A trend analysis of dating violence in a rural southern community

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Introduction

Adolescent dating violence is a significant public health concern with far-reaching consequences, including:

- Posttraumatic stress, depression, anxiety, and behavioral problems (Rizzo et al., 2010)
- Multiple victimizations, including child maltreatment, physical and sexual assault outside dating relationships, witnessing violence, cyber bullying, and property crime (Hamby, Finkelhor, & Turner, 2012).
- Physical and sexual health problems (Munõs-Rivas et al., 2007; Silverman et al., 2009).
- Eating disorders (Banyard & Cross, 2008);
- Alcohol and other substance use (Stappenbeck & Fromme, 2010);
- Poor academic performance (CDC, 2012).

Introduction

Estimates of prevalence vary:

- The 2009 Youth Risk Behavior Surveillance showed a past 12 month prevalence of 9.8% among all students (CDC, 2009).
- A retrospective study of college students showed that 64.7% of females and 61.7% of males had experienced dating violence between ages 13 and 19 (Bonomi et al., 2012).
- A literature review found single study prevalence rates between 20% and 38% (Offenhauer & Buchalter, 2011).
- The study reported here found prevalence rates for victimization of 26.2% for females and 19.0% for males and rates for perpetration of 21.0% for females and 9.7% for males.

Introduction

Despite national concern and high prevalence rates, research remains relatively sparse and there are significant gaps in knowledge. In particular, there is little data on the complex interplay of individual, family, and community level factors (Mulford & Giordano, 2008).

Due in part to

- Lack of consensus on definition;
- Differences in measurement across studies;
- Using measures for adults in studies of adolescents;
- Tendency to investigate specific behaviors in isolation, rather than viewing adolescent dating violence as reflecting a constellation of behaviors and outcomes.

Introduction

Dating violence is particularly under-studied among rural adolescents

- Some studies have found that rates among rural adolescents are higher than those found among urban and suburban teens (Hickman et al., 2004; Spencer & Bryant, 2000).
- However, other studies have shown comparable rates between urban and rural teens with lower rates among suburban teens (Silverman, Raj, & Clements, 2004).

Introduction

There is some evidence that the prevalence of dating violence may be higher in the South than in other regions of the country.

- A national study (Marquart et al., 2007) found rates in the South of 43.8%, followed by the West at 27.5%, the Midwest at 25.7%, and the East at 22.8%.
- The authors stressed the need to examine the role that cultural norms might play in the regional differences found.

Introduction

A review of the literature shows that the factors influencing dating violence fall into four categories

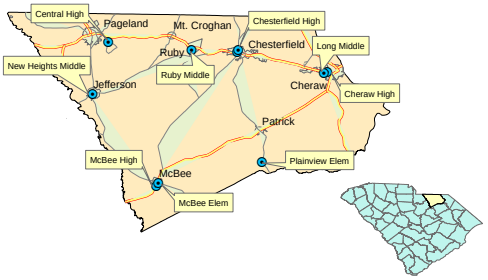
- Family factors include lack of closeness in parent/child relationships; punitive parenting; and having witnessed family violence.
- Individual factors include substance use, attitudes accepting of violence, knowing someone who has been victimized, being involved in a deviant peer network, and depression and other well-being indicators.
- Community factors include level of community violence, reluctance among service providers to reach out to teens , and lack of attachment to school and other community institutions.
- Contextual factors include situation specific interpretation of violent behaviors, similarity between adolescents' and parents' conflict styles, and stability of aggression over time.

Methods

Given these considerations, this presentation reports the results of a seven-year repeated cross-sectional study of dating violence victimization and perpetration among rural middle- and high-school students. The measures included:

- emotional/psychological, physical & sexual dating violence
- attitudes towards violence;
- knowledge of dating and family violence within peer network;
- acceptability of violence-related behaviors in dating and family relationships
- qualities of dating relationships;
- perceptions of extent of and community response to violence;
- substance use, perceived risks of substance use, and perceived parental attitudes towards substance use; and
- availability of adult support.

Chesterfield County, SC schools in study



Methods

One classroom at each middle- and high-school grade level at each school in the County was selected by convenience and all students were invited to participate.

Data were collected in the classroom via self-administered survey.

