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Childhood Adversities and Resistant Behaviors Toward Law Enforcement Officers in a National Sample of State and Federal Inmates

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Abstract

An overwhelming body of literature points to a relationship between experiencing adversity during childhood and later violence in adulthood. This study addresses a gap in existing research by testing of the impact of four prior childhood adversities on resistant behaviors toward law enforcement officers. A four-level ordinal dependent variable measuring passive resistance, verbal resistance, police action resistance, and physical resistance was created using data from the nationally representative, 2004 Survey of Inmates in State and Federal Correctional Facilities. A generalized ordinal logistic regression model tested the effects of childhood adversities on resistant behaviors toward law enforcement officers. Physical victimization during childhood and adulthood predicted resistant behaviors toward law enforcement officers above and beyond the effects of prior victimization during only childhood and only adulthood. This study found a strong association between prior physical victimization, foster care involvement, and resistant behaviors after adjusting for demographic, situational, and criminal background variables.

Keywords

childhood adversity; child abuse and neglect; victimization; violence; resistance; law enforcement officers; victim–offender overlap

Introduction

The risks of physical assault and injury in the daily activities of law enforcement officers surpass the potential hazards of most other occupations (Bureau of Labor Statistics, 2013; Clarke & Zak, 1999). In 2012, 52,901 law enforcement officers were physically assaulted during encounters with persons in the community resulting in 11,759 injuries (Federal Bureau of Investigation, 2012). Nonetheless, relative to the 62 million persons who reported at least one contact with law enforcement in 2011 (Langton & Durose, 2013), citizen assaults on law enforcement officers are extremely rare events (Brandl, 1996; Brandl &

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Stroshine, 2003, 2012). The occurrence of more minor forms of resistance or defiance of police directive, however, far exceeds the prevalence of assaultive and injurious behaviors toward law enforcement officers. Terrill (2003) found that 12% of all encounters between police and persons in the community involved some form of resistance (i.e., arguing, cursing, or insulting officers) rather than severe forms of physical aggression. In the pursuit of understanding why offenders resist, empirical studies have provided crucial insights into social, economic, demographic, and structural predictors of resistant behaviors toward law enforcement officers (e.g., Belvedere, Worrall, & Tibbetts, 2005; Brandl & Stroshine, 2003; Covington, Huff-Corzine, & Corzine, 2014; Engel, 2003; Kaminski, Jefferis, & Gu, 2003; Kaminski & Marvell, 2002; Kaminski & Sorenson, 1995; Kavanagh, 1997; Kent, 2010; Wilson & Zhao, 2008). Alongside these contributions, considerable research points to a link between exposure to childhood adversities and violent behaviors in adulthood (e.g., Clarke & Zak, 1999; English, Widom, & Brandford, 2001; Maxfield & Widom, 1996; Rivera & Widom, 1990; Weiler & Widom, 1996; Widom, 1989a, 1989b; Widom & Maxfield, 2001). Childhood adversities remain absent from studies examining predictors of resistant behavior toward law enforcement officers. This study addresses a significant gap in existing research by examining the effects of four childhood adversities (foster care involvement, sexual victimization, physical victimization, and caretaker abuse of substances) on resistant behaviors in adulthood during encounters with law enforcement officers.

Literature Review

Conceptualization of Suspect Resistance

Research into encounters between persons in the community and law enforcement officers typically conceptualizes resistant behaviors along a continuum ranging from passive forms of noncompliance to severe physical resistance (Alpert & Dunham, 1997; Alpert, Dunham, & MacDonald, 2004; Crawford & Burns, 2002; Wolf, Henych, Thompson, & Mesloh, 2009; Alpert & Dunham, 2004). To accommodate an underlying continuum, studies traditionally impose a hierarchical ordinal ranking structure of between four and six categories of resistance severity (Alpert et al., 2004; Terrill, 2003; Wolf et al., 2009). For instance, within categories of severity, Terrill (2003) conceptualized *verbal resistance* as vocal noncompliance with police direction, *defensive resistance* as attempts on behalf of individuals to evade police methods of control (i.e., flee, refuse search, refuse to provide identification), and *active resistance* involving physical aggression (i.e., kicking, fists, and any attacks with a weapon). For the purposes of this study, the term *resistance* encompasses any behavior that acts in opposition to police directive ranging from passive forms of noncompliance to potentially deadly aggression. Guided by prior empirical literature, resistance, is operationalized as an ordinal scale to accommodate an underlying continuous construct ranging from least to most severe forms of resistant behavior.

