Machines About Personal Mental Health Problems. J Am Med Assoc 2017; 318(13). DOI: 10.1001/jama.2017.14151
29. Mishna F, Khoury-Kassabri M, Gadalla T, Daciuk J. Risk factors for involvement in cyber bullying: Victims, bullies, and bully-victims. Child Youth Serv Rev 2012; 34(1) DOI: 10.1016/j.childyouth.2011.08.032
30. Montes-Vozmediano M, Jiménez AG, Sendra, JJM. Teen Videos on YouTube: Features and digital vulnerabilities. Comunicar 2018; 54(1). DOI: 10.3916/CS4-2018-06
31. Myers CA, Cowie H. Bullying at University: The Social and Legal Contexts of Cyberbullying Among University Students. J Cross Cult Psychol 2017; 48(8). DOI: 10.1177/0022022116684208
32. Ofcom. Children and parents: media use and attitudes report 2021. Retrieved from: <https://www.ofcom.org.uk/research-and-data/media-literacy-research/childrens/children-parents-nov16>
33. Ozer DJ, Benet-Martinez V. Personality and the prediction of consequential outcomes. Annu Rev Psychol 2006; 57. DOI: 10.1146/annurev.psych.57.102904.190127
34. Plomin R, DeFries JC. *Behavioral Genetics*. New York, US: Worth Publishers; 2013.
35. Palladino BE, Nocentini A, Menesini E. Evidence-based intervention against bullying and cyberbullying: Evaluation of the NoTrap! program in two independent trials. Aggr Behav 2016; 42(2). DOI: 10.1002/ab.21636
36. Przybylski A, Bowes L. Cyberbullying and adolescent well-being: a population-based cross-sectional study. Lancet Child Adolesc Health 2017; 1(1). DOI: 10.1016/S2352-4642(17)30011-1
37. Radey M, Randolph KA. Parenting Sources: How Do Parents Differ in Their Efforts to Learn about Parenting? Fam Relat 2009; 58(5):536–548. www.jstor.org/stable/40405712.
38. Robinson L. A taste for the necessary: a Bourdieuan approach to digital inequality. Inf, Commun Soc 2009; 12(4):488-507.
39. Rosenblatt K. *Cyberbullying Tragedy: New Jersey Family to Sue After 12-Year-Old Daughter's Suicide*. 2017. Retrieved from <https://www.nbcnews.com/news/us-news/new-jersey-family-sue-school-district-after-12-year-old-n788506>
40. Samara M, Burbidge V, El Asam A, Foody M, et al. Bullying and Cyberbullying: Their Legal Status and Use in Psychological Assessment. Int J Environ Res Public Health 2007; 14(12). DOI: 10.3390/ijerph14121449
41. Vakhitova Z, Webster J, Alston-Knox CL et al. Offender-Victim Relationship and Offender Motivation in the Context of Indirect Cyber Abuse: A Mixed-Method Exploratory Analysis. Int Rev Vict 2018. DOI: 10.1177/0269758017743073
42. Wang X, Yang L, Yang J, et al. Trait anger among young adults: A moderated mediation model of moral disengagement and moral identity. Comput Human Behav 2017; 73. DOI: 10.1016/j.chb.2017.03.073
43. Wolke D, Lee KS, Guy A. Cyberbullying: a storm in a teacup? Eur Child Adolesc Psychiatry 2017; 26(8). DOI: 10.1007/s00787-017-0954-6
44. Woods S, White EJ. The association between bullying behaviour, arousal levels and behavioural problems. Adolesc 2005; 28(3). DOI: 10.1016/j.adolescence.2004.09.002
45. Zezulka LA, Seigfried-Spellar KC. Differentiating Cyberbullies and Internet Trolls by Personality Characteristics and Self-Esteem. J Digit Forensic Secur Law 2016; 11(3). DOI: 10.15394/jdfsl.2016.1415