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Author(s): Byongook Moon, Ph.D., John McCluskey,

Ph.D.

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A Longitudinal Study of Teacher Victimization at Schools: Prevalence, Predictors, and Negative Consequence

Final Report

Report submitted to the National Institute of Justice

Byongook Moon, Ph.D., University of Texas San Antonio John McCluskey, Ph.D., Rochester Institute of Technology

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Overview

This report provides an overview of the research project A Longitudinal Study of Teacher Victimization at Schools: Prevalence, Predictors, and Negative Consequence, funded under Award No. 2017-CK-BX-0010. Below the primary goals and objectives of the present research are introduced and the sample and data collection are discussed. In the result section, we explore the trends and patterns of seven different types of teacher victimization over four years. The results of multivariate analyses, specifically focusing on victimizations via verbal abuse and non-physical contact aggression, are presented to understand risk factors related to victimization.

Also, by focusing on teacher victimization via physical assault at Wave III, the report examines the percentage of teachers reporting victimizations to school administrators, school responses to teacher victimization, and satisfaction with school handling of victimization incidents. Finally, we investigate the effect of procedural justice on 1) victimized teachers' satisfaction with school responses, 2) physical distress, and 3) emotional distress. Conclusions and policy implications from the research are briefly discussed.

Five peer-reviewed papers that are accepted or under review for publication in academic journals are included as appendices. These papers represent in-depth investigations of the primary research goals addressed under this award. Also, the key findings from each of these papers are briefly summarized.

Primary goals and objectives of the project

A growing number of empirical studies (Curran, Viano, & Fisher, 2019; Dzuka & Dalbert, 2007; Huang, Eddy, & Camp, 2020; Martinez, McMahon, Espelage, & Anderman, 2016; Moon, Morash, Jang, & Jeong, 2015; Wilson, Douglas, & Lyon, 2011) have examined the prevalence of teachers' victimization in schools and these findings suggest that it is a serious problem deserving further examination to increase our understanding of physical, emotional and/or psychological violence directed against teachers. Despite the seriousness and importance of the issue in the context of developing and maintaining a safer school environment, it is surprising that to the best of our knowledge, no extensive multi-wave panel research has been implemented to investigate the trend and stability of teacher victimization, school responses to teacher victimization in the context of procedural justice, and negative consequences. The present research, using a representative sample of middle and high school teachers in a large metropolitan area in Texas, attempts to address these limitations by investigating trends and predictors of teacher victimization, negative consequences of teacher victimization, and school administrators' responses to teacher victimization. We believe that the current research can further inform policymakers and school administrators in developing and implementing comprehensive intervention and counseling programs, particularly those aimed specifically at repeatedly victimized teachers. Also, the research provides valuable information in understanding how school administrations respond to teacher victimization and whether victimized teachers are satisfied or dissatisfied with the outcome due to identifiable elements of the administrative intervention particularly within the context of procedural justice.

Research Design and Methods

Data collection and sample

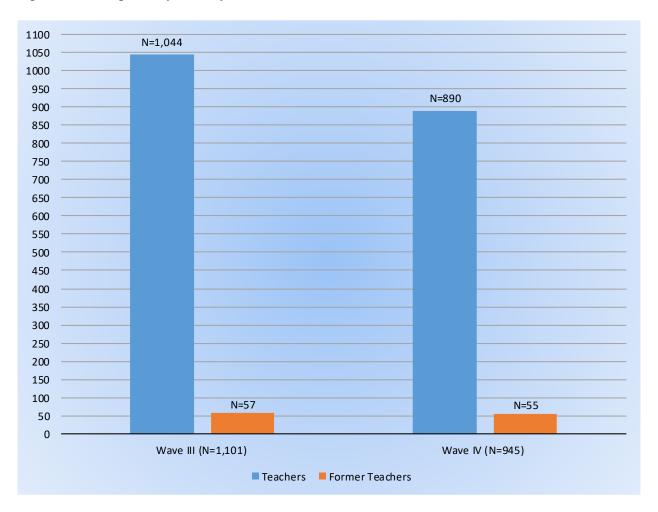
The present Waves III and IV research (2018 and 2019) is a continuation of the NIJ funded two-year longitudinal research (Waves I and II in 2016 and 2017, Grant No. 2015-CK-BX-0019). In 2016, a stratified multistage cluster sampling design was employed to collect a representative sample of middle and high school teachers in a metropolitan area in Texas. With a secure web-based survey system (Qualtrics), randomly selected teachers were invited to participate in the survey, which took approximately 30 minutes to complete. To encourage and compensate teachers' voluntary participation outside of their work, participants received an e-gift card (\$30) via a third party after the completion of a survey at each wave. Overall, 3,102 teachers opened the electronic invitation. Among them, 1,948 teachers voluntarily participated in the survey and

Table 1: Descriptive Statistics of the sample at Wave III (N = 1,101)

Gender	Percentage	Number
Male	29 %	322
Female	71 %	779
Race		
White	50 %	554
Hispanic	41 %	455
Black	5 %	50
Other	4 %	42
Duration of Career		
2-7 years	25 %	275
8-12 years	28 %	303
13 – 47 years	48 %	523

