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Child maltreatment (CM) reporting laws and policies have an important role in the identification, treatment, and prevention of CM in the United States (U.S. Department of Health and Human Services [US DHHS], 2012). Abuse by a member of the clergy "is not only a personal and emotional betrayal, but [also] a spiritual betrayal, with secrecy amplified by the unprecedented and systemic cover-up committed by the Church hierarchy" (Coyne, 2011, p. 15). Recent controversies have resulted in the consideration of changes in mandated U.S. reporting laws that include increasing requirements for clergy and extension to additional professions (Freeh, Sporkin, & Sullivan, 2012; Loviglio, 2012).

Many professionals and policymakers have expected that these changes will result in better identification and response to CM, but the effects of such changes on reporting rates have not yet been systematically evaluated. When the categories of professionals required to report suspected child sexual assault in New South Wales, Australia, for example, were extended to include teachers and other school professionals, there was a significant increase in the number of reports received from teachers but no change in the quality of their reports as measured by the percentage of reports that were verified (Lamond, 1989). When we looked at the association of universal reporting laws with total and confirmed CM reports, there were higher report rates in large counties with universal reporting, but most of the additional confirmed reports were for neglect (Palusci & Vandervort, 2014). It is important to take current specific laws and child and community factors into account if we are to understand the full effects of their implementation on the accurate reporting and identification of CM.

History of Reporting Laws

In the early 1960s, with the support and encouragement of the federal government, U.S. states began enacting laws mandating the reporting of child abuse to government authorities (Vandervort, 2012). Statutes requiring the reporting of suspected cases of child abuse were modeled on earlier laws that required medical professionals to report violence, such as gunshot wounds. Some states mandated all adults to report, while others targeted certain professionals. Early reporting laws contained two limitations: (1) they required the reporting of only serious cases of

physical injury and did not mandate that less severe injuries be reported, and (2) they were typically aimed at medical providers, particularly physicians. In 1974, to assist states in funding their child protection systems and bring more uniformity to the nation's reporting laws, Congress enacted the Child Abuse Prevention and Treatment Act, which made receipt of federal funding by state child welfare systems contingent on a state's reporting statute containing certain core elements.

The types of maltreatment that must be reported have since expanded to encompass a range of harms or potential harms to affected children. Child protection laws now require the reporting of physical, sexual, and psychological abuse as well as neglect of varying types—physical, medical, and psychological. Similarly, there has been an expansion of the professions that must report concerns that a child has been abused or neglected, with some states' reporting statutes now containing a laundry list of professionals who must report suspected cases of maltreatment to child protection agencies. States may exempt certain professionals, such as attorneys and the clergy, from all reporting or decide to exempt them when there are certain circumstances, such as attorney—client or clergy—penitent privilege (National Center for Prosecution of Child Abuse, 2012).

Current Reporting Law Trends for CM Mandating Clergy to Report

Many state child maltreatment reporting laws address the responsibility of members of the clergy separately from other groups of professionals. Although doctors, social workers, and teachers are typically subject to blanket mandates, clergymen are usually covered by more nuanced legal requirements. First, in states with universal mandatory reporting, if members of the clergy are not explicitly exempted, they are presumably required to report in the same way that all other adult persons in the state are mandated to report. Second, a number of states seem to require clergymen to report suspicions of child maltreatment, but they circumscribe that requirement, sometimes to the extent that the duty to report is, as a practical matter, eliminated.

Maine law, for instance, requires that members of the clergy report suspected child abuse or neglect "except for information received during confidential communications" (Maine Revised Statues, 2012). A recent case from Michigan also illustrates this point. The Michigan statute mandates that a member of the clergy report suspected child maltreatment (Michigan Compiled Laws Annotated § 722.623, 2013). However, a separate provision of the state's Child Protection Law provides that legal privileges of communication between a member of the clergy and a parishioner are eliminated except for those communications "made to a member of the clergy in his or her professional character in a confession or similarly confidential communication" (Michigan Complied Laws Annotated § 722.631, 2013). Applying these statues, the Michigan Court of Appeals ruled that a minister had no duty to report when a member of the church came to him to seek advice after she had discovered that her husband was sexually abusing their daughter (People v. Prominski, 2013). Thus, even where clergy are mandated to report, that duty is most often much narrower in scope than the duty imposed on other professional groups (Vandervort, 2012).

