Published in final edited form as:

Early Interv Psychiatry. 2013 November ; 7(4): . doi:10.1111/eip.12013.

Cyberbullying in those at Clinical High Risk for psychosis

Emilie Magaud¹, Karissa Nyman¹, and Jean Addington¹

¹Hotchkiss Brain Institute, Department of Psychiatry, University of Calgary, Alberta, Canada

Abstract

Aim—Several studies suggest an association between experiences of childhood trauma including bullying and the development of psychotic symptoms. The use of communications technology has created a new media for bullying called ‘cyberbullying’. Research has demonstrated associations between traditional bullying and cyberbullying. Negative effects of cyberbullying appear similar in nature and severity to the reported effects of traditional bullying. Our aim was to examine the prevalence and correlates of cyberbullying in those at clinical high risk (CHR) for psychosis.

Methods—Fifty young people at CHR for psychosis were administered the Childhood Trauma Questionnaire with added questions about cyberbullying.

Results—Cyberbullying was reported in 38% of the sample. Those who experienced cyberbullying also reported experiencing previous trauma.

Conclusion—It is possible that cyberbullying may be a problem for those at CHR of psychosis and due to the vulnerable nature of these young people, may have longitudinal implications.

Keywords

childhood trauma; clinical high risk; cyberbullying; prodromal; psychosis

INTRODUCTION

An association between experiences of childhood trauma and the later development of psychosis has been suggested with a recent meta-analysis indicating that individuals with psychosis are 2.72 times more likely than controls to have experienced childhood adversity.⁽¹⁾ Associations between trauma and psychosis were found to be stronger for traumatic victimising experiences with a direct intent to harm,² such as peer bullying^{2–4} and that being a victim of bullying approximately doubled an adolescent’s risk for psychotic experiences.⁵ However, bullying is not necessarily a causal factor in the development of psychosis.⁶

With reports of cell phone and Internet use as high as 92% and 97% respectively among Canadian students,⁷ the prevalence of communications technology has created new media for the perpetration of bullying behaviour, namely cyberbullying. According to Patchin and Hinduja,⁸ the term cyberbullying describes “willful and repeated harm inflicted through the medium of electronic text”. In student populations, a relationship between involvement in traditional bullying and cyberbullying has been established in the literature.^{9;10} Negative effects of cyberbullying seem to be similar in nature and severity to the reported effects of traditional bullying with respect to mental health, for example, suicide attempts.^{11–13} In a study of 1694 adolescents, victims of cyberbullying reported higher levels of depressive

symptoms than uninvolved students, even when controlling for involvement in traditional bullying.¹⁴ To our knowledge, no study has focused on cyberbullying and psychotic phenomena, although, using the Revised Symptoms Check-list-90, Aricak¹⁵ determined that 'psychoticism' significantly predicted the perpetration of cyberbullying.

The 'clinical high risk' (CHR) criteria were developed as a paradigm for investigating antecedents of the onset of psychosis. This 'close-in' strategy identifies young people who might be in the prodromal phase of a psychotic illness by combining known state and trait risk factors for psychotic illness.¹ High rates of childhood trauma and bullying have been reported in individuals at CHR of psychosis.^{17;18} Those who had experienced trauma reported increased levels of attenuated positive symptoms,¹⁹ anxiety depression and poorer functioning.¹⁸

Thus, based on the current interest in cyberbullying, the purpose of this study was to first examine the extent of cyberbullying in a sample of young people at CHR of psychosis, and secondly to determine if it co-occurred with other traumas.

METHODS

Participants

The sample for this project consisted of 50 individuals who met the Criteria of Prodromal Symptoms (COPS) using the Structured Interview for Prodromal Symptoms (SIPS).²⁰ The three COPS criteria are: attenuated positive symptom syndrome (APSS), brief intermittent positive symptoms (BIPS) and genetic risk and deterioration (GRD). The APSS and BIPS criteria are based on duration and severity of attenuated psychotic symptoms. The GRD requires either a first-degree relative with a psychotic disorder or the subject having schizotypal personality disorder plus at least a 30% drop in functioning in the past 12 months. Exclusion criteria included meeting criteria for current or lifetime axis I psychotic disorder, prior history of antipsychotic treatment, IQ less than 70, past or current history of a clinically significant central nervous system disorder.