1,628 teachers from 130 middle and high schools in 14 school districts completed the Wave I online survey. The overall response rate among confirmed recipients was 52 percent. The first wave data collection period lasted approximately 3 months from late March to June 2016. At an interval of approximately one-year, the Wave II data collection was implemented and 1,317

Figure 1: Participants by mobility at Waves III and IV



participants completed a Wave II survey, yielding a retention rate of 81 percent. Among 1,317 participants, 1,239 were current teachers and 78 participants were former teachers who were excluded from Waves III and IV research. In spring 2018, 1,101 among 1,239 eligible participants completed the Wave III web-based survey, having a retention rate of 89 percent from Wave II to Wave III research. Of 1,101 participants at Wave III, 57 participants were former teachers and were not eligible for further participation at Wave IV research. In spring 2019, 945 out of 1,044 participants continued to participate and completed the Wave IV survey, yielding a retention rate of 91 percent from Wave III to Wave IV. For former teachers at each

wave, separate question items were used to examine whether teacher victimization, school safety, and/or school's responses to teacher victimization were related to the career exit decision.

Key Results

Figure 2 shows the prevalence of seven types of teacher victimization from Waves I to IV. The results indicate that relatively less severe victimization such as verbal abuse (approximately 45%) and non-physical contact aggression (ranging from 29% to 35%) was most common, while relatively more severe victimization such as physical assault (ranging from 5% to 8%) and sexual harassment (ranging from 6% to 11%) was less prevalent over the four waves. Regarding the trends of the prevalence of various types of teacher victimization, the results indicate that the

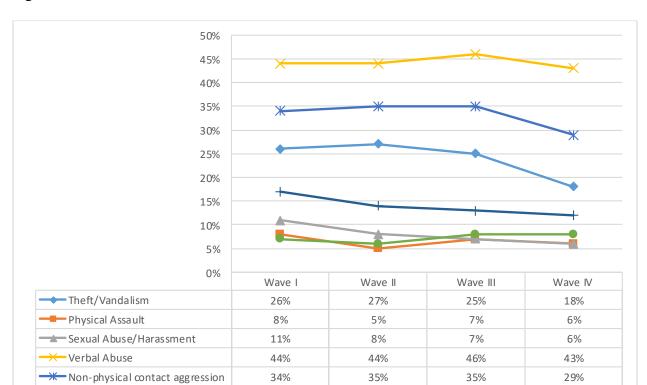


Figure 2. Trend of teacher victimization from Waves 1 to IV

Cyber bullying

In-person bullying

6%

14%

8%

13%

8%

12%

7%

17%

prevalence of victimization via verbal abuse, cyberbullying, and physical assault remain stable from Waves I to IV, while the prevalence of victimizations via theft/vandalism, non-physical contact aggression, and in-person bullying were leveling off between Waves I and III and then decreased notably from Waves III to IV.

Figure 3 shows the descriptive patterns of five distinct subgroups of teacher victimization, including non-victim, low-stable, and high-stable groups, based on the results of the group-based trajectory modeling. The findings indicate that 17 percent of participants (non-

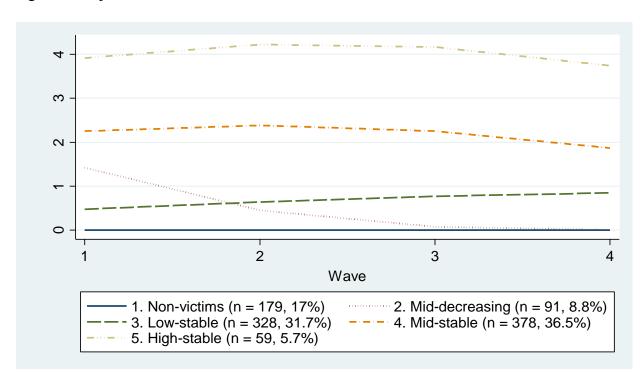


Figure 3. Trajectories of Teachers' Victimization.

victim group) in the sample reported no victimization experience over the four-year period. The mid-decreasing group (approximately 9 percent of the participants in the sample) reported a sharp decreasing victimization trajectory at Wave II and had almost no experience of victimization after Wave III. The low-stable group, comprising almost 32 percent of participants

in the sample, was found to experience approximately 0.5 to 1 types of victimization at each Wave. The mid-stable group comprised the largest proportion of the sample (approximately 37%), experiencing consistent victimization over time with an average of two different types of victimization at each Wave. Finally, the high-stable group, comprising around 6 percent of participants in the sample, reported persistently higher levels of victimization with an average of four different types of victimization annually (See Appendix B for further information on the trajectory of teacher victimization and its risk factors).

Predictors of teacher victimization (Verbal abuse and non-physical contact aggression)

To investigate the effects of teacher and school characteristics on teacher victimization

experiences (focusing on verbal abuse and non-physical contact aggression victimization as they most frequently observed), we employ negative binomial regression models, given the nature of the dependent variable as count events and positively skewed distribution of victimization.

In Tables 2 and 3, the results from negative binomial models predicting verbal abuse (Table 2) and non-physical contact aggression victimization (Table 3) are presented. In each table, Model 1 is a multilevel negative binomial regression model, while Model 2 is a negative binomial regression model controlling for school fixed effects. Teacher socio-demographic characteristics, three measures on teacher interaction with students at the classroom, teacher activities outside of the classroom, measures on teachers' perception toward school, school

characteristics, and prior victimization experience are measured and included as independent

variables. Reference categories are not displayed for gender (male), race/ethnicity (White),

school).

education level (Bachelor's degree), teaching subjects (general education), and school level (high

The findings in Table 2 indicate that none of the teacher socio-demographic factors and measures on teachers' interactions with students is significantly related to verbal abuse

Table 2. Predicting teacher victimization via verbal abuse

		Frequency			
	Mo	Model 1		Model2	
	IRR	SE	IRR	SE	
Individual Level					
Female	1.064	.166	.980	.155	
Hispanic	.832	.116	.863	.127	
Black	.666	.225	.983	.420	
Otherrace	1.755	.619	1.594	.610	
Advanced degree	.977	.131	.854	.116	
Years of teaching experience	1.005	.008	1.003	.009	
Special education	.930	.190	.956	.194	
Physical education	.994	.308	.950	.307	
Prior verbal abuse	1.103***	.014	1.106***	.014	
Activities outside of classroom					
Sponsoring student groups	1.167	.157	1.161	.165	
Coaching a sport club	1.338	.297	1.532	.358	
Coaching a UIL team	.677	.139	.706	.159	
Otheractivities	1.188	.246	1.551*	.336	
Teacher interaction with students					
Helping/Friendly	.996	.068	1.034	.076	
Uncertain behavior	.997	.077	1.129	.091	
Strict	1.024	.075	.978	.075	
Teacher's perception toward school					
Administrative support	1.005	.091	.987	.093	
Student disengagement	1.538***	.145	1.618***	.161	
Schooldiscipline	.858	.078	.896	.086	
School level					
Middle school	2.079**	.475			
Student enrollment	1.336	.304			
Disadvantaged student populations	1.092	.093			
School fixed effects	Ŋ	No	Yes		
Number of observations	8	51	8	390	

Note. IRR = incidence-rate ratio; SE = standard error.

victimization. The only significant predictor among teachers' perceptions toward schools is teachers' perception toward students' disengagement. A one standard deviation increase in the scale of teachers' perceived perception of students' disengagement is associated with 1.5 times higher expected verbal abuse victimization counts. Also, middle school teachers are more often

^{*}p < .05; **p < .01; ***p < .001 (two-tailed).

to experience victimization via verbal abuse by students, compared to their counterparts in high schools. The verbal abuse victimization counts for middle school teachers are expected to be 2.1 times greater than their high school counterparts.

The findings in Table 3 indicate that two teachers' socio-demographic characteristics are significantly related to teacher victimization via non-physical contact aggression. Compared

Table 3. Predicting teacher victimization via non-physical contact aggression

	1 7	Frequency			
	Mod	Model 1		del2	
	IRR	SE	IRR	SE	
Individual Level					
Female	1.041	.203	1.004	.199	
Hispanic	.753	.134	.828	.155	
Black	.757	.313	1.035	.499	
Other	1.748	.784	1.986	.935	
Advanceddegree	.762	.132	.691*	.119	
Years of teaching experience	1.019	.011	1.020	.011	
Special education	1.859**	.436	1.616	.399	
Physical education	.396**	.169	.491	.218	
Prior non-contact aggression	1.234***	.037	1.244***	.039	
Activities outside of classroom					
Sponsoring student groups	1.283	.213	1.141	.206	
Coaching a sport club	1.245	.345	1.259	.372	
Coaching a ÚIL team	.775	.197	.885	.253	
Otheractivities	1.353	.347	1.298	.351	
Teacher interaction with students					
Helping/Friendly	.903	.075	.887	.078	
Uncertain behavior	.973	.091	1.045	.102	
Strict	1.125	.111	1.000	.099	
Teacher's perception toward school					
Administrative support	.973	.105	1.053	.124	
Student disengagement	1.634***	.196	1.833***	.233	
Schooldiscipline	.864	.095	.905	.109	
School level					
Middle school	3.065***	.907			
Student enrollment	1.333	.384			
Disadvantaged student populations	.971	.108			
School fixed effects	N	o	Y	es	
Number of observations	85	51	8	90	

Note. IRR = incidence-rate ratio; SE= standard error.

^{*}p < .05; **p < .01; ***p < .001 (two-tailed).

with their counterparts who only hold a BA degree, the non-physical contact aggression victimization counts for those teachers with an advanced degree are expected to decrease by a factor of 0.7, while holding all other variables in the model constant. Also, special education teachers are more likely to report their victimization of non-physical contact aggression by students, compared to teachers who teach general education subjects. The non-physical contact aggression victimization counts for special education teachers are expected to be 1.9 times greater than general education teachers. Similar to the results of verbal abuse victimization, teachers' perceptions toward students' engagement at school and middle school teachers are significantly associated with non-physical contact aggression victimization in the expected directions. A one standard deviation increase in the scale of teachers' perceived perception of students' disengagement is associated with 1.6 times higher expected non-physical contact victimization counts, while the non-physical contact victimization counts for middle school teachers are expected to be 3.1 times greater than their high school counterparts.

Victimized teachers' reports to school officials and satisfaction with school responses: Physical assault victimization as an example

At each wave, participants were asked about their experience of seven different types of victimization (ranging from verbal abuse, physical assault, to bullying) by students and/or students' parents at school. To understand the percentage of teacher victimization reported to the school and whether victimized teachers were satisfied with school responses, we focused on teachers' victimization via physical assault at Wave III, as it is a relatively severe form of victimization.

The results in Figure 4 indicate that 70 teachers (out of 1,044 current teachers) reported experiencing physical assault victimization at Wave III. Almost three-quarters of teachers victimized via physical assault reported their victimization to school and/or school police officers, while 26 percent (N=18) did not report their victimization to school and reported doing nothing or handling incidents by themselves. Victimized teachers who reported their

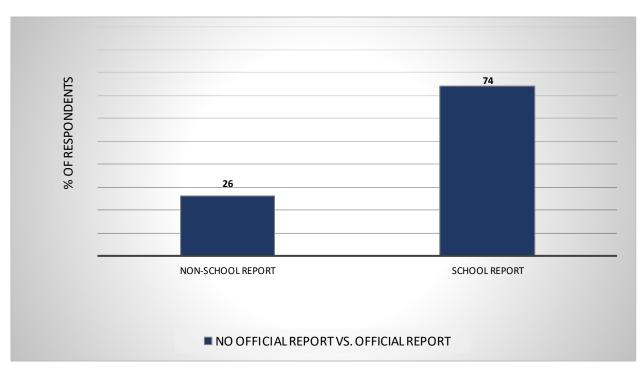


Figure 4: Percentage of physical assault victimization reported to school at Wave III (N: 70)

victimization to the school were asked to share their perceptions regarding how school officials handled their victimization cases. The response options were that the school officials (a) did nothing, (b) questioned offender(s), (c) disciplined offender(s), (d) reported the incident to police, and/or (e) notified parents/caregivers. Respondents were allowed to select all response options that were applied. The results in Figure 5 indicate that approximately 50 percent of respondents reported school administrators questioning or disciplining offending students

respectively, while 21 percent of them indicate that school officials reported the incidents to school police. Approximately eight percent of victimized teachers reported no action taken by school administrators in response to their physical assault victimization.

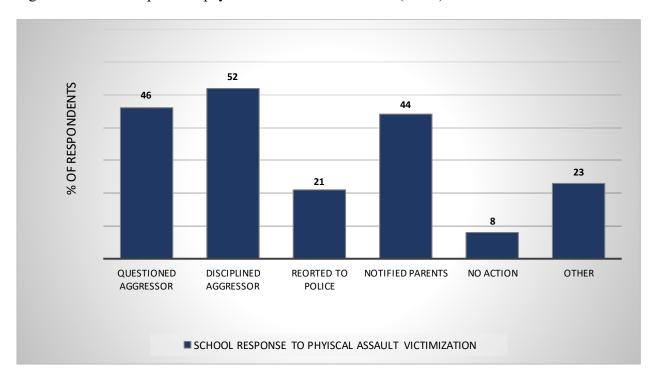


Figure 5: School response to physical assault victimization (N=52)

Regarding victimized teachers' satisfaction with school handling of their physical assault victimization, the results in Figure 6 show that 48 percent of respondents were very dissatisfied or dissatisfied with schools' handling of their victimization, while 52 percent of them reported their satisfaction with school responses to their physical assault victimization.

Figure 6: Victimized teachers' satisfaction with the school handling of physical assault victimization (N=52)

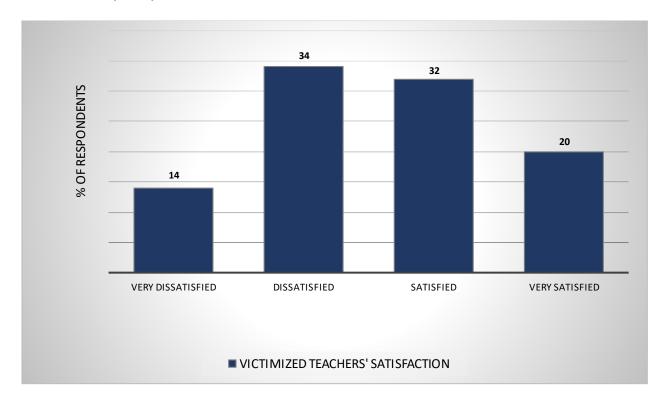
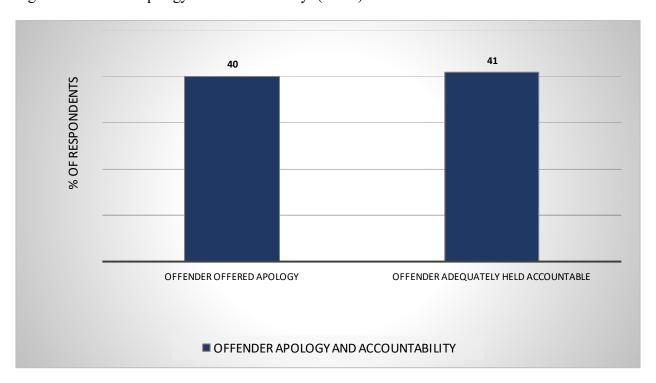


Figure 7: Offender apology and accountability (N=52)



Furthermore, all victimized teachers via physical assault at Wave III were asked whether offending students offered an apology to them and whether they believed that offending students were held accountable. The findings in Figure 7 indicate that 40 percent of victimized teachers via physical assault had received an apology from an offending student(s), while 41 percent of victims believed that offending students were held accountable for their physical assault directed against teachers.

Physical and emotional distress in response to victimization

Figure 8 indicates victimized teachers' physical and emotional distress in response to the experience of theft and assault victimization at school. Physical distress is measured with seven

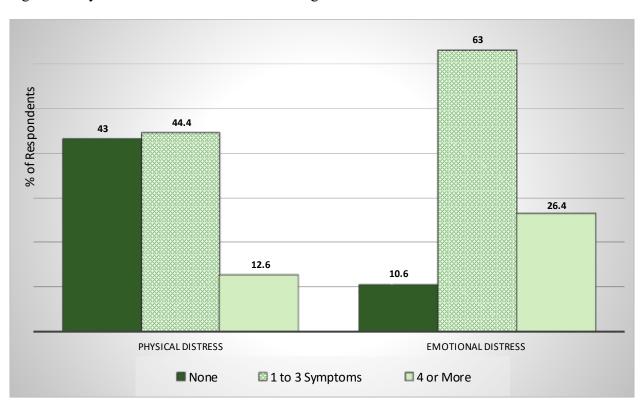


Figure 8. Physical and emotional distress among victimized teachers

items including whether victims experienced headaches, trouble sleeping, changes in eating or drinking habits, upset stomach, fatigue, muscle tension/back pain, or other physical problems after experiencing victimization. Emotional distress comprises victims' experience of various types of negative emotions such as worry/anxiety, anger, sadness/depression, vulnerability, violation, reduced trust in students, or feeling unsafe in response to victimization. The results show that 43 percent of the victims did not experience any type of physical distress, while 44 percent and 13 percent of the victims reported suffering from 1 to 3 symptoms and 4 or more symptoms respectively. For emotional distress, the results indicate that approximately 90 percent of the victims reported experiencing at least one type of emotional distress after the experience of victimization at school.

The effect of procedural justice on teachers' satisfaction with school responses

This section corresponds to Appendix D ("Victimized Teachers' Perceptions of Procedural Justice and the Impact on Satisfaction with School Responses") and presents bivariate results to illustrate the link between procedural justice and satisfaction. To understand victimized teachers' satisfaction with the school's intervention within the context of procedural justice, a two-dimensional cross-tabulation was performed. At Waves 2, 3, and 4, teachers who reported their victimization incident to school administrators were asked whether school authorities handled their victimization with quality of decision-making and quality of treatment, which are key elements of procedural justice posited by Tyler. A procedural justice index was constructed by summing 13 items, adapted from those explored by Reisig et al. (2007), and was categorized into three groups (low, medium, and high) for the analyses in the present report. The analyses focus on teachers' evaluation of incident responses and satisfaction with school administration responses to 638 events recorded across the three waves, with the possibility of teachers

reporting more than one event. Overall, the events included 117 reported sexual harassment incidents (18.3%), 370 theft incidents (58%), and 151 physical assaults (23.7%).

The results in Table 4 present victimized teachers' satisfaction with school responses for low, medium, and high levels of procedural justice. As expected, victimized teachers' perceived procedural justice is highly correlated with satisfaction with school responses. While 35 percent

Table 4. Satisfaction with School Responses Cross-Tabulated with Procedural Justice (N=638)

	Procedural Justice			
	Low	Middle	High	Total
Satisfaction with School Responses	25%	26%-74%	25%	10141
	6 . 60.4	4.4.007	2.60/	22 50 (
Very Dissatisfied	65.6%	14.2%	2.6%	23.5%
	(99)	(47)	(4)	(150)
Dissatisfied	30.5%	36.9%	2.6%	27.0%
	(46)	(122)	(4)	(172)
Satisfied	4.0%	43.8%	59.6%	38.2%
	(6)	(145)	(93)	(244)
Very Satisfied	0.0%	5.1%	35.3%	11.3%
	(0)	(17)	(55)	(72)
m . 1	100.0%	100.0%	100.0%	100.0%
Total	(151)	(331)	(156)	(638)

 $\overline{X^2 = 377.3, (6.d.f.)}, p < .001$

of victimized teachers reporting experiencing relatively high procedural justice were very satisfied with school responses, compared with no teachers whose reports were consistent with experiencing low procedural justice. Moreover, only 8 percent of victimized teachers in a high procedural justice group reported their dissatisfaction (dissatisfied and very dissatisfied) with schools' handling of their victimization cases, while 96 percent of victimized teachers in a low procedural justice group were dissatisfied with schools' responses.