Child Characteristics

In addition to reporting laws, several child characteristics have been linked to CM and CM reporting. Girls were sexually abused much more often than were boys in NIS-4 (Sedlak et al., 2010), and this gender difference in incidence rates of sexual abuse led to higher rates of total abuse among girls. NIS-4 found also strong and pervasive race differences in the incidence of maltreatment, with the rates of maltreatment for black children significantly higher than those for white and Hispanic children. Latino, Asian/Pacific Islander, and multiracial children were found to have greater risk for being reported, and Native Americans had lower risk for physical abuse reports (Dakil, Cox, Lin, & Flores, 2011). Racial differences in victimization data from the official child welfare system are consistent with known differences for other child outcomes, including evidence that supports the presence of cultural protective factors for Hispanic children, termed the "Hispanic paradox" (Drake et al., 2011). Under the NIS Harm Standard, children with confirmed disabilities had significantly lower rates of physical abuse and moderate harm from maltreatment, but they had significantly higher rates of emotional neglect and serious injury. In another population, physical disability did not increase the risk for any type of victimization once confounding factors and co-occurring disabilities were controlled (Turner et al., 2011).

Family Characteristics

Reporting has also been linked with poor school attendance, disability, family structure, and poverty. In one study, white race, inadequate housing, and receiving public assistance were associated with significantly increased risk of CM recurrence among young children (Palusci, 2011). In the LONGSCAN studies, the mothers of biracial children were poorer, had more alcohol use, and had decreased social support (Fusco & Rautkis, 2012). Children in low socioeconomic-status households had significantly higher rates of maltreatment in all categories and across

both definitional standards in NIS-4. They experienced some type of maltreatment at more than 5 times the rate of other children, were more than 3 times as likely to be abused, and were about 7 times as likely to be neglected (Sedlak et al., 2010).

Children living with their married biological parents universally had the lowest report rates in NIS-4, whereas those living with a single parent who had a cohabiting partner in the household had the highest rate in all maltreatment categories. Compared with children living with married biological parents, those whose single parent had a live-in partner had more than 8 times the rate of maltreatment overall, over 10 times the rate of abuse, and nearly 8 times the rate of neglect. School-aged children who were not enrolled in school were sexually abused more often than enrolled children and more often qualified for inferred harm, an outcome frequently associated with sexual abuse in NIS-4.

Factors at the Community Level

Population size, housing, unemployment, education levels, crime, and religiosity at the community level have also been linked with CM reports. Many of these are measures of social capital, such as the number of religious congregations, personal social support, and support within the neighborhood (Runyan et al., 1998). Studies have documented the association between neglect in early childhood and subsequent externalizing behavior, which may be related in part to families' residence in dangerous neighborhoods (Yonas et al., 2010). In addition to crime, a number of socioeconomic characteristics of neighborhoods have been shown to correlate with child maltreatment rates as measured by official reports to child protective service agencies (Coulton et al., 2007). Higher rates of poverty and higher density of alcohol outlets in urban areas have been associated with higher rates of CM reports in certain communities (Fresithler, Bruce, & Needell, 2007).

In a study of religion and social capital, increasing social capital decreased the odds of neglectful parenting, psychologically harsh parenting, and domestic violence but not harsh physical punishment (Zolotor & Runyan, 2006). Extrinsic religiosity (e.g., church attendance or formal participation in a recognized group) was associated with increased physical abuse potential, with greater social conformity moderating this association (Rodriguez & Henderson, 2010). In a meta-analysis, Mahoney and colleagues (2001) found that while certain religious practices are associated with higher rates of corporal punishment, greater parental religiousness related to more positive parenting and better child adjustment.

Objectives

To better understand these relationships and the effects of mandating clergy to report CM, the objectives of this study were (1) to evaluate the relationship of total and confirmed child maltreatment report rates with state reporting laws requiring clergy to report suspected abuse and neglect, (2) to determine

whether child and community characteristics modify these effects, and (3) to assess whether these relationships, if any, hold with confirmed reports of specific child maltreatment types.

Methods

Dataset Preparation

The National Child Abuse and Neglect Data System (NCANDS) has collected data from U.S. states and territories and offered large annual samples of CM reports since 1990. State CPS agencies voluntarily submit expanded case-level information about child, family, and service characteristics for what is now called the Child File (National Data Archive on Abuse Child Abuse and Neglect, 2002). Although precise definitions vary from state to state, CM type categorizations in NCANDS are based on federal guidelines for evidence of one or more instances of physical abuse, sexual abuse, psychological maltreatment, neglect, or medical neglect (US DHHS, 2002). When state agencies find credible evidence that abuse or neglect has occurred, the report is labeled "substantiated" or "indicated" based on state law and is considered a CPS-confirmed report. Data from more recent years also contain "alternative response victims," which are also considered confirmed reports, although the investigation process is different (National Data Archive ..., 2002).

As described in another study (Palusci & Vandervort, 2014), NCANDS public use data files were obtained for this study for the year 2000 from the National Data Archive on Child Abuse and Neglect (2002) at Cornell University. The SAS statistical software package, version 9.1 (SAS Institute Inc., Cary, NC), was used for data management and analysis. Duplicative reports occurring on the same day were deleted using a "roll up" procedure provided with the dataset. Variable fields were assessed to determine whether they were missing, categorical, or continuous in nature. Records were sorted by state and county in the dataset and were compared with published information to assess overall dataset integrity.

Study Sample

The child maltreatment report study sample used for this study was derived from the NCANDS dataset from 2000 (National Data Archive..., 2002). This group of NCANDS records has been used successfully in prior research looking at other forms of CM, and this study year was chosen in place of the more recent decennial census in 2010 to enable comparison using more complete data. After aggregation, the overall dataset had reports from 18 U.S. states with county information. Confirmed reports were identified as those that were labeled as "substantiated" or "indicated" or "alternative response victim" in the dataset, and confirmed reports were used for all analyses.

Counties where children lived were identified in the dataset only for those counties where 1,000 or more reports had been made. This resulted in 754,225 total reports with 252,390 confirmed

reports being available for analysis. Confirmed reports could have up to four confirmed CM types from among five types of CM: physical abuse (PA), sexual abuse (SA), neglect (NE), medical neglect (MN), and psychological maltreatment (PM). The U.S. states with county-level data available for our analysis are Arkansas, Delaware, Florida, Kansas, Kentucky, Louisiana, Maine, Massachusetts, Minnesota, Missouri, Nebraska, North Carolina, Oklahoma, Pennsylvania, Rhode Island, Texas, Utah, and Washington.

Review of CM Reporting Laws

One of us (FEV) reviewed applicable state statutes in the 18 study states regarding mandatory reporting requirements. Each state law was examined using state statutory codes as well as session laws to determine whether, in the year 2000, the applicable statutes specifically identified whether religious clergy were specifically required to report suspected abuse or neglect. Table 1 shows the results of our review of these laws with the published state total and confirmed report rates available from NCANDS (US DHHS, 2002).

Table 1. State Reporting Laws and Report Rates, 2000

State	Were clergy mandated to report?	Total report rate per 1,000 children	Confirmed report rate per 1,000 children
AR	No	41.2	8.2
DE	No	43.5	6.2
FL	No	34.4	15.5
KS	No	41.8	8.0
KY	No	44.1	12.2
LA	Sometimes	33.1	5.4
ME	Sometimes	51.7	8.9
MA	No	37.5	13.2
MN	Sometimes	20.8	6.0
MO	Sometimes	73.2	4.7
NE	Yes	26.4	5.1
NC	Yes	46	9.7
OK	Yes	59.6	9.2
PA	Sometimes	30.1	1.7
RI	Yes	49.9	8.9
TX	Yes	25.3	5.1
UT	Sometimes	34.9	8.0
WA	No	44.4	3.1

State laws could have an absolute requirement for reporting ("yes") or certain exclusions could apply ("sometimes") when clergy reporting was mandated. A number of the reporting laws that designated clergy as mandated reporters also referenced other state code provisions, which imposed limitations on the reporting duty. When this was the case, those other code provisions were reviewed. In these circumstances, the child abuse reporting statute required that a member of the clergy report suspected child maltreatment subject to a separate statute that provided for clergy-penitent communications to be confidential.

Minnesota's law provides a typical illustration of this phenomenon. Minnesota's mandatory child abuse reporting law provided that a member of the clergy was mandated to report child maltreatment if the clergyman "received the information while engaged in ministerial duties, provided that a member of the clergy is not required . . . to report information that is otherwise privileged under section 595.02, subdivision 1, paragraph (c)" (Minnesota Statutes, 2012). In such an instance, we reviewed the referenced statutes. In the case of Minnesota, the statute provided as follows:

(c) A member of the clergy or other minister of any religion shall not, without the consent of the party making the confession, be allowed to disclose a confession made to the member of the clergy or other minister in a professional character, in the course of discipline enjoined by the rules or practice of the religious body to which the member of the clergy or other minister belongs; nor shall a member of the clergy or other minister of any religion be examined as to any communication made to the member of the clergy or other minister by any person seeking religious or spiritual advice, aid, or comfort or advice given thereon in the course of the member of the clergy's or other minister's professional character, without the consent of the person.

In such a situation, although the mandated reporting law seems to mandate "universal" or at least some reporting by members of the clergy, given the breadth of the privilege statute, there seems to be nothing that can in fact be reported without the consent of the individual actually confessing to the abuse. As a result, for our analyses, study states were labeled as having a clergy reporting requirement if they at least specifically listed clergy as mandated reporters, with or without an exception in certain circumstances.

Additional County-Level Data Sources

While information is not readily available at the county level about all of the many risk and social capital factors associated with CM reporting, several data sources exist with U.S. countylevel data regarding child and community characteristics that link to counties in NCANDS (Table 2). From the U.S. Decennial Census (U.S. Department of Commerce, Census Bureau, 2000a, 2000b), information about the county's total and child populations less than 18 years of age, child gender, race, ethnicity,

Table 2. CM Variables by Type and Source

Maltreatment Reports

NCANDS, 2000 (county)

Total Reports

Confirmed Reports (substantiated, indicated, and alternative-response—victim)

Physical Abuse

Sexual Abuse

Neglect

Medical Neglect

Psychological Maltreatment

Child Characteristics

U.S. Census, 2000

Population: Total and child, age <18y

Gender: Children < 18y male (%)

Race: Children <18y White, Black, Asian, American Indian, Pacific Islander (%)

Race: Children <18y with two or more races (%)

Ethnicity: Children <18y Hispanic (%)

Marriage: Children <18y in married families (%)

Disability: Children ages 5-15y with no disability (%)

Isolation: Children with linguistic isolation, %

Education: Children attending school (%), by age (3–4y, 5–9y, 10–14y, 15–17y)

Poverty: Children in families at or below 100% federal poverty level

Community Characteristics

U.S. Census, 2000

Education: Adults ages 18-24y without HS completion (%)

Housing: Occupied housing units (%)

Bureau of Labor Statistics, 2000 (county level)

Employment: Unemployment (%)

Association of Religion Data Archives, 2000

Religiosity: Number of congregations (per 100,000 children)

FBI Uniform Crime Statistics, 2000 (rate per 100,000 total population)

Crime: Index crimes

Murders

Rapes

Aggravated assaults

19

county unemployment, marriage percentage, education levels, school attendance, housing, poverty, disability, and family linguistic isolation were available. From the Association of Religion Data Archives (2002), data were available from a survey of all religious congregations in each county, including total membership and number of congregations for all religions. The U.S. FBI Uniform Crime Reports (U.S. Department of Justice, 2001) provided information for each county on the total number of index crimes, aggravated assaults, rapes, and murders. Index crimes are the eight crimes the FBI combines to produce its annual crime index: willful homicide, forcible rape, robbery, burglary, aggravated assault, larceny over \$50, motor vehicle theft, and arson.

Data Analysis

As described in another study (Palusci & Vandervort, 2014), statewide child abuse report rates were first compared using NCANDS summary data. To compare variables across counties of varying size, rates were used or calculated as needed for all analyses. Using the NCANDS Child File, the frequency of total and confirmed CPS reports were then calculated by U.S. county, as were confirmed reports by CM subtype. Rates per 1,000 children, 1,000 total population, or 100,000 total population were calculated for each county-level variable as indicated by dividing frequencies by the appropriate population.

Total reports, confirmed reports, and CM types were stratified by state reporting law requirement, and means were compared using T-tests and chi square, as indicated. Variable means were compared for the study counties, states, and the United States as a whole to highlight similarities or differences from the entire population. Cross-sectional ecological design was used for multiple variable comparisons with county as the unit of analysis. County rates were linked with CM reports in a single dataset for the U.S. counties in the 18 study states. Linear regression models with stepwise, backward elimination were used, beginning with an initial model with "clergy reporter requirement" (yes/sometimes vs. no) as the independent variable while controlling for

child and community variables. Alpha was set to 0.05 for all analyses. Results were calculated for full and reduced models.

Human Subjects Protections

Several steps have been taken in the dataset preparation, distribution, and use to protect the privacy of children and families. Names and other identifying information were removed and replaced with unique child and report identifiers prior to distribution. Files were transmitted using secure servers and were stored on secure computers. Because child date of birth had been removed in the data, age was reported only as years. The date of report was rounded to the first half or second half of the month and the county identified only if there were over 1,000 reportchild pairs in that county. All geography and other identifiers were masked for fatalities. Unique race-ethnicity records in a county were recoded to "unknown." Because of these protections, the New York University human subjects committee deemed this research to be exempt from further review.

Results

Relationship of CM Report Rates With State Reporting Laws

Differences occur in the rates of total reports and rates of confirmed reports, depending on the state reporting requirement identified. Among the 18 states with county-level data available, our review of state laws identified 5 states where clergy were considered mandated reporters; an additional 6 states sometimes required clergy to report (Table 1). In states requiring clergy to report all or some of the time, there were lower report rates that were statistically significant for confirmed reports compared with states without this requirement. This difference was statistically significant only for confirmed report rates (Table 3).

County-level data were available in NCANDS for 213 counties, which had a total population of over 69 million people and over 17 million children younger than 18 years of age. These states and counties differed in several ways from the U.S. population as a whole (Table 4). For example, the study counties had significantly fewer Asian children, more children with two or more races, and

Table 3. County Mean Report Rates, by State Law and CM Type

Reporting Law	Counties	Report Rate	Confirmed Rate	PA	SA	NE	PM
All clergy are m	andated report	ters:					
Yes	91	55.7	15.4*	4.4*	2.1	9.3	1.4*
Sometimes	37	44.5	8.8*	3.6*	1.7	7.3*	1.6
No	83	66.8	25.4	11.6	4.5	17.3	2.2

Table 4. Comparison of Variables by Locality, 2000

	U.S.	Selected States	Selected Cou	ınties
States, #	50	18	18	
Counties, #	3143	1330	213	
Total population, # 28	1,421,906	104,296,664	69,641,321	
Child Characteristics				
Child population <18y, #	2,300,000	26,402,677	17,897,170	
Male children, %	51.3	51.3	51.3	
White children, %	75.1	76.4	73.2	
Black children, %	12.3	12.6	15.3	
American Indian/Alaskan Native children, %	0.9	1.4	1.6	
Asian children, %	3.6	2.0	1.7	AB
Native Hawaiian/Pacific Islander children, %	0.1	0.1	0.1	
Children >1 race, %	2.4	2.3	3.3	В
Hispanic children, %	12.5	9.4	12.2	A
Children in married families, %	66.0	67.9	62.1	В
No disability, 5–15y, %	91.9	95.6	93.7	AB
Linguistic isolation, %	4.7	3.9	3.2	
In school, 3–4y, %	49.3		48.5	
In school, 5–9y, %	97.4		95.6	
In school, 10–14y, %	98		98.9	
In school, 15–17y, %	94.9	96.8	93.9	A
Children in families at or below 100% federal poverty level, $\%$	9.2	15.4	17.6	В
Community				
No high school completion, 18–24y, %	25.3	18.5	26.9	A
Unemployment rate, %	5.8	5.3	4.0	В
Religious congregations per 100,000 children	3.7	4.2	4.1	
Housing units, % occupied	91	89.9	89.3	
Index crime rate per 100,000	4124	4219	5,067	
Murder rate per 100,000	5.5	4.9	6.1	
Rapes per 100,000	32	35.9	38.0	A
Aggravated assaults per 100,000	324	290	402	A

fewer disabled children than did the United States as a whole. There were also more children living in poor families but with less unemployment than the general population. There were several other differences that were not statistically significant.

Effects of Child, Family, and Community Factors

In models controlling for all the child, family, and community factors identified, states with mandated reporting laws requiring clergy to report at least sometimes did not have significantly different total report rates (Table 5). Although there were numerical differences in the strengths of association, significant variables in most of the full models remained so in the corresponding reduced models. In full models for total reports, significant factors included child gender (males), race (American Indian/Native

Alaskan), school attendance (ages 10–14y), family marriage, and poverty. In reduced models, male gender and poverty had increased rates, while black race, Hispanic ethnicity, and school attendance (ages 10–14y) all played a significant role in decreasing rate. The reporting law had no significant effect. For confirmed reports, significantly lower report rates (8 per 1,000 children) were found in both full and reduced models, with significant increases associated with male gender, poverty, and religious congregations in the full model and total child population, male gender, school attendance (ages 10–14y), and crime (index crimes and aggravated assaults) in reduced models.

Effects on Specific CM Types

States' mandated reporting laws have varying association with

Table 5. Multiple Regression: Clergy Reporting on Total and Confirmed Report Rates

	Total R	eport Rate	Confirmed Report Rate		
	Full Model	Reduced Model	Full Model	Reduced	
Model	2 0 2207	0.257/	0.2065	0.2217	
	r ² =0.3287	0.2576	0.3865	0.3217	
Mandated Reporting					
Clergy (yes/sometimes vs. no)	-3.767	NS	-8.233**	-8.579***	
Child Characteristics					
Population, <18y	-0.00005091	-0.00006728*	-0.00001737	0.00002882***	
Male children, %	24.52*	26.88**	9.722**	11.32***	
White children, %	-1.369	NS	-0.1408	NS	
Black children, %	-2.302	-0.6268*	-0.3028	NS	
American Indian/Alaskan Native children, %	-3.072*	NS	-0.4550	NS	
Asian children, %	-0.5808	NS	0.0954	NS	
Native Hawaiian/Pacific Islander children, %	-17.77	NS	-4.644	NS	
Children >1 race, %	0.2404	NS	-0.3598	NS	
Hispanic children, %	-1.116	-0.7964***	-0.1239	NS	
Children in married families, %	71.88*	NS	16.73	NS	
No disability, 5-15y, %	2.786	NS	-0.2564	NS	
Linguistic isolation, %	-1.744	NS	-0.1434	NS	
In school, 3–4y, %	0.6178	NS	0.2435	NS	
In school, 5–9y, %	1.162	NS	-0.3354	NS	
In school, 10–14y, %	-22.70**	-20.92**	-4.771	-5.899**	
In school, 15–17y, %	-1.008	NS	-0.1778	NS	
Children at or below poverty level, %	3.464***	2.186***	0.6466*	NS	
Community					
No high school completion, 18–24y, %	-0.2886	NS	0.01483	NS	
Unemployment rate, %	-0.8663	NS	-1.659	NS	
Religious congregations, per 100,000 children	0.1159	NS	0.04656*	NS	
Housing units, % occupied	-63.18	NS	-27.65	NS	
Index crimes, per 100,000	-0.00598	NS	-0.2325	-0.01915*	
Murders, per 100,000	3.581	NS	4.552	NS	
	-5.841	NS	0.1840	NS	
Rapes, per 100,000	0.3696	NS	0.1991	0.2408**	

rates of specific child maltreatment confirmed after CPS investigation in bivariate analyses (Table 3). States with at least "sometimes" clergy reporting had decreased confirmation rates for physical abuse compared with states having no requirement. Those always mandating clergy reports had fewer confirmed psychological maltreatment reports, and those with only "sometimes" reporting had significantly fewer cases of confirmed neglect. In models controlling for child, family, and community factors (Table 6), significantly decreased confirmed physical abuse

report rates were noted in both full and reduced models. While there were decreases, none of the other CM rates were significantly associated with clergy mandated reporting requirements in our regression models.

Discussion

It is interesting to note that total CM report rates did not change significantly based on mandated clergy reporting requirements in the 11 states where clergy were required to report at least some of

Table 6. Confirmed Report Rate Models for Clergy Reporting, by Child Maltreatment Type

	CM Rate Change			
СМ Туре	Full Model	Reduced Model		
Physical Abuse	-4.750**	-4.392***		
Sexual Abuse	-1.833	NS		
Neglect	-2.584	NS		
Medical Neglect	-0.4505	NS		
Psychological Maltreatment	-0.6576	NS		

the time. Child gender, race, ethnicity, middle school attendance, poverty, and crime modified the association between CM rates and mandated reporting, sometimes with a larger effect size. For CM type, there were lower confirmed report rates found for physical abuse. While numerical differences were noted in the strengths of association, significant variables in most of the full models remained so in the corresponding reduced model.

Child, Family, and Community Factors

The contribution of child and community variables noted in our results is in many ways similar to what others have found. Factors such as poverty, race/ethnicity, and gender have been extensively studied and linked to CM reports, confirmed reports, and actual cases across varying communities, although on the community level, the association with poverty is weak (Millett, Lanier, & Drake, 2011). Housing problems and receiving public assistance are related to CM recurrence among young children (Palusci, 2011), while other elements of social capital are associated with physical and sexual abuse rates (Coulton et al., 2007; Freisthler, Bruce, & Needell, 2007). CM rates have been linked to crime rates (Finkelhor & Jones, 2006), and a review of several studies noted important community factors associated with CM reports, such as poverty, unemployment, property values, community resources, child care burdens, crime, social resources, and household crowding, all consistent with our findings (Coulton et al., 2007; Wulczyn, 2009).

Other differences from previous studies are also noted in our results. Unlike NIS-4 (Sedlak et al., 2010), this study finds that counties with a higher proportion of boys have higher CM reporting rates. African American race has been associated with higher reporting rates (Sedlak et al., 2010), while Hispanics have had higher reporting rates but lower confirmation rates for physical abuse, and Native Americans have lower and Pacific Islanders have higher reporting rates than do whites (Dakil et al., 2011). While increased availability of

early child care and early childhood education has been linked with fewer CM reports (Klein, 2011), school attendance was found to be linked to increased reports among 3-4-year-olds and decreased for 10-14-year-olds in our multivariable models. In another study in which mothers who were married, had graduated high school, and had more social supports were found to have fewer CM reports, their children ages 4–8 years attending school, in contrast, were found to be almost 3 times more likely to be reported (Li, Godinet, & Arnsberger, 2011). Child disability, long thought to be associated with increased risk of CM, did not have significant effect in our study. Linguistic isolation, unemployment, and high school graduation also had no effect. Given that social capital factors may act more on the individual level, their effects may not be as important as previously thought on the community level, or they may be additive with other factors in the child or economy (Saluja, Kotch, & Lee, 2003; Zolotor & Runyan, 2006).

Why Fewer Confirmed Reports?

The issues underlying the 10%+ fewer confirmed reports in states with mandated reporting by clergy are more difficult to understand. Although religious beliefs and church attendance have been associated with certain parenting practices and corporal punishment (Mahoney et al., 2001; Rodriguez & Henderson, 2010;



Runyan et al., 1998), only a small difference in confirmed reports was seen in states with mandated clergy reporting or with an increased number of congregations. This suggests that it is both the number of congregations and mandated clergy reporting that are important. Reporting laws that require clergy to "sometimes" or universally report suspected CM are also limited by one or more exclusions (e.g., in the confessional), which may affect these rates. What is clear is that this study does not support the hypothesis that mandating reports by the clergy will necessarily increase total or confirmed CM reports. To explain differences between total report rates and confirmed reports, there are likely other system factors beyond reporting laws that affect case confirmation because it has been suggested that both populations (confirmed and unconfirmed) have similar risk profiles (Hussey et al., 2005).

