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# Impact of Stranger Violence and Intimate Partner Violence on the Grades of American Indian/Alaska Native Undergraduate College Students

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2015  
CSD Working Papers  
No. 15-32

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## *Abstract*

Stranger and intimate partner violence are pervasive public health problems that have a range of negative effects, with exceptionally high prevalence among ethno-racial minority youth. This study assesses the prevalence of these types of violence among American Indian/Alaska (AI/AN) students and examines the impact of victimization on academic performance AI/AN and non-AI/AN student populations using self-reported college health survey data. Results found that students who identified fully or partially as AI/AN reported markedly higher rates of all types of violence/abuse than did other students, and students who had experienced violence/abuse had lower GPAs than those who had not. The interaction effect of female and violence type on GPA was significant for AI/AN students. Recommendations for future research and direct practice with AI/AN students are discussed.

**Key words:** *Stranger Violence, Intimate Partner Violence, American Indian/Alaska Natives, academic performance, ethno-racial minority youth, grade point average (GPA)*

## **Background**

Stranger violence and intimate partner violence are a pervasive public health problems that have a number of negative psycho-emotional and social effects on victims and their families (Cisler, Begle, Amstadter, Resnick, Danielson, Saunders, & Kilpatrick, 2012; Henry & Zeytinoglu, 2012; Kilpatrick, Ruggiero, Acierno, Saunders, Resnick, & Best, 2003; Kilpatrick, Saunders, & Smith, 2000; Leaman, & Gee, 2008; Nooner, Linares, Batinjane, Kramer, Silva, & Cloitre, 2012). Although definitions vary by researcher, stranger and intimate partner violence (SV/IPV) as a construct includes any attempt to dominate or control another person—whether physically, sexually, psychologically, or emotionally—that results in harm. Thus, SV/IPV entails a wide range of sexual and nonsexual behaviors, including stalking, physical aggression, sexual violence, and psychological abuse, perpetrated by an acquaintance, a casual or committed romantic/sexual or marital partner, or a stranger (Kilpatrick, Saunders, & Smith, 2000; Wekerle & Wolfe, 1999). Outcomes of SV/IPV include health and mental health problems (e.g., depression, posttraumatic stress disorder, increased risk of substance abuse, unhealthy weight control behaviors, sexual risk behavior, pregnancy, suicidality) (Ackard & Neumark-Sztainer, 2002; Campbell, 2002; Cisler et al., 2012; Plichta, 2004; Silverman, Rai, Mucci, & Hathaway, 2001). Moreover, SV/IPV is associated with other high-risk behaviors (e.g., fighting, drug use and abuse, sexual activity), poor academic performance, and revictimization and domestic violence in adulthood (Black, Noonan, Legg, Eaton, & Breiding, 2006; Cisler et al., 2012; Hanson, 2002; Smith, White, & Holland, 2003).

Studies that rely on nationally representative samples have estimated that rates of SV/IPV are extremely high: 80% of youth have experienced at least one form of SV/IPV, and 30% of youth have experienced five or more (Finkelhor, Ormrod, & Turner, 2007; Kilpatrick, Saunders, & Smith, 2000; Turner, Finkelhor, & Ormrod, 2010). Moreover, more than half of ethno-racial minority youth have experienced violence in their lifetime, with the highest prevalence rates for physical and sexual victimization among American Indian/Alaska Native (AI/AN) youth (Kilpatrick, Saunders, & Smith, 2000). Despite these high prevalence rates, relatively little is known about differing outcomes for varying victimization types among ethno-racial minority youth, particularly for epidemiologically underrepresented groups, such as AI/ANs (Manson, Beals, Klein, Croy, AI-SUPERPPF Team, & AI-SUPERPPF Team, 2005; Pole, Gone, & Kulkarni, 2008).

To date, studies that focus on academic performance of students who have experienced SV/IPV as a type of outcome have been largely cross-sectional and have relied on children and youth samples, with mediational analyses that focus on the role of externalized and internalized symptomatology on the SV/IPV-academic performance nexus (Henrich, Schwab-Stone, Fanti, Jones, & Ruchkin, 2004; Schwartz & Gorman, 2003; Voisin, Neilands, & Hunnicutt, 2011). Though longitudinal studies that examine this nexus are rare, the few that have been conducted verify this mediational relationship and the adverse impact of SV/IPV on academic performance over time (Busby, Lambert, & Ialongo, 2013; Masten et al., 2005; Rosenthal & Wilson, 2003). These available studies include samples of ethno-racial minority children and youth, but absent are both underrepresented groups and comparative analyses between underrepresented and ethno-racial majority groups, such as AI/ANs.

The United States has a long, troublesome history of educating AI/ANs within public universities. In the 19th Century, the stereotypical ideas and beliefs about this population centered on converting so-called savages into English-speaking Americans (Ridgeway & Pewewardy, 2004). Between 1880 and 1930, the U.S. government removed AI/AN children from their families and relocated them to residential boarding schools hundreds of miles away. In 1920, boarding school attendance for AI/AN children was required by law, and each year, police would round up children to be sent to residential schools (Reyhner & Eder, 2004). By 1930, more than half of all AI/AN children who attended school did so in these institutions, resulting in trauma that lingers into current educational experiences (Evans-Campbell, Walters, Pearson, & Campbell, 2012). These historical experiences are a thread woven into every part of the educational process for AI/AN communities.

Given the scope of SV/IPV in the United States, it is important to explore its impact among all populations and contexts, including epidemiologically underrepresented ethno-racial minority youth such as AI/ANs, and its deleterious effects on their academic performance. The purpose of this study is two-fold: (1) to compare the prevalence of both stranger and intimate partner violence among AI/AN undergraduate students with that among students with other ethnic backgrounds, and (2) to examine its impact on the academic performance of AI/AN students. We address three specific research questions in this study:

1. Are there differences in academic performance between AI/AN undergraduates and students from other ethnic backgrounds who self-report SV and IPV?
2. Does the prevalence of SV and IPV differ across ethnic groups?

3. What is the impact of both types of violence on the self-reported academic performance of students from varying ethnic backgrounds?

## Methods

### Data set

This study analyzes data from four annual administrations of the American College Health Association's (ACHA) National College Health Survey (NCHS). The ACHA administers the NCHS twice yearly, in the Fall and Spring. The ACHA administers each to a separate, self-selected sample of U.S. and Canadian colleges and universities that have paid to participate in the survey.<sup>1</sup>

This study uses data from the NCHS taken in Fall of 2008 ( $N = 26,685$  students, 40 institutions); Spring of 2009 ( $N = 87,105$ , 117 institutions); Fall of 2009 ( $N = 34,208$ , 57 institutions); and Fall of 2010 ( $N = 30,093$ , 139 institutions). The ACHA administered the same survey items to each student. The data set is fully de-identified with respect to both students and institutions.

### Sample

The sample for this study consists of the subset of students who met the following criteria:

1. Described themselves either male or female (versus transgender)
2. Were undergraduates and were within three years of the normal age progression for a full-time undergraduate student (i.e., aged 18–21 years for a first year undergraduate)
3. Were attending a U.S. or Canadian college or university
4. Reported a valid cumulative grade point average (GPA) (i.e., A through D/F).

After the selection of cases that met the retention criteria, the final sample included 117,430 students. Table 1 reports the demographics for each year's sample and for the total sample. Though the relationship between each demographic variable and the survey subsample was significant ( $p < .001$ ), the *rho* effect sizes were uniformly small, ranging from .014 and .015 for the Biracial/Multiracial and Other race/ethnic categories, respectively, to .090 for the White race/ethnic category. Age differed significantly across the four survey subsamples ( $F_{(3, 117,426)} = 943.03$ ,  $\eta^2 = .153$ ). We examined the association between cumulative GPA and the sample by means of a chi-squared test and by a univariate analysis of variance (ANOVA). Although both statistical tests were statistically significant [ $\chi^2(9, N = 117,430) = 180.72$ ,  $p < .001$ ;  $F_{(3, 117,426)} = 36.83$ ], the *rho* for the crosstabulation was .023 and the *eta* for the ANOVA was .031.

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<sup>1</sup> For more information, visit ACHA's website at <http://acha.org>.

Table 1. Demographics by Sample and Total

Demographic Variable	Fall, 2008 ( <i>N</i> = 18,375)	Spring, 2009 ( <i>N</i> = 58,091)	Fall, 2009 ( <i>N</i> = 21,023)	Fall, 2010 ( <i>N</i> = 19,941)	Total ( <i>N</i> = 117,430)	Effect Size
Female	69.82%	65.42%	65.76%	65.68%	66.21%	.033
Undergraduate year in school						.051
1st year	33.93	28.07	33.65	36.27	31.38	
2nd year	20.18	24.65	21.72	22.88	23.13	
3rd year	23.10	23.19	20.67	21.84	22.50	
4th year	18.20	18.91	17.38	14.33	17.75	
5th year or more	4.59	5.17	6.58	4.67	5.25	
White, non-	79.22	79.28	76.73	68.97	77.05	.090
Hispanic						
Black, non-	6.63	5.06	6.38	7.82	6.01	.044
Hispanic						
Hispanic/Latino	8.60	6.36	6.54	10.48	7.43	.060
Asian/Pacific	9.30	8.77	9.82	13.18	9.80	.053
Islander						
American Indian	1.71	1.24	2.25	2.24	1.66	.036
Bi/Multiracial	4.25	3.61	3.36	3.80	3.69	.014
Other	2.88	2.26	2.10	2.34	2.34	.015
Cumulative GPA						<i>Rho</i> = .023
A	36.04	33.67	32.96	34.78	34.10	<i>Eta</i> = .031
B	52.40	51.45	53.26	51.36	51.91	
C	10.97	14.00	13.27	12.98	13.22	
D/F	0.59	0.88	0.51	0.88	0.77	
Age						
mean	19.62	20.08	19.76	19.53	19.86	<i>Eta</i> =
SD	1.45	1.47	1.60	1.48	1.51	.153

*Note.* Multiple race/ethnic category selections allowed. All crosstabulations are significant at  $p < .001$ . Effect size is *rho*.

## Variables

### *Grades*

We assessed grades by a single item on the survey that asked for the respondent’s approximate cumulative GPA, with possible responses of A, B, C, D/F or N/A. We treated the response of N/A as an invalid response per criterion 5. We recoded the data so that D/F = 1, and A = 4.

### *Ethnicity*

The survey featured seven “select as many as apply” options for race/ethnicity as shown in Table 1. Inspection of the four samples’ endorsement patterns revealed that every possible combination of options was marked including instances in which none was marked and all were marked. We elected to treat the Asian, Black, Hispanic, AI/AN, and White options as primary categories and Biracial/Multiple and Other as secondary categories. Throughout the samples, 491 students marked AI/AN but no other primary categories, and 935 students marked both AI/AN and White but no other primary categories. Some of the 491 AI/AN and the 935 AI/AN–White students marked one

or both of the Biracial/Multiple or Other categories as well. Across the four samples, the percentages of AI/AN students ranged from 0.23% to 0.81% and the percentages of AI/AN–White students ranged from 0.69% to 1.08%. We defined the remaining 115,566 students as the reference group. Among the reference group were students who had marked AI/AN as well as one other primary category; however, their numbers, fewer than 100 in each case, were judged to be too small to be analytically meaningful. In addition, 438 respondents marked no ethnicity options and were scored as missing.

### *Stranger Violence*

The survey asked respondents the following questions regarding whether they had experienced each of seven types of stranger violence in the past year:

1. Were you in a physical fight ( $n = 9,711$ ; 8.29%)?
2. Were you physically assaulted (not including sexual assault) ( $n = 5,641$ ; 4.81%)?
3. Were you verbally threatened ( $n = 27,419$ ; 23.42%)?
4. Were you sexually touched without your consent ( $n = 8,484$ ; 7.25%)?
5. Was sexual penetration attempted (e.g., vaginal, anal, oral) without your consent ( $n = 3,198$ ; 2.73%)?
6. Were you sexually penetrated (e.g., vaginal, anal, oral) without your consent ( $n = 1,865$ ; 1.60%)?
7. Were you a victim of stalking (e.g., waiting for you outside your classroom, residence, or office; repeated emails/phone calls) ( $n = 8,433$ ; 7.22%)?

The respondents were not asked to identify their relationship to the perpetrator(s); thus, the perpetrator(s) may have been an acquaintance, casual or committed romantic/sexual partner or marital partner, or a stranger.

### *Intimate Partner Violence*

The survey featured questions regarding whether the respondents had been in an intimate (coupled/partnered) relationship in the past year that was either of the following:

1. Emotionally abusive (e.g., called derogatory name, yelled at, ridiculed) ( $n = 11,815$ ; 10.10%)
2. Physically abusive (e.g., kicked, slapped, punched) ( $n = 2,757$ ; 2.36%)
3. Sexually abusive (e.g., forced to have sex when you didn't want it, forced to perform an unwanted sexual act performed on you) ( $n = 1,923$ ; 1.65%).

## **Data Analysis**

To examine differences in self-reported academic performance across ethnic groups, we conducted regression analyses. Because it was expected that there would be more differences by gender than by ethnic group, we included ethnicity, gender, and their interaction in the regression model. We examined effect sizes using  $R^2$  and change in  $R^2$  (Tabachnik & Fidell, 2007). We used a chi-squared test and logistic regression analyses to examine the prevalence of SV/IPV across ethnic groups and the odds ratios from the logistic regression analysis to describe effect sizes (Garson, n.d.). We

examined the impact of violence on academic performance in two ways: (1) using T-tests to compare the GPAs of students who had experienced each type of violence to those who had not (Anderson & Finn, 1996), and (2) using Cohen’s d to examine the effect sizes of these differences (Cohen, 1988). Second, we used a series of multiple regressions to examine group differences and each type of violence on academic performance.