The effect of procedural justice on victimized teachers' physical/emotional distress

This section corresponds to Appendix A ("Aggression toward Teachers and negative consequences: The moderating effects of procedural justice") and presents bivariate results to illustrate the link between procedural justice and physical and emotional distress reported by victimized teachers. To understand the relationship between these outcomes and procedural justice reported by victimized teachers, a pair of two-dimensional cross-tabulation were performed. At Waves 2, 3, and 4, teachers who reported their victimization theft or assault incident to school administrators were asked whether those authorities handled their victimization with quality of decision-making and quality of treatment and a categorical variable identical to that above was computed for these analyses. The data extraction choice prioritized identification of individuals (as compared to incidents above) who experienced assaults, as such 120 individuals reporting assaults across waves two through four were first identified and the first wave in that series where an assault was reported was used to examine the consequences of victimization. Those cases were extracted and coded for analysis. Of the 120 teachers reporting assaults, 40% (N=48) reported contemporaneous or prior wave thefts. This choice recognizes the importance of understanding the sequelae of personal victimization and maximizing the size of the sample of assault victims. Regarding thefts, 229 teachers reported victimization to administration during the three-year period and represent those who experienced property victimization for a total of 349 events. The results in Table 5 show the level (variety) of physical distress among victimized teachers for low, middle, and high levels of procedural justice. The findings indicate that 5 percent of victimized teachers in the high procedural justice group reported experiencing four or more symptoms of physical distress, while 26 percent of those in

Table 5. Physical Distress Cross-Tabulated with Procedural Justice (N=349)

Physical Distress	Procedural Justice			
	Low 25%	Middle 26%-74%	High 25%	Total
None	25.9%	43.8%	56.8%	43.0%
	22	74	54	(150)
Some (1 to 3 symptoms)	48.2%	46.2%	37.9%	44.4%
	(41)	(78)	(36)	(155)
High (4 or more symptoms)	25.9%	10.1%	5.3%	12.6%
	(22)	(17)	(5)	(44)
Total	100.0%	100.0%	100.0%	100.0%
	(85)	(169)	(95)	(349)

 $\overline{X^2} = 28.2 \text{ (4 d.f.)}, p < .01$

low procedural justice experienced higher levels of physical distress. Also, 57 percent of victimized teachers in the high procedural justice group did not experience any physical distress in response to their victimization, while only 26 percent of those in low procedural justice reported no physical distress.

Table 6 shows the relationship between the level of procedural justice and victims' emotional distress. Consistent with the findings in Table 5, the results show that victimized teachers in The high procedural justice group reported fewer symptoms of emotional distress. For example, 19 percent of victims in high procedural justice experienced no symptom of emotional distress in response to victimization, while none of the victims in low procedural justice reported experiencing no emotional distress. Also, 15 percent of victims in high procedural justice reported experiencing 4 or more symptoms of emotional distress, while almost half of victims in low procedural justice experienced such an elevated level of emotional distress as a subsequent to victimization.

Table 6. Emotional Distress Cross-Tabulated with Procedural Justice (N=349)

	Procedural Justice			
Emotional Distress	Low 25%	Middle 26%-74%	High 25%	Total
None	0.0%	11.2%	18.9%	10.6%
	(0)	(19)	(18)	(37)
Some (1 to 3 symptoms)	52.9%	66.3%	66.3%	63.0%
	(45)	(112)	(63)	(220)
High (4 or more symptoms)	47.1%	22.5%	14.7%	26.4%
	(40)	(38)	(14)	(92)
Total	100.0%	100.0%	100.0%	100.0%
	(85)	(169)	(95)	(349)

 $X^2 = 36.8 \text{ (4 d.f.)}, p < .01$

Conclusion and Policy Implications

The present research indicates that violence directed against teachers is highly prevalent with negative consequences. Several key findings and policy implications suggested by these results need to be discussed. First, the prevalence of various types of victimization, especially verbal abuse, remains high and stable across all four waves. In addition, 42 percent of teachers in the sample were found to belong to the mid-stable and high-stable groups, indicating that teacher victimization is a serious and pervasive problem, affecting numerous teachers over time.

Second, the results show that a substantial proportion of victimized teachers who reported their victimization to schools were not satisfied with schools' responses to their victimization, thus raising serious concerns and questions about the effectiveness of schools' responses to teacher victimization. Third, the results show that teacher victimization has serious negative effects on victimized teachers' emotional and physical wellbeing, as many teachers reported experiencing various symptoms of physical and emotional distress in response to victimization. Fourth,

victimized teachers' perception of procedural justice is significantly related to victims' satisfaction with school responses and physical/emotional distress in the expected directions.

These findings indicate that schools' quality of decision-making and treatment in handling teacher victimization incidents has important beneficial correlations with a substantial increase of victims' satisfaction with school responses while also reducing physical and emotional harms among victimized teachers.

Overall, these findings highlight the urgent need for school administrators and policymakers to take teacher victimization seriously and implement comprehensive strategies and programs to prevent and reduce teacher victimization. Furthermore, school administrators should consider adopting school policies that support procedural justice and fairness concerns of victimized teachers as the findings indicate that school administrators' handling of teacher victimization with fairness and care has a substantial effect on reducing physical and emotional distress among victimized teachers.

