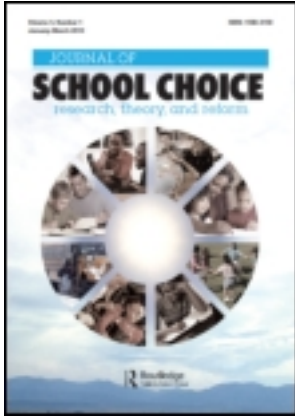


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### Books or Guards? Charter School Security Costs

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## **Books or Guards? Charter School Security Costs**

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*Little is known about the costs charter schools incur to foster security—a vexing phenomenon when one considers policymakers’ and parents’ seemingly high and growing want for school safety. Using data from the National Center for Education Statistics and Texas, we reveal how much charter schools spend on security, how they put these resources to use, and the extent to which spending differs between charter and traditional public schools. Our findings contribute to a sparse but important literature on how charters allocate resources generally, while also disaggregating an important, yet little understood, component of school spending.*

**KEYWORDS** *charter schools, security, costs*

In 1991, Minnesota became the first state to sanction charter schools. By 2010, 4,962 charters across 41 states and the District of Columbia educated 3.3% of public school students (National Center for Education Statistics, 2011a). A simple trend analysis, as well as federal and state policies that continue to favor charter school expansion, suggest that charters will continue to grow in number and student share throughout the decade. For example, No Child Left Behind allows students who attend schools designated as “in need of improvement” for two consecutive years to elect to transfer to another district school or a charter school (U.S. Department of Education, 2007). Consider also that the availability and pursuit of Race to the Top funding explicitly incentivized state-level expansion of charter schools (Shear & Anderson, 2009; Whitehouse, 2009).

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Explanations for charter school expansion vary. Some scholars used a public policy lens to trace the movement's roots to the 1970s when reformers introduced voucher programs and magnet schools as a means to provide choice and foster school autonomy and innovation (Cookson & Berger, 2002). Such work often highlights the roles of key actors in pressing early state-level charter initiatives, such as Ray Budde (credited with first using the term charter), Albert Shanker (president of the American Federation of Teachers), and Minnesotans Ted Kolderie and Joe Nathan (Murphy & Shiffman, 2002). More recently, scholars have highlighted the role of "venture philanthropists"; well-resourced, market-based reform advocates that brought charters to scale (Scott, 2009; Scott & DiMartino, 2010).

Other work draws on secondary data to understand charter demand at the local level. Corcoran and Stoddard (2009), for example, analyzed voting patterns from charter referenda in Washington State and found that political party membership was a stronger predictor of charter support at the district level than measures of school quality. d'Entremont and Gulosino (2008) used Geographic Information Systems and dynamic mapping to examine the relationship between charter school location decisions and student demographics, concluding that charter leaders employ "positioning strategies" (p. 21) to attract preferred students (see also, Henig & MacDonald, 2002). Another literature uses self-collected data to reveal factors that prompt charter school growth. Witte, Schlomer, and Shoher (2007) applied an entrepreneurial model to 19 Wisconsin charter schools and attributed their creation to the actions of key individuals, core groups (e.g., teachers and parents), and organizations (e.g., YWCA) (see also, Henig, Holyoke, Brown, & Lacireno-Paquet, 2005). Others researchers have simply asked charter leaders to list, and sometimes rank the reasons for establishing their school. Berman, Nelson, Ericson, Perry, and Silverman (1998) surveyed 364 charters and determined that founders most wanted to "realize an alternative vision for schooling" that encompassed providing "innovate techniques and ways of learning," "a smaller school," and a "safe environment" (p. 78). Several case studies also reported that charter staff and mission statements often speak of providing a sound academic program and a safe learning environment (Dannis, Columbo, & Sawilowsky, 1996; Fontaine, Debus-Sherrill, Downey, & Lowry, 2010; Miron & Horn, 2003; Ulpindo, 2008).

A corresponding literature informs charter school demand by querying parents about their enrollment decisions. Here one finds consistently that respondents list academic quality, lower class size, and school safety as factors most important to their enrollment decisions (Bancroft, 2009; Berman et al., 1998; Kleitz, Weiher, Tedin, & Matland, 2000; May, 2006; Texas Center for Educational Research, 2008). Other studies examined charter school parents' satisfaction, pointing to favorable perceptions of academics and safety (McCully & Malin, 2003; Miron & Horn, 2003; O'Reilly & Bosetti, 2000).

What we find interesting about the charter school literature is that stakeholders signal consistently that they place importance on school safety. We acknowledge the inherent limitations of relying on perceptions as indicators of school safety (Weiher & Tedin, 2002), and that stated preferences for selecting a charter school might not reflect actual behavior (Schneider & Buckley, 2002). Nevertheless, a number of factors may explain the high and growing interest in school safety. First, the malice and scale of Columbine and the media coverage that followed offered the public a stark view of school violence (Altheide, 2009; Cullen, 2009; McCabe & Martin, 2005; Midlarsky & Klain, 2005; Newman & Fox, 2009; Theriot, 2009). A Gallup Poll taken soon after Columbine indicated that 55% of parents feared for their child's physical safety at school (Lyons, 2002). Though more than a decade has passed since Columbine, 27% of parents still report being concerned about their child's safety while at school (Carroll, 2007).

A second factor that focuses attention on school violence and may explain, in part, charter stakeholders' attentiveness to safety is an improved understanding of how violence affects students and staff. Cornell and Mayer (2010) offered a multidiscipline review of studies that found links between measures of students' real and perceived victimization, psychosocial well-being (e.g., depression and anxiety), and short- and long-term academic performance (e.g., test scores and graduation) (see also, Borum, Cornell, Modzeleski, & Jimerson, 2010; Johnson, 2009; Ripski & Gregory, 2009; Swearer, Espelage, Vaillancourt, & Hymel, 2010). Similarly, Henry (2007) showed that 8th and 10th grade truants often reported feeling unsafe at school, noting that truancy is "predictive of maladjustment, poor academic performance, drop out, substance abuse, delinquency, and teenage pregnancy" (p. 30). Researchers have also found associations between teacher and administrators' concerns about personal safety and their engagement, attitude toward students, and job choices (Hastings & Bham, 2003; Markow & Cooper, 2008; McAdams & Foster, 2008; White & Beal, 1999; Williams & Corvo, 2005). Fisher and Kettl (2003), for example, reported that teachers believed school violence influenced negatively their ability to educate. Smith and Smith (2006) found that the threat of school violence contributed, in part, to teacher departures in urban schools.

Third, the emergence of defensible student victimization data has also drawn attention to the prevalence and nature of school violence. Since 1999, the National Center for Education Statistics (NCES) has surveyed students about school crime and safety. In 2009, 8% of students reported being threatened or injured with a weapon while at school, and 6% reported carrying a weapon on school property (NCES, 2011b, pp. 16, 54). The NCES also queries principals and teachers about school violence. In 2007–2008, 17% of the principals surveyed reported one or more serious violent incidents (e.g., rape or attack with a weapon) took place in their schools (NCES,

2011b, p. 24), while 7% of teachers reported threat of injury during the previous 12 months, and approximately 4% reported being attacked during the same period (p. 20). Interestingly, Christensen's (2007) analysis of NCES data revealed that traditional public school teachers were only somewhat more likely than charter school teachers to report being subject to threat of injury or physical attack.

Fourth, the Unsafe School Choice Option (USCO) of the No Child Left Behind Act of 2001 (NCLB) brought attention and policy to bear on school violence, with direct implications for charter schools. USCO, Section 9532 of NCLB, provides that students who are victims of a school-related violent crime, or attend a school labeled "persistently dangerous" as defined in state law, may transfer to another public school within the district, including charter schools (Gastic, 2010; U.S. Department of Education, 2004). The provision has engendered much debate about whether school discipline reports and police referrals reflect accurately the prevalence of violence in schools, and whether USCO addresses meaningfully how violence affects students and staff (Astor, Guerra, & Van Acker, 2010; Cornell, 2006; Gooden, Harrington, Findlay, & King, 2008; Johnson, Naumann, Steed, & Hennessey, 2002; Schreck & Miller, 2003; Skiba et al., 2004). Regardless, USCO and its forebears, like the Gun-Free Schools Act (PL 103-227) and the Safe and Drug-Free Schools Act (PL 103-227) point clearly to Federal policymakers' want for schools to provide safe learning environments.

Finally, one might reasonably argue that many local educational stakeholders view a safe environment as a *sine qua non* of successful schools (Casella, 2002; Education Commission of the States, 1999, 2009). Certainly there is evidence that schools have responded to high profile school shootings and allied violence prevention policies by implementing a wide range of security measures. Addington (2009), for example, analyzed data from the School Crime Supplement to the National Crime Victimization Survey to demonstrate an increased use of metal detectors and security guards/police following Columbine (see also, Theriot, 2009). Largely unknown to policymakers and scholars, however, are the absolute and relative costs of school security generally, and in charter schools specifically. A vexing phenomenon when one considers policymakers' and parents' seemingly high and growing want for school safety, and the fiscal challenges that most schools confront.

Our purpose here is to shine much needed light on the types and costs of charter security. To do so, we use data from the NCES and Texas Education Agency (TEA) to answer three questions.

1. How do charters put security resources to use (e.g., security personnel)?
2. How much do charters spend on school security?
3. How do charter security costs differ from those of traditional public schools?

Answering these questions enables us to provoke interest in security costs, an important, yet little understood component of school spending, while also contributing to a sparse but important literature on how charters allocate resources generally.

## LITERATURE

We draw upon two literatures, both limited, to inform our study. The first examines charter school finance. The second considers school safety.

### Charter School Finance

A small but growing body of work examines charter school finances independently, or in comparison to traditional public schools. Here one finds evidence that the revenues of traditional schools often exceed those of charter schools (Carr, 2006; Jacobowitz & Gyurko, 2004; Miron & Urschel, 2010; Nelson, Muir, & Drown, 2003; Speakman & Hassel, 2005). An analysis of Texas' school finance system, for example, revealed that districts secured, on average, \$1,200 (or 16%) more revenue per pupil than charters (Texas Center for Educational Research [TCER], 2008, p. 56). The report attributed the revenue gap to policies that allow traditional districts to raise local revenues, a phenomenon noted in other work (Hannaway & Sharkey, 2004).

A companion line of inquiry seeks to understand charter school expenditures. Researchers consistently report that traditional districts expend more per pupil than charter schools. In 2006–2007, for example, Texas' charters spent \$1,304 less per pupil than traditional districts (Miron & Urschel, 2010). Studies also report that charters typically expend greater percentages of their resources on the broad functional areas of administration and operations and, consequently, less on instruction than traditional schools (Arsen, 1999; Arsen & Ni, 2012; Herdman & Millot, 2000; Miron & Horn, 2003; Miron & Urschel, 2010; Nelson et al., 2003; Osberg, 2006; TCER, 2008).

Despite consistent reports of revenue and expenditure differences between charter and traditional schools, drawing conclusions about equity (or adequacy) and efficiency in the origination and use of charter revenues is tenuous. Miron and Urschel's (2010) analysis of National Public Education Financial Survey data makes clear that although many charters secure private revenues, such revenues often go unreported. Indeed, several efforts demonstrate that venture philanthropy enables some charters to secure more revenues per pupil than their counterparts (Scott, 2009). Here scholars provide examples of charters who derive revenues from foundation grants, capital campaigns, and partnerships with for-profit and nonprofit educational management organizations (EMO) (Huerta & d'Entremont, 2010; Krop & Zimmer, 2005; Miron, Nelson, & Risley, 2002; Scott & DiMartino, 2010).



In 2010–2012, EMOs operated 35% of all charters schools, with for-profit EMOs accounting for about 40% of this figure (Miron, Urschel, Aguilar, & Dailey, 2012).

Differences in school level, student characteristics (e.g., percent special needs), and purpose (e.g., alternative instruction) also confound our ability to compare charter and traditional school finances (Bodine et al., 2008). Consider that charters are disproportionately elementary schools (U.S. Department of Education, 2011), which tend to be less costly to operate than secondary schools (Miron & Urschel, 2010). Similarly, charters tend to educate fewer special needs students (e.g., disabled or limited English proficient), who are more costly to serve and, as a consequence, may receive proportionally higher aid allocations (Arsen & Ni, 2012; Arsen & Ray, 2004; Miron et al., 2002). In addition, state and local mandates may require traditional districts to provide services that charters do not, such as adult education, community service, and transportation (Arsen & Ni, 2012; Miron & Urschel, 2010). Policy also may dictate that conversion charters (i.e., a traditional public school that converts to a charter school) do not have to pay rental or lease fees to host districts (Florida Department of Education, 2011).

There is also some evidence that charter expenditure patterns differ across and within management types. Miron and Urschel (2010), for example, report that traditional districts spend 2% more on instruction than nonprofit EMO charters, and 11% more than for-profit EMO charters. Hannaway and Sharkey (2004) found that expenditure patterns differ even among charters managed by the same EMO, a result believed to follow from contextual factors including district contractual provisions, mission, union agreements, and local funding.

Others argue that charter spending decisions follow in large part from state funding policies, such as those that prohibit charters' use of public funds to construct, lease, or renovate school facilities (Ascher, 2004; Kamai, 2005; Krop & Zimmer, 2005; Smith, 2005), or require that they comply with district collective bargaining agreements (Belfield, 2008). Still others note how charters' need to incur start-up costs obscures spending comparisons (e.g., developing curriculum, hiring staff, and procuring facilities). Start-up costs are thought to be less for conversion charters than nonconversion charters (Huerta & d'Entremont, 2010; Krop & Zimmer, 2005).

In short, studies of charter school finance reveal and often acknowledge limits in the availability of meaningful data. Noteworthy, though, researchers attribute most charter closures to budgetary problems (Center for Education Reform, 2009; see also Brent & Finnigan, 2009).

### School Safety and Security

The second literature that informs our study considers school safety generally, and in a few instances, charter school safety. Here we find helpful

reports that document the prevalence of school safety and security measures. NCES (2011b), for example, regularly queries traditional public school principals about their use of security cameras and metal detectors, revealing an increased use of these measures during the 2000s (p. 81). Professional associations and state agencies have conducted similar surveys and reported similar results (e.g., Cooper & Beatty, 2006; Hess, 2002; McCarter, 2008). Of particular interest is Christensen's (2007) analysis of the 2003–2004 Schools and Staffing Survey (SASS) where he found that charters and traditional public schools employ like safety measures. Together these efforts offer insight into the percentage of schools that use various safety and security strategies. However, an indication that a school uses, say, security guards does not reveal their cost. The number of guards likely varies because of need, enrollment, and fiscal capacity—and so too would the total cost.

There is also a literature that examines the efficacy of school safety approaches. Many such studies focus on traditional secondary schools and solicit stakeholders' perceptions of one or more security measures' effectiveness. Brown (2005), for example, surveyed 230 students in Brownsville, Texas and found that most perceived that security personnel did a "good job of keeping school safe" (p. 111). Garcia (2003) interviewed 41 school safety administrators representing 15 states and learned that they viewed video cameras and recorders as the "most effective school safety technology" (p. 40). Similarly, Fontaine and colleagues' (2010) case study of a Washington, DC charter school determined that most faculty and students felt that security personnel and cameras contributed positively to their safety.