Predictors of Resistance Toward Law Enforcement Officers

Extant literature on resistance toward law enforcement officers has focused on offender, officer, organizational, structural, and spatial predictors. At the offender level, studies have found an association between Black race (Belvedere et al., 2005), prior criminal history (in particular violent offending), demeanor (Crawford & Burns, 2002; Kavanagh, 1997),

arrestee drug or alcohol intoxication (Covington et al., 2014; Engel, 2003; Kavanagh, 1997; Reisig, McCluskey, Mastrofski, & Terrill, 2004), and an elevated likelihood of resistance. Research examining the link between gender and resistant behaviors is mixed, with some studies finding significant effects of female sex (Covington et al., 2014; Crawford & Burns, 2002; Engel, 2003) and others identifying an insignificant relationship (Kaminski & Sorenson, 1995; Kavanagh, 1997). Officer-level variables consist of age, length of tenure, (Tucker-Gail, Selman, Kobolt, & Hill, 2010), and female sex (Rabe-Hemp & Schuck, 2007). Variables that fall within the purview of organizational context are body armor policies, violent crime rates of the precinct (Fridell, Faggiani, Taylor, Brito, & Kubu, 2009), the number of minority law enforcement officers (Barrick, Hickman, & Strom, 2014), and aggressive drug enforcement policing tactics (Wilson & Zhao, 2008). High numbers of prison populations, absolute deprivation (e.g., economic conditions or percent in poverty), racial income inequality, and size of the African American population (Kent, 2010) are structural variables that increase the likelihood of resistance toward law enforcement officers (Kaminski & Marvell, 2002; Peterson & Bailey, 1988). Macrospatial variables consist of arrests occurring in police beats with a larger number of calls for service or arrests, (Belvedere et al., 2005; Kaminski et al., 2003), neighborhood violent crime rates, criminogenic conditions (Kaminski et al., 2003), and disadvantaged neighborhoods (Reisig et al., 2004). At the microspatial level, Caplan, Marotta, Piza, and Kennedy (2014) and Marotta and Caplan (2013) suggest that felonious assaults on law enforcement officers are more likely to occur in locations where multiple spatial risk factors collocate, namely foreclosures and problem buildings as well as locations that afford offenders with multiple opportunities for concealment and escape. Situational variables encompass the use of weapons (e.g., handguns and knives), the type of crime or call for service (Hirschel, Dean, & Lumb, 1994; Kavanagh, 1997; Kercher, Swedler, Pollack, & Webster, 2013; Swedler, Kercher, Simmons, & Pollack, 2013), and the number of responding officers (Covington et al., 2014; Edwards, 1995). Studies have found that although offenders in possession of a gun or a knife were more likely to assault law enforcement officers, personal weapons (i.e., hands, feet, arms) comprised a vast majority of the weapons utilized to assault police (Brandl, 1996).

Several theoretical perspectives have sought to provide explanations for the underlying causal mechanisms behind resistant behaviors toward law enforcement officers. One such theory, provided by Tedeschi and Felson's (1994) interactive theory of coercive action, explains resistant behaviors as a reaction to perceptions of directives from police officers as an insult to the citizen's social identity (Engel, 2003; Tedeschi & Felson, 1994). The likelihood of interpreting police directive as impolite and rude is enhanced by the presence of other officers or citizens (Belvedere et al., 2005; Engel, 2003). Another explanatory model put forth by Turk's (1966) theory of norm resistance suggests that resistance toward law enforcement officers embodies a conflict between social norms and is a product of structured inequalities (Weidner & Terrill, 2005). Studies by Lanza-Kaduce and Greenleaf (1994, 2000) and Weidner and Terrill (2005) found empirical support for Turk's theory of norm resistance. Closely related, the deference exchange theory devised by Sykes and Clarke (1975) asserts that citizen-police encounters involve an exchange of deference between two parties and expectations of adherence to norms of compliance. In this context,

the citizen is a lower status actor, and deference is expected to directives given by law enforcement officers. Demographic factors such as race, age, and sex further complicate the (a)symmetry of status norm arrangements. Sykes and Clark found that conflict was least likely among elderly, middle class, and female citizens. Expectations of deference become more stringent when a citizen is suspected of deviance and conflict erupts when either party interprets the other as challenging the status arrangement.