The sample sizes were:

Year	Sample
2004	273
2005	173
2006	327
2007	498
2008	428
2009	351
2011	490

Characteristics of the students

		Y1	Y2	Y3	Y4	Y5	Y6	Y7
Average age in years		13.6	13.6	13.3	13.2	13.1	13.3	13.5
Gender	Female	69.1	62.6	61.7	58.6	60.6	63.4	63.9
	Male	30.1	37.4	38.3	41.4	39.4	36.6	36.1
Race/ Ethnicity	Black or African-American	32.2	32.5	36.6	31.8	32.9	31.3	26.6
	Hispanic and other minorities	3.0	11.4	8.8	9.0	7.9	8.8	11.6
	White	64.9	56.1	54.6	59.2	59.2	59.9	61.8
Grade level	Middle school	59.8	61.5	48.7	60.2	68.8	61.5	55.4
	High school	41.2	38.5	51.3	39.8	31.2	38.5	44.6

Analysis

The data were modeled using binomial logit regression (generalized linear model) in SPSS version 20.

- Given the small sample sizes by type, dating violence victimization and perpetration were treated as composite outcomes measuring any victimization and any perpetration.
- Model selection log-linear analysis was used to assess main effects and interaction terms for inclusion in the final model. While several two- and three-way interactions were found to be significant, these did not improve model fit and were excluded.
- A single model was identified both for dating violence victimization and perpetration.

Analysis

The final model consisted of seven main effects and the intercept. In addition:

- Model fit was assessed through smaller–is-better information criteria.
- Model effects were assessed through Wald Chi-square.
- No victimization was the reference category for the outcome variable.
- The predicted probabilities were saved as variables in the data set and were used to calculate model odds ratios.

Analysis

The factors included in the model were:

- Gender
- Age
- Knowing a female victim of dating violence by a male
- Knowing a male who had perpetrated violence
- Past 6 month tobacco use, in any form
- Past 6 month alcohol and other substance use

One covariate was included

- Justification for violence

Dating violence victimization by gender

Note that data on past 3 month victimization was not collected in year 1.

Lifetime

	Y1	Y2	Y3	Y4	Y5	Y6	Y7
Female	21.1	25.0	31.7	24.9	23.8	33.3	29.2
Male	7.4	12.5	25.7	19.1	20.9	26.2	21.1

Past 3 month

		Y1	Y2	Y3	Y4	Y5	Y6	Y7
All students	Female	-	12.5	12.5	10.4	12.5	13.5	13.8
	Male	-	4.8	9.7	11.8	7.0	10.8	11.1
Those victimized	Female		50.0	40.0	40.3	50.8	51.7	47.2
	Male		25.0	31.0	54.3	33.3	57.1	47.4

There were no significant differences in dating violence victimization across years by gender, $X^2(6) = 12.14$, $p = .059$ for males, $X^2(6) = 8.28$, $p = .218$ for females.

Differences across years for past 3 month dating violence victimization were significant for males, $X^2(6) = 12.62$, $p = .049$, and for females, $X^2(6) = 29.81$, $p = .000$.

Dating violence perpetration by gender

Note that data on dating violence perpetration was not collected in year 1.

Lifetime

	Y1	Y2	Y3	Y4	Y5	Y6	Y7
Female	-	24.0	23.4	22.3	17.8	20.1	20.4
Male	-	14.8	8.1	6.7	11.5	8.3	11.2

Past 3 month

		Y1	Y2	Y3	Y4	Y5	Y6	Y7
All students	Female	-	9.6	9.7	11.0	9.8	10.5	10.5
	Male	-	11.3	8.0	5.6	7.7	5.8	7.8
Those perpetrating	Female	-	11.5	20.0	26.0	23.8	30.5	30.3
	Male	-	28.6	17.2	17.1	27.3	33.3	23.7

There were no significant differences in dating violence perpetration across years by gender, $X^2(6) = 5.15$ $p = .398$ for males, $X^2(6) = 3.44$, $p = .633$ for females.

Differences across years for past 3 month dating violence perpetration were not significant for males, $X^2(6) = 8.68$, $p = .193$, but were significant for females, $X^2(6) = 22.65$, $p = .001$.

Dating violence victimization and perpetration by age

	Age	Y1	Y2	Y3	Y4	Y5	Y6	Y7
Victimization	14 and under	12.1	14.5	25.6	16.4	16.2	18.2	15.7
	15 and older	24.3	25.0	32.8	29.1	32.0	28.7	37.9
Perpetration	14 and under	-	16.4	12.6	25.4	7.5	9.4	9.9
	15 and older	-	23.9	22.4	25.0	26.6	23.4	24.7

There were no significant differences in dating violence victimization across years by age, $X^2(6) = 10.23$, $p = .115$ for age 14 and younger, $X^2(6) = 10.26$, $p = .114$ for age 15 and older. Similarly, no significant differences in dating violence perpetration across years was found by age, $X^2(6) = 7.28$, $p = .201$ for age 14 and younger, $X^2(6) = 1.11$, $p = .9.53$for age 15 and older.

Past 3 month dating violence victimization and perpetration by age

		Age	Y1	Y2	Y3	Y4	Y5	Y6	Y7
Victimization	All students	14-	-	5.3	9.1	8.5	7.8	9.9	6.7
		15+	-	13.0	13.4	12.7	14.0	15.6	19.2
	Those victimized	14-	-	27.3	30.3	50.0	46.2	54.5	40.0
		15+	-	52.2	41.3	40.8	43.9	52.5	50.0
Perpetration	All students	14-	-	7.9	8.3	4.5	5.8	6.1	3.9
		15+	-	12.0	9.8	13.1	13.4	12.0	15.4
	Those perpetrating	14-	-	50.0	62.5	52.6	66.7	64.7	40.0
		15+	-	45.5	39.5	51.6	51.1	48.7	59.6

Past 3 month dating violence victimization and perpetration by age

The differences across years for past 3 month dating violence victimization were significant for ages 14 and younger, $X^2(6) = 16.51$, $p = .011$, and for ages 15 and older, $X^2(6) = 24.85$, $p = .000$.

Similarly, the differences across years for past 3 month dating violence perpetration were significant for ages 14 and younger, $X^2(6) = 14.45$, $p = .025$, and for ages 15 and older, $X^2(6) = 19.70$, $p = .003$.

Know a female victim or a male perpetrator of dating violence

The difference across time in knowing a female victim of dating violence was not significant, $X^2(6) = 4.85$, $p = .563$. The difference across time in knowing a male perpetrator of dating violence was significant, $X^2(6) = 24.75$, $p = .000$.

Item	Y1	Y2	Y3	Y4	Y5	Y6	Y7
Know female victim	69.8	64.3	66.3	63.7	62.7	61.2	63.0
Know a male perpetrator	68.8	66.0	61.7	56.1	55.3	56.4	51.7

There were significant relationships between dating violence victimization and knowing a female victim of family violence, $r = .26$, $p = .000$, and knowing a male perpetrator of dating violence, $r = -.25$, $p = .000$.

There were also significant relationships between dating violence perpetration and knowing a female victim of family violence, $r = .241$, $p = .000$, and knowing a male perpetrator of dating violence, $r = .23$, $p = .000$.

Know a female victim or a male perpetrator of dating violence

There were no significant differences across time in knowing a female victim of family violence by gender, $X^2(6) = 4.81$, $p = .57$ for males, $X^2(6) = 9.82$, $p = .13$ for females.

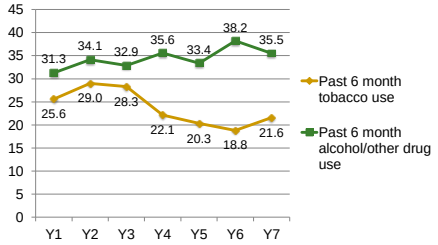
There was no significant differences across time among males for knowing a male perpetrator of dating violence, $X^2(6) = 11.51$, $p = .07$. However, there was a significant difference across time for females, $X^2(6) = 18.67$, $p = .005$.

There were no significant differences across time in knowing a female victim of family violence by age, $X^2(6) = 4.62$, $p = .59$ for students 14 and younger, $X^2(6) = 12.57$, $p = .05$ for students 15 and older.

There was a significant difference for knowing a male perpetrator of violence for students age 14 and younger, $X^2(6) = 20.84$, $p = .002$ but not for students age 15 and older, $X^2(6) = 12.21$, $p = .057$

Tobacco and alcohol and other substance use

There were two composite measures for tobacco use in all forms (cigarettes, snuff, etc.) and alcohol and other drug use (marijuana, prescription medications, etc.).



Substance use

There was a significant difference across years for tobacco use, $X^2(6) = 15.58$, $p = .016$, but not for alcohol and other substance use.

There were no significant differences across years either for tobacco use or for alcohol and other substance use for gender.

There was a significant difference for age 14 and younger for tobacco use, $X^2(6) = 16.26$, $p = .012$ and for other drug use, $X^2(6) = 13.22$, $p = .040$.

Justification for violence

This is a five item measure drawn from a 13-item measure of attitudes towards violence. The mean value and standard deviation by year are shown below.

Y1		Y2		Y3		Y4		Y5		Y6		Y7	
M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD
2.34	.49	2.33	.46	2.28	.48	2.27	.49	2.28	.50	2.28	.51	2.35	.58

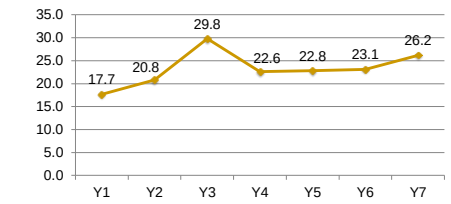
There was not a significant difference across years, $F(6, 2530) = 1.80$, $p = .096$.

Parameter estimates for dating violence victimization

Parameter	Level	β	SE	Wald χ2	df	p	Exp(B)
Intercept		-3.55	.34	107.51	1	.000	.03
Gender	Female	.31	.14	5.07	1	.024	1.36
Age	15+	.38	.10	15.01	1	.000	1.46
Know female victimized by male	Yes	.89	.24	14.17	1	.000	2.43
Know male who perpetrated violence	Yes	.76	.22	11.38	1	.001	2.13
Past 6 month tobacco use	Yes	.71	.10	46.85	1	.000	2.04
Past 6 month alcohol/other drug use	Yes	.41	.13	9.76	1	.002	1.51
Justification for violence		.26	.09	8.01	1	.005	1.08

Note: Reference category omitted

Rate of dating violence victimization by year



Odds ratios

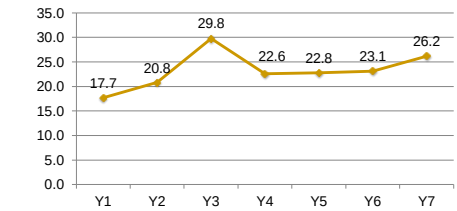
	Y1	Y2	Y3	Y4	Y5	Y6	Y7
OR	2.14	1.98	2.04	2.09	2.35	2.12	2.74
95% CI	1.95, 2.34	1.74, 2.24	1.92, 2.17	1.97, 2.22	2.20, 2.51	1.98, 2.26	2.65, 2.84

Parameter estimates for dating violence perpetration

Parameter	Level	β	SE	Wald χ2	df	p	Exp(B)
Intercept		-5.16	.39	179.51	1	.000	.01
Gender	Female	.94	.26	13.16	1	.000	2.57
Age	15+	.47	.16	8.84	1	.003	1.60
Know female victimized by male	Yes	.69	.17	16.38	1	.000	1.98
Know male who perpetrated violence	Yes	.68	.08	81.58	1	.000	1.97
Past 6 month tobacco use	Yes	.55	.11	22.98	1	.000	1.73
Past 6 month alcohol/other drug use	Yes	.73	.07	102.15	1	.000	2.07
Justification for violence		.56	.11	25.32	1	.000	1.75

Note: Reference category omitted

Rate of dating violence perpetration by year



Odds ratios

	Y2	Y3	Y4	Y5	Y6	Y7
OR	2.17	2.15	3.15	2.83	2.48	2.45
95% CI	1.87, 2.46	1.98, 2.31	2.99, 3.33	2.58, 3.09	2.22, 2.74	2.22, 2.69

Discussion

Not surprisingly, we found that being female and older increased the risk of dating violence victimization. Given the predictors in the model, females were about 1.4 times more likely to be victimized than were males and students ages 15 and older were nearly 1.5 times more likely to be victimized than were students ages 14 and younger.

Consistent with other studies, we found that knowing someone who had been victimized in a dating relationship, knowing someone who had perpetrated dating violence, and substance use were associated with an increased likelihood of dating violence victimization. Knowing a female victim increased the chance of victimization by about 2.4 times. Knowing a male who had perpetrated dating violence increased the risk of victimization by 2.1 times.

Discussion

Also consistent with other studies, we found that substance use was a significant predictor of dating violence victimization. Past 6 month tobacco use slightly more than doubled the chance of being victimized while past 6 month alcohol and other substance use increased the risk of victimization by about 1.5 times. Holding views suggesting that violence is justified increased the risk of dating violence victimization by 1.1 times

Given the predictors in the model, the overall odds of victimization across years was 2.22 (95% CI = 2.17, 2.28) indicating about a 1¼ greater likelihood of being victimized in a dating relationship if female, 15 or older, knowing someone who has been victimized and someone who perpetrated dating violence, using tobacco, alcohol, and other substances, and holding moderately high attitudes that violence is justified.

Discussion

The study found consistently higher rates of dating violence perpetration among females than among males, with an average difference of 11.2% across study years. This is consistent with findings from other studies (Offenhauer & Buchalter, 2011). Indeed, being female increased the odds of perpetration by about 2.5 times.

As was the case with victimization, dating violence perpetration was 1.6 times more likely if one is age 15 or older, nearly 2 times greater by knowing someone who has been victimized and perpetrated dating violence, 1.7 times greater by using tobacco , 2 times greater by using alcohol and other substances , and 1.7 times greater if one holds moderately high views that violence is justified.

Given the factors in the model, the overall odds of dating violence perpetration were 2.58 (95% CI = 2.49, 2.68), indicating nearly about a 1½ times increased risk of perpetration.

Discussion

It is interesting to note that rates of dating violence victimization increased by 48% across the 7 years of the study.

Much of the increase was driven by gender differences. Dating violence victimization increased by 185% among males and 38% among females.

At the same time, dating violence perpetration decreased by 22% across the 7 years of the study.

Here, too, the magnitude of the change is influenced by gender differences. Rates of perpetration declined by 24% among males and 15% among females.

Conclusions

While the rates of dating violence reported here are unacceptably high, they do not appear any higher than rates reported elsewhere, suggesting that rates of dating violence in the Southern US and in this rural setting may not be greater than elsewhere.

However, the absence of comparison samples makes an absolute determination impossible.

The high rates of dating violence victimization and perpetration and their persistence across time make it imperative that extensive prevention efforts get underway.

Yet, these findings have been presented to local and state policy makers over several years and no action has been taken. This raises questions as to whether the political will to act exists.

Conclusions

While these findings are an important contribution to the literature, we are only marginally closer to understanding dating violence in general and in the rural South in particular.

For example, do the increased rates of dating violence victimization among males reflect a true upsurge in the phenomenon or does it result from greater recognition of the extent to which males are victimized?

Similarly, do the consistently lower rates of perpetration among males reflect an actual decrease in male dating violence perpetration or does it reflect reluctance on the part of males to self-report?

Research is needed to answer these and related questions.

Challenges to collecting data across time

There are several challenges to collecting data from repeated samples across time. Among these are:

Timing data collection - Ideally, data should be collected at the same time each year. Vagaries, however, may throw the schedule off introducing potential confounds.

Study fatigue – It is challenging to maintain the investment of those assisting in the study (e.g., school personnel). The use of teacher incentives is important.

On the flip side, however, the study may begin to be seen as a normative part of the setting. Institutionalization is important.

Testing effects – the use of the same or similar measures across time may sensitize the population to the issues under consideration.

Instrumentation effects – changes may be needed in instruments to fix errors or to keep pace with changes in the population being studied. These changes need to be kept to a minimum and their potentially confounding effects need to be considered.

Next steps

These findings led to success in funding a new and more comprehensive study of adolescent dating violence.

- A four-year multi-level, cohort-sequential study is collecting data on 589 adolescents in grades 6 through 12 (grades 6-9 in year 1) and a caregiver.
- In addition, data are being collected from teachers and youth service providers, through observations of neighborhood characteristics, and community-level rates of child injuries, crime, and child maltreatment.
- The design also includes an observational study of interactions among dating partners.

These factors will permit modeling the growth trajectory of adolescent dating violence victimization and perpetration, providing much needed data on an important public health issue.