Others researchers have probed the efficacy of school security by analyzing the association between strategies and incident reports. For example, Blossnich and Bossarte (2011) used data from the 2007 School Crime Supplement and found that security guards and cameras had a positive, though statistically insignificant association with low-level physical victimization (e.g., bullying) and vandalism. Brunnsma (2006) notes that many schools have implemented dress and uniform policies in the belief that common attire will improve school culture, lessen peer pressure, improve student's self-esteem, and reduce violence and misbehavior. His analysis of data from NCES's Early Childhood Longitudinal Study however, indicates that school uniforms have not "reduced violence and behavior problems" (p. 53). Similarly, Johnson (2010) found no difference in rates of crime and violence in North Carolina high schools with uniform policies. Interestingly, Johnson (2010) notes that administrators in schools with uniforms perceive their schools are safer, though incident reports suggest otherwise (Johnson, 2010).

Though reducing school size is not a security strategy per se, our recognition that charters tend to be smaller than traditional schools prompted us to consider the relationship between school size and safety. Leithwood and



Jantzi's (2009) review of the empirical literature on the relationship between school size and academic outcomes certainly favors small schools. Small schools are also thought to provide safer learning environments because of their ability to foster closer student–staff bonds and shared behavior norms (Cotton, 1996; Jimerson, 2006; Klonsky, 2002; Nathan & Febey, 2001). Despite the plausibility of this view, few studies explore the association between enrollment and safety directly (Leithwood & Jantzi, 2009), and those studies that have offer ambiguous results (Klein & Cornell, 2010). For example, Gottfredson and DiPietro (2011) reported that after controlling for student characteristics (e.g., age, poverty, gender, and ethnicity) personal and property victimization was inversely associated with enrollment (see also, Mooij, Smeets, & de Wit, 2011). The authors hypothesized that this result might follow from larger school use of security practices such as cameras. Klein and Cornell (2010) reported like findings after analyzing data from the Virginia High School Safety Study.

When viewed broadly, studies of school security efficacy yield mixed results. Some scholars note that perceived levels of school violence are consistently higher than actual violent incidents (Mayer & Leone, 1999), pointing out an inherent limitation of using stakeholders' perceptions to measure the prevalence of school violence, and by extension, the effects of various approaches (Hankin, Hertz, & Simon, 2011; Johnson, 2009; Juvonen, 2001; Mayer & Furlong, 2010). Alternatively, Bosworth, Ford, and Hernandez (2011) hold that perceptual data can reveal “a feeling of safety,” an understanding of which is central to efforts to address the social and emotional effects of school violence and its prevention (p. 195). Still others argue that efforts to link security measures to incident reports is subject to the same criticism of efforts that claim causality between academic interventions and test scores (Christensen, 2007).

Such concerns aside, what we find useful about work that probes the efficacy of school safety initiatives is that one can often glean the “ingredients” needed to implement the measures (Schneider, 2008; Sprague, 2007). A few efforts have even specified unit costs on various ingredients, such as metal detectors and security cameras (e.g., Bartosh, 2006; Idaho State Department of Education, n.d.; McCarter, 2008; U.S. Department of Education, 2002). To impute a full accounting of the resources that schools devote to security is, however, another matter. Similarly, one cannot extrapolate from categorical federal and state safety grants/aids how schools put these resources to use, or whether there was a local share (e.g., New Jersey Department of Education, 2007; U.S. Department of Education, n.d.).

Our review of school safety costs would not be complete if we did not acknowledge accounts that appear regularly in professional publications and the media. Typically, authors report the costs associated with a specific safety approach, such as cameras, security guards, or electronic identification tags (Batchelder, 2009; Calabro, 2010; Radcliff, 2010; Rossi, 2010; Washington,

2010). Others note the expenditures schools incur to remedy rather than prevent school safety issues, such as the cost to repair vandalized property, replace stolen property, or meet legal obligations following a victimization incident (Chandler, 2009; Hoffman, 2010; Nelson, 2009; Simon, 2009; Stover, 1990; Washington Times, 2004). One recent report even documented that San Antonio schools lost \$80,000 in state aid because rumors of a mass school shooting may have prompted many students to stay home (Lloyd, 2010).

Taken together, our charter school finance and school security literature reviews shed little light on the costs schools incur to foster safe learning environments. Broad examinations of charter school finances continue to emerge, but few afford policymakers insight beyond functional spending levels. A vast multidisciplinary literature reveals traditional schools' high and increasing use of safety measures, though remarkably few attend to their cost. Our purpose here is to move beyond gross depictions of charter finances and anecdotal accounts of school security costs by providing the first comprehensive account of charter school security costs.

## CONCEPTUAL FRAME

Thus far, we have used *school violence*, *school safety*, and *school security* without regard to the conceptual differences that underlie the terms.<sup>1</sup> We did so deliberately. Our literature review revealed little consistency in the use of those terms. The U.S. Department of Education holds that "violent incidents" involve "rape, sexual battery other than rape, physical attacks or fights with or without a weapon, threats of physical attack with or without a weapon, and robbery with or without a weapon" (NCES, 2011b, p. 25). Alternatively, Thomas (2006) views school violence as "intentional actions that disrupt the operation of the school's learning program, cause physical harm or psychological distress for students, teachers and other members of the staff, and/or destroy property" (p. 1). Henry (2000) broadens further the school violence frame to include "acts and processes of institutionalized racism or sexism, other discrimination, labeling and tracking, authoritarian discipline, militaristic approaches to school security, sexual harassment and predation" (p. 18). Furthermore, some scholars argue that school violence is a socially constructed term whose definition differs among ethnicities, classes, and gender (Benbenishty & Astor, 2005; Williams, 2005).

School safety is also a construct without universal meaning. Consider how states identify schools that are "persistently dangerous" and, by exclusion, those that are "safe" for purposes of USCO (Gastic & Gasiewski, 2008). Some states view any assault as a safety threat, while others recognize only assaults that result in suspensions or expulsions (Education Commission of the States, 2009). Moreover, policymakers and others use the term school

safety to dictate or describe schools' readiness to address matters of health (e.g., H1N1), terrorism, natural disasters, and fire.

Our study focuses on school violence measures, as defined by Thomas (2006). School violence measures are generally tagged as either *prevention activities* or *security*. Prevention activities are strategies that aim to lower the probability that students will engage in violent acts (Miller & Kraus, 2008). A given intervention might address one or more known risk factors (e.g., gang involvement or antisocial behavior) and be applied school-wide (e.g., positive reinforcement system), to at-risk students only (e.g., intensive social skills teaching), or to high-risk students only (e.g., individual behavior management plans) (Sprague, 2007). Security, also called "target hardening" (Astor et al., 2010), includes initiatives that independently or in concert make a school a less desirable venue for violence, theft, or vandalism. Security measures include the use of personnel (e.g., law enforcement, security guards), monitoring devices (e.g., surveillance cameras, metal detectors), and communication systems (e.g., confidential reporting system). In this study, we examine the prevalence of prevention activities and security measures in U.S. charter schools. Our inability to disaggregate prevention activity expenditures in the Texas dataset, however, limits our cost analyses to security measures.

## DATA AND METHODS

### Texas Data and Context

Charters in the Texas public school system are the primary focus of this study. We selected Texas for several reasons. Foremost, Texas may be the only state that requires all districts, including charters, to use a dedicated account code to report security expenditures. Further, since charters were first approved in 1995, Texas now ranks second among states in the total number of charter schools (NCES, 2011a), offering a varied set to analyze. Reports of Texas charter schools' waiting lists suggest also that the sector will continue to grow (Terry & Yelverton, 2009). Texas Education Code § 37.108(b) also requires that districts and charters undertake a "Safety and Security Audit" at least once every three years, and take steps to implement any recommendations that follow from this process. Together these reporting and assessment requirements point clearly to Texas education policymakers' want to understand and attend to matters of school security in both traditional and charter settings. Finally, with regard to school security, findings from national data (NCES, 2012) have shown that school security incidents in Texas as measured by the percentage of Texas public high school students "who reported being threatened or injured with a weapon on school property at least one time during the previous 12 months" (p. 105) are comparable to the national average, as is the percentage of Texas teachers "who

reported that they were threatened with injury by a student from school during the previous 12 months” (p. 108).

The primary data source used is 2008–2009 Texas district financial data from the Texas Education Agency’s (TEA) Public Education Information Management System (PEIMS). Texas charters and districts incurred the expenditures (actual not budgeted) during the 2008–2009 accounting year (TEA, 2010a). The dataset includes all 1,030 traditional public school districts, as well as 201 state-approved charters that operated independent of local districts during that academic year.<sup>2</sup> Eighty four (42%) of the 201 charters operated more than one campus or school site so the charters in this study represent 439 charter campuses. Because some expenditures in the PEIMS data are unallocated or undistributed, meaning they are not attributable to a specific school, to obtain accurate figures we have to aggregate expenditures to the charter or district level for our analyses, rather than to the individual charter campus or public school level.

As explained by Taylor et al. (2011), Texas Education Code allows for four classes of charters, three of which were in existence during the study period. The first class district (or campus) charters are sponsored and overseen by local public school districts. These charters, which may be created through the conversion of existing public schools in the district or as new startup schools, receive state and local funds just like the sponsoring district (TCER, 2008, 2011). During the 2008–2009 academic year, there were 61 district charter schools serving 24,737 students. Nearly all of those charters were sponsored by the Houston, Dallas, or San Antonio school districts (Taylor et al., 2011). We do not analyze district charters separately or with the other charters in this study due to the need to aggregate the expenditure data to the district level as noted above. The 61 district charters, thus, are included in the expenditure figures of the sponsoring public school district.

The second class of charters, referred to as open-enrollment charters, consists of entirely new schools created by nondistrict entities (e.g., nonprofit organizations), authorized by the State Board of Education, and overseen by the TEA. These are the most common type of charters in the state (TCER, 2008) and comprise 198 of the 201 charters in our dataset. Texas limits the number of open-enrollment charters to 215, although as noted earlier a single charter can operate more than one campus (TCER, 2011).

The third class of charters is university (or college-operated) charters; actually a second type of open-enrollment charters sponsored by public higher education institutions in the state (TCER, 2008). Texas’ original 1995 charter code was amended in 2001 to allow for university charters (TCER, 2011). Like open-enrollment charters, university charters also are permitted to operate multiple school sites, although each site must be located on campus or within the county of the sponsoring higher education institution. Currently, there is no cap on the number of university charters allowed

(TCER, 2011). Because of the very small number of university charters in existence at the time of this study (3 out of the 201 charters), we do not distinguish between open-enrollment and university charters. We use the generic term “charters” to refer to these two classes of charters. According to Taylor et al. (2011), these two charter classes combined served 102,249 students in 2008–2009. Together with campus charters, charter students overall constituted just under 3% of Texas students in that academic year.

In 2008–2009, open-enrollment charter schools secured, on average, \$9,654 per pupil, while traditional school districts secured \$10,281 per pupil (Taylor et al., 2011). Open-enrollment charters depend on federal and state aids and grants, and revenues derived from private sources (e.g., donations, foundations, and Education Management Organizations). Like charters elsewhere, Texas open-enrollment charters may not draw upon local tax-based revenue (e.g., property taxes).

In 2008–2009, Texas open-enrollment charters and traditional districts received comparable levels of federal revenues per pupil (State of Texas Education Research Center, 2011). With regard to state revenues, both types derive most of their state revenue from a foundation aid, the Foundation School Program (FSP). Simply, the foundation aid amount is multiplied by the school or district’s weighted average daily attendance, a provision designed to adjust for student cost differences (i.e., special needs, bilingual and English language learners, career and technology education, compensatory education, and gifted/talented) (Texas Education Agency Division of Charter School Administration, n.d.). Unlike traditional districts, Texas charters do not secure revenue from facility related aids (e.g., Facilities Allotment Program and the Existing Debt Allotment Program), although the State does allow approved bonding authorities to issue bonds to finance authorized charter schools (TCER, 2008). In a survey of new open-enrollment charters in 2008–2009, all but one leased, rented, or purchased their facilities; the one exception reported using district-provided space (TCER, 2008).

Texas’ PEIMS data provide detailed expenditure information by major function codes that represent the broad operational areas that traditional districts and charters use to categorize spending for related activities (e.g., instruction, school leadership, transportation, health services). The TEA reserves function code 52 for expenditures associated with security and monitoring services, which Texas defines as “activities to keep student and staff surroundings safe, whether in transit to or from school, on a campus or participating in school-sponsored events at another location” (TEA, 2010a, p. 324). According to the TEA, examples of function code 52 expenditures include security guards, hall monitors for security purposes, security vehicles, and supplies and equipment associated with the safekeeping of students and staff, such as metal detectors and security cameras. Further, the TEA makes clear that function code 52 *does not* include expenditures for security systems that are part of a smoke detector system (i.e., fire

safety), truant officers, social workers, and school bus aides for special education. Our main interest in this study concerns expenditures for security as captured by function code 52, although we consider spending in other functional areas as well to provide a sense of the magnitude of resources devoted to security compared to other educational activities.

In addition to absolute levels of security spending, we examine security expenditures on a per pupil basis and as a percentage of both total expenditures and operating expenditures. For enrollment and other information about Texas' charters and traditional public schools districts, such as locale and student demographics, we utilize 2008–2009 public-use data files from Texas' Academic Excellence Indicator System (TEA, n.d.) and the NCES' Common Core of Data. Operating expenditures and total expenditures were calculated by summing across function codes in accordance with the definitions provided in TEA (2010b). We then verified the accuracy of these calculations by using financial audit reports from the same year for a random sample of charters and traditional public school districts (Texas Education Agency Division of School Financial Audits, n.d.).

### National Data

Though the Texas financial data provide valuable information about charters' and districts' security expenditures, the data provide no information about their actual security practices. To gain some understanding of security practice implementation, we turned to two data sources from the NCES. The first is principal survey data from the 2007–2008 SASS restricted-use dataset. SASS' principal survey asks respondents to report information about their schools on a variety of topics, including the types of practices used in the school to promote the security of students and staff (Tourkin et al., 2010). The public school principal dataset provides cross-sectional information from a nationally-representative stratified sample of U.S. public schools, including both traditional public schools and charter schools. Charter schools in the SASS data are representative at the national level, but not at the state level.<sup>3</sup> Thus, our analysis of principals' responses from the SASS data provides a snapshot of security practices used by charter schools and traditional public schools nationally. Although similar information for Texas charters and traditional public schools would have been more informative for this study, the national results shed some light on what schools of both types have been doing to promote school security and enable us to compare the practices of charter schools to those of traditional public schools.

The second NCES dataset used is the 2007–2008 School Survey on Crime and Safety (SSOCS) restricted-use data. The SSOCS, which is conducted biannually, is a cross-sectional survey of a nationally-representative stratified sample of U.S. public schools. Like the SASS, the SSOCS asks principals to provide information about their schools on a variety of topics, including



practices used to promote the safety and security of students and staff (NCES, 2007). The SSOCS data provide detailed information regarding charter and traditional public schools' utilization of security personnel, which is not available from the SASS data. In contrast to the SASS data, charter schools in the SSOCS are not nationally representative when weighted. This is a shortcoming, although the lack of representativeness of charters is not uncommon within the charter school finance literature (Miron et al., 2012).

