

BACKGROUND

Cyberbullying is a form of bullying that involves electronic communication with the purpose of causing harm to another person through repeated aggressive, intentional acts [1]. Reported rates for cyberbullying are variable, ranging from 7% to 67%, depending on characteristics of the sample [2-7], most of which are primarily urban and suburban. Prior research demonstrated that rates of traditional bullying are comparable in rural settings [8]; questions regarding cyberbullying remain. Access to a cell phone is presumably associated with the experience of cyberbullying, given that it facilitates instant messaging, text messaging, emails, and social media [9]. However, few studies have examined the prevalence and correlates of cyberbullying, and fewer still have assessed cyberbullying in rural areas [10]. Thus, this project investigated the relations between cyberbullying and: other forms of bullying (**H1**), cell phone and social media use (**H2**), and rurality of the school (**H3**).

METHOD

Participants/Procedure: Students in grades 4-12 (n=5927) from predominantly rural schools across Southern Illinois completed the **School Climate Survey** student and teacher forms developed by the Ontario Ministry of Education and modified with permission for this project. The total sample was collected from 58 schools during the 2017-2018 academic year. All survey responses were anonymous, collected in groups at times designated by the schools.

MEASURES

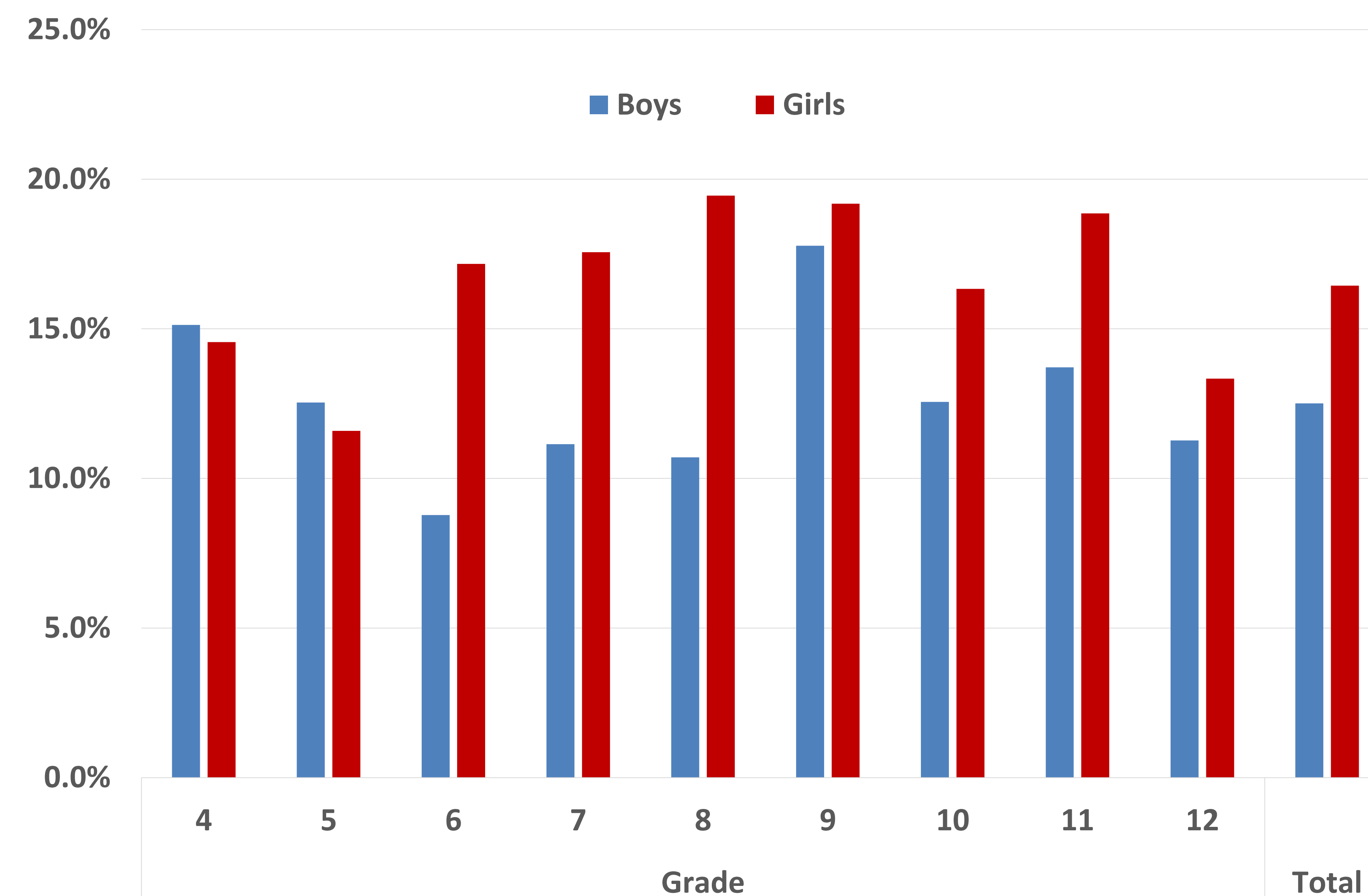
Electronic Device and Social Media Access: Students were asked yes/no questions regarding whether they had a cell phone, received or sent texts, or if they had a social media account.