List of Peer-Reviewed Articles (see Appendices)

1. Moon, B., & McCluskey, J. (Under Review). Aggression toward teachers and negative consequences: The moderating effects of procedural justice

Summary of findings: The results indicate that victimization via theft/vandalism and physical assault is closely related to victimized teachers' emotional and physical distress. A substantial proportion of victimized teachers reported physical and emotional suffering and problems as a result of victimization. These findings highlight the importance of developing and implementing school-wide prevention measures and programs on violence directed against teachers and providing victimized teachers with needed emotional support and counseling services. Also, the findings show that victimized teachers' perception of procedural justice is a significant predictor of physical and emotional distress for both victimizations in the expected direction, providing support for the Hypothesis. Victimized teachers who perceived that they were treated fairly and their case was handled unbiasedly are more likely to report lower levels of physical and emotional distress in response to their victimization. The result is consistent with prior studies (see Laxminarayan, 2012; Maddox et al., 2011; Wemmers, 2013), outside of the teacher population, that victims' perception toward procedural justice has a significant positive effect in alleviating the emotional and psychological distress that victims experience. Though more empirical studies are necessary to better understand the relationship between victims' perception toward the way schools handle their victimization in the context of procedural justice and physical/emotional distress, these initial findings indicate that schools' quality of decisionmaking and treatment in handling teacher victimization incidents has a substantially important beneficial effect on reducing physical and emotional harms among victimized teachers

2. Moon, B., Kim, J., & McCluskey, J. (Revise & Resubmit). Using a Group-Based Trajectory Approach to Assess Theoretical Predictors of Teacher Victimization.

Summary of findings: The results of the group-based trajectory modeling identified five distinct groups for teacher victimization trajectories and show that a considerable proportion of victimization, as measured by variety, is concentrated among the mid-stable and high stable groups, consistent with prior research on victimization. The mid-stable (36.5%) and high-stable groups (5.7%) account for approximately 80% (from 71% to its lowest to 95% to its highest) of various types of victimization during four waves. The high-stable group reported experiencing approximately 34% of physical assault victimization and 30% of sexual harassment victimization despite comprising 5.7% of the sample. Also, the findings indicate relatively stable trajectory patterns among the four groups, except for stability being among the mid-decreasing group (accounting for 8.8% of the respondents). Specifically, this indicates that an initially high victimization group remains steadily as a high victimization group, while the group starting at no or low levels of victimization continues to remain as no victimization or low-stable group over time. Regarding the risk factors related to distinctive patterns of teacher victimization, the findings provide some support of opportunity theory's applicability in explaining distinctive patterns of teacher victimization trajectories as several theoretically informed factors were found to be related to class membership. Administrative support, dangers in school, and uncertainty are significant predictors of latent group membership for teacher victimization across the models in the expected directions. In particular, teachers' perception toward the danger in school is more strongly related to mid- and high-stable latent groups and it is the only risk factor that distinguishes the mid-stable group from the mid-decreasing group victimization patterns. For teachers' uncertain behaviors in dealing with students, the findings show that it is a significant

factor for predicting teacher victimization trajectories, including the difference between low-stable and mid-stable victimization groups. Overall the findings have demonstrated the importance of understanding heterogeneity and distinctive trajectories of teacher victimization over time in order to inform the development and implementation of comprehensive anti-teacher victimization interventions and counseling programs specifically targeted to mid/high stable victimized groups. Given that this is a first step in investigating risk factors for explaining various teacher victimization patterns in the context of opportunity theories, further research with diverse samples and adequate measurement of theoretically informed variables should be conducted to better understand the utility of traditional criminological theories, especially opportunity theories, as theoretical frameworks for teacher victimization trajectories.

3. Moon, B., Saw, G., & McCluskey, J. (2020). Teacher Victimization and Turnover: Impact of Different Types and Multiple Victimization. Journal of School Violence, 19(3), 406-420.

Note: The early version of this paper was included as a part of the final report for the award (2015-CK-BX-0019) and a published version of the paper is included in the summary of work completed under this grant as it prominently featured the use of Wave III data collected under this funding in the execution of the analyses. Put simply it bridges the initial funding in 2015 with the current funding for which this report is being compiled.

Summary of findings: The results indicate that almost all types of victimization measured in the present research, except sexual harassment, were significant predictors of teachers' transfer and/or exit attrition. Also, our data document that not only serious victimization such as physical assault, but also relatively less intensive student aggression toward teachers such as verbal abuse and non-physical contact aggression, the two most prevalent forms of teacher victimization, were significantly related to teacher turnover. Moreover, less than half of the teachers who exited the profession reported that their experience of victimization by students and/or their

parents/caregivers played a role in their decision to leave the teaching profession. Interestingly, compared with the direct victimization experience as a motivation for leaving, higher percentages reported school administrators' indifference, lack of support, and ineffective intervention as a very important reason for their career exit. This implies that school administrators' ineffective intervention and response to teacher victimization may exacerbate the problem further and consequently leading to higher likelihood of turnover. Overall, the results indicate that teacher victimization is a significant predictor of teacher turnover, further aggravating problems of teacher turnover and shortages. In light of the results there is arguably an urgent need for policymakers and school administrators to pay close attention to the magnitude and severity of students' aggression toward teachers and its detrimental career impacts. If unattended and unaddressed, many teachers may be concerned for their own safety and security at school and decide to move to another school or otherwise leave the teaching profession entirely as a consequence of victimization experiences and/or ineffectual school response.

4. McCluskey, J., & Moon, B. (Revise & Resubmit). Victimized Teachers' Perceptions of Procedural Justice and the Impact on Satisfaction with School Responses.

Summary of findings: Findings indicate that the quality of decision-making and quality of treatment – two main components of procedural justice – are significant predictors of victimized teachers' satisfaction with school responses. Victims who believed that they were treated fairly by schools are more likely to report higher levels of satisfaction with schools' responses to their victimization incidents. Though further research is necessary to better understand the applicability of procedural justice theory in understanding predictors of victims' satisfaction with the way schools handle victimization, this initial result suggests that procedural justice can offer

a useful theoretical and practical framework for understanding and enhancing that experience. In particular, care and concern and respectful handling of reported victimization events, the components of quality treatment, consistently relate to higher satisfaction in all the models estimated. Also, the findings indicate that distributive justice matters to victims' satisfaction with school responses, even after the inclusion of procedural justice variables in the final model. Victimized teachers are more likely to be satisfied with school responses when an offending student offered an apology and/or offending students were disciplined or school officials reported the incident to school resource officers or police. Regarding the relative effects of procedural justice on victims' satisfaction, compared to distributive justice, the findings show that the perceived quality of decision-making and treatment has more explanatory power than distributive justice measures on victims' satisfaction, suggesting that victimized teachers' perception of treatment by school administration matters more in shaping victims' satisfaction with the overall process than the outcomes.

5. Moon, B., Kim, J., & McCluskey, J. (Under Review). Teacher Victimization Patterns Establishing a Group-Based Trajectory Approach to Assessing Predictors of Connectedness to School, Job Satisfaction, and Depression

Summary of findings: The findings from multivariate analyses indicate significant relationships between different trajectories of teacher victimization and the three outcome variables - teachers' connectedness to schools, job satisfaction, and depression. For example, compared to non-victims, teachers in the mid- and high-stable groups were less likely to report their connectedness to schools. Similarly, the results show that teachers in the mid- and high-stable trajectory groups are more likely to report lower levels of job satisfaction, while they are more likely to report higher levels of depression, compared with teachers in the non-victim group. Overall, the results

are consistent with prior findings that continued victimization over an extended period of time has particularly adverse effects on victimized teachers' emotional wellbeing and job satisfaction. Interestingly, the findings show that teachers in the mid-decreasing group were more likely than their counterparts in the non-victim group to report higher levels of connectedness to schools, while there is no significant difference in job satisfaction and depression between the non-victims and the mid-decreasing groups. The findings may indicate contemporaneous effects of teacher victimization on these outcome measures and suggest the importance of schools' active interventions to prevent teachers' victimization, especially revictimization, to minimize the negative consequences of teacher victimization. Overall, these findings highlight that key stakeholders in K-12 education should recognize the severity of victimization and its persistence when directed against teachers at school. Recognition of the negative impacts indicates the need to develop comprehensive and effective strategies to prevent teachers from being (re)victimized and to seek to reduce the negative consequences of any such experiences.

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Appendices

- Appendix A Aggression toward Teachers and Negative Consequences: The Moderating Effects of Procedural Justice
- Appendix B Using a Group-Based Trajectory Approach to Assess Theoretical Predictors of Teacher Victimization
- Appendix C Teacher Victimization and Turnover: Impact of Different Types and Multiple Victimization
- Appendix D Victimized Teachers' Perceptions of Procedural Justice and the Impact on Satisfaction with School Responses.
- Appendix E Teacher Victimization Patterns Establishing a Group-Based Trajectory Approach to Assessing Predictors of Connectedness to School, Job Satisfaction, and Depression

Appendices

The original report, as submitted by the grantee, included the draft text of the following five articles, which have now been published in journals. The citations for the published works appear below.

Appendix A

 Moon, B., & McCluskey, J. (2022). Aggression toward Teachers and Negative Consequences: The Moderating Effects of Procedural Justice. *Victims & Offenders*, 1-16. https://doi.org/10.1080/15564886.2022.2062080

Appendix B

 Moon, B., Kim, J., & McCluskey, J. (2022). Using a Group-Based Trajectory Approach to Assess Theoretical Predictors of Teacher Victimization. Journal of Developmental and Life-Course Criminology, 8(1), 75-95. https://doi.org/10.1007/s40865-022-00187-x

Appendix C

 Moon, B., Saw, G., & McCluskey, J. (2020). Teacher victimization and turnover: Focusing on different types and multiple victimization. Journal of school violence, 19(3), 406-420. https://doi.org/10.1080/15388220.2020.1725529

Appendix D

Moon, B., Morash, M., & McCluskey, J. (2021). Student violence directed against teachers:
 Victimized teachers' reports to school officials and satisfaction with school responses. *Journal of interpersonal violence*, 36(13-14), NP7264-NP7283. https://doi.org/10.1177/0886260519825883

Appendix E

 Moon, B., Kim, J., & McCluskey, J. (2021). Teacher Victimization Patterns Establishing a Group-Based Trajectory Approach to Assessing Predictors of Connectedness to School, Job Satisfaction, and Depression. Victims & Offenders, 1-16. https://doi.org/10.1080/15564886.2021.2014007