Defiance theories put forth by Sherman (1993) and Tyler (1990) conceptualize law-breaking behaviors as a response to perceptions of officer authority as illegitimate, biased, discriminatory, or unfair (Engel, 2003; Lind & Tyler, 1988; Tyler, 2003). When the public regard the distribution of police services as unfair, when laws are enforced unequally, and when harsh crime control efforts are disproportionately administered to minority disadvantaged communities, citizens are less likely to comply with police directive, endorse the mandates of the law, and are more likely to challenge the authority of police (Sherman, 1993; Sunshine & Tyler, 2003; Tyler, 2006). Populations subjected to discrimination, most notably minority youth, are more likely to perceive interactions with law enforcement officers as unfair and punishments as excessive (Gau & Brunson, 2010). Amidst nearly a 50-year growth in research, none of the theoretical frameworks discussed thus far account for the impact of early developmental adversities on resistant behavior toward law enforcement officers during adulthood.

Theoretical Framework

The inclusion of childhood adversities in empirical inquiry into resistance toward law enforcement officers is supported by principles of attachment and social learning theories of human behavior. Attachment theory and social processing models suggest that exposure to severe sexual or physical trauma and family relationships characterized by discord, abrupt separations, or inconsistent parenting (i.e., foster care, caretaker substance abuse, parental incarceration) increases the likelihood of forming insecure interpersonal relationships (Baer & Martinez, 2006; Dodge, Bates, & Pettit, 1990; Fearon, Bakermans-Kranenburg, Van Ijzendoorn, Lapsley, & Roisman, 2010; Finzi, Ram, Har-Even, & Shnit, 2001). The formation of insecure attachments creates working models of social surroundings that can be interpreted as threatening and produce hypervigilance to normal social cues (Mikulincer & Shaver, 2001). The product of this hypervigilance is an elevated propensity for aggressive responses or “rage responses” to cues that are internalized as threatening (Dodge et al., 1990; Widom, 2014). These distortions in viewing interpersonal relationships, also known as biased and deficient social processing patterns, are skewed to interpret interactions as dangerous and are more likely to result in impulsive and reactive violence (Dodge et al., 1990). Studies suggest a connection between attachment insecurities and antisocial, deviant (Finzi et al., 2001; Levinson & Fonagy, 2004), psychopathic (Frodi, Dernevik, Sepa, Philipson, & Bragesjo, 2001), and aggressive behaviors (Mikulincer & Shaver, 2001). Social learning theories propose that exposure to violence socializes children to regard aggression as an effective method of coping with negative experiences, administering punishment, or resolving interpersonal conflict especially if the perpetrator (i.e., family member, peer, or stranger) is positively rewarded for being aggressive (Bandura, 1977). Childhood

experiences that disrupt the attachment process and facilitate the learning of violent coping strategies increase the likelihood of violence in adulthood.