## Method

To answer the first two of our research questions regarding charters' use of and spending on security measures, we calculated simple descriptive statistics, as well as inferential statistics (including t-tests, analysis of variance with Bonferroni post-hoc tests, and Chi-square tests) where appropriate to assess the statistical significance of differences among different types of charters and between charters and traditional public school districts. With regard to charter type, we examined charters by locale, accountability, and management type due to variation among Texas charters along those dimensions (National Alliance for Public Charter Schools [NAPCS], n.d.; Smith, 2005). For locale type, we distinguished between urban and nonurban charters. In terms of accountability type, Texas schools, including charter campuses, that serve a predominance of students at risk of dropping out can petition to be rated under an alternative education accountability system rather than the State's standard education accountability system (TCER, 2008). Because alternative education schools serve more challenging student populations than standard education schools (at risk student enrollment is 75% or greater), we distinguished charters based on the accountability type of their campus(es); Standard or Alternative. Charters with both alternative and standard campuses were placed into a third category labeled "Combined." According to Taylor et al. (2011) and TCER (2008), open-enrollment charters are much more likely than district charters and traditional public schools to be designated as alternative accountability schools. Indeed, Taylor et al. (2011) indicated that only 7 of the 61 (11.5%) district charters in 2008–2009 were designated as alternative. By comparison, 78 of the 201 (38.8%) charters examined in this study were alternative. With regard to management type, we used the 2008–2009 profiles published by Molnar, Miron, and Urschel (2009) and Miron and Urschel (2009) to differentiate Texas charters managed by for-profit or nonprofit EMOs from independent (Non-EMO) charters. We do not distinguish for-profit from nonprofit EMO-operated charters due to the small number of for-profit EMO-operated charters in Texas (NAPCS, n.d.).

Charters in Texas and elsewhere have been found to differ from traditional public schools in a number of other ways, including their average size, location, and types of students served (see, e.g., Frankenberg,

Siegel-Hawley, & Wang, 2011; Miron & Urschel, 2010; Smith, 2005; TCER, 2008). We show in Table 1 differences in measurable characteristics among Texas charters by locale, accountability, and management type and between Texas charters and traditional public school districts overall and by locale type. As has been reported in other studies, Table 1 shows that Texas charters served significantly fewer students overall than the average public school district in the State, though the average percentage of high school students served was similar (about 43% for both charters and traditional districts). Texas charters also were significantly more likely than traditional public districts to be located in urban areas and to serve non-White and low-income students. We find similar disparities among charters by locale type with urban charters serving significantly more students, including greater percentages of African American students, low-income students, and English language learners (ELL), than nonurban charters. Interestingly, urban traditional districts differed from nonurban traditional districts in analogous ways to urban versus nonurban charters (i.e., more students overall; greater percentages of non-White, low-income, and ELL students). Comparisons of these characteristics among charters by accountability type revealed the greatest differences between alternative charters and one or both of the other charter types, particularly with regard to the percentage of high school students served. We also find significant differences in a number of these characteristics between EMO versus non-EMO charters. On average, EMO-operated charters were larger and served a greater percentage of high school students, though they served fewer African American, ELL, and Individual Education Program (IEP) students than non-EMO charters.

Table 1 also reports information regarding student disciplinary actions taken from Texas' PEIMS data. Charters, on average, placed a significantly lower percentage of students in disciplinary alternative education programs (DAEP) than traditional schools, overall and by locale type. Similarly, comparatively fewer charter students committed one or more disciplinary offenses during the school year (% discipline population). Though traditional urban districts reported significantly greater percentages on both discipline measures than traditional nonurban districts, we did not find significant differences across charter types.

Individually or in concert, these discipline variables serve as reasonable, but imperfect, proxies for school crime and safety in Texas. The first proxy, % students with disciplinary placements, accounts for those students placed in DAEP, a result that can follow from a range of offenses (i.e., committing an assault in school to possessing tobacco). The second proxy, % discipline population, accounts for 23 disciplinary offenses, including conduct "punishable as a felony" and "truancy—unexcused absence." Neither variable accounts for the possibility that a single student might commit multiple offenses, resulting in multiple placements. As we noted above, the reliability of student discipline data as a proxy for school crime and safety is highly

**TABLE 1** Characteristics of Texas Charters and Traditional Public School Districts

	Charters										Traditional Public School Districts		
	Locale Type			Accountability Type				Management Type			Locale Type		
	All	Urban	Nonurban	(a) Standard	(b) Alternative	(c) Combined	EMO	Non-EMO	All	Urban	Nonurban		
Total enrollment	506.2 (592.2) <sup>***</sup>	551.4 (590.3) <sup>***</sup>	362.3 (581.2) <sup>***†</sup>	559.4 (636.0)	372.0 (343.4) <sup>c</sup>	861.9 (1065.2) <sup>b</sup>	756.4 (799.3)	392.0 (425.4) <sup>#</sup>	4491.0 (12798.0)	28704.7 (34026.3)	2806.3 (7217.2) <sup>#</sup>		
Mean % high school students	43.8 (37.5)	41.5 (37.9)	51.0 (35.6)	23.6 (23.3) <sup>bc</sup>	70.4 (38.6) <sup>a</sup>	54.7 (20.7) <sup>a</sup>	56.8 (35.1)	37.8 (37.1) <sup>#</sup>	42.7 (8.6)	41.1 (4.1)	42.8 (8.8) <sup>†</sup>		
Mean % African American students	28.5 (30.0) <sup>***</sup>	30.1 (31.0) <sup>***</sup>	23.5 (26.2) <sup>***#</sup>	30.0 (32.5)	26.2 (27.1)	30.3 (25.1)	22.3 (24.7)	31.1 (31.8) <sup>‡</sup>	8.0 (11.7)	15.8 (15.9)	7.5 (11.1) <sup>#</sup>		
Mean % Latino students	47.4 (32.0) <sup>***</sup>	52.0 (32.1)	32.8 (27.2)	45.8 (33.7)	52.4 (30.4)	31.0 (19.2)	52.2 (30.0)	45.2 (32.8)	34.0 (26.9)	52.2 (28.2)	32.7 (26.3) <sup>#</sup>		
Mean % White students	21.1 (17.6) <sup>***</sup>	15.1 (19.9) <sup>***</sup>	40.3 (29.4) <sup>***#</sup>	19.5 (25.2)	20.7 (23.9)	36.8 (23.9)	20.4 (20.6)	21.4 (26.7)	56.4 (54.8)	28.8 (21.9)	58.4 (26.5) <sup>#</sup>		
Mean % Other, non-White students	3.0 (7.1) <sup>**</sup>	2.9 (6.4)	3.4 (9.0)	4.7 (9.2) <sup>b</sup>	0.7 (1.1) <sup>a</sup>	1.9 (1.7)	5.1 (10.2)	2.1 (4.9) <sup>‡</sup>	1.5 (2.5)	3.2 (3.6)	1.4 (2.3) <sup>#</sup>		
Mean % low-income students	69.2 (26.3) <sup>***</sup>	72.7 (24.2) <sup>**</sup>	58.2 (29.8) <sup>#</sup>	64.0 (28.9) <sup>b</sup>	77.3 (19.3) <sup>a</sup>	65.0 (29.3)	67.2 (22.8)	70.2 (27.8)	53.6 (18.9)	61.7 (20.4)	53.0 (18.6) <sup>#</sup>		
Mean % ELL students	11.5 (18.3) <sup>**</sup>	14.3 (20.0)	2.5 (5.1) <sup>***#</sup>	14.6 (21.0) <sup>b</sup>	8.0 (14.3) <sup>a</sup>	6.2 (8.8)	7.3 (10.0)	13.4 (20.8) <sup>†</sup>	7.8 (9.3)	16.0 (13.0)	7.2 (8.7) <sup>#</sup>		
Mean % IEP students	10.7 (13.6)	8.8 (10.4)	16.9 (19.5) <sup>†</sup>	5.9 (4.3) <sup>bc</sup>	16.0 (17.9) <sup>a</sup>	19.5 (19.2) <sup>a</sup>	7.9 (8.5)	12.0 (15.2) <sup>‡</sup>	10.7 (2.8)	10.0 (2.2)	10.7 (2.9) <sup>‡</sup>		

Mean % with disciplinary placements	0.06 (0.6) <sup>***</sup>	0.08 (0.7) <sup>***</sup>	0.002 (0.01) <sup>***</sup>	0.02 (0.2)	0.12 (1.0)	0.00 (0.0)	0.14 (1.1)	0.02 (0.2)	1.8 (1.4)	2.7 (1.3)	1.7 (1.4) <sup>#</sup>
Mean % discipline population	6.8 (8.6) <sup>***</sup>	6.4 (7.8) <sup>***</sup>	8.0 (10.8) <sup>**</sup>	6.2 (6.7)	7.5 (10.3)	6.3 (11.2)	6.7 (9.0)	6.8 (8.5)	13.8 (7.1)	17.0 (5.6)	13.6 (7.2) <sup>#</sup>
Locale type											
% Urban	76.1 <sup>***</sup>			78.2	74.4	69.2	82.5	73.2	6.5		
% Nonurban	23.9			21.8	25.6	30.8	17.5	26.8	93.5		
N	201	153	48	110	78	13	63	138	1030	67	963

Note. Asterisks in the charters columns indicate mean differences between charters and traditional public school districts, overall or by locale type: \*  $p \leq .05$ ; \*\*  $p \leq .01$ ; \*\*\*  $p \leq .001$ . Symbols in the nonurban columns indicate mean differences between urban and nonurban within charter/district type. Similarly, symbols in the non-EMO column indicate mean differences between EMO-operated and non-EMO charters: #  $p \leq .001$ ; †  $p \leq .01$ ; ‡  $p \leq .05$ . Bonferroni multiple comparisons were used to examine differences across all pairs of charter accountability type classifications. If the mean value for one column has a superscript for another column, those two means are different at the  $p \leq .05$  familywise error rate.

contested, with critics pointing to differences in reporting practices among and within districts.

The differences in characteristics among charter types and between charters and traditional public school districts reported in Table 1 make direct comparisons of security spending complicated, particularly because some of the same characteristics have been shown to be associated with differences in security practices and spending (Christensen, 2007; DeAngelis, Brent, & Ianni, 2011; NCES, 2010). To control for these differences, we estimated OLS regression models with security spending as a percent of operating expenditures as the dependent variable. In models examining differences in security spending between charters and traditional districts, we first included a simple indicator variable (charter = 1, traditional = 0) to capture overall differences; as an alternate specification, we included indicators for charter type, for which we interacted accountability type (i.e., standard, alternative, or combined) with management type (EMO or non-EMO), to capture differences in spending by different types of charters compared to traditional public schools. In models examining differences in security spending among charters, we included the accountability by management type indicators with non-EMO standard accountability charters as the reference category. Like Arsen and Ni (2012), we also included in the regression models a variable labeled "Years in operation" to control for possible differences in security spending by charters based on how long they had been in existence. As they explained, spending in particular function areas might change as charters mature beyond their initial start-up phase (Arsen & Ni, 2012). The first charters in Texas opened in 1996 so our years in operation variable ranges from 1 to 13. As additional control variables, we included locale type (urban vs. nonurban), total student enrollment and its square (to capture possible economies of scale associated with security use), the percentage of high school students in the charter or district, the percentage of students by race/ethnicity, the percentage of low-income students as determined by their eligibility for free or reduced-price lunch, the percentage of ELL, the percentage of students with an IEP, and the percentage of students who had been placed at least once during the academic year in a disciplinary alternative education or juvenile justice alternative education program.

## FINDINGS

### Comparative Security Practices

Our first analysis examined the prevalence of school security practices nationally using school-level SASS data. As the left hand columns of Table 2 reveal, a given charter school might employ a variety of strategies, ranging from the use of metal detectors at entry to prohibiting student book

bags. Most charter schools controlled entrance to and egress from their buildings by locking or monitoring doors and closing campus during lunch. A majority of charter schools also sought to provide security by enacting policies that governed student attire through dress codes or uniforms. Over 40% of charter schools used security cameras and nearly a quarter used security personnel daily. Relatively few charter schools employed metal detectors to search students randomly, or students, staff, and visitors upon entry.

Table 2 also reports differences in the percentage of independent and district-governed charter schools that used a given security practice, though such differences were not statistically significant.<sup>4</sup> When we compared charter schools to traditional public schools, however, we found several differences. Overall, charter schools were significantly more likely to utilize strict dress codes and uniforms, but less likely to lock or monitor doors.

Believing that locale might play a role in school security decisions, we also examined the prevalence of security measures in urban and nonurban settings. As the right hand columns of Table 2 indicate, we found significant differences between charter and traditional schools' use of student uniforms in both urban and nonurban settings, as well as urban charter and urban traditional schools' use of strict dress codes. We also learned that locale does not seem to affect whether charter schools in general use security measures as urban and nonurban charter schools only differed significantly in their use of uniforms. In contrast, the prevalence of security measures in traditional urban and nonurban public schools differed considerably. Nonurban schools were more likely than urban schools to have security cameras, but less likely to have security personnel, require student ID badges, or use metal detectors randomly or upon entry.

Table 3 offers further insight into the pervasiveness of security efforts between charter and traditional public schools. Here we report that very few charter schools (3.6%) and still fewer traditional public schools (1.3%) indicated that they did not use any of the security measures listed in Table 2. We also report that small percentages of schools use nine or more of these measures, regardless of type or locale. Instead, the figures indicate that most schools employ four to six security strategies, with only traditional urban and nonurban schools differing significantly on the mean number of security measures employed.

Because security personnel are likely the most visible and costly school security measure, we used the SSOCS data to show in Table 4 the mean number of full-time and part-time security personnel per 100 students in charter and traditional schools. Recall that charter schools in the SSOCS data are not representative due to the sampling design of that survey. The data allowed us to distinguish among three types of school security personnel: (a) school resource officers (SROs), (b) sworn law enforcement officers, and (c) security guards. SROs are active duty police assigned and paid by



**TABLE 2** Percentage of Schools Using Identified Security Practices in U.S. Charter and Traditional Public Schools (2007–2008 SASS Data)

	All Locales				Locale Type			
	Charter Schools		Traditional Public Schools		Charter Schools		Traditional Public Schools	
	All	Independent	District Governed	All	Urban	Nonurban	Urban	Nonurban
Lock or monitor doors	81.3*	86.3	75.0	89.1	83.5	78.5	90.0	88.9
Enforce strict dress code	73.7**	75.6	71.3	53.2	76.7*	69.9	61.9	50.6 <sup>a</sup>
Close campus during lunch	60.7	62.7	58.0	60.8	58.8	62.9	61.5	60.6
Require student uniforms	55.4***	59.9	49.6	14.9	64.7***	43.6*** <sup>c</sup>	33.6	9.5 <sup>a</sup>
Lock or monitor gates	48.4	40.4	58.6	44.8	56.7	38.0	55.5	41.6 <sup>a</sup>
Use security cameras	41.2	40.8	41.8	52.2	41.9	40.5	45.6	54.1 <sup>a</sup>
Use daily security personnel	23.4	18.3	29.9	27.3	29.3	16.1	37.8	24.3 <sup>a</sup>
Perform random sweeps for weapons/contraband	15.9	16.3	15.3	14.8	17.5	13.8	12.7	15.4
Require students to wear ID badges	11.8	9.5	14.8	7.3	13.6	9.6	11.3	6.1 <sup>b</sup>
Require clear book bags or prohibit use of book bags	7.5	7.5	7.4	6.8	11.3	2.6	6.8	6.8
Use random metal detector checks	3.6	2.8	4.6	6.0	5.0	1.9	10.2	4.7 <sup>a</sup>
Use metal detectors at entry	1.7	0.3	3.3	2.3	2.1	1.0	4.3	1.7 <sup>b</sup>
<i>N</i>	3547	1989	1558	86920	1974	1572	19588	67332

*Note.* The numbers were weighted to produce estimates that are nationally representative. Replicate weights provided with the dataset were used to calculate standard errors. None of the differences between Independent charter schools and District-governed charter schools were statistically significant. Asterisks in the “All” charter school columns and “Urban” and “Nonurban” charter school columns represent statistically significant differences between all charter schools and traditional public schools in those locales: \* $p \leq .05$ ; \*\* $p \leq .01$ ; \*\*\* $p \leq .001$ . Letters in the nonurban columns indicate mean differences between urban and nonurban within school type: <sup>a</sup> $p \leq .001$ ; <sup>b</sup> $p \leq .01$ ; <sup>c</sup> $p \leq .05$ .