Measures

The Structured Interview for Prodromal Symptoms (SIPS) and the Scale for Assessment of Prodromal Symptoms (SOPS)²⁰ were used to determine criteria for a prodromal syndrome and to determine severity of attenuated positive symptoms. Experience of trauma was assessed using the Childhood Trauma Questionnaire-Short Form (CTQ-SF).²¹ Participants responded to 28 items indicating traumatic experiences by selecting one of the following frequencies: 'Never True', 'Rarely True', 'Sometimes True', 'Often True', or 'Very Often True'. Item scores are combined to create five clinical sub-scores – Emotional Abuse, Physical Abuse, Sexual Abuse, Emotional Neglect, and Physical Neglect and a total score. Cyberbullying was assessed by asking participants if they had been harassed or bullied through technology or communication devices and if so through which media.⁷

Procedures

Participants provided informed consent or assent (parental informed consent for minors). The Structured Interview for Prodromal Symptoms (SIPS) was carried out by clinical raters who were experienced research clinicians that demonstrated adequate reliability at routine checks, achieving excellent gold standard post-training agreement on determination of prodromal diagnoses (kappa=0.94).

Statistical Analysis

Associations between cyberbullying and other traumas were examined using Spearman correlations. T-tests were used to compare those who had experienced cyberbullying with those who had not on age, sex and symptoms.

RESULTS

Participants (25 males, 25 females) had an average age of 16.7 years ($SD = 3.3$). The majority of participants were living with their family (88%) and were students (96%).

Thirty eight percent (38%) of participants reported having experienced cyberbullying. The most frequent types reported were bullying via text messages, Facebook, and instant messages ('chat'). See Table 1

Bullying via texts and Facebook was associated with a past history of sexual abuse and physical neglect, Facebook with a past history of emotional neglect and texts were more frequent in those who reported past physical abuse. See Table 2.

There were no significant differences in age, sex, or severity of attenuated positive symptoms between those who reported cyberbullying compared to those who did not.

DISCUSSION

Cyberbullying is an emerging issue within our society, particularly among adolescents. Cyberbullying is similar to traditional bullying in that it is hurtful, repetitive behaviour involving a power imbalance, often causing psychosocial issues. Thirty-eight percent of our young sample reported experiencing cyberbullying, mostly through text messages, social networks such as Facebook, and instant messaging. Lack of a non-psychiatric control group makes it difficult to determine if this is occurring more often in these CHR individuals. Regardless, the literature does not help with determining a "normal range" as studies report cyberbullying occurring in 9%²² up to 72%²³ of students. This is further hindered by a lack of consistency in the definitions and measures of cyberbullying.

It is possible that these young CHR individuals may lack the necessary skills and possibly misrepresent themselves using 'cyber-tools', particularly on social networks such as Facebook. This would be consistent with findings¹³ that reported that young, regular internet users who report DSM IV-like depressive symptomatology were more likely to concurrently report being targets of internet harassment and reports that children who misrepresent themselves on the internet have less well-developed social skills, lower levels of self-esteem, and higher levels of social anxiety and aggression.²⁴

We observed that there were some associations between reports of past trauma and cyberbullying. Since it has been suggested that individuals experiencing psychotic symptoms may have more negative appraisals of and experience more distress from their past experiences²⁵ young people at CHR with past experiences of trauma may be more affected by internet communications and have an increased risk of perceiving cyberbullying.²⁶ Additionally, it is possible that being exposed to one type of adversity increases the risk of exposure to another.²⁷ This would be important in that dose-response effects of trauma on psychosis seem to be of particular importance.^{1,28}

This study has several limitations. We did not have a non-psychiatric control group, the study is cross-sectional, and the sample is small. Our assessment of cyberbullying was limited, with no details about the duration, frequency, or the co-occurrence of different types of cyberbullying, and its perceived impact on the person. This would be important as

persistence of bullying over time is related to an increased emotional impact on mental health.^{29,30} Furthermore, it appears that some types of cyberbullying are perceived as less harmful than traditional bullying, such as insults and threats, while other forms are considered more damaging, especially those where images or videos are used and when there is a perception of high risk of personal injury, such as with blackmail.³¹ Finally, the use of self-reports of abuse are controversial. However there is some evidence of the validity and reliability of retrospective reports of trauma in psychotic samples, showing that they are stable across time, unaffected by current symptoms, and are generally concordant with other sources of information.³²

To our knowledge, focusing on cyberbullying in young people at CHR of psychosis is new in the field. Our results suggest that CHR individuals are affected by cyberbullying. From a clinical perspective, these young people at CHR are already a vulnerable population and due to their reported poorer social functioning, and often lack of friends, may be more vulnerable to bullying through the internet and cell phones. Cyberbullying certainly deserves further study and more specifically for those at CHR using larger samples with longitudinal design to better determine its impact on later conversion to psychosis.

Acknowledgments

This study was supported by the National Institute of Mental Health grant U01MH081984 to Dr Addington and an Alberta Innovates-Health Solutions summer studentship to Karissa Nyman.