Empirical studies provide strong support for a connection between attachment insecurities, social learning theories, and the development of aggression in adulthood. Childhood adversities disrupt the attachment process and provide learning experiences that internalize the practice of violence as an effective strategy to achieve positive rewards. Prior literature has identified poor parental mental health, parental substance abuse, parental criminality, childhood physical or childhood sexual victimization, neglect, and family separation (i.e., foster care involvement, death of a caretaker) as predictive of poor physical health, abnormal psychopathology, and externalizing behaviors in adulthood (Benjet, Borges, & Medina-Mora, 2010; Fisher et al., 2010; Green et al., 2010; Kessler, Davis, & Kendler, 1997; Kessler et al., 2010; McLaughlin et al., 2010; Pirkola et al., 2005; Schilling, Aseltine, & Gore, 2008; Vanderfaeillie, Van Holen, Vanschoolandt, Robberechts, & Stroobants, 2013; Widom & Ames, 1994; Zlotnick, Tam, & Soman, 2012). In addition to mental health and behavioral outcomes, many studies support a link between adult delinquency and high prevalence of prior exposure to childhood adversities among populations involved in criminal justice systems (Jennings, Higgins, Tewksbury, Gover, & Piquero, 2010; Maldonado-Molina, Jennings, Tobler, Piquero, & Canino, 2010; Manasse & Ganem, 2009; Posick, 2013; Reid & Sullivan, 2012; Sarchiapone, Carli, Cuomo, Marchetti, & Roy, 2009; Silver, Piquero, Jennings, Piquero, & Leiber, 2011). This link is known colloquially as the *victim-offender overlap* (Jennings et al., 2010; Jennings, Piquero, & Reingle, 2012).

Epidemiological and psychological studies suggest that the effects of multiple, co-occurring childhood adversities on later behavioral problems are cumulative (Anda et al., 2006; Appleyard, Egeland, Dulmen, & Alan Sroufe, 2005; Atzaba-Poria, Pike, & Deater-Deckard, 2004). Anda et al. (2006) identified cumulative effects of co-occurring exposures to household dysfunction, childhood abuse, and witnessing domestic violence, on later substance abuse, violence, and sexually aggressive behaviors. Further, the effects of physical victimization during childhood are compounded by exposure to physical trauma during adulthood. In accordance with theories of secure attachment formation, Newton, Litrownik, and Landsverk (2000) suggest that problem behaviors are associated with the number of placements in homes and foster care institutions. These studies suggest that a dose-response relationship exists in which the co-occurrence of multiple childhood adversities increases the risk of violence later in life.

Hypotheses

The body of research discussed thus far justifies the inclusion of childhood adversities in statistical models predicting resistance toward law enforcement officers. This study examines the effects of physical abuse in childhood, in adulthood, and in both childhood and adulthood on resistance later in the life course. Contributions by attachment theory and cumulative adversity provide empirical evidence to expect that someone who was exposed to physical violence or sexual abuse in childhood and adulthood to be more likely to exhibit resistant behaviors than someone who was exposed to only physical or sexual abuse during childhood. The following hypotheses are put forth regarding the effects of four childhood

adversities: (a) prior sexual victimization, (b) foster care involvement, (c) caretaker use of substances, and (d) prior physical victimization, on resistance toward law enforcement officers during adulthood.

Physical Victimization Hypotheses

It is hypothesized that any form of physical victimization during childhood or adulthood will significantly predict resistant behaviors. With a reference group of offenders who reported no prior physical victimization, this study hypothesizes that offenders who endure physical violence in childhood and adulthood will exhibit greater odds of resistant behaviors than offenders whose victimization was confined to only childhood or only to adulthood. It is also anticipated that the odds of resistance for offenders who experienced physical victimization during childhood will exceed the odds of resistance for offenders who were victimized in adulthood.

Sexual Abuse Hypotheses

When compared against offenders reporting no prior sexual victimization, the effects of sexual victimization on levels of resistance severity will be greatest for offenders who were victimized during childhood and adulthood. The effects of sexual victimization only during childhood on levels of resistance will exceed the effects of sexual abuse only during adulthood.

Caretaker Use of Substances Hypothesis

Offenders who report caretaker use of substances will be at greater likelihood of resistant behaviors than offenders who did not grow up in a household with a caretaker who used alcohol or illicit substances.

Foster Care Involvement Hypotheses

When compared with offenders reporting no prior foster care involvement, the odds of resistant behaviors for offenders who report prior foster care placements in both institutions and homes will exceed the odds of resistance for offenders exposed to foster care placements only in homes or institutions. The odds of resistant behaviors for offenders in foster care institutions will exceed the odds of resistance for offenders in foster homes.