Experiencing, Witnessing and Perpetration of Physical, Verbal, Social or Electronic Bullying: Students who responded that they had experienced, witnessed or perpetrated physical, verbal or social bullying at least once over the previous four weeks were included in our analyses.

Rural Designation of School: Each school was classified by the National Center for Education Statistics (NCES) as: Small City, Town (Fringe or Distant), Rural (Fringe or Distant). The NCES Locale Classifications are determined according to designations codified by the United States Census Bureau.

RESULTS

Prevalence of Cyberbullying by Grade and Gender



Cyberbullying Experience and Electronics Access

	Yes (86.3%)	Chi-Square Statistics
Have a cell phone?		
Been cyberbullied	14.35%	($\chi^2(1, N=5,479)=18.05$)**
Witnessed cyberbullying	29.11%	($\chi^2(1, N=5,451)=26.17$)**
Perpetrated cyberbullying	7.74%	($\chi^2(1, N=4,627)=0.019$)
Receive/send texts?	Yes (82.8%)	
Been cyberbullied	14.37%	($\chi^2(1, N=5,476)=16.68$)**
Witnessed cyberbullying	29.78%	($\chi^2(1, N=5,446)=50.55$)**
Perpetrated cyberbullying	7.72%	($\chi^2(1, N=5,414)=0.014$)
Have a social media account?	Yes (72.9%)	
Been cyberbullied	15.47%	($\chi^2(1, N=5,494)=50.24$)**
Witnessed cyberbullying	30.86%	($\chi^2(1, N=5,468)=70.31$)**
Perpetrated bullying	8.31%	($\chi^2(1, N=5,433)=7.328$)*

**p < .001 *p = .007

Cyberbullying Experiences and Physical, Verbal and Social Bullying Experiences

	Experienced physical	Experienced verbal	Experienced social
Experienced Cyberbullying	.466***	.454***	.534***
Witnessed Cyberbullying	.631***	.645***	.692***
Perpetrated Cyberbullying	.662***	.592***	.705***

***p < 0.001

RESULTS

H1: The highest rates of cyberbullying, approaching 20%, were reported by middle school and 9th grade youth. More girls reported experiences than males in most grades in our sample. Cyberbullying experiences were significantly correlated with physical, verbal, and social bullying experiences.

H2: Chi-square analyses demonstrated significant relations between having a cell phone, sending/receiving text messages, and having a social media account with experiences of and witnessing cyberbullying. Perpetration of cyberbullying was only related to having a social media account.

H3: Because there were no high schools in the Small City designation, rurality analyses were restricted to surveys obtained from students in grades 4-8th. Chi-square analyses demonstrated a significant effect for experiencing cyberbullying ($\chi^2(4, N=3,465)=13.32, p=0.01$) and witnessing cyberbullying ($\chi^2(4, N=3,294)=11.031, p=0.026$), but not for perpetrating cyberbullying. It appeared that the schools categorized as Town Fringe had higher rates of experienced bullying and witnessed bullying and schools categorized as Rural had the lowest rates of reported bullying perpetration. There is no clear rationale for why the Town-Fringe schools had the highest reported rates of bullying. Regarding perpetration, students in the rural schools may have been less willing to acknowledge engagement in bullying due to fear of identification.

DISCUSSION

Both bullying and cyberbullying are significant issues for rural youth. Cyberbullying was related to all forms of bullying and this suggests intervention and prevention programs should consider focusing on all forms of bullying. There is a significant relation between access to technology and experiencing and witnessing cyberbullying. This suggests the need for parental monitoring of electronics and social media accounts. Safe and effective methods for children to report cyberbullying need to be a priority. Additional research on bystander education to empower children to intervene or seek help when witnessing a cyberbullying event is also indicated. To potentially prevent perpetration, future studies should potentially focus on psychoeducation and the disinhibition effect related to social media use among youth.

REFERENCES

Please see attached document for a full list of references.