References

1. Varese F, Smeets F, Drukker M, Lieveer R, Lataster T, Viechtbauer W, et al. Childhood Adversities Increase the Risk of Psychosis: A Meta-analysis of Patient-Control, Prospective-and Cross-sectional Cohort Studies. *Schizophrenia Bulletin*. 2012 Mar 29.
2. Arseneault L, Cannon M, Fisher H, Polanczyk G, Moffitt T, Caspi A. Childhood Trauma and Children's Emerging Psychotic Symptoms: A Genetically Sensitive Longitudinal Cohort Study. *American Journal of Psychiatry*. 2011; 168(1):65–72. [PubMed: 20952460]
3. Campbell MLC, Morrison AP. The relationship between bullying, psychotic-like experiences and appraisals in 14–16-year olds. *Behaviour Research and Therapy*. 2007; 45(7):1579–91. [PubMed: 17229400]
4. Kelleher I, Harley M, Lynch F, Arseneault L, Fitzpatrick C, Cannon M. Associations between childhood trauma, bullying and psychotic symptoms among a school-based adolescent sample. *The British Journal of Psychiatry*. 2008; 193(5):378–82. [PubMed: 18978317]
5. Lataster T, Van Os J, Drukker M, Henquet C+ Feron F, Gunther N, et al. Childhood victimisation and developmental expression of non-clinical delusional ideation and hallucinatory experiences. *Social Psychiatry and Psychiatric Epidemiology*. 2006; 41(6):423–8. [PubMed: 16572272]
6. van Dam DS, van der Ven E, Velthorst E, Selten JP, Morgan C, de Haan L. Childhood bullying and the association with psychosis in non-clinical and clinical samples: a review and meta-analysis. *Psychol Med*. 2012; 9:1–12.
7. Beran, TN.; Walroth, K. Report prepared for the Alberta Center for Child, Family, and Community Research. Alberta, Canada: 2010. Does Cyber Bullying End After High School? A Report on Students' Experiences.
8. Patchin JW, Hinduja S. Bullies Move Beyond the Schoolyard. *Youth Violence and Juvenile Justice*. 2006; 4(2):148–69.
9. Dempsey A, Sulkowski M, Dempsey J, Storch E. Has Cyber Technology Produced a New Group of Peer Aggressors? *Cyberpsychology, Behavior, and Social Networking*. 2011; 14:297–302.
10. Vandebosch H, Van Cleemput K. Cyberbullying among youngsters: profiles of bullies and victims. *New Media & Society*. 2009; 11(8):1349–71.