Methods

Study Design and Sample

This study uses data from the publically available Survey of Inmates in State and Federal Correctional Facilities. Data collection entailed a two-stage, systematic sampling method of 287 state and 39 federal facilities selected at random, resulting in a nationally representative sample of 14,499 state and 3,686 federal inmates (18,185 inmates total). The study is conducted to glean information on individual offender characteristics, offense information, criminal history, pretrial release and trial proceedings, the current sentence, alcohol and drug use, substance abuse treatment, prison activities, medical conditions, mental health conditions, and disabilities. Offenders were excluded based upon two predetermined factors.

First, offenders who were incarcerated at arrest were excluded from the study due to an inability to determine if their arrest involved an interaction with a law enforcement officer. Second, since the hypotheses include sexual and physical abuse experienced during adulthood, offenders who were arrested prior to the age of 18 were also excluded. Exclusion of offenders who did not meet the inclusion criteria or had missing data resulted in a final sample size of 15,271 respondents.

Measures

Resisting arrest.—Figure 1 explains how a four-level ordinal dependent variable was created from seven items in the study questionnaire that classified offenders according to their most severe level of self-reported resistance. Offenders were classified in *passive resistance*, the least severe of the resistant behaviors, if they endorsed verbally arguing or disagreeing with law enforcement officers and none of the other seven items in the scale. The next level, verbal resistance, was endorsed if offenders reported saying something threatening or calling the police officer(s) names and endorsed no physical forms of resistance. Offenders were classified in the third level, *police action resistance*, if they physically resisted being searched, attempted to escape by hiding, running away, or engaging in a high-speed chase. Finally, offenders were classified in the fourth and most severe form of resistance, *physical resistance*, if they grabbed, hit, fought, used a weapon to threaten, or used a weapon to assault the arresting officer(s). The resulting four-level ordinal variable classified offenders according to their most severe form of self-reported resistance. The dependent variable refers to the most recent arrest leading to their incarceration.

Childhood adversities.—The main predictor variables were caretaker use of drugs or alcohol, physical victimization, sexual victimization, and foster care involvement. Offenders who grew up with a caretaker who abused alcohol, drugs, or both were dummy coded in a variable (1 = yes). To assess for a history of physical victimization, respondents were asked, “before you were admitted to prison had you ever been physically abused?” and if the abuse had occurred prior to the age of 18. These two variables were utilized to create three physical abuse variables: abuse prior to 18, abuse during adulthood, and abuse in adulthood and childhood. The dichotomized physical abuse variables include offenders who reported experiencing assault consisting of being “pushed, grabbed, slapped, kicked, bit or shoved, hit with a fist, beaten up, choked, or assaulted with a weapon.” The offenders’ relationship with the perpetrator included “a parent or other guardian, spouse/ex-spouse, sibling, relative, girlfriend, boyfriend, friend or acquaintance, or someone else.” Similar to physical victimization, sexual abuse was assessed by asking respondents “before your admission to prison had anyone ever pressured or forced you to have any sexual contact against your will, that is touching of genitals, or oral or anal sex (if female vaginal sex)” and if the abuse occurred prior to the age of 18. Six dummy variables were created to represent offenders who reported: (a) sexual or (b) physical victimization during only childhood, (c) sexual or (d) physical victimization during only adulthood, and (e) sexual or (f) physical victimization in adulthood and childhood (1 = yes). For foster care involvement, three dummy variables classified offenders who were placed in a (a) foster care institution, (b) a foster care home, or (c) both homes and institutions (1 = yes). Variables measuring victimization during

adulthood are included to control for the potential effects of experiencing violence or sexual abuse at later stages in the life course.