## Results

### Variations in self-reported academic performance

Table 2 presents the descriptive statistics for the ANOVA of GPA by ethnicity and gender. We used multiple regressions to examine the independent effects of ethnicity, gender, and their interaction while controlling for sample effects. The “All Else” ethnic group and males were the reference categories for ethnicity and gender, respectively. The equation with only sample contrasts was significant [ $F_{(3, 116988)} = 36.11, p < .001; R = .0304; R^2 = .0093$ ]. Adding the ethnicity contrasts yielded a significant increase in  $R^2$  [ $F_{(2, 116986)} = 29.92, p < .001; \Delta R^2 = .0005; b(\text{AI/AN}) = -0.240 \pm 0.031; b(\text{AI/AN-White}) = -0.030 \pm 0.022$ ]. Adding the gender contrast (female) yielded an additional significant increase in  $R^2$  [ $F_{(1, 116985)} = 556.98, p < .001; \Delta R^2 = .0047; b = -0.099 \pm 0.004$ ]. However, the ethnicity–gender interaction was not significant [ $F_{(2, 116983)} = 1.71, p > .05; \Delta R^2 = .00003$ ]. The results of the final regression equation showed that, compared to the “All Else” reference group, AI/AN students averaged  $0.183 \pm 0.056$  grade points lower, which was significant at  $p < .001$ , but that AI/AN–White students averaged  $0.016 \pm 0.040$  grade points higher, which was not significant. Females averaged  $0.100 \pm 0.004$  grade points higher, which was significant at  $p < .001$ .

Table 2. Cumulative GPA by Ethnicity Category and Gender ( $N = 116,992$ )

Gender	AI/AN	AI/AN-White	All Else	Total
Male				
<i>N</i>	147	298	39063	39508
Mean	2.95	3.14	3.13	3.13
SD	(0.719)	(0.722)	(0.699)	(0.699)
Female				
<i>N</i>	344	637	76503	77484
Mean	2.97	3.18	3.23	3.23
SD	(0.691)	(0.670)	(0.672)	(0.672)
Total				
<i>N</i>	491	935	115566	116992
Mean	2.96	3.17	3.19	3.19
SD	(0.699)	(0.687)	(0.683)	(0.683)

Table 3. Prevalence of Stranger Violence and Intimate Partner Violence by Ethnicity Category

Variable	All Else N = 114,666– 115,311	AI/AN N = 489–491	AI/AN–White N = 930–933	Total N = 116086– 116735	Effect Size ( <i>Rbo</i> )
<b>Stranger violence</b>					
In physical fight	8.24%	11.61%	11.79%	8.28%	.014***
Physically assaulted	4.77%	8.35%	8.05%	4.81%	.017***
Verbally threatened	23.32%	28.22%	34.01%	23.43%	.024***
Touched sexually w/o Consent	7.21%	7.74%	10.83%	7.24%	.012***
Attempted sexual penetration w/o consent	2.72%	3.47%	3.97%	2.73%	.007*
Sexual penetration w/o Consent	1.59%	2.25%	1.94%	1.59%	.004***
Victim of stalking	7.17%	11.63%	11.27%	7.22%	.018***
<b>Intimate Partner Violence</b>					
Emotional	10.06%	14.46%	12.97%	10.10%	.013***
Physical	2.34%	5.70%	2.79%	2.36%	.015***
Sexual	1.64%	1.63%	2.26%	1.65%	.004

\* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ .

### Variations in violence prevalence rates

Because violence differs by the sex and possibly ethnicity of the victim, we crosstabulated the prevalence of the SV/IPV variables by both ethnicity and gender. As Table 3 shows, the prevalence of all types of SV/IPV differed significantly across the three ethnic group categories in the past year. Only the rates of sexual abuse did not differ. Both AI/AN and AI/AN–White students reported markedly higher rates of all types of violence and abuse than did other students. The prevalent rates of the types of SV/IPV were from 7.35% (being touched sexually without consent) to 75.05% (being physically assaulted) higher for AI/AN students and from 19.23% (being physical abused) to 68.76% (being physical assaulted) for AI/AN–White students. Prevalent rates of violence among AI/AN and AI/AN–White students were generally similar, within approximately one percentage point of each other. The largest difference was for the “being verbally threatened” form of abuse, which showed a six percentage point difference with AI/AN–White students being higher (34.01%) than AI/AN students.