11. Dempsey AG, Sulkowski ML, Nichols R, Storch EA. Differences between peer victimization in cyber and physical settings and associated psychosocial adjustment in early adolescence. *Psychol Schs*. 2009; 46(10):962–72.
12. Hinduja S, Patchin JW. Bullying, Cyberbullying, and Suicide. *Archives of Suicide Research*. 2010; 14(3):206–21. [PubMed: 20658375]
13. Ybarra ML. Linkages between depressive symptomatology and Internet harassment among young regular Internet users. *Cyberpsychology & Behavior*. 2004; 7(2):247–57. [PubMed: 15140367]
14. Perren S, Dooley J, Shaw T, Cross D. Bullying in school and cyberspace: Associations with depressive symptoms in Swiss and Australian adolescents. *Child and Adolescent Psychiatry and Mental Health*. 2010; 4(1):28. [PubMed: 21092266]
15. Aricak OT. Psychiatric Symptomatology as a Predictor of Cyberbullying among University Students. *Egitim Arastirmalari-Eurasian Journal of Educational Research*. 2009; 34:167–84.
16. Yung AR, McGorry PD. The Prodromal Phase of First-episode Psychosis: Past and Current Conceptualizations. *Schizophrenia Bulletin*. 1996; 22(2):353–70. [PubMed: 8782291]
17. Bechdolf A, Thompson A, Nelson B, Cotton S, Simmons MB, Amminger GP, et al. Experience of trauma and conversion to psychosis in an ultra-high-risk (prodromal) group. *Acta Psychiatrica Scandinavica*. 2010; 121(5):377–84. [PubMed: 20199494]
18. Addington, J.; Stowkowy, J.; Cadenhead, K.; Cornblatt, B.; McGlashan, T.; Perkins, D., et al. Early Traumatic Experiences in those at Clinical High Risk for Psychosis. 2012. Unpublished Work
19. Thompson JL, Kelly M, Kimhy D, Harkavy-Friedman JM, Khan S, Messinger JW, et al. Childhood trauma and prodromal symptoms among individuals at clinical high risk for psychosis. *Schizophr Res*. 2009; 108(13):176–81. [PubMed: 19174322]
20. McGlashan, T.; Walsh, B.; Woods, S. The psychosis-risk syndrome: Handbook for diagnosis and follow-up. New York: Oxford University Press; 2010.
21. Bernstein DP, Stein JA, Newcomb MD, Walker E, Pogge D, Ahluvalia T, et al. Development and validation of a brief screening version of the Childhood Trauma Questionnaire. *Child Abuse & Neglect*. 2003; 27(2):169–90. [PubMed: 12615092]
22. Wolak, J.; Mitchell, KJ.; Finkelhor, D. Online victimization of youth: Five years later. Alexandria, VA: National Centre for Missing and Exploited Children; 2006.
23. Juvonen J, Gross EF. Extending the School Grounds? Bullying Experiences in Cyberspace. *Journal of School Health*. 2008; 78(9):496–505. [PubMed: 18786042]
24. Harman J, Hansen C, Cochran M, Lindsey C. Liar, Liar: Internet Faking but Not Frequency of Use Affects Social Skills, Self-Esteem, Social Anxiety, and Aggression. *CyberPsychology & Behaviour*. 2005; 8(1):1–6.
25. Brett CM, Peters EP, Johns LC, Tabraham P, Valmaggia LR, McGuire P. Appraisals of Anomalous Experiences Interview (AANEX): a multidimensional measure of psychological responses to anomalies associated with psychosis. *Br J Psychiatry Suppl*. 2007; 51:s23–30. [PubMed: 18055934]
26. Lazarus, R.; Folkman, S. Stress, Appraisal, and Coping. New York: Springer Publishing Company, Inc; 1984.
27. Green JG, McLaughlin KA, Berglund PA, et al. Childhood adversities and adult psychiatric disorders in the national comorbidity survey replication I: associations with first onset of DSM-IV disorders. *Arch Gen Psychiatry*. 2010; 67:113–123. [PubMed: 20124111]
28. Heins M, Simons C, Lataster T, Pfeifer S, Versmissen D, Lardinois M, Marcelis M, Delespaul P, Krabbendam L, van Os J, Myin-Germeys I. Childhood trauma and psychosis: a case-control and case-sibling comparison across different levels of genetic liability, psychopathology, and type of trauma. *Am J Psychiatry*. 2011; 168(12):1286–94. [PubMed: 21955935]
29. Aleude O, Adeleke F, Omoike D, Afen-Akpaidia J. A review of the extent, nature, characteristics and effects of bullying behavior in school. *J Instructional Psychol*. 2008; 35:151–8.
30. Brighi, A.; Melotti, G.; Guarini, A.; Genta, M.; Ortega, R.; Mora-Merchan, J., et al. Self-esteem and loneliness in relation to cyberbullying in three European countries. In: Li, Q.; Cross, D.; Smith, P., editors. *Cyberbullying in the global playground: research from international perspectives*. Chichester: John Wiley and Sons; 2012. p. 32-56.

31. Mora-Merchan, J.; Del Rey Jager, T. Cyberbullying: Review of an emergent issue. In: Mora-Merchan, J.; Jager, T., editors. Cyberbullying: A cross-national comparison. Landau: Verlag Empirische Padagogik; 2010. p. 271-82.
32. Fisher HL, Craig TK, Fearon P, Morgan K, Dazzan P, Lappin J, Hutchinson G, Doody GA, Jones PB, McGuffin P, Murray RM, Leff J, Morgan C. Reliability and comparability of psychosis patients' retrospective reports of childhood abuse. Schizophr Bull. 2011; 37(3):546–553. [PubMed: 19776204]

Table 1

Frequencies in types of Cyberbullying among those with CHR of psychosis

Cyberbullying							
	Chat	Texts	Cell	Facebook	Web	Blog	Other Web
Percentage (N)	18% (9)	30% (15)	2% (1)	28% (14)	4% (2)	6% (3)	6% (3)
							62% (31)

Table 2

Associations between Cyberbullying and Childhood Trauma

Cyberbullying							
	Chat	Texts	Cell Phone	Facebook	Web	Blog	Other Web
CTQ Emotional Abuse	0.25	0.22	0.16	0.26	-0.15	0.05	0.00
CTQ Physical Abuse	-0.1	0.29 *	-0.11	0.20	0.10	-0.03	0.24
CTQ Sexual Abuse	0.12	0.38 **	-0.06	0.29 *	-0.08	-0.10	0.17
CTQ Emotional Neglect	0.09	0.15	0.10	0.33 *	-0.11	0.03	0.02
CTQ Physical Neglect	0.15	0.37 **	0.07	0.32 *	-0.06	0.11	0.04
CTQ Total	0.10	0.26	0.05	0.32 *	-0.05	0.01	0.10

CTQ= Childhood Trauma Questionnaire

**
p<0.01,*
p<0.05