Control Variables

Based on review of the extant literature on predictors of resistant behaviors toward law enforcement officers, a total of 10 control variables were selected for inclusion in the study. Dummy variables were created that indicated offenders' race as (1 = yes): White (reference group), Black, Hispanic, or Other (Native American, Other, or Pacific Islander). Offenders' age at arrest was calculated by first subtracting the offenders' date of birth from the date of arrest. A dichotomous variable was then created to classify offenders who were between the ages of 18 and 25 at the time of arrest (1 = yes). Unemployment at arrest was measured with a dummy variable that represented offenders who were not employed full time or part-time during the month prior to the arrest (1 = yes). A dummy variable was created (1 = yes) to represent offenders who were ever sentenced to serve time or placed on probation for a violent offense. The type of offense at arrest was represented by a dummy variable for offenders who were arrested for a violent crime (1 = yes). The reference category included offenders arrested for any other type of crime (property, drug, or public order crime). A dummy variable (1 = yes) represented offenders who possessed or used a gun, knife, or other weapon during the offense. Lastly, offenders who reported using alcohol or drugs prior to the offense were coded in a dummy variable (1 = yes). Since the study questionnaire fails to ascertain if the offender was arrested at the time of the offense, it is not possible to determine the time elapsed between the offense and the encounter with law enforcement officers. One cannot determine if an offender possessed/used a weapon during the encounter with law enforcement officers or used drugs/alcohol immediately prior to the arrest. Due to these limitations, the effects of possession of a weapon and use of drugs at the offense were controlled but not discussed.

Statistical Analysis

A partial proportional odds model was the most appropriate analytic technique to accommodate the ordinal ranking structure of the dependent variable. The partial proportional odds model belongs to a class of ordinal regression models that estimates parameters for dependent variables where the exact distance between categories cannot be measured, but there is an assumed hierarchical relationship (Agresti, 2002; Armstrong & Sloan, 1989; Bender & Grouven, 1998; Brant, 1990; Hosmer, Lemeshow, & Sturdivant, 2013; Long & Freese, 2006; Williams, 2006). The user-written statistical application GOLOGIT2 for Stata, Version 13 (Stata Corporation, College Station, TX) fits a partial proportional odds model using a series of Wald tests that all of the predictor variables' regression coefficients pairwise contrasts were equal to 0 across each of the outcome categories (Hosmer et al., 2013; Long & Freese, 2006; Williams, 2006). When design-adjusted Wald tests rejected the null hypothesis, the restricted ordinal model was not acceptable for analysis. For variables whose pairwise contrasts were significantly different from 0, the parameter estimates were allowed vary across categories of the ordinal outcome variable (Hosmer et al., 2013). The following equation was fit using the GOLOGIT2 application:

$$P(\text{Resistance}_{i > j}) = g(X\beta_i) = \left(\exp(\alpha_j + X_i\beta_{j\dots}) \right) / \left(1 + \left\{ \exp(\alpha_j + X_i\beta_{j\dots}) \right\} \right)$$

When the number of categories, m exceeds 2, the ordinal regression model fits a series of binary logistic regressions where the likelihood of membership in a lower category j of the explanatory variable is compared with all greater categories. The model compared the likelihood of *no resistance* to all greater forms of resistance (0 vs. 1, 2, 3, 4), no resistance and verbal resistance with resisting police action (0, 1, vs. 2, 3, 4), and so on. The results in Table 4 reflect these contrasts.

The stratified sampling design used to recruit participants necessitates the application of sampling weights to account for sampling error. Complex sampling weights were provided by the publically available dataset and reflect the probability of selection for each participant. Omitting sampling weights biases p values and increases the likelihood of committing a type I error. To generate unbiased p -value estimates, probability weights were applied to all descriptive statistics, bivariate tests, point estimates, standard errors, and confidence intervals to correct the variance for the sampling error. For more information on how sampling weights were created and the stratified sampling method used, please refer to the study codebook (U.S. Department of Justice, Bureau of Justice Statistics, Federal Bureau of Prisons, 2004).

Results and Discussion

Overall, 16.32% (2,298) of all offenders displayed some form of resistant behavior when arrested by law enforcement officers. Starting with the least severe, 2.52% (387) of offenders reported passive resistance, 3.65% (532) reported verbal resistance, 8.74% (1,185) reported police action resistance, and 1.41% (194) reported physical resistance as their most severe form of resistance (Table 1).