By gender, prevalent rates of SV/IPV differ significantly between males and females—except for physical abuse (Table 4). Males reported higher prevalence of having been in a physical fight, and being physically assaulted and verbally threatened. Females reported higher prevalence of all types of sexual contact, stalking, and both emotional and sexual abuse.



Table 4. Prevalence of Stranger Violence and Intimate Partner Violence by Gender

Variable	Males N = 39,343– 39,580	Females N = 77,173– 77,591	Total N = 11,6516– 11,7171	Effect Size ( <i>Rho</i> )
<b>Stranger violence</b>				
In physical fight	15.29%	4.72%	8.29%	.181***
Physically assaulted	6.70%	3.85%	4.81%	.063***
Verbally threatened	32.75%	18.66%	23.42%	.157***
Touched sexually w/o consent	4.18%	8.81%	7.25%	.085***
Attempted sexual penetration w/o consent	0.92%	3.66%	2.73%	.079***
Sexual penetration w/o consent	0.70%	2.05%	1.60%	.051***
Victim of stalking	4.41%	8.65%	7.22%	.077***
<b>Intimate Partner Violence</b>				
Emotional	7.29%	11.53%	10.10%	.067***
Physical	2.41%	2.33%	2.36%	.002
Sexual	0.86%	2.05%	1.65%	.044***

\* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ .

### Ethnic group and gender

While controlling for study contrasts, we used logistic regression to more precisely study the relationship between ethnic group and gender and SV/IPV. We checked for an interaction between ethnic group and gender, but because none of the interaction effects were significant, we omitted them from the results reported in Table 5. Female students were less likely to be involved in physical fights, physically assaulted, or verbally threatened (odds varied between 0.27 and 0.56) but more likely to be the recipient of any of the three forms of nonconsensual sexual contact or be a victim of stalking (odds ranged between 2.04 and 4.05). Female students were also more likely to report experiencing emotional and sexual abuse in a relationship (odds were 1.66 and 2.41, respectively). Female students were as likely as male students to report physical abuse in a relationship.

Compared to other students, both AI/AN and AI/AN–White students were more likely to be involved in physical fights, physically assaulted, or verbally threatened (the odds varied between 1.34 and 1.89). Both groups were also more likely to be a victim of stalking or to be the victim of emotional abuse (odds ranging between 1.33 and 1.67). American Indian/Alaska Native–White students, but not AI/AN students, were more likely to report nonconsensual touching and attempted penetration. On the other hand, AI/AN students, but not AI/AN–White students, were more likely to report physical abuse in a relationship. Neither group was more likely than other students to report nonconsensual sexual penetration or sexual abuse in a relationship.

Table 5. Ethnic Group, Gender, and Their Interaction as Predictors of Stranger Violence and Intimate Partner Violence Controlling for Background Variables

Stranger Violence						
Equation term	In physical fight		Physically assaulted		Verbally threatened	
	B±SE	OR	B±SE	OR	B±SE	OR
Constant	-1.757±0.030	0.17***	-2.703±0.039	0.07***	-0.691±0.020	0.50***
Study18_19	0.044±0.032	1.04	0.091±0.041	1.09*	-0.035±0.020	0.97
Study18_20	0.080±0.038	1.08*	0.061±0.048	1.06	-0.006±0.024	0.99
Study18_22	0.014±0.039	1.01	0.011±0.049	1.01	-0.080±0.025	0.92***
AI/AN	0.448±0.145	1.56**	0.635±0.164	1.89***	0.295±0.102	1.34**
AI/AN-White	0.439±0.105	1.55***	0.576±0.122	1.78***	0.555±0.071	1.74***
Female	-1.295±0.022	0.27***	-0.584±0.028	0.56***	-0.757±0.014	0.47***
Equation term	Touched sexually w/o consent		Attempted sexual penetration w/o consent		Sexual penetration w/o consent	
	B±SE	OR	B±SE	OR	B±SE	OR
Constant	-3.059±0.036	0.05***	-4.605±0.066	0.01***	-4.882±0.080	0.01***
Study18_19	-0.035±0.032	0.97	-0.057±0.050	0.94	-0.106±0.066	0.90
Study18_20	-0.157±0.039	0.85***	-0.101±0.061	0.90	-0.030±0.078	0.97
Study18_22	-0.196±0.040	0.82***	-0.156±0.063	0.86*	-0.101±0.081	0.90
AI/AN	0.089±0.170	1.09	0.236±0.249	1.27	0.316±0.307	1.37
AI/AN-White	0.444±0.107	1.56***	0.377±0.169	1.46*	0.179±0.240	1.20
Female	0.793±0.028	2.21***	1.398±0.056	4.05***	1.086±0.066	2.96***
Equation term	Victim of stalking					
	B±SE	OR				
Constant	-3.057±0.036	0.05***				
Study18_19	-0.024±0.033	0.98				
Study18_20	0.007±0.039	1.01				
Study18_22	-0.074±0.040	0.93				
AI/AN	0.515±0.142	1.67***				
AI/AN-White	0.487±0.105	1.63***				
Female	0.714±0.028	2.04***				
Intimate Partner Violence						
Equation term	Emotional		Physical		Sexual	
	B±SE	OR-Sig	B±SE	OR-Sig	B±SE	OR-Sig
Constant	-2.524±0.030	0.08***	-3.722±0.057	0.02***	-4.837±0.079	0.01***
Study18_19	-0.005±0.028	1.00	0.038±0.056	1.04	0.116±0.068	1.12
Study18_20	-0.082±0.034	0.92*	-0.090±0.069	0.91	0.118±0.081	1.13
Study18_22	-0.035±0.034	0.97	0.050±0.067	1.05	0.052±0.083	1.05
AI/AN	0.414±0.129	1.51***	0.945±0.196	2.57***	-0.036±0.358	0.96
AI/AN-White	0.284±0.098	1.33**	0.190±0.200	1.21	0.311±0.222	1.36
Female	0.505±0.022	1.66***	-0.033±0.041	0.97	0.880±0.060	2.41***

### Violence, abuse, and GPA

To measure the effect of violence or abuse on GPA, we conducted a series of T-tests (Table 6). The relationship was significant for all types of violence and abuse. Students who had experienced any type of violence had a lower GPA than those who had not. The effect size varied, at least numerically, with physically violent experiences yielding a larger effect size (0.32 to 0.37) than

nonconsensual sexual penetration (0.23), which was similar to that of being verbally threatened or having experienced emotional abuse (0.25 and 0.24, respectively).

### Combined models

To study the correlation between ethnicity, gender, and violence/abuse and GPA, we conducted one multiple regression for each violence/abuse measure. The basic model consisted of the study contrasts, the two ethnicity contrasts, the female contrast, and a violence or abuse measure. Relative to the model with only the study contrasts, the addition of the two ethnicity contrasts and the female contrast yielded a significant  $R^2$  increment of .00052 or .00053, depending on the specific violence/abuse variable to be added later. The AI/AN and female contrast terms were significant in each model, but the AI/AN–White term was not. Adding the violence/abuse measure resulted in a significant  $R^2$  change from .0009 (attempted sexual penetration without consent) to .0089 (verbally threatened).

With this basic model structure, we tested separately whether each of three interaction terms added significantly to the equation  $R^2$ : ethnic group by female, ethnic group by violence or abuse type, and female by violence or abuse type. Thus, we sought to identify whether incremental impacts on GPA accrued for students having pairwise combinations of the three independent variable groups. We found that adding the ethnic group by female interaction did not yield a significant increment in  $R^2$ . We also found that adding the ethnic group by violence or abuse type interaction did not yield a significant increment in  $R^2$ . However, we did find that adding the female by violence/abuse type interaction did yield a significant increment in  $R^2$  for some, but not all, violence/abuse measures (Table 7).

Table 6. GPA by Stranger Violence and Intimate Partner Violence Type

Variable	Not Reported		Reported		Effect size
	N	Mean (SD)	N	Mean (SD)	
Stranger violence					
In physical fight***	107,460	3.21 (0.68)	9,711	2.96 (0.70)	.368
Physically assaulted***	111,516	3.20 (0.68)	5,641	2.98 (0.71)	.323
Verbally threatened***	89,661	3.23 (0.67)	27,419	3.06 (0.70)	.250
Sexually touched w/o consent***	108,596	3.20 (0.68)	8,484	3.11 (0.71)	.132
Sexual penetration attempted w/o consent***	113,821	3.20 (0.68)	3,198	3.09 (0.71)	.161
Sexually penetrated w/o consent***	115,015	3.20 (0.68)	1,865	3.04 (0.73)	.234
Victim of stalking***	108,378	3.20 (0.68)	8,433	3.10 (0.71)	.147
Intimate Partner Violence					
Emotional***	105,188	3.21 (0.68)	11,815	3.05 (0.71)	.235
Physical***	114,126	3.20 (0.68)	2,757	2.96 (0.75)	.352
Sexual***	114,593	3.20 (0.68)	1,923	3.08 (0.73)	.176

Effect size is  $d$ . \*\*\* $p < .001$ .