Giardino, Sacks, and Terry (2012) noted a marked decrease in clergy sexual abuse (CSA) after the year 2000, when the institutional response of the U.S. Catholic Church leaders was on public display with public apologies and commitments to take action to halt the occurrence of such abuse. The authors report the downward clergy CSA trend appears to have begun earlier when compared with the trends in general CSA because cases began their steady decline in the 1980s. They also assert that the predominance of male victims and the relatively higher proportion of adolescents in clergy sexual abuse are clear differences from the age and gender pattern seen in the general CSA problem. At least within the Catholic Church, there appears to be fewer cases now for clergy to



report, but, given that the number of reports from the clergy in states mandating such reports is low overall, it is unclear whether mandating clergy CM reports in additional states will result in increased case identification. It is also possible that fewer CM cases occur (and are therefore reported) in jurisdictions where there are more mandated reporters because there is greater public awareness and less acceptance of CM.

This study confirms that several community and child factors more strongly predict confirmed report rates than do reporting laws. Multiple issues have been debated regarding the U.S. child welfare system overall, ranging from error in identifying actual cases to bias in case investigation and ineffectiveness in service provision (Mathews & Bross, 2008; Melton, 2005). Mandated reporters do not regularly report their suspicions, and case workers may use substantial bias, prompting calls for changes such as increased professional education, increased prosecution for failure to report, and alternative systems using consultation with centers of excellence (Berkowitz, 2008; Cross & Casanueva, 2009; Delaronde, King, Bendel, & Reece, 2000; Flaherty, et al., 2008). Thus, any changes to mandated reporting laws may identify only a small number children and families who would not otherwise be identified.

Limitations

The results of this study cannot address the issue of whether changing clergy reporting laws will actually improve case identification. We also cannot know definitively from this research whether changing state law or policy will result in changes in report or confirmation rates, as this analysis is preliminary and cross-sectional ecological comparisons cannot be used to infer causation. When clergy were surveyed in the 1990s, a sizeable percentage (29%) had no education about child abuse and neglect, and 22% believed that evidence, rather than the suspicion of abuse, was required before a CM report is made (Grossoehme, 1998). This highlights an untapped area for case identification amenable to changes in law, policy, and practice in the United States (John Jay College Research Team, 2011).

While NCANDS is a large dataset covering many U.S. states, several characteristics limit its use in secondary analysis. Year 2000 data were used for completeness, but more accurate analysis of more recent trends may become available using year 2010 census data. County-level data were available only for the 213 counties having 1,000 or more reports in 2000, which may bias the results toward being more predictive for larger states with larger counties. While the 18 study states contained over 69 million people and over 17 million children, these states and counties did not include smaller counties and differed in several ways from the U.S. population as a whole, such as having significantly fewer Asian children, more children of two or more races, and fewer disabled children. There were also more children living in poor families but with less unemployment. No attempts have been made to

make the data representative of the U.S. child population or the population of maltreated children. There are likely several factors working within communities to affect CM reporting rates in addition to those measured in our study, and we may not have been able to capture the "micro-social environments" contributing to CM using county-level data (Vinson & Baldry, 1999).

While exhaustive efforts are underway to assure that data can be combined, the states also use different definitions and policies for what is entered into NCANDS. Some states, for example, expand what can be reported, especially for physical and educational neglect, and wide state-to-state variations are common (Kelly, Barr, & Weatherby, 2006; Mathews & Kenny, 2008). Within states, statutes do not necessarily reflect their actual procedural implementation, and variations across counties in a state can bias the results. Any effects that we found, for example, could be biased by local historical and social factors that reflect on the acceptance of reporting or the child welfare system, separate from state law. It will require additional studies of what happens both within and among states over time to determine the true impact of clergy mandated reporting laws on the identification and reporting of child maltreatment.

Conclusions

State mandated clergy reporting laws affect both total and confirmed CM report rates, sometimes in unexpected ways. When looking at the effects of these laws, it is also important to consider several child, family, and community factors (e.g., social capital) because they may act to modify the results as confounders. Policymakers considering changing mandated reporting laws, such as clergy mandated reporting, need also to consider the effects on reports for different CM types and whether these changes will more accurately identify child maltreatment victims.

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