Bivariate Statistical Analysis

Bivariate design-adjusted Wald tests of independence interrogated each independent variable for statistically significant differences in proportions of offenders in each class of the resistant behaviors (Table 2). The prevalence of any prior physical victimization for the entire sample was 49.20% (7,566) and increased from 46.96% (6,163) for offenders with no resistance to 67.66% (129) for offenders who reported physical resistance ($F = 33.59, p < .001$). The prevalence of physical victimization during only childhood for the entire sample was 20.13% (2,806) and increased from 19.18% (2,258) in no resistance to 31.86% (60) in physical resistance ($F = 10.47, p < .001$). Significant differences across categories of resistance was not observed for offenders reporting physical victimization during only adulthood ($F = 1.46$). No clear pattern was observed across categories of resistance for offenders reporting physical victimization during childhood and adulthood. Victimization that occurred during childhood and adulthood was reported by 14.80% (2,230) of the sample and rose from 13.46% (1,740) for offenders with no resistance to 25.28% (129) for verbal resistance, decreased to 19.84% (239) in police action resistance, and then spiked to 25.35% (46) for physical resistance ($F = 23.85, p < .001$).

Foster care was reported by 11.64% (1,708) of the total sample. The proportion of offenders reporting any foster care involvement in the no resistance category increased from 10.56% (1,318) to 19.11% (37) in the physical aggression category ($F = 18.46, p < .001$). Only marginal increases in the proportion of offenders who reported only placement in foster homes were observed from 4.75% (620) of offenders reporting no resistance to 6.38% (15) of offenders who reported physical resistance ($F = 4.57, p < .01$). Unlike placement in foster homes, the proportion of offenders who resided in a foster care institution rose from 4.71% (558) in the no resistance category to 9.34% (16) of offenders reporting physical resistance ($F = 7.30, p < .001$). For respondents who reported placements in both institutions and homes, proportions increased from 1.14% (131) to 3.05% (5) ($F = 5.98, p < .001$). No significant differences in proportions of resistance toward law enforcement officers were observed for any of the categories of prior sexual victimization. Nearly a third of offenders (32.81%; 4,525) reported growing up in a household with a caretaker who abused substances or alcohol and the proportion of offenders in the no resistance category increased from 31.69% (4,123) to 38.41% (78) in the physical resistance category ($F = 7.53, p < .001$).

Results from bivariate design-based tests of significance assessing all other potential predictors of resistance toward law enforcement officers are provided in Table 3. Compared with offenders who were not resistant (37.09%, 4,424), younger offenders were disproportionately represented in higher levels of severity, most notably physical resistance where over half (50.36%, 91) were between the ages of 18 and 25 years ($F = 23.59, p < .001$). Similarly, the prevalence of offenders with a history of violence was greater in the physical resistance category (30.51%, 57) relative to offenders who were not violent (17.84%, 2,067). Significant differences in proportions of resistance severity were observed for offenders who were male sex ($F = 14.49, p < .001$), unemployed ($F = 12.80, p < .001$), and arrested for a violent crime ($F = 5.54, p < .001$).

Generalized Ordered Regression Analyses

Childhood Adversity Variables.—Interactions were tested between all of the individual childhood adversities and demographic characteristics. None of the resulting interaction terms was statistically significant and is not included in any of the models. Parameter estimates and 95% confidence intervals for primary and control variables included in the generalized ordered regression analysis are presented in Table 4. The parallel lines assumption was relaxed for male sex, physical victimization during childhood and adulthood, violent crime type, and possession or use of a weapon during the offense. Discussion of results from the generalized ordinal regression model is presented in reference to the hypotheses put forth by this study.

Sexual victimization hypotheses.—Contrary to expectations, after controlling for all other adversities, offenders who sustained sexual victimization in childhood were less likely to exhibit any level of severity of resistance toward law enforcement officers than offenders who did not experience sexual victimization ($OR = .78, p < .05$). A significant relationship was not observed between the other two sexual victimization variables and resistant behaviors toward law enforcement officers.

Caretaker use of drugs or alcohol hypotheses.—Support was not found in favor of a relationship between caretaker use of illicit drugs or alcohol and resistant behaviors toward law enforcement officers.