Table 7. Ethnic Group, Female, Stranger Violence and Intimate Partner Violence and Interaction as Predictors of GPA

Variable	B±SE (Beta)	Variable	B±SE (Beta)
Constant	3.200±0.006	Constant	3.171±0.006
Study18_19	-.054±0.006 (-.039)***	Study18_19	-.054±0.006 (-.040)***
Study18_20	-.045±0.007 (-.025)***	Study18_20	-.046±0.007 (-.026)***
Study18_22	-.032±0.007 (-.018)***	Study18_22	-.033±0.007 (-.018)***
AI/AN	-.232±0.031 (-.022)***	AI/AN	-.237±0.031 (-.022)***
AI/AN-White	-.020±0.022 (-.003)	AI/AN-White	-.030±0.022 (-.004)
Female	.081±0.004 (.056)***	Female	.101±0.004 (.070)***
Physical fight	-.205±0.009 (-.083)***	Sexual penetration	-.204±0.041 (-.037)***
Female by Physical fight	-.063±0.015 (-.016)***	Female by Sexual penetration	.039±0.045 (.007)
Constant	3.182±0.006	Constant	3.175±0.006
Study18_19	-.053±0.006 (-.039)***	Study18_19	-.054±0.006 (-.039)***
Study18_20	-.046±0.007 (-.026)***	Study18_20	-.046±0.007 (-.026)***
Study18_22	-.032±0.007 (-.018)***	Study18_22	-.033±0.007 (-.018)***
AI/AN	-.232±0.031 (-.022)***	AI/AN	-.235±0.031 (-.022)***
AI/AN-White	-.022±0.022 (-.003)	AI/AN-White	-.025±0.022 (-.003)
Female	.095±0.004 (.066)***	Female	.104±0.004 (.072)***
Physically assaulted	-.193±0.014 (-.060)***	Victim of stalking	-.127±0.017 (-.048)***
Female by Physically assaulted	-.026±0.019 (-.006)	Female by Victim of stalking	.011±0.019 (.004)
Constant	3.215±0.006	Constant	3.183±0.006
Study18_19	-.055±0.006 (-.040)***	Study18_19	-.055±0.006 (-.040)***
Study18_20	-.047±0.007 (-.026)***	Study18_20	-.048±0.007 (-.027)***
Study18_22	-.034±0.007 (-.019)***	Study18_22	-.033±0.007 (-.018)***
AI/AN	-.231±0.031 (-.022)***	AI/AN	-.232±0.031 (-.022)***
AI/AN-White	-.012±0.022 (-.002)	AI/AN-White	-.025±0.022 (-.003)
Female	.086±0.005 (.060)***	Female	.107±0.004 (.074)***
Verbally threatened	-.136±0.007 (-.085)***	Emotional abuse	-.172±0.013 (-.076)***
Female by Verbally threatened	-.030±0.010 (-.015)**	Female by Emotional abuse	-.001±0.015 (.000)
Constant	3.176±0.006	Constant	3.174±0.006
Study18_19	-.054±0.006 (-.040)***	Study18_19	-.054±0.006 (-.039)***
Study18_20	-.047±0.007 (-.027)***	Study18_20	-.047±0.007 (-.027)***
Study18_22	-.033±0.007 (-.018)***	Study18_22	-.032±0.007 (-.018)***
AI/AN	-.239±0.031 (-.023)***	AI/AN	-.231±0.031 (-.022)***
AI/AN-White	-.026±0.022 (-.003)	AI/AN-White	-.028±0.022 (-.004)
Female	.102±0.004 (.071)***	Female	.101±0.004 (.070)***
Touched sexually	-.142±0.017 (-.054)***	Physical abuse	-.184±0.022 (-.041)***
Female by Touched sexually	.045±0.019 (.015)*	Female by Physical abuse	-.075±0.028 (-.013)**
Constant	3.171±0.006	Constant	3.170±0.006
Study18_19	-.054±0.006 (-.040)***	Study18_19	-.054±0.006 (-.040)***
Study18_20	-.047±0.007 (-.026)***	Study18_20	-.046±0.007 (-.026)***
Study18_22	-.033±0.007 (-.018)***	Study18_22	-.032±0.007 (-.017)***
AI/AN	-.239±0.031 (-.023)***	AI/AN	-.240±0.031 (-.023)***
AI/AN-White	-.028±0.022 (-.004)	AI/AN-White	-.029±0.022 (-.004)