**TABLE 3** Total Number of Security Practices Used by U.S. Charter and Traditional Public Schools (% of Schools)

Number of Security Practices Used	All Locales					Locale Type			
	Charter Schools					Charter Schools		Traditional Public Schools	
	All	Independent	District Governed	Traditional Public Schools		Urban	Nonurban	Urban	Nonurban
0	3.6	3.3	3.8	1.3	3.0	4.2	1.4	1.3	1.3
1	8.3	7.5	9.4	7.7	7.0	10.0	4.7	8.5	8.5
2	11.7	11.2	12.4	17.5	8.4	16.0	12.8	18.9	18.9
3	8.3	8.0	8.6	22.2	7.8	8.8	21.5	22.4	22.4
4	24.3	24.7	23.9	20.1	21.3	28.1	17.5	20.8	20.8
5	16.4	22.0	9.2	14.2	18.4	13.8	17.1	13.4	13.4
6	13.2	13.0	13.5	8.1	15.1	10.9	10.1	7.5	7.5
7	7.6	5.8	10.0	4.5	11.3	3.0	6.5	3.9	3.9
8	3.9	2.5	5.8	2.2	3.5	4.4	4.4	1.6	1.6
9 or more*	2.6	2.1	3.3	2.2	4.1	0.8	4.1	1.6	1.6
Mean number of practices ( <i>SD</i> )	4.2 (7.9)	4.2 (7.4)	4.3 (8.4)	3.8 (6.7)	4.6 (8.1)	3.8 (7.3)	4.3 (7.7)	3.6 (6.3) <sup>a</sup>	3.6 (6.3) <sup>a</sup>
<i>N</i>	3547	1989	1558	86920	1974	1572	19588	67332	67332

*Note.* Based on 2007–2008 SASS data. The numbers were weighted to produce estimates that are nationally representative. Replicate weights provided with the dataset were used to calculate standard errors. Letters in the nonurban columns indicate mean differences between urban and nonurban within school type: <sup>a</sup> $p \leq .001$ .

\*We collapsed schools that utilized 9, 10, 11, or 12 security practices into the category labeled 9 or more due to NCEES regulations regarding cells with small sample sizes.

local agencies to work in schools. In addition to policing schools, SROs provide law-related counseling to students, faculty, and staff (Center for the Prevention of School Violence, n.d.). Sworn law enforcement officers are also active duty police, but they are not specially trained or assigned to schools long-term. Security guards, in contrast, are not police officers, but district-paid security personnel.

The figures in Table 4 suggest that charter schools use significantly more security personnel per student than do traditional schools, regardless of personnel type or school location. Traditional public schools overall employed one full-time security person for every 1,000 students and one part-time security person for every 1,100 students. Charter schools, alternatively, reported one full-time security personnel per 170 students and one part-time security personnel per 357 students. Notable differences also were reported by location within each school type. Without exception, urban traditional public schools employed significantly more security personnel than nonurban traditional public schools. Urban schools, for example, had one full-time security personnel for every 550 students compared to 1,250 students in nonurban schools. Though charter schools' use of full-time security personnel did not differ significantly by location, it appears that nonurban charter schools were more likely to use security guards and sworn law enforcement officers than urban charter schools. Nonurban charter schools also used significantly more part-time sworn law enforcement officers than their urban counterparts. Although charters or districts bear the cost of security guards, the budgetary effect of SROs and law enforcement officers is less clear because their costs are shared sometimes with local agencies.

### Charter Security Costs

Our analyses thus far used national-level data to highlight differences between charter and traditional public schools' approaches to school security. The analyses that follow draw upon Texas financial data to examine the budgetary effects of such practices on schools and programs. We begin by juxtaposing the mean level of security expenditures incurred by Texas charters (Table 5). Across all 201 charters, an average of \$30,625 was spent. This average, though, masks significant variations in security spending within charter locale, accountability, and management types. In urban charters, for example, total security expenditures averaged \$37,551, but ranged from \$3,273 to \$715,823. Among the accountability types, alternative charters reported the highest average expenditures levels (\$41,304). EMO-operated charters also reported significantly higher average security spending (\$57,919) than non-EMO charters (\$18,165). Even after controlling for differences in charter enrollment, significant spending variations among charter types remained. Overall, Texas charters devoted an average

**TABLE 4** Magnitude of Schools' Use of Security Personnel in U.S. Charter and Traditional Public Schools, Overall and by Locale Type

	Charter Schools			Traditional Public Schools		
	Locale Type			Locale Type		
	All	Urban	Nonurban	All	Urban	Nonurban
Full-time						
Security guards <sup>†</sup>	0.45 (1.52)	0.37 (0.70)	0.53 (1.97)*	0.05 (0.19)	0.11 (0.31)	0.03 (0.12)**
School resource officers <sup>†</sup>	0.12 (0.46)	0.12 (0.41)	0.12 (0.49)	0.04 (0.20)	0.06 (0.25)	0.04 (0.18)**
Sworn law enforcement officers <sup>†</sup>	0.02 (0.15)	0.04 (0.22)	0.0005 (0.006)**	0.008 (0.09)	0.02 (0.17)	0.006 (0.05)**
Total <sup>†</sup>	0.59 (1.59)	0.53 (0.89)	0.65 (2.00)	0.10 (0.31)	0.18 (0.46)	0.08 (0.24)**
Part-time						
Security guards <sup>†</sup>	0.11 (0.58)	0.10 (0.54)	0.11 (0.62)	0.02 (0.13)	0.03 (0.21)	0.02 (0.09)**
School resource officers <sup>†</sup>	0.08 (0.43)	0.09 (0.37)	0.08 (0.48)	0.05 (0.16)	0.07 (0.22)	0.05 (0.13)**
Sworn law enforcement officers <sup>†</sup>	0.09 (0.33)	0.03 (0.18)	0.14 (0.42)**	0.02 (0.11)	0.04 (0.15)	0.02 (0.09)**
Total <sup>†</sup>	0.28 (0.86)	0.23 (0.66)	0.33 (1.00)**	0.09 (0.25)	0.13 (0.38)	0.09 (0.20)**
<i>N</i>	3142	1444	1698	78728	19653	59075

*Note.* Based on 2007–2008 SSOCS data. Means per 100 students enrolled are reported (standard deviations in parentheses). The numbers are weighted using the final weight provided with the dataset. The charter results are not nationally representative due to the sampling design of the survey. Replicate weights provided with the dataset were used to calculate standard errors. Asterisks in the nonurban columns indicate differences in the use of security personnel between urban and nonurban schools within school type: \* $p \leq .05$ ; \*\* $p \leq .001$ .

<sup>†</sup>All of the differences between charter schools and traditional public schools overall and by locale type are statistically significant at the  $p \leq .01$  level except for the difference in use of part-time sworn law enforcement officials in urban areas, which is not statistically significant.

**TABLE 5** Security Spending in Texas Charters, Overall and by Locale, Accountability, and Management Type

	Locale Type			Accountability Type			Management Type	
	All Charters	Urban	Nonurban	(a) Standard	(b) Alternative	(c) Combined	EMO	Non-EMO
Total Expenditures on Security (\$)								
Mean	30625 (79027)	37551 (88964)	8548 (18042)***	26137 (62194)	41304 (102358)	4530 (7796)	57919 (120407)	18165 (45357)**
Min.	0	0	0	0	0	0	0	0
Median	2588	3273	1536	2374	3045	992	10044	1380
Max.	715823	715823	83547	367072	715823	26275	715823	272998
Security Expenditures per Pupil (\$/pupil)								
Mean	45.85 (89.34)	54.16 (99.54)	19.36 (31.26)***	29.98 (55.20) <sup>b</sup>	74.45 (122.32) <sup>bc</sup>	8.55 (14.33) <sup>b</sup>	76.08 (126.09)	32.05 (62.01)**
Min.	0	0	0	0	0	0	0	0
Median	9.26	10.57	6.59	7.67	13.61	1.65	19.73	4.81
Max.	507.85	507.85	138.78	389.44	507.85	46.52	507.85	389.44
Security Expenditures as a Percentage of Total Expenditures (%)								
Mean	0.51 (0.96)	0.61 (1.06)	0.21 (0.36)***	0.36 (0.66) <sup>b</sup>	0.80 (1.27) <sup>bc</sup>	0.10 (0.16) <sup>b</sup>	0.83 (1.30)	0.37 (0.71)**
Min.	0	0	0	0	0	0	0	0
Median	0.10	0.12	0.08	0.09	0.18	0.02	0.21	0.06
Max.	4.96	4.96	1.86	4.30	4.96	0.48	4.96	4.30
Security Expenditures as a Percentage of Operating Expenditures (%)								
Mean	0.53 (0.98)	0.62 (1.09)	0.21 (0.37)***	0.37 (0.68) <sup>b</sup>	0.82 (1.30) <sup>bc</sup>	0.10 (0.16) <sup>b</sup>	0.84 (1.32)	0.38 (0.73)*
Min.	0	0	0	0	0	0	0	0
Median	0.11	0.12	0.08	0.10	0.18	0.02	0.21	0.06
Max.	5.00	5.00	1.92	4.42	5.00	0.48	5.00	4.42
N	201	153	48	110	78	13	63	138

Note. Asterisks in the Nonurban column indicate mean differences between urban and nonurban charters. Similarly, asterisks in the Non-EMO column indicate mean differences between EMO and Non-EMO charters: \* $p \leq .05$ ; \*\* $p \leq .01$ ; \*\*\* $p \leq .001$ . Bonferroni multiple comparisons were used to examine differences across all pairs of accountability type classifications. If the mean value for one column has a superscript for another column, those two means are different at the  $p \leq .05$  familywise error rate.

of \$45.85 per pupil on security expenditures, with urban charters (\$54.16), alternative charters (\$74.45), and EMO-operated charters (\$76.08) again incurring the highest average spending per pupil.

Table 5 also provides an initial view of the budgetary effect of security by reporting security expenditures as a percentage of total expenditures and operating expenditures. On average, Texas charters spent 0.51% of total expenditures and 0.53% of operating expenditures on security. Significant variations in spending occurred within locale, accountability, and management types. Urban charters allocated a significantly greater percentage of operating costs to security than did nonurban charters, as did alternative charters when compared to the other accountability types and EMO compared to non-EMO charters.

By themselves, the figures in Table 5 seem quite modest. However, when we compared security spending to other functional expenditures, a more informative perspective emerged. Table 6 reveals that the average charter devoted a greater percentage of operating expenditures to security (0.53%) than to instructional resources and media services (0.39%), facilities acquisition (0.32%), health services (0.31%), or social work services (0.20%). Moreover, security expenditures equaled 42% of the amount charters spent on curriculum/staff development, and more than 50% of the amount spent on instructional leadership.

Table 6 also reveals functional spending by charter locale, accountability, and management types. At 0.82%, alternative charters, for example, spent 3.5 times more on security than on health services, and nearly twice as much as they did on social work services—which involve activities related to the diagnosis and treatment of students' social needs, including the employment of truant officers and social workers. Alternative charters also spent a significantly greater percent of expenditures on security, and a lesser percent on instruction, extracurricular activities, and health services, than did standard charters. We find a similar pattern for charters managed by EMOs, which spent 2.5 times more on security than on health services and more than three times as much on security as on social work services. Compared to non-EMO charters, EMO charters spent significantly more on maintenance and operations, general administration, school leadership, extracurricular activities, and facilities acquisition, but significantly less on instruction and food services.

The greater spending on security by urban, alternative, and EMO-operated charters shown in Tables 5 and 6 may be due at least in part to other differences in the characteristics of those charters compared to other charters in the state (shown in Table 1). In Table 7, we report the results of OLS regression analyses in which security spending as a percentage of operating expenditures is a function of charter type and other measurable characteristics of the charters. Model I controls for charter type and the number of years the charter had been in operation. The results indicate that



**TABLE 6** Mean Expenditures by Function as a Percentage of Operating Expenditures for Texas Charters, Overall and by Locale, Accountability, and Management Type

	Locale Type			Accountability Type			Management Type	
	All Charters	Urban	Nonurban	(a) Standard	(b) Alternative	(c) Combined	EMO	Non-EMO
Instruction	53.17 (9.40)	52.54 (9.22)	55.17 (9.78)	54.43 (9.34) <sup>b</sup>	50.67 (9.26) <sup>ac</sup>	57.44 (7.31) <sup>b</sup>	48.21 (8.78)	55.43 (8.81) <sup>***</sup>
Maintenance and operations	13.53 (6.22)	14.01 (6.37)	11.99 (5.53) <sup>*</sup>	13.79 (6.44)	13.55 (6.17)	11.10 (4.18)	15.37 (5.86)	12.68 (6.22) <sup>**</sup>
General administration	11.44 (6.07)	11.56 (6.16)	11.06 (5.81)	11.26 (6.03)	12.11 (6.24)	8.92 (4.75)	12.20 (7.31)	11.09 (5.40)
School leadership	7.79 (4.07)	7.75 (3.99)	7.91 (4.38)	6.87 (3.58) <sup>b</sup>	8.97 (4.53) <sup>a</sup>	8.48 (3.37)	9.92 (3.36)	6.81 (4.01) <sup>***</sup>
Food services	4.46 (3.15)	4.81 (3.00)	3.34 (3.40) <sup>**</sup>	5.43 (3.07) <sup>b</sup>	3.20 (2.88) <sup>a</sup>	3.77 (2.71)	3.46 (2.61)	4.92 (3.28) <sup>***</sup>
Guidance and counseling	1.91 (2.63)	1.63 (2.23)	2.78 (3.52) <sup>*</sup>	0.97 (1.37) <sup>b</sup>	3.21 (3.39) <sup>a</sup>	2.01 (2.33)	2.11 (2.47)	1.81 (2.71)
Data processing services	1.56 (2.04)	1.33 (1.56)	2.30 (3.01) <sup>*</sup>	1.06 (1.09) <sup>b</sup>	2.18 (2.66) <sup>a</sup>	2.14 (2.75)	1.51 (2.01)	1.58 (2.05)
Transportation	1.38 (2.97)	1.30 (2.62)	1.62 (3.91)	1.41 (3.25)	1.26 (2.60)	1.80 (2.76)	1.03 (2.14)	1.54 (3.28)
Curriculum/Staff development	1.27 (1.41)	1.32 (1.42)	1.09 (1.39)	1.16 (1.13)	1.30 (1.48)	1.95 (2.62)	1.49 (1.49)	1.17 (1.36)
Instructional leadership	1.05 (1.80)	1.10 (1.77)	0.88 (1.89)	0.86 (1.53)	1.29 (2.17)	1.17 (1.39)	1.30 (1.89)	0.93 (1.75)
Extracurricular activities	0.72 (0.94)	0.70 (0.96)	0.78 (0.89)	0.98 (1.09) <sup>b</sup>	0.40 (0.60) <sup>a</sup>	0.44 (0.57)	1.05 (1.05)	0.57 (0.85) <sup>**</sup>
Security and monitoring services	0.53 (0.98)	0.62 (1.09)	0.21 (0.37) <sup>***</sup>	0.37 (0.68) <sup>b</sup>	0.82 (1.30) <sup>ac</sup>	0.10 (0.16) <sup>b</sup>	0.84 (1.32)	0.38 (0.73) <sup>*</sup>
Instr. resources and media services	0.39 (1.14)	0.40 (1.26)	0.37 (0.65)	0.52 (1.42)	0.21 (0.50)	0.42 (1.18)	0.31 (0.51)	0.43 (1.33)
Facilities acquisition	0.32 (0.81)	0.37 (0.22)	0.16 (0.36) <sup>*</sup>	0.43 (0.98)	0.18 (0.51)	0.19 (0.40)	0.61 (1.19)	0.18 (0.51) <sup>**</sup>
Health services	0.31 (0.43)	0.32 (0.42)	0.28 (0.45)	0.40 (0.45) <sup>bc</sup>	0.23 (0.40) <sup>a</sup>	0.07 (0.11) <sup>a</sup>	0.33 (0.38)	0.30 (0.45)
Social work services	0.20 (0.73)	0.24 (0.81)	0.07 (0.30) <sup>*</sup>	0.05 (0.22) <sup>b</sup>	0.43 (1.10) <sup>a</sup>	0.006 (0.02)	0.25 (0.56)	0.17 (0.79)
N	201	153	48	110	78	13	63	138

*Note.* Asterisks in the nonurban column indicate mean differences between urban and nonurban charters. Similarly, asterisks in the non-EMO column indicate mean differences between EMO and non-EMO charters: \* $p \leq .05$ , \*\* $p \leq .01$ , \*\*\* $p \leq .001$ . Bonferroni multiple comparisons were used to examine differences across all pairs of accountability type classifications. If the mean value for one column has a superscript for another column, those two means are different at the  $p \leq .05$  familywise error rate.

**TABLE 7** Multivariate Analysis of Differences in Security Spending as a Percentage of Operating Expenditures Among Texas Charters

	Model I	Model II
Intercept	0.14 (0.19)	-0.56 (0.29)
Charter type (Non-EMO standard as reference)		
Non-EMO alternative	-0.08 (0.15)	-0.17 (0.18)
Non-EMO combined	-0.32 (0.32)	-0.29 (0.33)
EMO standard	-0.04 (0.19)	-0.34 (0.20)
EMO alternative	1.45 (0.21)***	0.98 (0.21)***
EMO combined	-0.11 (0.49)	-0.42 (0.48)
Years in operation	0.03 (0.02)	-0.01 (0.02)
Locale type (Urban as reference)		
Nonurban		-0.07 (0.15)
Total enrollment (000's)		0.10 (0.03)***
Total enrollment squared		-0.003 (0.00)**
% High school students		1.00 (0.22)***
% African American students		0.01 (0.00)**
% Latino students		0.01 (0.00)*
% Other, non-White students		0.007 (0.01)
% Low-income students		-0.01 (0.00)*
% English language learners		0.01 (0.00)
% IEP students		0.00 (0.01)
% Students with disciplinary placement		0.05 (0.09)
Adjusted R <sup>2</sup>	0.232	0.356
N	201	201

Note. Standard errors are in parentheses.

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

EMO-operated alternative charters spent significantly more on security than non-EMO standard charters, whereas the other charter types spent similar percentages of their operating budgets on security. Model I also shows that the number of years the charter had been in operation was not significantly associated with security spending.

Model II in Table 7 reveals that differences in student and other characteristics account for some but not all of the difference in security spending between EMO alternative and non-EMO standard charters. After controlling for differences in other characteristics, we found that EMO alternative charters spent on average 0.98% more on security than non-EMO standard charters. Model II also indicates that the budgetary effect of security was similar for Texas charters in urban and nonurban locales after controlling for differences in type, enrollment, and student characteristics.

### Comparative Security Costs

Our previous analyses compared security expenditures among Texas charters organized by locale, accountability, and management type. In this

section, we compare Texas charter security spending to traditional school district spending organized by locale type only. Texas does not classify districts by accountability type, though districts can have alternative schools. Similarly, no traditional public school district in Texas was entirely EMO-operated, although some districts had EMO-operated schools (Miron & Urschel, 2010). As noted earlier, the TEA does not require districts to allocate all expenditures to the school level, impeding school-level cost analyses in this study.

In Table 8, we compare security spending in charters and traditional public school districts. Though total expenditures for security in traditional school districts (\$312,030) far exceeded the amount for charters (\$30,625), scale differences between the types explain that difference. When restated in terms of per pupil expenditures, we find that charters overall spent significantly more per pupil on security than did traditional public school districts. However, as Table 1 showed, charters are much more likely to be located in urban areas than traditional public school districts in Texas. Comparing charters and traditional districts within locale type we find that urban charters spent significantly less on security per pupil and as a percentage of their operating budgets than traditional urban districts and about the same in nonurban locales.

Table 9 illuminates further expenditure patterns between Texas charters and traditional school districts. In addition to spending significantly more of their operating expenditures on security, charters overall spent significantly more than traditional districts on maintenance and operations, administration, school leadership, and staff development, whereas they spent significantly less in other functional areas, including instruction, food services, guidance and counseling, transportation, extracurricular activities, instructional resources, and health services. These differences in functional area spending were fairly consistent even between charters and traditional districts within urban and nonurban locales.

Because Texas charters enroll different students and provide different programs than traditional school districts (shown in Table 1), one needs to interpret the descriptive comparisons in Tables 8 and 9 carefully. As we did for charters in Table 7, we estimated regression models to control for differences in student and other characteristics between charters and traditional districts. The results of the regression analyses are reported in Table 10. The first two models compare charters overall to traditional public districts, whereas the third and fourth models compare charters by type (accountability by management interactions) to traditional public districts. Starting with charters overall, we find that differences in measurable characteristics between charters and traditional public districts explain a significant portion of the variance in security spending as a percentage of operating expenditures (Models I and II). Controlling for those differences, Model II shows that charters overall devoted no more of their operating budgets to security

**TABLE 8** Security Spending in Texas Charters and Traditional Public School Districts, Overall and by Locale Type

	Charters			Traditional Public School Districts		
	Locale Type			Locale Type		
	All	Urban	Nonurban	All	Urban	Nonurban
Total Expenditures on Security (\$)						
Mean	30625 (79027)***	37551 (88964)***	8548 (18042)***	312030 (1228980)	2571982 (3757371)	154796 (516278)
Min.	0	0	0	0	0	0
Median	2588	3273	1536	9578	1151670	6487
Max.	715823	715823	83547	21129747	21129747	5132426
Security Expenditures per Pupil (\$/pupil)						
Mean	45.85 (89.34)**	54.16 (99.54)*	19.36 (31.26)	28.49 (37.94)	73.81 (43.64)	25.34 (35.44)
Min.	0.00	0.00	0.00	0.00	0.00	0.00
Median	9.26	10.57	6.59	12.59	68.92	9.81
Max.	507.85	507.85	138.78	341.41	183.60	341.41
Security Expenditures as a Percentage of Total Expenditures (%)						
Mean	0.51 (0.96)***	0.61 (1.06)	0.21 (0.36)	0.23 (0.32)	0.65 (0.40)	0.21 (0.30)
Min.	0.00	0.00	0.00	0.00	0.00	0.00
Median	0.10	0.12	0.08	0.08	0.61	0.07
Max.	4.96	4.96	1.86	1.85	1.65	1.85
Security Expenditures as a Percentage of Operating Expenditures (%)						
Mean	0.53 (0.98)**	0.62 (1.09)*	0.21 (0.37)	0.31 (0.41)	0.83 (0.46)	0.27 (0.38)
Min.	0.00	0.00	0.00	0.00	0.00	0.00
Median	0.11	0.12	0.08	0.13	0.81	0.10
Max.	5.00	5.00	1.92	3.28	1.92	3.28
<i>N</i>	201	153	48	1030	67	963

Note. Asterisks in the Charters columns indicate mean differences between charters and traditional public school districts, overall or by locale type: \* $p \leq .05$ ; \*\* $p \leq .01$ ; \*\*\* $p \leq .001$ .

than traditional districts. Models III and IV, however, reveal some differences between some charter types and traditional public districts. Model III, for example, indicates that EMO alternative charters spent significantly more on security as a percentage of operating expenditures than traditional districts, whereas non-EMO combined charters spent significantly less. The results of that model also reveal that charters that had been operating longer spent more, controlling for charter type.

As was the case in the regression models in Table 7, Model IV shows that differences in other characteristics of the charters and traditional districts explain some of the differences revealed in Model III. Specifically, the difference in security spending between EMO-operated alternative charters and traditional public school districts was not as great after controlling for locale type and other characteristics. Similarly, the years in operation

**TABLE 9** Mean Expenditures by Function as a Percentage of Operating Expenditures for Texas Charters and Traditional Public School Districts, Overall and by Locale Type

	Charters			Traditional Public School Districts		
	Locale Type			Locale Type		
	All	Urban	Nonurban	All	Urban	Nonurban
Instruction	53.17 (9.40)***	52.54 (9.22)**	55.17 (9.78)	55.65 (4.54)	57.40 (3.90)	55.52 (4.55)
Maintenance and operations	13.53 (6.22)***	14.01 (6.37)***	11.99 (5.53)	11.88 (4.22)	11.14 (4.54)	11.93 (4.19)
General administration	11.44 (6.07)***	11.56 (6.16)***	11.06 (5.81)***	5.29 (2.57)	2.84 (1.13)	5.46 (2.55)
School leadership	7.79 (4.07)***	7.75 (3.99)***	7.91 (4.38)***	5.28 (1.26)	5.34 (0.73)	5.28 (1.29)
Food services	4.46 (3.15)***	4.81 (3.00)	3.34 (3.40)***	5.38 (1.23)	5.29 (0.80)	5.38 (1.25)
Guidance and counseling	1.91 (2.63)***	1.63 (2.23)***	2.78 (3.52)	2.55 (1.67)	3.55 (0.72)	2.48 (1.70)
Data processing services	1.56 (2.04)	1.33 (1.56)	2.30 (3.01)	1.47 (1.13)	1.52 (0.89)	1.46 (1.14)
Transportation	1.38 (2.97)***	1.30 (2.62)***	1.62 (3.91)***	3.60 (2.07)	2.61 (1.20)	3.67 (2.10)
Curriculum/Staff development	1.27 (1.41)**	1.32 (1.42)***	1.09 (1.39)	1.00 (0.94)	2.04 (1.05)	0.93 (0.89)
Instructional leadership	1.05 (1.80)	1.10 (1.77)***	0.88 (1.89)	0.93 (1.02)	1.73 (0.79)	0.87 (1.01)
Extracurricular activities	0.72 (0.94)***	0.70 (0.96)***	0.78 (0.89)***	4.15 (1.74)	2.70 (1.18)	4.25 (1.73)
Security and monitoring services	0.53 (0.98)**	0.62 (1.09)*	0.21 (0.37)	0.31 (0.41)	0.83 (0.46)	0.27 (0.38)
Instr. resources and media services	0.39 (1.14)***	0.40 (1.26)***	0.37 (0.65)***	1.53 (0.74)	1.58 (0.42)	1.53 (0.76)
Facilities acquisition	0.32 (0.81)	0.37 (0.22)	0.16 (0.36)	—	—	—
Health services	0.31 (0.43)***	0.32 (0.42)***	0.28 (0.45)***	0.80 (0.56)	0.97 (0.26)	0.79 (0.57)
Social work services	0.20 (0.73)	0.24 (0.81)	0.07 (0.30)	0.11 (0.28)	0.36 (0.30)	0.10 (0.27)
Chapter 41 costs	—	—	—	0.06 (0.92)	0.05 (0.40)	0.06 (0.95)
Payments to juvenile justice alternative education programs <sup>a</sup>	—	—	—	0.02 (0.08)	0.06 (0.10)	0.02 (0.08)
N	201	153	48	1030	67	963

Note. Asterisks in the Charters columns indicate mean differences between charters and traditional public school districts, overall or by locale type: \* $p \leq .05$ ; \*\* $p \leq .01$ ; \*\*\* $p \leq .001$ .

<sup>a</sup>Texas Education Code (§37) requires students who "threaten the safety of other students or teachers . . ." to attend disciplinary alternative education programs (DAEP) or juvenile justice education programs (JAEP). Districts account for JAEP expenditures using this reserved function code, but allocate DAEP expenditures among several functional areas. Further, Texas Education Code §12.111(a)(6) allows charters to decline enrollment to students with a documented history of criminal offense, juvenile court adjudications, or severe discipline issues (Smith, 2005).

**TABLE 10** Multivariate Analysis of Differences in Security Spending as a Percentage of Operating Expenditures Between Texas Charters and Traditional Public School Districts

	Model I	Model II	Model III	Model IV
Intercept	0.31 (0.02)***	-0.23 (0.08)**	0.31 (0.02)***	-0.13 (0.08)
Charter <sup>a</sup>	0.22 (0.04)***	0.01 (0.06)	0.03 (0.01)**	.02 (0.01)
Years in operation				
Charter type <sup>a</sup>				
Non-EMO standard			-0.17 (0.11)	-0.12 (0.11)
Non-EMO alternative			-0.25 (0.13)	-0.32 (0.12)**
Non-EMO combined			-0.49 (0.21)*	-0.49 (0.19)**
EMO standard			-0.04 (0.11)	-0.10 (0.10)
EMO alternative			1.45 (0.12)***	1.21 (0.11)***
EMO combined			-0.11 (0.29)	-0.03 (0.25)
Locale type <sup>a</sup>				
Nonurban		-0.15 (0.05)**		-0.12 (0.05)*
Total enrollment (000's)		0.001 (0.0003)***		0.002 (0.0002)***
Total enrollment squared		-8.63E-7 (1.79E-7)***		-8.74E-7 (1.70E-7)***
% High school students		1.07 (0.08)***		0.73 (0.10)***
% African American students		0.007 (0.001)***		0.01 (0.001)***
% Latino students		0.003 (0.001)**		0.003 (0.001)***
% Other, non-White students		0.001 (0.004)		0.003 (0.004)
% Low-income students		-0.001 (0.001)		-0.001 (0.001)
% English language learners		0.01 (0.002)***		0.01 (0.002)***
% IEP students		-0.01 (0.002)**		-0.003 (0.002)
% Students with disciplinary placement		0.03 (0.01)**		0.04 (0.01)***
Adjusted R <sup>2</sup>	0.020	0.308	0.147	0.377
N	1231	1231	1231	1231

Note. Standard errors are in parentheses.