Physical victimization hypotheses.—All three of the hypotheses regarding prior physical victimization were confirmed. Parameter estimates for the effects of physical violence in childhood and adulthood violated the parallel lines assumption and coefficients were allowed to vary according to severity of resistance ($p < .05$). The odds of any form of resistance compared with no resistance (0 vs. 1, 2, 3, 4) for offenders who were victimized in childhood and adulthood were 1.88 times the odds of resistance among offenders who were not physically victimized. The likelihood of the most severe category of resistance, among offenders who experienced physical victimization in adulthood and childhood was 2.05 ($p < .001$) times the odds of all the other forms of resistance (including no resistance) (0, 2, 3 vs. 4). To a lesser extent, physical victimization experienced during childhood ($OR = 1.55$, $p < .001$) significantly predicted resistant behaviors toward law enforcement officers. Exposure to violence only during adulthood exhibited the weakest association with resistant behaviors ($OR = 1.30$, $p < .05$).

Foster care hypotheses.—All of the hypotheses put forth regarding prior foster care involvement were confirmed. The reference category for the three foster care variables is offenders who reported no history of any type of foster care placement. The proportional odds assumption was not violated, and the effects of foster care placements were held constant across categories of the dependent variable. When compared with offenders reporting no prior foster care involvement, exposure to placements in both a foster home and a foster care institution was the most likely to exhibit any category of resistance ($OR = 1.99$, $p < .01$). The odds of resistance were the same for offenders who reported 1/4 placements in either a foster home ($OR = 1.31$, $p < .01$) or an institution ($OR = 1.31$, $p < .01$).

Control Variables

For demographic and criminal background variables, a greater odds of resistant behavior was observed for offenders who were between the ages of 16 and 25 ($OR = 1.50$, $p < .001$), of Black race ($OR = 1.15$, $p < .05$), were not employed full time at arrest ($OR = 1.21$, $p < .001$), or had a history of one or more convictions for a violent crime ($OR = 1.38$, $p < .001$). The parallel lines assumptions were relaxed for male sex ($p < .001$), use or possession of a weapon ($p < .01$), and violent crime type at arrest ($p < .001$). With the exception of physical resistance, the effects of male sex increased with each ordinal category of resistance when compared with categories of lesser severity. At all categories of the dependent variable except the most severe, offenders who were arrested for a violent crime were less likely to exhibit resistance than offenders who were not arrested for the commission of any other type of crime (property, drug, or public order).

Discussion

Overall, prior foster care involvement and physical victimization remained robust predictors of later violence toward law enforcement officers after adjusting for history of a violent

crime, violent crime type, use/possession of a weapon, influence of substances, and demographic characteristics. These findings suggest that the seeds of resistant behavior are sown early in the developmental life course when the impact of physical victimization and family disruptions are the greatest. The lasting effects of childhood physical victimization on resistance toward law enforcement officers significantly outweighed the impact of violence experienced in adulthood. Exposure to childhood physical victimization was compounded when coupled with exposure to physical victimization in adulthood. Offenders who sustain physical victimization throughout the life course are at the greatest risk of exhibiting the most severe forms of resistance toward law enforcement officers. These findings portray a persistent pattern of victimization as opposed to victimization at just one stage in life and are consistent with the theoretical framework provided by the victim–offender overlap and life-course theories of offending.

Aligned with attachment theories, offenders who were placed in foster institutions and homes exhibited the greatest odds of violence toward law enforcement officers when compared with offenders placed in only homes or institutions. The greater number of disruptions associated with placements in multiple settings may enhance the likelihood of forming insecure social processing patterns that lead to hypervigilant and reactive relationships with authority figures. When broken down by type of placement, contrary to initial expectations, the odds of resistance for offenders who were placed in foster care homes approximated the odds of resistance for offenders placed in institutional settings.

Unlike foster care involvement and prior physical victimization, sexual victimization experienced only during childhood yielded a protective effect on resistance. A potential explanation for these findings is found within the framework of social learning theories. Studies show that, when compared with other types of childhood adversity namely physical victimization, child sexual victimization is closely related to the development of deviant, maladaptive sexual behaviors in adulthood rather than physical aggression (Briere & Runtz, 1990; Mullen, Martin, