

Teacher-directed violence by students in Western Australia: An exploratory study

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Teacher-directed violence (TDV) by students is a growing concern in Western Australia (WA) with 8,500 students suspended in 2017 for committing TDV. This study investigates the prevalence of TDV reported by WA primary and secondary teachers, as well as the associations between TDV and gender, education sector and Socio-Economic Indexes for Areas (SEIFA) of school locations. Participants included 56 primary and secondary teachers in WA who completed an anonymous survey about their experiences with TDV over the past two years. The results revealed that 67.9% of participants had experienced TDV at least once in the past two years. Furthermore, a significant relationship was detected between TDV and gender, education sector and SEIFA indexes. Combined, this information should direct future research and school policy related to TDV.

Introduction

An increase in violence occurring at schools in recent years has resulted in greater attention within the media and public discourse (Anderman et al., 2018; Reddy, Espelage, Anderman, Kanrich & McMahon, 2018). The majority of research that has investigated school violence examined student-to-student peer violence and bullying (Espelage, et al., 2013; Longobardi, Badenes-Ribera, Fabris, Martinez, & McMahon, 2018). However, violence against teachers is increasing, and the general consensus in the contemporary literature is that there is an absence of research on teacher-directed violence (TDV) (Dzuka & Dalbert, 2007; Espelage et al., 2013; Kapa, Luke, Moulthrop & Gimbert, 2018).

Research that does exist on TDV is multifaceted. The majority has emerged from the United States of America, examining the categories of TDV, demographics associated with TDV, and the implications of TDV (Longobardi et al., 2018; Reddy et al., 2018). Nevertheless, other countries across Europe, the Americas and Asia are now contributing to this body of research. Additionally, studies have identified the characteristics of victims and perpetrators (Benbenishty, Astor, Lopez, Bilbao & Ascorra, 2019; Longobardi et al., 2018; Moon & McCluskey, 2016; Nashiki, 2014; Reddy et al., 2018; Yang et al., 2019). In contrast, few Australian studies have explored TDV.

Prevalence of TDV

The prevalence of reported TDV in the literature varies. Musu-Gillette et al. (2018) and the U.S. Department of Education, National Center for Education Statistics (NCES)

(2018) showed a significant number of teachers experienced TDV in the USA. They reported that out of 3.2 million teachers, 10% experienced TDV in the 2015-16 school year (Musu-Gillette et al., 2018; U.S. Department of Education, National Center for Education Statistics [NCES], 2018). McMahon et al. (2014) found that of 2,998 teachers surveyed in the USA, 80% had experienced TDV over two years. Similarly, a Canadian study of 731 teachers revealed that 80% of teachers experienced it in their careers (Wilson et al., 2011). In Turkey, 50% of teachers reported TDV (Cemaloglu, 2007).

While little research has specifically examined TDV among teachers in Australia, Riley, Duncan and Edwards (2011) conducted a study on staff being bullied in Australian schools and found that students were the possible bullies 74.1% of the time. However, of 800 participants only 66.8% of the respondents were teachers (Riley, Duncan & Edwards, 2011). One of the most recent publications regarding TDV in Australia examined principals of schools (Riley, 2018). This longitudinal study investigated principal's health, safety and wellbeing, and also documented incidents of TDV (Riley, 2018). Results indicated threats of violence from students towards principals has increased from 17% in 2011 to 32% in 2017. The latest figures on TDV by students in Australia report that, of 560 teachers surveyed across Australia excluding the Northern Territory, 71.4% of teachers had been subjected to TDV (Billet, Fogelgarn & Burns, 2019). Comparatively, there were 2,000 recorded acts of assault and threatening physical aggression against Department of Education employees at schools in Western Australia (WA) in 2017, as well as 945 acts of TDV in the first six months of 2018 (Parliament of Western Australia, 2018). This data does not account for incidents of TDV by students that are not reported to the Department of Education. Given TDV is occurring in Australia and overseas, it is important to identify its prevalence.

Categories of TDV

There are several overarching categories of TDV, which include harassment, personal property offences, physical aggression and bullying (Longobardi et al., 2018; McMahon et al., 2014).

Harassment is the most frequently occurring category of TDV (McMahon et al., 2014; Mooij, 2011). It includes obscene remarks, obscene gestures, verbal threats, intimidation and sexual harassment (McMahon et al., 2014). Teachers can experience all these subcategories of harassment or one specific subcategory (Chen & Astor, 2009). Harassment is the most prevalent category of TDV in multiple countries, including the USA (73%) and Spain (58.8%) (Alonso, López-Castedo & Juste, 2009; McMahon et al., 2014). In Nigeria, approximately 50% of students admitted to verbally harassing teachers (Akinlolu et al., 2011). Dzuka and Dalbert (2007) reported that 35.4% of verbal harassment was committed by students in Slovakia. A national study in Luxembourg reported that 23.9% of teachers were subjected to verbal harassment several times a year (Steffgen & Ewen, 2007). Similarly, in Australia, 35% of principals reported TDV in this category, and 28.6% of teachers reported encountering verbal harassment (Billet et al., 2019; Riley, 2018). It was also the most prevalent category of TDV in WA at 45% (Riley, 2018).

Personal property offences consist of theft and/or damage to a teacher's personal property and are relatively common occurrences (McMahon et al., 2014; Wilson et al., 2011). A study conducted in Canada with 585 teachers showed that 34% of the teachers had experienced personal property damage (Wilson, et al., 2011). Similarly, a study conducted in the USA with 2,998 teachers indicated that over half of teachers experienced personal property offences over two years (McMahon et al., 2014). In Australia, of the 560 participants surveyed, 12.5% teachers identified that they had their personal property damaged by a student (Billet et al., 2019). To the authors' knowledge no research has explored personal property offences in WA.

Physical aggression involves physical harm including objects being thrown at teachers, teachers being physically attacked and/or teachers having a weapon pulled on them (McMahon et al., 2014). Although the literature indicates that physical aggression is less frequent than harassment or personal property offences it is still common, with 44% of teachers having reported it in the USA and 11.4% in Canada (McMahon et al., 2014; Wilson et al., 2011). Akinolu et al. (2011) reported that 73.2% of students in Nigeria divulged that they had assaulted a teacher with a weapon in rural schools and 26.8% in urban schools. In Australia, 35% of principals reported that they had experienced physical violence from students (Riley, 2018). Furthermore, 10% of teachers in Australia had been hit or punched in the past year (Billet et al., 2019). In WA, 43% of principals reported physical violence in 2018 (Riley, 2018). There appears to be no data regarding physical aggression against teachers in WA other than principals.

Bullying is an offensive behaviour that intentionally hurts or harms another person, and it can incorporate different categories of harassment, property offences, or physical aggression (Chen & Astor, 2009; Dzuka & Dalbert, 2007; Khoury-Kassabri, Astor & Benbenishty, 2009; Mooij, 2011; Riley et al., 2011; Riley, 2018). Bullying differs from the other categories of TDV because the behaviours are repeated and persistent over time (Koiv, 2015; Riley et al., 2011). Koiv (2015) compared two studies that were conducted in Estonia ten years apart on teacher targeted bullying, which revealed that pupil-to-teacher bullying had increased substantially. Additionally, Fox and Stallworth (2010) revealed that teachers in the USA experienced bullying from students 'extremely often' (29.1%). In Turkey, Cemaloglu (2007) found that almost 50% of teachers had experienced bullying from students and in Finland, 25.6% of teachers reported being bullied 'occasionally' and 3.7% reported it had occurred 'almost daily' (Kauppi & Pörhölä, 2012). In Australia, principals experienced bullying from students under 5% over the course of seven years (Riley, 2018). Whereas Billet, Fogelgarn and Burns (2019) reported that the prevalence of bullying towards teachers occurred 71.4% over a year. Bullying was reported by 35% of principals in WA in 2018 (Riley, 2018). Actual prevalence data regarding bullying towards teachers in WA is not apparent in the literature.

Demographics associated with TDV

There are multiple demographic influences associated with categories of TDV including gender, education levels, ethnicity, teacher's experience and socio-economic factors (McMahon et al., 2014; Mooij, 2011; Reddy et al., 2018). Some studies reported that

Caucasian males encounter more TDV than their female colleagues (McMahon et al., 2014; Wilson et al., 2011). This is inconsistent with other studies indicating that female teachers are more likely to incur TDV (Billet et al., 2019; Kapa et al., 2018; Mooij, 2011). This is consistent with an Australian study by Billet et al. (2019) that reported female teachers experience TDV more often than their male counterparts. These inconsistencies could be due to the category of TDV studied. McMahon et al. (2014) found female teachers were more likely to incur verbal violence, whereas male teachers experienced more physical violence and were more likely to report the violence. A recent study conducted by Anderman et al. (2018) that addressed some of these methodological discrepancies, found that there was no difference between genders regarding the prevalence of TDV. Riley (2018) also found that there was no significant difference between genders among principals who had experienced TDV in Australia. Gender specific data on TDV for WA is not evident in the current research.

Primary and secondary schools, along with education sectors of Catholic, Government and Independent schools are also linked to different categories of TDV. Verbal abuse or threats towards teachers by students occurred more frequently in secondary schools in the USA and Taiwan (Anderman et al., 2018; Chen & Astor 2009). Australian state government secondary schools had a higher rate of verbal abuse, although it is unclear on the rate of student perpetrators (Riley, 2018). Additionally, verbal abuse was more frequent than physical offences in primary education for Catholic and Independent schools in Australia, but similar to secondary schools, the data does not clearly delineate the perpetrators as students, parents or colleagues (Riley, 2018). Teachers in secondary schools also reported more damage to their personal belongings than teachers in primary schools, which was attributed to older students understanding that damaging property has fewer repercussions than physical violence (Ozdemir, 2012; Wilson et al., 2011). Riley et al. (2011) found that 25.4% of secondary teachers in Australia 'sometimes' experienced damage to personal property. Anderman et al. (2018) reported that primary school teachers in the USA experienced more acts of physical aggression from students, whereas secondary school teachers received more threats of physical aggression. In Australian state government secondary schools, principals reported experiencing more TDV in 2018 compared to state government primary schools, and both Catholic and Independent primary and secondary schools (Riley, 2018). No demographic data on TDV associated with education level and school sectors for WA is evident in current literature.

Socio-economic status (SES) and geographical locations of schools in either urban or rural areas have been linked with TDV. Benbenishty, Astor, López, Bilbao and Ascorra (2019) highlighted that schools in lower SES areas report a higher level of TDV. Additionally, schools with a higher percentage of low SES students and higher residential crowding were correlated with high levels of TDV (Gottfredson, Gottfredson, Payne & Gottfredson 2005; Gregory, Cornell & Fan, 2012; Khoury-Kassabri et al., 2009). A national Israeli study on students who perpetrate TDV indicated that these were dominant factors associated with TDV (Khoury-Kassabri et al., 2009). Moreover, communities with medium to high crime rates were also linked with higher physical assault of teachers by students (Casteel, Peek-Asa & Limbos, 2007; Gregory et al., 2012). To date, there appears

to be no evidence regarding *Socio-Economic Indexes for Areas* (SEFIA) of school locations and associations with TDV in Australia or WA.

Hence, this study aimed to explore:

1. The frequency and categories of TDV that primary and secondary teachers are experiencing from students in WA; and
2. Associations between TDV experienced by teachers in WA and gender, education sector and SEFIA index percentiles.

Method

This exploratory research study employed a descriptive, correlational, cross-sectional design that explored the categories and frequency of TDV that primary and secondary teachers experienced in WA from students over two years (2016-2018). The study was approved by the University of Notre Dame, Australia, Human Research Ethic Committee (research number 018150F).

Participants and setting

Participants were recruited through convenience and purposive sampling. A convenience sample of five ($n=5$) participants was recruited from the Australian Council for Health, Physical Education and Recreation (ACHPER) annual general meeting held at Edith Cowan University, Mount Lawley WA on 27 November 2018 with 23 attendees. Purposive snowball sampling through social media followed from the 29 November 2018 to 16 March 2019, recruiting fifty-one WA teachers from a population of 35,012 (Australian Bureau of Statistics, 2019). Response rates were low at 22% and 0.0015% respectively.

Measures and procedure

The survey tool titled *Occurrences of violence and aggression towards teachers by students and their experiences and perceptions of preparedness survey* was used to gather data for this research project. It was modified from the APA *Violence Against Teachers Task Force: Survey for K-12 teachers*, which displayed strong external validity, 'due to the heterogeneous sampling of locations (e.g., regions, states, school community settings) and individual demographic characteristics (e.g., gender, race/ethnicity)' (McMahon et al., 2014, p. 756). Demographic questions were altered to suit WA's population, and the questions about the categories of TDV experienced omitted parents, colleagues or stranger as perpetrators and only asked about experiencing TDV from students. The adapted survey tool was piloted with sixteen ($n=16$) WA teachers prior to the main study and included the same questions and answering format as the survey tool used in this study. It proved to have good face and content validity with respondents from various school sectors (e.g., Catholic, Government, Independent) and distinct demographic properties (e.g., gender, years teaching, career stage). Extensive psychometric information for the survey tool is not available, but preliminary evidence based on the current sample suggests that it has

adequate validity. The survey tool was administered in two different mediums, initially as a hard-copy paper survey (ACHPER AGM) and then as an online survey through *Google Forms*.

The survey included demographic information on gender (male, female), education level taught (primary, secondary), career stage (graduate, proficient, highly accomplished, lead), education sectors (Catholic, Government, Independent), years teaching and postcode of school where participants were teaching (Australian Institute for Teaching & School Leadership [AITSL], 2017). Participants were asked, 'In the past 2 years how many times have you experienced [TDV subcategory] by a student?' TDV subcategories stipulated were obscene remarks, obscene gestures, verbally threatened, intimidated, theft of property, damage to property, objects thrown, physically attacked no medical treatment required (NMTR), physically attacked medical treatment required (MTR) and weapon pulled. Participants responded with a numerical value. Furthermore, participants had the option to write in other categories of TDV not listed they had experienced.

Treatment of data

The following treatment of data occurred for data analysis. Years teaching was categorised as under 5 years, 5-10 years and over 10 years. Postcodes were converted to SEIFA index percentiles based on the postal area (POA) within WA and categorised as low<74% and high>75% (Australian Bureau of Statistics, 2008). For each TDV subcategory, additional information on frequency was reported using a 2-point Likert-style scale: never, sometimes or rarely (reported between 1-5 times); frequently or persistently (reported more than 5 times). TDV subcategories were grouped into three categories that included harassment (i.e. obscene remarks, obscene gestures, verbally threatened, intimidated), property offence (i.e. theft of property, damage to personal property), physical offence (i.e. object thrown, physically attacked [NMTR], physically attacked [MTR], weapon pulled) and reported as occurred or did not occur. Due to the low numbers of participants in the Catholic and Independent sectors, education sectors were collapsed to public (Government) and private (Catholic, Independent) for the requirements of the generalised linear model.

Data analysis

Data were analysed using *SPSS version 25.0* (IBM Corp, 2017). All data were treated as categorical for statistical analysis and described using count and percent. Pearson's chi-square analysis was used to investigate if there were statistically significant group differences between gender (male, female), education level (primary, secondary), SEIFA percentiles (low<74%, high>75%) and TDV categories (harassment, property offence, physical offence). Chi-square analysis was also used to determine if there were statistically significant differences between independent variables of TDV categories experienced (yes/no) and frequency of TDV categories with education sectors (Catholic, Government, Independent) and SEIFA percentiles. The significance level for analysis was set at $p<0.01$.

Binary logistic generalised linear models (GLM) were used to estimate the odds that a TDV offence category would occur (yes/no) for the different categories of TDV: obscene remarks, obscene gestures, verbally threatened, intimidated, theft of property, damage to property, objects thrown, physically attacked [NMTR], physically attacked [MTR], weapon pulled (10 models). The dependent variables for the ten models tested were the different categories of TDV. For each model, gender (female, male), SEIFA percentile (low<74%, high>75%) and education sector (public, private) were included as fixed effects. The binary reference category for the TDV offence category was set to occur (yes) as the response for all models. The significance level for analysis was set at $p<0.01$.

Results

Participant demographics

A total of 57 teachers responded to the survey, with one survey omitted from further analysis due to the participant not meeting the requirement of teaching in WA. Table 1 reports the demographic features of the 56 participants included for analysis. The majority of respondents were female (62.5%) and taught at the secondary level (62.5%). A gender difference between primary and secondary teaching levels was found ($\chi^2(1, N=56)=7.73, p=.009$). Female teachers were distributed relatively evenly across both education levels of primary (51.4%) and secondary (48.6%), whereas male teachers were mainly at the secondary level (85.7%). The distribution of participants across the SEIFA percentiles of school locations in WA differed between low<74% (60.7%) and high>75% (39.3%). A nonsignificant, but notable difference between gender and school SEIFA percentiles was reported. Female participants were represented considerably more in the low SEIFA percentile (71.4%) compared with schools in high SEIFA percentile (28.6%) locations. Whereas, male participants were similar between low (42.9%) and high (57.1%) SEIFA percentiles. Government (46.4%) and Independent (39.3%) education sectors had a higher representation of participants compared to the Catholic (14.3%) education sector for this study. More female (57.1%) teachers reported working in the Government sector over Catholic (11.4%) and Independent (31.4%). Male teachers (52.4%) were more likely to work in the Independent sector compared to Catholic (19.0%) and Government sectors (28.6%). There were no significant differences found for years teaching or career stage, therefore these were not reported in this study.

TDV by offence category and frequency

TDV categories and frequency were examined across the 10 offence subcategories. Overall, 67.9% of teachers reported experiencing TDV at least once in the past two years. The most common reported category was harassment, with 64.3% of teachers reporting that they had experienced it from students. Property offences (33.9%) and physical offences (33.9%) were equally reported as being experienced by teachers. Obscene remarks were the highest subcategory reported at 60.7%, and it also had highest occurrence rate (33.9%) where *frequently or persistently* were reported (Table 2).

Table 1: Demographic features of participants (N=56)

		<i>n</i>	%
Gender	Female	35	62.5
	Male	21	37.5
Education level participants teach	Primary	21	37.5
	Secondary	35	62.5
Education sector participants working	Catholic	8	14.3
	Government	26	46.4
	Independent	22	39.3
Years teaching	Under 5 years	20	35.7
	5-10 years	19	33.9
	Over 10 years	17	30.4
Career stage	Graduate	14	25.0
	Proficient	22	39.3
	Highly accomplished	16	28.6
	Lead	4	7.1
Western Australia State SEIFA percentile of school locations	Low < 74%	34	60.7
	High > 75%	22	39.3

Table 2: Teachers' experiences of TDV by offence and frequency

Offence category	Reporting at		Frequency	
	least one offence <i>n</i> (%)	Never <i>n</i> (%)	Sometimes or rarely <i>n</i> (%)	Frequently or persistently <i>n</i> (%)
Harassment	36(64.3)			
Obscene remarks	34(60.7)	22(39.3)	15(26.8)	19(33.9)
Obscene gestures	28(50.0)	28(50.0)	19(33.9)	9(16.1)
Verbally threatened	22(39.3)	34(60.7)	17(30.4)	5(8.9)
Intimidated	26(46.4)	30(53.6)	20(35.7)	6(10.7)
Property offence	19(33.9)			
Theft of property	10(17.9)	46(82.1)	8(14.3)	2(3.6)
Damage to property	15(26.8)	41(73.2)	12(21.4)	3(5.4)
Physical offence	19(33.9)			
Objects thrown	16(28.6)	40(71.4)	11(19.6)	5(8.9)
Physically attacked (NMTR)	9(16.1)	47(83.9)	7(12.5)	2(3.6)
Physically attacked (MTR)	3(5.4)	53(94.6)	3(5.4)	0(0.0)
Weapon pulled	1(1.8)	55(98.2)	1(1.8)	0(0.0)

NMTR = No medical treatment required
MTR = Medical treatment required

Demographic differences and categories of TDV experienced

Differences between the demographics of participants and categories of TDV experienced are presented in Table 3. Harassment displayed a statistically significant difference among the demographics of SEIFA percentiles ($\chi^2(1, N=56)=12.31, p=.001$) and education sectors ($\chi^2(2, N=56)=8.79, p=.010$). While not significant, an important trend was found between gender and harassment. Female (77.1%) participants reported experiencing harassment more than male (42.9%) participants. Participants in low<74% SEIFA schools (82.4%) also reported that harassment occurred more compared to participants at high>75% SEIFA schools (36.4%). Property offences and physical offences were also statistically significant with education sectors ($\chi^2(2, N=56)=8.93, p=.008$; $\chi^2(2, N=56)=16.99, p=.001$) respectively.

Table 3: Categories of TDV experienced and demographic differences

Demographics		Offence categories					
		Harassment		Property offence		Physical offence	
		Yes <i>n</i> (%)	No <i>n</i> (%)	Yes <i>n</i> (%)	No <i>n</i> (%)	Yes <i>n</i> (%)	No <i>n</i> (%)
Gender	Male	9(42.9)	12(57.1)	5(23.8)	16(76.2)	6(28.6)	15(71.4)
	Female	27(77.1)	8(22.9)	14(40.0)	21(60.0)	13(37.1)	22(62.9)
	χ^2	6.72		1.54		0.43	
	p-value	.020		.256		.572	
SEIFA percent-iles	Low < 74%	28(82.4)	6(17.6)	16(47.1)	18(52.9)	16(47.1)	18(52.9)
	High > 75%	8(36.4)	14(63.6)	3(13.6)	19(86.4)	3(13.6)	19(86.4)
	χ^2	12.31		6.56		6.56	
	p-value	.001**		.019		.019	
Education sector	Catholic	4(50.0)	4(50.0)	2(25.0)	6(75.0)	0(0.0)	8(0.0)
	Government	22(84.6)	4(15.4)	14(53.8)	12(46.2)	16(61.5)	10(38.5)
	Independent	10(45.5)	12(54.5)	3(13.6)	19(86.4)	3(13.6)	19(86.4)
	χ^2	8.79		8.93		16.99	
p-value	.010*		.008*		.001**		

Statistically significant at * $p < .01$, ** $p < .001$

Generalised linear models for categories of TDV

The GLM analysis indicated the odds of being intimidated or threatened were five times more likely to occur if the participant was female, while controlling for postcode and sector (Table 4, Model 3 and 4 respectively). See Table 4 for GLM and TDV categories. Working at a public (Government) school located in a low<74% SEIFA index increased the odds five times that a teacher would experience obscene gestures and theft of personal property (Table 4, Models 2 and 5 respectively). The odds of being physically attacked (NMTR) were increased if female (OR=3.97), in a low<74% SEIFA percentile (OR=3.67) or at a public school (OR=4.15).

Table 4: Generalised linear model for categories of TDV and demographics predicting TDV

Model #	Variables	β	SE	OR		CIOR		p-value
				Exp (β)	Lower	Upper		
1. Obscene remarks	Intercept	-2.00	0.73	0.14	0.03	0.57	.006*	
	Gender ¹	1.18	0.68	3.25	0.85	12.42	.085	
	Postcode ²	1.68	0.68	5.35	1.42	20.24	.013	
	Public ³	1.33	0.68	3.77	1.00	14.28	.051	
2. Obscene gestures	Intercept	-1.96	0.73	0.14	0.03	0.59	.007*	
	Gender ¹	-0.33	0.70	0.72	0.18	2.87	.640	
	Postcode ²	1.75	0.70	5.78	1.47	22.73	.012	
	Public ³	1.72	0.68	5.57	1.47	21.12	.012	
3. Verbally threatened	Intercept	-2.88	0.88	0.06	0.01	0.32	.001*	
	Gender ¹	1.69	0.74	5.41	1.26	23.14	.023	
	Postcode ²	1.17	0.71	3.22	0.80	12.94	.100	
	Public ³	0.78	0.69	2.17	0.56	8.39	.260	
4. Intimidated	Intercept	-2.20	0.75	0.11	0.03	0.48	.003*	
	Gender ¹	1.74	0.68	5.68	1.50	21.51	.010*	
	Postcode ²	0.89	0.66	2.43	0.66	8.91	.182	
	Public ³	0.56	0.66	1.74	0.48	6.30	.398	
5. Theft of property	Intercept	-3.94	1.38	0.02	0.00	0.29	.004*	
	Gender ¹	-0.20	0.84	0.81	0.16	4.21	.810	
	Postcode ²	1.70	1.14	5.49	0.59	51.28	.135	
	Public ³	1.68	1.13	5.36	0.59	48.83	.136	
6. Damage to property	Intercept	-2.46	0.84	0.09	0.02	0.44	.003*	
	Gender ¹	0.29	0.71	1.34	0.33	5.39	.684	
	Postcode ²	0.91	0.76	2.49	0.56	11.07	.231	
	Public ³	0.94	0.75	2.57	0.59	11.18	.209	
7. Objects thrown	Intercept	-2.71	0.92	0.07	0.01	0.40	.003*	
	Gender ¹	-0.21	0.72	0.81	0.20	3.29	.767	
	Postcode ²	1.75	0.86	5.77	1.07	31.26	.042	
	Public ³	1.00	0.76	2.72	0.61	12.11	.188	
8. Physically attacked (NMTR)	Intercept	-4.75	1.60	0.01	0.00	0.20	.003*	
	Gender ¹	1.38	1.14	3.97	0.43	36.80	.225	
	Postcode ²	1.30	1.14	3.67	0.39	34.52	.256	
	Public ³	1.42	1.14	4.15	0.45	38.59	.210	

Notes: OR = odds ratio. CIOR = 95% Wald confidence interval for odds ratio. Physically attacked (MTR) and weapon pulled were not included in this table because no statistically significant differences were found.

1 = Male set to zero as comparison

2 = High SEIFA percentile set to zero as comparison

3 = Private education sector set to zero as comparison

NMTR = No medical treatment required

Statistically significant at *p < .01, **p < .001

Discussion

To the authors' knowledge this exploratory study is the first to investigate TDV frequency and categories, and to identify associations between TDV experienced, gender, education sector and SEFIA index percentile among WA teachers. TDV is a prevailing issue for the teachers in WA who participated in this study, with the results suggesting that 70% of the participants reported experiencing at least one category of TDV over the past two years. These findings indicate that the rates of TDV occurring in this subsample in WA are comparable to those that have been recently reported in Australia (Billet et al., 2019). Additionally, these results support the current literature that shows a high prevalence of TDV, with approximately 80% of teachers reporting it in the USA and Canada (McMahon et al., 2014; Wilson et al., 2011).

The frequency of TDV categories in WA that were explored in this study are different to the findings from previous literature. Similar to the USA, harassment was the most common category of TDV reported, although it was notably higher at 73% in the USA (McMahon et al., 2014) compared to 64.3% in the current study. This could be due to the small sample in the current study. Other research in Australia has shown lower rates of harassment at 35% (Riley, 2018). This could be attributed to the different classification of participants, where the Australian study used principals and the current study used teachers. Both physical offences and property offences against teachers in this study occurred at similar rates of 33.9%. This is different from other studies that reported property offences occurring more frequently compared to physical offences (McMahon et al., 2014; Ozdemir, 2012, Wilson et al., 2007). The results surrounding physical offences in this study, although similar to principals, were dissimilar to what has been reported for teachers in Australia. For example, while one in three principals (33%) reported physical violence in Australia, only 10% of teachers reported it (Billet, 2019; Riley, 2018). Any form of physical violence or aggression is not acceptable in schools, and these results suggest that teachers are still being subjected to a substantial amount of physical offences in WA.

This investigation's results also identified important associations between gender, school sectors and SEIFA index percentiles of school locations and the occurrence of TDV. Findings indicated female participants in this study experienced harassment (44%) and physical offences (23%) more than male participants over the past two years. Gender differences reported in the literature have been mixed. McMahon et al. (2014) and Wilson, Douglas and Lyon (2011) found that male teachers are more likely to experience TDV, while Anderman et al. (2018) found no gender differences. The results of this study are consistent with the data on female principals reporting TDV in Australia (Riley, 2018). In addition to gender, a strong association was identified between occurrences of TDV and Government school sector compared to the non-Government sectors. Riley (2018) found a similar relationship with TDV reported by principals and the Government school sector. These results may be associated with the fact that violent students can be removed from non-Government sectors and likely end up in the Government sector (Riley, 2018).

As this is the first study investigating SEIFA indexes of school locations and its relationship with TDV in WA, the results are novel, yet not surprising. In this WA sample, schools located in communities ranked lower in the SEIFA index percentiles reported higher incidences of TDV across all three categories, than those ranked higher. This indicates that violence and aggression are possibly related to community factors of school locations in WA. Community factors of low SES has been connected with TDV in previous literature (Benbenishty et al., 2019; Casteel et al., 2007; Gottfredson et al., 2005; Gregory et al., 2012; Khoury-Kassabri et al., 2009). Furthermore, an important trend identified in the current study is that if teachers are female, and work at a public school located in a low<74% SEIFA location in WA, they are more likely to be physically attacked, verbally threatened and intimidated, compared to their male colleagues. It imperative that more research be conducted on TDV in WA so that effective prevention and management strategies can be instigated. Teachers must feel their safety is being protected, especially in terms of recruitment and retention of female teachers.

Although this study did not investigate the implications of TDV, previous literature has highlighted the numerous adverse effects of TDV (Dzuka & Dalbert, 2007; McMahon et al., 2017). Future research needs to include the impacts that TDV is having on WA's teacher attrition rates, as well as their health and wellbeing. It also needs to investigate the impact that TDV is having on students. Additionally, several cross-sectional studies should be performed on a national scale and in WA that further explore the categories and frequency of TDV. Moreover, research should report on the characteristics of students, the *how* and *why* TDV is occurring. A qualitative study of both teacher victims and student perpetrators would add valuable insight into these issues. This information can better inform training practices, develop comprehensive school-based interventions, and contribute to the formation of policies on TDV that protect teachers.

There are a number of limitations to this study that could impact the findings. First, the sample size of this study was small and drawn from a convenience cohort of primary and secondary teachers in WA. While the sample was small, the representativeness is similar to the national study by Billet et al. (2019) that had a response rate of 0.0019%. It is also reflective of the larger WA teaching population in regard to gender and education sectors (ABS, 2019). The results suggest TDV is a concern within the WA education sector. Second, self-selection bias and retrospective self-reporting on the occurrence of violence by teachers may have influenced the reported rates, as well as snowball sampling that could have resulted in more participants who had experienced TDV participating, compared with participants who had not experienced TDV. This could be through only significant TDV events, or re-occurring TDV events being recalled, or inaccurate recall over the two-year period. While self-report and recall may be problematic, results align with previous international studies and again confirm the need for further research in this area. Even if this is a case of higher participation by teachers who had experienced TDV, the comparisons of gender and education sectors, combined with the likely representativeness of proportions within WA, are likely to be good reflections of the differences in TDV between these groups.

While this was an exploratory study exploring TDV in a WA sample, the small sample and accurate representation of TDV experienced by teachers in WA needs to be considered in the interpretation of results. The cross-sectional nature of this study could have influenced the results because if it occurred at a different time, it could have presented different results. While the design of this study cannot determine the causes of TDV in this cohort, the current findings highlight significant associations between gender, SEIFA indexes and sectors, that may provide insights to societal issues impacting TDV occurrence in schools.

In conclusion, the results from this exploratory study indicate that TDV is a concern and further research, with a larger representative sample of teachers in WA is needed to further understand the extent of TDV present in WA schools. Should the concerning rates reported by this study be confirmed, then this indicates a call to action on how to provide a safe workplace for teachers and ways to mitigate the detrimental effect TDV is likely having on providing a safe learning environment for all students.

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