<sup>a</sup>Reference categories are traditional public school districts and urban locale.

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

**TABLE 11** Extent to Which Inadequate Funds Limited Schools' Efforts to Prevent Crime, Percentages of U.S. Charter and Traditional Public Schools, Overall and by Locale Type

	Charter Schools			Traditional Public Schools		
	Locale Type			Locale Type		
	All	Urban	Nonurban	All	Urban	Nonurban
Limit in major way	18.8	19.0	18.5	23.6	31.2	21.1
Limit in minor way	43.8	36.6	49.9	39.8	35.2	41.3
Does not limit	37.4	44.3	31.5	36.6	33.6	37.6
<i>N</i>	3142	1444	1698	78728	19653	59075

*Note.* Based on 2007–2008 SSOCS data. The numbers are weighted using the final weight provided with the dataset. The charter results are not nationally representative due to the sampling design of the survey. Replicate weights provided with the dataset were used to calculate standard errors. Chi-square tests for differences between school type (i.e., charter schools vs. traditional public schools) overall and for urban and nonurban schools and within school type for urban vs. nonurban schools are all statistically significant at  $p \leq .001$ .

variable was no longer significant in Model IV. Considering the other charter types, non-EMO alternative and combined charters spent significantly less of their operating budgets on security than traditional districts, whereas non-EMO standard and EMO standard and combined charters spent about the same percentage of their budgets, all else equal.

Our comparative analyses prompted us to question the adequacy of security expenditures—in other words, do charters and traditional districts, in general, devote sufficient resources to maintaining a secure learning environment? A definitive answer to this question would require that one conduct hundreds of independent, school-level cost-effectiveness analyses. Conceding that undertaking such a task was evidently prohibitive, we turned again to the SSOCS data to provide some insight into the issue. As shown in Table 11, principals in about 63% of charter and traditional schools reported that inadequate funds limit their ability to prevent crime. Moreover, traditional school respondents were significantly more likely than charter respondents to view the limitation as major, as were those in urban settings within school type.

## DISCUSSION

Taken together, our analyses suggest that educational policymakers and charter stakeholders need to take notice of the expenditures that charters incur—or would incur if able—to provide security. Indeed, we report that most charter schools, whether independent or district governed, employ four to six security practices, the number and nature of which are largely comparable to traditional schools. The only notable difference among the school types is that charters more often employ uniforms and enforce strict



dress codes, policies that many believe improve school culture, increase student self-esteem, reduce peer pressure, and, as a result, reduce violence and misbehavior (Brunsmas, 2006). As we discussed in our literature review, however, the efficacy of schools uniforms in producing these ends is ambiguous (Johnson, 2010; Wade & Stafford, 2003).

Our analyses also revealed that Texas charters, on average, spent 0.53% of their operating budget on security measures. Percent spending differences varied significantly when we compared charters within locale, accountability, and management types. Here we found that urban charters spent three times more than nonurban charters, alternative accountability charters nearly twice as much as standard charters, and EMO-operated charters about twice as much as non-EMO charters. Spending variations among broad functional categories (e.g., administration and instruction) between and among charter school types have been documented elsewhere (Miron & Urschel, 2010). We extended these analyses to account for the fact that a single charter may represent multiple types (e.g., an urban, alternative, EMO-operated charter). Doing so revealed that only EMO-operated alternative charters spent significantly more on school security than other charter types and traditional districts. Further, security spending was not a function of locale, years in operation, or the percent of ELL and IEP students, or those with disciplinary placements. Spending was significantly related to enrollment and enrollment squared, pointing to economies of scale in security spending.

Our analyses also revealed that security spending was positively related to the percent of high school students served, an anticipated finding given reports that the prevalence of most security measures (e.g., cameras) increases with grade level (NCES, 2012, p. 165). We also found that security spending was positively associated with the percentages of African American and Latino students. Some might simply posit that spending follows from rates of student indiscipline. The NCES (2012) reports that “percentage of students ages 12–18 who reported avoiding one or more places in school because of fear of attack or harm during the school year” and the “percentage of students in grades 9–12 who reported being threatened or injured with a weapon on school property at least one time during the previous 12 months” were higher for Black and Hispanic students than national averages (pp. 19, 75). However, one must recognize that studies have demonstrated consistently that schools with greater percentages of non-White students take disciplinary actions more frequently than those with fewer non-White students (Han & Akiba, 2011). Further, as we made clear throughout our analysis the veracity of student violence and discipline reports are highly contested. Simply, our data do not offer any defensible inferences regarding the association between security spending and ethnicity. The figures instead invite debate and further investigation.

Policymakers need also understand that the security spending figures we report are not negligible or complete. We acknowledge the utility

of production function and equity studies that examine the relationship between more costly resources, like instructional staff, and schooling outcomes and student characteristics. We can make no casual claims of how security spending affects other functional areas, but a dollar spent on security cannot be spent on other activities that might yield more lasting ends, such as instruction, health services, and social work.

Our expenditure analyses also account only for those costs that Texas charter and traditional districts incurred to provide security and monitoring services. A given school may employ additional measures to provide a safe learning environment—including school-wide positive behavior support systems, small-group strategies for select students, and individualized interventions for high-risk students (Sprague, 2007). Though schools may engage in these activities to enhance security for students and staff, accounting convention requires that those expenditures be recorded in functional areas such as instruction or counseling. Similarly, charters and traditional districts use building leadership or general administration account codes to record expenditures associated with administrators whose duties in full or in part serve to address school safety and security (e.g., Dean of Students). We do not dispute that charters and traditional districts need to follow prescribed accounting rules. Our point is simply to make clear that the expenditure figures we report understate the full cost of security-related activities.

Educational policymakers and charter stakeholders need also recognize that schools will incur additional costs as notions of safety and security expand to include bullying. In 2009, 28% of students reported being bullied at school (e.g., property destroyed on purpose, threatened with harm, and pushed, shoved, tripped, or spit on), while 6% reported being cyberbullied (e.g., harassing instant messages and harassing e-mails) (NCES, 2012, pp. 45, 47). Districts that fail to implement defensible antibullying measures risk legal exposure. In 2010, a Massachusetts high school freshman allegedly committed suicide because she was bullied by classmates. The event which has been described as “this generation’s Columbine” (Khadaroo, 2010) and a “watershed case” (Hampson, 2010) marks the beginning of an era in which the courts hold schools accountable for preventing bullying (Paulson, 2010). For instance, in 2010, a U.S. District court awarded \$800,000 to a Michigan student because district officials failed to protect him from being bullied (Walsh-Sarnecki, 2010), and a North Dakota district paid \$300,000 in an out-of-court settlement following similar allegations (*Bismarck Tribune*, 2010). More recently, parents of a child who committed suicide after classmates allegedly posted a nude video of the student on YouTube filed a \$20 million federal lawsuit against a Texas school district (DiBlasio, 2011). No less than 48 states now have policies that govern how K–12 schools, including charters, address bullying (Zinth, 2011). Although the unit cost of security cameras and metal detectors might decline in the coming years as have other technologies, one can reasonably anticipate that schools will

incur additional personnel costs (e.g., staffing and training) as officials strive to mitigate bullying, as will their legal costs if they fail to do so.

Our work in Texas offers the first comprehensive account of charter security spending. As it stands, the findings can advance policymakers' understanding of the nature and magnitude of charter security costs, as well as inform broader discussions of charter finance. There remain, however, numerous ways to extend these analyses. To begin with, the Texas data did not afford us the opportunity to examine the revenue flows that finance security expenditures. In 2008, the year of our data, Texas districts received nearly \$8 million from the federal Safe Schools-Healthy Students Initiative (U.S. Department of Education, n.d.). State and local governments have also been known to share the cost of SROs with local districts (Warren & Stewart, 2011). A clearer understanding of the revenues that schools use to underwrite security spending generally, or a given measure specifically, would enable policymakers to consider equity in the distribution of these resources, and whether state education finance systems should provide security-related categorical aids.

Another important extension of this work is for researchers to account for those security-related expenditures recorded in other functional areas, such as instruction, student support services, and administration. As noted, we could not account for the costs that charters or traditional districts incurred to provide school-wide or individualized violence prevention programming—nor could we account for the time that teachers (e.g., serving as hall monitors), student support services personnel, or administrators devoted to preventing or addressing security issues. Moreover, researchers wishing to provide a full account of security costs need to consider the time students spend engaged in security activities (e.g., waiting to proceed through a metal detector or attending a violence prevention program). It is possible that school security results in lost instructional time. Our literature review revealed a multitude of studies that probed the efficacy of school security measures, but few provided meaningful insight into the cost of these measures. If policymakers are to understand the cost-effectiveness of school security systemically or by measure, researchers need to juxtapose the effects of these activities (e.g., incident reports and indicators of perceived student safety) with their full cost.

We also encourage researchers to study how charter security costs are associated with structural characteristics beyond those we considered here. Turning to our comparisons between charters and traditional districts we learned that EMO alternative charters spent significantly more on school security, while non-EMO alternative charters spent significantly less. Alternatively, we found no differences in spending between standard EMO charters, standard non-EMO charters, and traditional districts. This finding invites questions about the nature of alternative charters, the degree to which organizational type influences the use of security practices, and cost

of services to support these practices. Our data do not afford us the opportunity to determine whether, say, security personnel is contracted out (e.g., security firm) or provided in-house (e.g., staff). We are also unable to determine whether charter schools employ cooperative purchasing arrangements or obtain resources through cooperative service agencies. Finally, we were not able to compare open-enrollment charters to district-operated charters because Texas' PEIMS data does not allocate district-level security costs to the building level.

Each of these research programs requires the availability of more refined data. We need to stress again that Texas offers a rare, if not unique, account of charter and traditional school district security spending. Since 2003, NCES has called for schools to distinguish between security and safety related expenditures. Our review of state fiscal reporting systems, however, revealed that most states have not complied, including California, Florida, and New York—states with large charter and traditional school enrollments. Our hope is that this work will draw attention to charter security costs, and prompt policymakers to modify state-level fiscal reporting systems so that they may understand better the equity, adequacy, and productivity of these important, yet little understood educational inputs.

## NOTES

1. We developed and described the conceptual frame that underlies this study in a previous article. Our discussion here draws from that work (DeAngelis, Brent, & Ianni, 2011).
2. Taylor et al. (2011) indicated that 202 charters operated throughout the entire 2008–2009 academic year, but only 201 appear in our dataset.
3. Final weights provided in the SASS dataset were used to construct weighted responses in order to obtain nationally representative responses.
4. Independent and district-governed charters in the SASS data are comparable to Texas' open-enrollment and district charters, respectively.

## REFERENCES

- Addington, L. A. (2009). Cops and cameras: Public school security as a policy response to Columbine. *American Behavioral Scientist*, *52*(10), 1426–1446. DOI: 10.1177/0002764209332556
- Altheide, D. L. (2009). The Columbine shootings and the discourse of fear. *American Behavioral Scientist*, *52*(10), 1354–1370. DOI: 10.1177/0002764209332552
- Arsen, D. (1999). Resource allocation in Michigan charter schools. *Journal of School Business Management*, *12*(2), 8–14.
- Arsen, D., & Ni, Y. (2012). *Is administration leaner in charter schools? Resource allocation in charter and traditional public schools*. New York, NY: National Center for the Study of Privatization in Education. Retrieved from [http://www.ncspe.org/publications\\_filesOP201.pdf/](http://www.ncspe.org/publications_filesOP201.pdf/)

- Arsen, D., & Ray, L. (2004). When do charter schools enroll students with disabilities? *Journal of Special Education Leadership*, 17(2), 71–81. DOI: 10.1177/0013161X11419654
- Ascher, C. (2004). *The finance gap: Charter school funds and their facilities*. Retrieved from <http://steinhardt.nyu.edu/scmsAdmin/uploads/001/117/FinanceGap.pdf>
- Astor, R. A., Guerra, N., & Van Acker, R. (2010). How can we improve school safety research? *Educational Researcher*, 39(1), 69–78. DOI: 10.3102/0013189X09357619
- Bancroft, K. (2009). To have and to have not: The socioeconomics of charter schools. *Education and Urban Society*, 41(2), 248–279. DOI: 10.1177/0013124508325674
- Bartosh, J. E. (2006). Evaluating lockerless schools. (Unpublished doctoral dissertation). University of Texas, Austin, Texas.
- Batchelder, M. (2009, December 30). School will keep Olympia police officers. *Olympian*. Retrieved from <http://www.theolympian.com/2009/12/30/1085498/schools-will-keep-olympia-police.html>
- Belfield, C. (2008). *Funding formulas, school choice, and inherent incentives*. Retrieved from <http://epicpolicy.org/files/CHOICE-05-Belfield2.pdf>
- Benbenishty, R., & Astor, R. A. (2005). *School violence in context: Culture, neighborhood, family, school and gender*. New York, NY: Oxford University Press.
- Berman, P., Nelson, B., Ericson, J., Perry, R., & Silverman, D. (1998). *A national study of charter schools*. Washington, DC: U.S. Department of Education. Retrieved from <http://www2.ed.gov/pubs/charter98/index.html>
- Bismarck Tribune (2010, December 30). Lawsuit over bullying in Fargo School District settled for \$300K. Retrieved from [http://bismarcktribune.com/news/state-and-regional/article\\_2955d12e-1422-11e0-b1f5-001cc4c002e0.html#ixzz1dPn14O3H](http://bismarcktribune.com/news/state-and-regional/article_2955d12e-1422-11e0-b1f5-001cc4c002e0.html#ixzz1dPn14O3H)
- Blosnich, J., & Bossarte, R. (2011). Low-level violence in schools: Is there an association between school safety measures and peer victimization? *Journal of School Health*, 81(2), 107–113. DOI: 10.1111/j.1746-1561.2010.00567.x
- Bodine, E., Fuller, B., Gonzalez, M., Huerta, L., Naughton, S, Park, S., & Teh, L. W. (2008). Disparities in charter school resources—the influence of state policy and community. *Journal of Education Policy*, 23(1), 1–33. DOI: 10.1080/02680930701625262
- Borum, R., Cornell, D. G., Modzeleski, W., & Jimerson, S. R. (2010). What can be done about school shootings? A review of the evidence. *Educational Researcher*, 39(1), 27–37. DOI: 10.3102/0013189X09357620
- Bosworth, K., Ford, L., & Hernandez, D. (2011). School climate factors contributing to student and faculty perceptions of safety in select Arizona schools. *Journal of School Health*, 81(4), 194–207.
- Brent, B. O., & Finnigan, K. S. (2009). Financial management of New York's charter schools: A normative, descriptive, and prescriptive analysis. *Journal of School Choice*, 3(4), 368–396.
- Brown, B. (2005). Controlling crime and delinquency in the schools: An exploratory study of student perceptions of school security measures. *Journal of School Violence*, 4(4), 105–125. DOI: 10.1300/J202v04n04\_07

- Brunsmas, D. L. (2006). School uniform policies in public schools. *Principal*, 85(3), 50–53.
- Calabro, T. (2010, August 12). Penn Hills school board hires another new security firm. *Pittsburgh Post-Gazette*. Retrieved from <http://www.post-gazette.com/pg/10224/1079362-56.stm>
- Carr, M. (2006). *The financial impact of Ohio's charter schools*. Retrieved from <http://epsl.asu.edu/epru/ttdocuments/EPRU-0607-402-OWI.pdf>
- Carroll, J. (2007, September 5). The divide between public school parents and private school parents. *Gallup News Service*. Retrieved from <http://www.gallup.com/poll/28603/Divide-Between-Public-School-Parents-Private-School-Parents.aspx>
- Casella, R. (2002). Where policy meets the pavement: Stages of public involvement in the prevention of school violence. *Qualitative Studies in Education*, 15(3), 349–372.
- Center for Education Reform. (2009). *The 2009 accountability report: Charter schools*. Retrieved from [http://www.edreform.com/download/CER\\_2009\\_AR\\_Charter\\_Schools.pdf](http://www.edreform.com/download/CER_2009_AR_Charter_Schools.pdf)
- Chandler, M. A. (2009, October 25). Cameras will remain as cafeteria monitors. *Washington Post*. Retrieved from <http://www.washingtonpost.com/wpdyn/content/article/2009/10/24/AR2009102401896.html>
- Christensen, J. (2007). *School safety in urban and traditional public schools*. Seattle, WA: Center for Reinventing Public Education.
- Cookson, P. W., & Berger, K. (2002). *Expect miracles: Charter schools and the politics of hope and despair*. Boulder, CO: Westview Press.
- Cooper, R., & Beatty, B. (2006). *Keeping North Carolina schools safe and secure*. Raleigh, NC: North Carolina Departments of Justice and Crime Control and Public Safety. Retrieved from [http://www.ncdjjdp.org/cpsv/pdf\\_files/school\\_report\\_06.pdf](http://www.ncdjjdp.org/cpsv/pdf_files/school_report_06.pdf)
- Corcoran, S. P., & Stoddard, C. (2009). *Local demand for school choice: Evidence from the Washington charter school referenda*. Retrieved from [http://www.ncspe.org/publications\\_files/OP175.pdf](http://www.ncspe.org/publications_files/OP175.pdf)
- Cornell, D. G. (2006). *School violence: Fears versus facts*. Mahwah, NJ: Lawrence Erlbaum.
- Cornell, D. G., & Mayer, M. J. (2010). Why do school order and safety matter? *Educational Researcher*, 39(1), 7–15. DOI: 10.3102/0013189X09357616
- Cotton, K. (1996). *School size, school climate, and student performance*. Retrieved from [http://upstate.colgate.edu/pdf/Abt\\_merger/Cotton\\_1996\\_Size\\_Climate\\_Performance.pdf](http://upstate.colgate.edu/pdf/Abt_merger/Cotton_1996_Size_Climate_Performance.pdf)
- Cullen, D. (2009). *Columbine*. New York, NY: Twelve.
- Dannis, J., Columbo, M., & Sawilowsky, S. (1996). *Lessons from the evaluation of a university operated charter middle school*. Detroit, MI: Wayne State University. (ERIC Reproduction Service Document ED 427 057)
- DeAngelis, K. J., Brent, B. O., & Ianni, D. (2011). The hidden cost of school security. *Journal of Education Finance*, 36(3), 312–337.
- d'Entremont, C., & Gulosino, C. (2008). *Circles of influence: How neighborhood demographics and charter school locations influence student enrollments*. Retrieved from [http://www.ncspe.org/publications\\_files/OP160.pdf](http://www.ncspe.org/publications_files/OP160.pdf)



- DiBlasio, N. (2011, September 11). More bullying cases have parents turning to courts. *USA Today*. Retrieved from <http://www.usatoday.com/news/education/story/2011-09-11/bullying-lawsuits-parents-self-defense-courts/50363256/1>
- Education Commission of the States. (1999). *Summary of state policies on school safety and violence*. Denver, CO: Author. Retrieved from <http://www.ecs.org/clearinghouse/13/49/1349.htm>
- Education Commission of the States. (2009). *Recent state policies/activities: Safety/student discipline—Code of conduct*. Denver, CO: Author. Retrieved from <http://www.ecs.org/ecs/ecscat.nsf/WebTopicView?OpenView&count=-1&RestrictToCategory=Safety/Student+Discipline--Code+of+Conduct>
- Fisher, K., & Kettl, P. (2003). Teachers' perceptions of school violence. *Journal of Pediatric Health Care, 17*(2), 79–83. DOI: 10.1067/mpH.2003.20
- Florida Department of Education. (2011). *Funding and financial management of Florida's public charter schools*. Retrieved from [http://www.floridaschoolchoice.org/information/Charter\\_schools/files/Funding\\_and\\_Financial\\_Management\\_TAP.pdf](http://www.floridaschoolchoice.org/information/Charter_schools/files/Funding_and_Financial_Management_TAP.pdf)
- Fontaine, J., Debus-Sherrill, S., Downey, P. M., & Lowry, S. S. (2010). *Violence prevention in schools: A case study of the Thurgood Marshall Academy Charter High School*. Washington, DC: The Urban Institute. Retrieved from <http://www.urban.org/uploadedpdf/412200-violence-prevention-schools.pdf>
- Frankenberg, E., Siegel-Hawley, G., & Wang, J. (2011). Choice without equity: Charter school segregation. *Educational Policy Analysis Archives, 19*(1). Retrieved from <http://epaa.asu.edu/ojs/article/view/779>
- Garcia, C. A. (2003). School safety technology in America: Current use and perceived effectiveness. *Criminal Justice Policy Review, 14*(1), 30–54. DOI: 10.1177/0887403402250716
- Gastic, B. (2010). Student safety and the reauthorization of No Child Left Behind. *Educational Researcher, 39*(5), 423–424. DOI: 10.3102/0013189X10374769
- Gastic, B., & Gasiewski, J. (2008). School safety under NCLB's unsafe school choice option. *Penn GSE Perspectives on Urban Education, 5*(2). Retrieved from <http://urbanedjournal.org>
- Gooden, J. S., Harrington, S. Y., Findlay, H. E., & King, G. V. (2008). The unsafe school choice option: A model for school choice–policy responses. *Journal of School Choice, 2*(2), 155–178. DOI: 10.1080/15582150802208642
- Gottfredson, D. C., & DiPietro, S. M. (2011). School size, social capital, and student victimization. *Sociology of Education, 84*(1), 69–89. DOI: 10.1177/0038040710392718
- Hampson, R. (2010, April 5). A “watershed” case in school bullying? *USA Today*. Retrieved from [http://www.usatoday.com/news/nation/2010-04-04-bullying\\_N.htm](http://www.usatoday.com/news/nation/2010-04-04-bullying_N.htm)
- Han, S., & Akiba, M. (2011). School safety, severe disciplinary actions, and school characteristics: A secondary analysis of the school survey on crime and safety. *Journal of School Leadership, 21*(2), 262–292.
- Hankin, A., Hertz, M., & Simon, T. (2011). Impacts of metal detector use in schools; Insights from 15 years of research. *Journal of School Health, 81*(2), 100–106. DOI: 10.1111/j.1746-1561.2010.00566.x



- Hannaway, J., & Sharkey, N. (2004). Does profit status make a difference: Resource allocation in EMO-run traditional public schools, *Journal of Education Finance*, 30(1), 27–50.
- Hastings, R., & Bham, M. (2003). The relationship between student behavior patterns and teacher burnout. *School Psychology International*, 24(1), 115–127. DOI: 10.1177/0143034303024001905
- Henig, J., Holyoke, T., Brown, H., & Lacireno-Paquet, N. (2005). The influence of founder type on charter school structures and operations. *American Journal of Education*, 111(4), 487–522. DOI: 10.1086/431181
- Henig, J., & MacDonald, J. (2002). Locational decisions of charter schools: Probing the market metaphor. *Social Science Quarterly*, 83(4), 962–980. DOI: 10.1111/1540-6237.00126
- Henry, K. L. (2007). Who's skipping school: Characteristics of truants in 8th and 10th grade. *Journal of School Health*, 77(1), 29–35. DOI: 10.1111/j.1746-1561.2007.00159.x
- Henry, S. (2000). What is school violence? An integrated definition. *ANNALS of the American Academy of Political and Social Science*, 567(1), 16–29. DOI: 10.1177/000271620056700102
- Herdman, P., & Millot, M. D. (2000). *Are charter schools getting more money into the classroom?* Seattle, WA: Center on Reinventing Public Education.
- Hess, F. M. (2002). *School boards at the dawn of the 21st century: Conditions and challenges of district governance*. Alexandria, VA: National School Boards Association. Retrieved from <http://www.nsba.org/MainMenu/ResourceCenter/SurveysStudiesandEvaluations/SchoolBoardsattheDawnofthe21stCentury.aspx>
- Hoffman, J. (2010, June 27). Online bullies pull schools into the fray. *New York Times*. Retrieved from <http://www.nytimes.com/2010/06/28/style/28bully.html>.
- Huerta, L. A., & d'Entremont, C. (2010). Charter school finance: Seeking institutional legitimacy in a marketplace of resources. In C. A. Lubienski & P. C. Weitzel (Eds.), *The charter school experiment: Expectations, evidence and implications* (pp. 121–146). Cambridge, MA: Harvard Education Press.
- Idaho State Department of Education. (n.d.). *An educator's guide to school safety equipment*. Boise, ID: Author.
- Jacobowitz, R., & Gyurko, J. S. (2004). *Charter school funding in New York: Perspectives on parity with traditional public schools*. New York, NY: Institute for Education and Social Policy.
- Jimerson, L. (2006). The hobbit effect: Why small works in public schools. Arlington, VA: The Rural School and Community Trust. Retrieved from [http://www.ruraledu.org/user\\_uploads/docs/hobbit\\_effect.pdf](http://www.ruraledu.org/user_uploads/docs/hobbit_effect.pdf)
- Johnson, L., Naumann, K., Steed, A., & Hennessey, J. (2002). *The prevalence of school related violence: An overview of statistical and perceptual data*. Little Rock, AR: University of Arkansas System, Criminal Justice Institute. Retrieved from [http://www.eric.ed.gov/ERICDocs/data/ericdocs2sql/content\\_storage\\_01/0000019b/80/34/e4/16.pdf](http://www.eric.ed.gov/ERICDocs/data/ericdocs2sql/content_storage_01/0000019b/80/34/e4/16.pdf)
- Johnson, S. L. (2009). Improving the school environment to reduce school violence: A review of the literature. *Journal of School Health*, 79(10), 451–465. DOI: 10.1111/j.1746-1561.2009.00435.x

- Johnson, W. S. (2010). Analyses of the impact of school uniforms on violence in North Carolina public high schools (Unpublished doctoral dissertation). East Carolina University, Greenville, NC.
- Juvonen, J. (2001). *School violence: Prevalence, fears, and prevention*. Santa Monica, CA: RAND. Retrieved from [http://www.rand.org/pubs/issue\\_papers/IP219/index2.html](http://www.rand.org/pubs/issue_papers/IP219/index2.html)
- Kamai, S. H. (2005). *A comparison of the legislative and financial constraints on the development of charter schools in the Aloha State* (Unpublished doctoral dissertation). University of Southern California, Los Angeles, CA.
- Khadaroo, S. T. (2010, April 1). Phoebe Prince case a 'watershed' in fight against school bullying. *Christian Science Monitor*. Retrieved from <http://www.csmonitor.com>
- Klein, J., & Cornell, D. (2010). Is the link between large high schools and student victimization an illusion? *Journal of Educational Psychology, 102*(4), 933–946. DOI: 10.1037/a0019896
- Kleitz, B., Weiher, G., Tedin, K., & Matland, R. (2000). Choice, charter schools, and household preferences. *Social Science Quarterly, 81*(3), 846–854.
- Klonsky, M. (2002). How smaller schools prevent violence. *Educational Leadership, 59*(5), 65–69.
- Krop, C. & Zimmer, R. (2005). Charter school type matters when examining funding and facilities: Evidence from California. *Educational Policy Analysis Archives, 13*(50). Retrieved from <http://epaa.asu.edu/epaa/v13n50/>
- Lloyd, J. R. (2010, October 27). Absences at schools up amid rumors. *My San Antonio*. Retrieved from <http://www.mysanantonio.com/news/education/article/Absences-at-schools-up-amid-rumors-725242.php>
- Leithwood, K., & Jantzi, D. (2009). A review of empirical evidence about school size effects: A policy perspective. *Review of Educational Research, 79*(1), 464–490. DOI: 10.3102/0034654308326158
- Lyons, L. (2002, September 17). Parents concerned about school safety. *Gallup News Service*. Retrieved from <http://www.gallup.com/poll/6808/parents-concerned-about-school-safety.aspx?version=print>
- Markow, D., & Cooper, M. (2008). *The MetLife survey of the American teacher: Past, present and future: A survey of teachers, principals and students*. New York, NY: Metropolitan Life Insurance Company. Retrieved from [http://www.eric.ed.gov/ERICDocs/data/ericdocs2sql/content\\_storage\\_01/0000019b/80/43/68/44.pdf](http://www.eric.ed.gov/ERICDocs/data/ericdocs2sql/content_storage_01/0000019b/80/43/68/44.pdf)
- May, J. J. (2006). The charter school allure: Can traditional schools measure up? *Education and Urban Society, 39*(1), 19–45. DOI: 10.1177/0013124506291786
- Mayer, M. J., & Furlong, M. J. (2010). How safe are our schools? *Educational Researcher, 39*(1), 16–26. DOI: 10.3102/0013189X09357617
- Mayer, M. J., & Leone, P. E. (1999). A structural analysis of school violence and disruption: Implications for creating safer schools. *Education and Treatment of Children, 22*(3), 333–356.
- McAdams III, C. R., & Foster, V. A. (2008). Voices from "The Front": How student violence is changing the experience of school leaders. *Journal of School Violence, 7*(2), 87–103. DOI: 10.1300/J202v07n02\_06
- McCabe, K. A., & Martin, G. M. (2005). *School violence, the media, and criminal justice responses*. New York, NY: Peter Lang.

- McCarter, M. (2008). *Safe and secure schools assessment*. Boise, ID: Idaho State Department of Education. Retrieved from [http://www.sde.idaho.gov/site/safe\\_secure/docs/2008%20Legislative%20Report%20%20Safe%20and%20Secure%20Schools.pdf](http://www.sde.idaho.gov/site/safe_secure/docs/2008%20Legislative%20Report%20%20Safe%20and%20Secure%20Schools.pdf)
- McCully, D. J., & Malin, P. J. (2003). *What parents think of New York's charter schools*. New York, NY: Manhattan Institute Center for Civic Innovation. (ERIC Reproduction Service Department ED 477 791)
- Midlarsky, E., & Klain, H. B. (2005). A history of violence in schools. In F. L. Denmark, H. H. Kraus, R. W. Wesner, E. Midlarsky, & U. P. Gielen (Eds.), *Violence in Schools: Cross-national and cross cultural perspectives* (pp. 37–57). New York, NY: Springer Science + Business Media, Inc.
- Miller, T. W., & Kraus, R. F. (2008). School-related violence: Definition, scope, and prevention goals. In T. W. Miller (ed.), *School violence and primary prevention* (pp. 15–24). New York, NY: Springer.
- Miron, G., & Horn, J. (2003). *Evaluation of Connecticut charter schools and the Charter School Initiative*. Kalamazoo, MI: Western Michigan University Evaluation Center. (ERIC Reproduction Service Document ED 480 989)
- Miron, G., Nelson, C., & Risley, J. (2002). *Strengthening Pennsylvania's charter school reform: Findings from the statewide evaluation and discussion of relevant policy issues*. Retrieved from [http://homepages.wmich.edu/~miron/publics/5\\_year\\_report\\_pa\\_cs\\_eval.pdf](http://homepages.wmich.edu/~miron/publics/5_year_report_pa_cs_eval.pdf)
- Miron, G., & Urschel, J. (2009). *Profiles of nonprofit education management organizations: 2008–2009*. Boulder, CO and Tempe, AZ: Education and the Public Interest Center & Education Policy Research Unit.
- Miron, G., & Urschel, J. (2010). *Equal or fair? A study of revenues and expenditures in American charter schools*. Boulder, CO and Tempe, AZ: Education and the Public Interest Center & Education Policy Research Unit.
- Miron, G., Urschel, J., Aguilar, M., & Dailey, B. (2012). *Profiles of for-profit and non-profit educational management organizations*. Boulder, CO: National Education Policy Center.
- Molnar, A., Miron, G., & Urschel, J. (2009). *Profiles of for-profit educational management organizations*. Boulder, CO and Tempe, AZ: Education and the Public Interest Center & Education Policy Research Unit.
- Mooij, T., Smeets, E., & de Wit, W. (2011). Multi-level aspects of social cohesion of secondary schools and pupils' feelings of safety. *British Journal of Educational Psychology*, 81(3), 369–390. DOI: 10.1348/000709910X526614
- Murphy, J., & Shiffman, C. D. (2002). *Understanding and assessing the charter school movement*. New York, NY: Teachers College Press.
- Nathan, J., & Febey, K. (2001). *Smaller, safer, saner, successful schools*. Washington, DC: National Clearing House for Educational Facilities.
- National Alliance for Public Charter Schools (n.d.). *CMO and EMO public charter schools: A growing phenomenon in the charter school sector*. Retrieved from [http://www.publiccharters.org/data/files/Publication\\_docs/NAPCS%20CMO%20EMO%20DASHBOARD%20DETAILS\\_20111103T102812.pdf](http://www.publiccharters.org/data/files/Publication_docs/NAPCS%20CMO%20EMO%20DASHBOARD%20DETAILS_20111103T102812.pdf)
- National Center for Education Statistics. (2007). *The School Survey on Crime and Safety (SSOCS) brochure*. Washington, DC: U.S. Department of Education. Retrieved from <http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2008300>

- National Center for Education Statistics. (2010). *Digest of education statistics, 2010 edition*. Washington, DC: U.S. Department of Education. Retrieved from [http://nces.ed.gov/programs/digest/d10/tables/dt10\\_100.asp](http://nces.ed.gov/programs/digest/d10/tables/dt10_100.asp)
- National Center for Education Statistics. (2011a). *Numbers and types of public elementary and secondary schools from the Common Core of Data: School year 2009-10—First Look*. Washington, DC: U.S. Department of Education. Retrieved from [http://nces.ed.gov/pubs2011/pesschools09/tables/table\\_02.asp](http://nces.ed.gov/pubs2011/pesschools09/tables/table_02.asp)
- National Center for Education Statistics. (2011b). *Indicators of school crime and safety: 2010*. Washington, DC: U.S. Department of Education. Retrieved from <http://nces.ed.gov/programs/crimeindicators/crimeindicators2010/>
- National Center for Education Statistics. (2012). *Indicators of school crime and safety: 2011*. Washington, DC: U.S. Department of Education. Retrieved from <http://nces.ed.gov/pubs2012/2012002.pdf>
- Nelson, F. H., Muir, E., & Drown, R. (2003). *Paying for the vision: Charter school revenue and expenditures*. Retrieved from <http://www.aft.org/topics/charters/downloads/PayingforVisionexecsum.pdf>
- Nelson, O. (2009, May 7). Vandals cost high school thousands. *KPHO News*. Retrieved from <http://www.kpho.com/news/19400200/detail.html>
- New Jersey Department of Education. (2007). *A formula for success*. Trenton, NJ: Author. Retrieved from <http://www.nj.gov/education/sff/reports/AllChildrenAllCommunities.pdf>
- Newman, K., & Fox, C. (2009). Repeat tragedy: Rampage shootings in American high school and college settings, 2002-2008. *American Behavioral Scientist*, 52(9), 1286–1308. DOI: 10.1177/0002764209332546
- O'Reilly, R., & Bosetti, L. (2000). Charter schools: The search for community. *Peabody Journal of Education*, 75(4), 19–36.
- Osberg, E. (2006). Charter school funding. In P. T. Hill (Ed.), *Charter schools against the odds: An assessment of the Koret Task Force on K-12 education* (pp. 45–69). Stanford, CA: Hoover Press.
- Paulson, A. (2010, August 11). School bullying summit's big hope: An anti-bullying tipping point. *Christian Science Monitor*. Retrieved from <http://www.csmonitor.com/USA/Education/2010/0811/School-bullying-summit-s-big-hope-an-anti-bullying-tipping-point>
- Radcliff, J. (2010, October 11). Tracking devices used in school badges. *Houston Chronicle*. Retrieved from <http://www.chron.com/dispatch/story.mpl/metropolitan/7241100.html>
- Ripski, M. B., & Gregory, A. (2009). Unfair, unsafe, and unwelcome: Do high school students' perceptions of unfairness, hostility, and victimization in school predict engagement and achievement? *Journal of School Violence*, 8(4), 355–375. DOI: 10.1080/15388220903132755
- Rossi, R. (2010, January 13). CPS' project protection: \$60 mil. To be spent on citizen's patrols, student mentors, more. *Chicago Sun Times*. Retrieved from <http://www.suntimes.com>
- Schneider, M., & Buckley, J. (2002). What do parents want from schools? Evidence from the Internet. *Educational Evaluation & Policy Analysis*, 24(2), 133–144. DOI: 10.3102/01623737024002133
- Schneider, T. D. (2008). *Ensuring quality school facilities and security technologies: effective strategies for creating safer schools and communities*. Washington, DC:

- The Hamilton Fish Institute on School and Community Violence and Northwest Regional Educational Laboratory.
- Shreck, C., & Miller, J. M. (2003). Sources of fear at school: What is the relative contribution of disorder, individual characteristics, and school security. *Journal of School Violence, 2*(4), 57–74. DOI: 10.1300/J202v02n04\_04
- Scott, J. (2009). The politics of venture philanthropy in charter school policy and advocacy. *Educational Policy, 23*(1), 106–136. DOI: 10.1177/0895904808328531
- Scott, J., & DiMartino, C. (2010). Hybridized, franchised, duplicated, and replicated: Charter schools and management organizations. In C. A. Lubienski & P. C. Weitzel (Eds.), *The charter school experiment: Expectations, evidence and implications* (pp. 171–196). Cambridge, MA: Harvard Education Press.
- Shear, M. D., & Anderson, N. (2009). A \$4 billion push for better schools. *The Washington Post*. Retrieved from <http://www.washingtonpost.com/wp-dyn/content/article/2009/07/23/AR2009072303881.html?hpid=topnews&sid=ST2009072303922>
- Simon, S. (2009, October 19). Stop that (solar) thief! *Wall Street Journal*. Retrieved from <http://online.wsj.com/article/SB10001424052970203278404574417320162879860.html>
- Skiba, R., Simmons, A. B., Peterson, R., McKelvey, J., Forde, S., & Gallini, S. (2004). Beyond guns, drugs, and gangs: The structure of student perceptions of school safety. *Journal of School Violence, 3*(2 & 3), 149–171. DOI: 10.1300/J202v03n02\_09
- Smith, D. L., & Smith, B. J. (2006). Perceptions of violence: The views of teachers who left urban schools. *The High School Journal, 89*(3), 34–42.
- Smith, N. (2005). *Texas roundup: Charter schooling in the Lone Star State*. Washington, DC: Progressive Policy Institute. Retrieved from [http://www.dlc.org/documents/Texasreport\\_0215.pdf](http://www.dlc.org/documents/Texasreport_0215.pdf)
- Speakman, S., & Hassel, B. (2005). Major findings. *Charter school funding: Inequity's next frontier*. Retrieved from [http://www.uscharterschools.org/cs/r/view/uscs\\_rs/2065](http://www.uscharterschools.org/cs/r/view/uscs_rs/2065)
- Sprague, J. (2007). *Creating schoolwide prevention and intervention strategies*. Washington, DC: George Washington University, Hamilton Fish Institute on School and Community Violence.
- Stover, D. L. (1990). How to be safe and secure against school vandalism. *Executive Educator 12*(11), 20–22.
- Swearer, S. M., Espelage, D. L., Vaillancourt, T., & Hymel, S. (2010). What can be done about school bullying? Linking research to educational practice. *Educational Researcher, 39*(1), 38–47. DOI: 10.3102/0013189X09357622
- Taylor, L. L., Alford, B. L., Rollins, K. B., Brown, D. B., Stillisano, J. R., & Waxman, H. C. (2011). *Evaluation of Texas charter schools 2009-10. Executive summary*. College Station, TX: Education Research Center at Texas A&M University.
- Terry, B. D., & Yelverton, B. (2009). *Charter school in Texas: The waiting lists grow longer*. Austin, TX: Texas Public Policy Foundation. Retrieved from <http://www.texaspolicy.com/pdf/2009-12-PP29-charterupdate-bt.pdf>
- Texas Center for Educational Research. (2008). *Texas charter schools evaluation 2006-07*. Austin, TX: Author.
- Texas Center for Educational Research. (2011). *Evaluation of new Texas charter schools (2007–10)*. Austin, TX: Author.



- Texas Education Agency. (2010a). *Financial accountability system resource guide*. Austin, TX: Author. Retrieved from <http://ritter.tea.state.tx.us/financial.audits/resguide14/FAR.pdf>
- Texas Education Agency. (2010b). *Glossary for the academic excellence indicator system*. Austin, TX: Author. Retrieved from <http://ritter.tea.state.tx.us/perfreport/aeis/2009/glossary.html>
- Texas Education Agency. (n.d.). *Academic excellence indicator system*. Retrieved from <http://ritter.tea.state.tx.us/perfreport/aeis/>
- Texas Education Agency Division of Charter School Administration. (n.d.). Retrieved from [http://www.tea.state.tx.us/index2.aspx?id=7574&menu\\_id=645](http://www.tea.state.tx.us/index2.aspx?id=7574&menu_id=645)
- Texas Education Agency Division of School Financial Audits. (n.d.). Retrieved from <http://tuna.tea.state.tx.us/audit/PDFviewer.asp>
- Theriot, M. T. (2009). School resource officers and the criminalization of student behavior. *Journal of Criminal Justice*, 37(3), 280–287. DOI: 10.1016/j.jcrimjus.2009.04.008
- Thomas, R. M. (2006). *Violence and America's schools: Understanding, prevention, and responses*. Westport, CT: Praeger Publishers.
- Tourkin, S., Thomas, T., Swaim, N., Cox, S., Parmer, R., Jackson, B., Cole, C., & Zhang, B. (2010). *Documentation for the 2007-08 Schools and Staffing Survey* (NCES 2010-332). Washington, DC: National Center for Education Statistics, U.S. Department of Education. Retrieved from <http://nces.ed.gov/pubs2010/2010332.pdf>
- Ulpindo, C. M. (2008). *Perceptions that led parents to choose a public charter school*. (Unpublished doctoral dissertation). California Lutheran University, Thousand Oaks, CA.
- U.S. Department of Education. (2002). *Exemplary & promising safe, disciplined, and drug free-school programs 2001*. Washington, DC: Author. Retrieved from [http://www.eric.ed.gov/ERICDocs/data/ericdocs2sql/content\\_storage\\_01/0000019b/80/1a/35/20.pdf](http://www.eric.ed.gov/ERICDocs/data/ericdocs2sql/content_storage_01/0000019b/80/1a/35/20.pdf)
- U.S. Department of Education. (2004). *Unsafe school choice option: Non-regulatory guidance*. Washington, DC: Author. Retrieved from <http://www2.ed.gov/programs/dvpformula/gfsaguid03.doc>
- U.S. Department of Education (2007). *No Child Left Behind and charter schools: Giving parents information and options*. Washington, DC: Author. Retrieved from <http://www2.ed.gov/nclb/choice/charter/nclb-chrter.html>
- U.S. Department of Education (2011). *The condition of education 2011*. Washington, DC: Author. Retrieved from [http://nces.ed.gov/programs/digest/d10/tables/dt10\\_100.asp](http://nces.ed.gov/programs/digest/d10/tables/dt10_100.asp)
- U.S. Department of Education. (n.d.). *Safe schools/Healthy students initiative*. Washington, DC: Author. Retrieved from <http://www2.ed.gov/programs/dvpsafeschools/fy2008awards.html>
- Wade, K., & Stafford, M. E. (2003). Public school uniforms: Effect on perceptions of gang presence, school climate, and student self-perceptions. *Education and Urban Society*, 35(4), 399–420. DOI: 10.1177/0013124503255002
- Walsh-Sarnecki, P. (2010, March 6). Court awards bullied student \$800,000. *Free Press*. Retrieved from <http://www.freep.com>

- Warren, M., & Stewart, S. (2011, October 19). Who will pay for SROs? *Omaha World Herald*. Retrieved from <http://www.omaha.com/article/20111019/NEWS2001/710199964/1120>
- Washington, J. (2010, September 5). Racial violence changes student and school. *Washington Post*. Retrieved from [http://www.washingtonpost.com/wpdyn/content/article/2010/09/05/AR2010090501565\\_pf.html](http://www.washingtonpost.com/wpdyn/content/article/2010/09/05/AR2010090501565_pf.html)
- Washington Times. (2004, April 26). School security costly in DC. Retrieved from <http://washingtontimes.com/news/2004/apr/26/20040426-113526-2212r/?page=1>
- Weihner, G., & Tedin, K. (2002). Does choice lead to racially distinctive schools? Charter schools and household preferences. *Journal of Policy Analysis and Management*, 21(1), 79–92.
- White, B. L., & Beal, G. D. (1999). Violence in schools as perceived by preservice and in-service teachers. *Contemporary Education*, 71(1), 31–38.
- Whitehouse (2009). *Promoting innovation, reform, and excellence in America's public schools*. Washington, DC: Author. Retrieved from <http://www.whitehouse.gov/the-press-office/fact-sheet-race-top>
- Williams, K. M. (2005). *Socially constructed school violence: Lessons from the field*. New York, NY: Peter Lang Publishing, Inc.
- Williams, K., & Corvo, K. (2005). "That I'll be killed": Pre-service and in-service teachers' greatest fears and beliefs about school violence. *Journal of School Violence*, 4(1), 49–69. DOI: 10.1300/J202v04n01\_04
- Witte, J., Schlomer, P., & Shoher, A. (2007). Going charter? A study of school district competition in Wisconsin. *Peabody Journal of Education*, 82(2/3), 410–439.
- Zinth, J. D. (2011, November). *Bullying and open enrollment*. Denver, CO: Education Commission of the States. Retrieved from <http://www.ecs.org/clearinghouse/99/36/9936.pdf>