Variable	B±SE (Beta)	Variable	B±SE (Beta)
Female	.102±0.004 (.071)***	Female	.101±0.004 (.070)***
Attempted sexual penetration	-.150±0.036 (-.036)***	Sexual abuse	-.143±0.037 (-.027)***
Female by Attempted sexual penetration	.024±0.038 (.005)	Female by Sexual abuse	.019±0.041 (.003)

As shown in Table 7, the female by violence/abuse measure was significant for four of the 10 measures. Interpretively, female students who had been involved in a physical fight lost an additional 0.063 grade points compared to males who had been involved in a physical fight. Female students who had been verbally threatened lost an additional 0.030 grade points compared to males who had been verbally threatened. Female students who reported physical abuse in a relationship lost an additional 0.075 grade points compared to males who reported the same event. In contrast to the preceding results, male students who were touched sexually without consent lost an additional 0.045 grade points compared to females who reported the same event.

### Discussion

This study examines the impact of SV/IPV on the self-reported academic performance of AI/AN students and students of other ethnic backgrounds. To date, such examinations are rare as AI/AN students are underrepresented in higher education (Aud, Fox, & KewalRamani, 2010; Patterson, Butler-Barnes, & Van Zile-Tamsen, 2015). Thus, the presence of an AI/AN student subsample is an important contribution to the epidemiological examination of SV/IPV among student populations. Not surprisingly, students who identified fully or partially as AI/AN reported markedly higher rates of all types of violence/abuse than did other students. Furthermore, students who had experienced violence/abuse had lower GPAs than those who had not. The prevalence of exposure to violence/abuse types was gendered, as noted in other violence studies that rely on college student samples (Dahlen, Czar, Prather, & Dyess, 2013; Hines, Armstrong, Reed, & Cameron, 2012; Rutter, Weatherill, Taft, & Orazem, 2012). Moreover, the interaction effect of female and violence type on GPA was significant for AI/AN students.

### Limitations

As with any research, there are limitations to this study. This study is based on self-reported information, which could result in inaccuracies. It is unknown whether students sought help or received services. Furthermore, the students most affected by violence/abuse may not have remained in college or even sought higher education.

### Conclusions

Historically, SV/IPV studies have centered on the impact of such violence/abuse primarily on women; however, since the emergence of third-wave feminism, SV/IPV is being considered in the framework of multiple identities in contextualized locales (Damant et al., 2008; George & Stith, 2014; Kuokkanen, 2008; Samuels & Ross-Sheriff, 2008). Further exploratory research should move beyond the cross-sectional and limited factors deployed in this study and examine contextualized factors pertinent to the AI/AN student narrative. In particular, longitudinal studies should test mental health causal pathways (i.e., mediational models) for the SV/IPV-academic performance

nexus to inform prevention and intervention efforts for ethno–racial minority student populations. This is especially important considering college counseling centers may not be deploying culturally competent services for these groups (Patterson, Dulmus, Maguin, & Perkins, 2014; Stewart, Swift, Freitas-Murrell, & Whipple, 2013).

With regard to practice, student service professionals on college and university campuses should be educated in the life experiences with which students from AI/AN populations enter their systems. The impact of violence/abuse on academic performance has little to do with the race or gender of the victim. American Indian/Alaska Natives students suffer similarly to any human experiencing violence/abuse. However, it is this population who experiences the highest risk of victimization.

Having accepted AI/AN students into their systems, universities have essentially indicated that these enrolled students have the right to seek scholarship on equal terms as every other student. When a specific group of students experiences similar rates of a serious disease (e.g., small pox), major investigation efforts are made, regardless of the region or overall university system. The same should be true for the public health problem of SV/IPV currently affecting AI/AN students.

These findings are timely given the national push to address violence on college campuses (Dupain, M., & Lombardi, 2014; Paludi, 2008; Stuart, 2014). Though campuses should be safe places for all individuals to become educated and improve their life circumstances, there should be targeted prevention and awareness activities for those who are at the highest risk to experience violence/abuse.

Protecting the most vulnerable individuals on college campuses is not only a social justice issue; ensuring that AI/AN students—the smallest, most underrepresented group in U.S. colleges—are free to pursue a higher education without the burden of being physically and sexually assaulted is a civil rights issue.

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### **Suggested Citation**

Patterson, D. A., Perkins, J., & Van Zile-Tamsen, C. (2015). *Impact of stranger violence and intimate partner violence on the grades of American Indian/Alaska Native undergraduate college students* (CSD Working Paper No. 15-32). St. Louis, MO: Washington University, Center for Social Development.

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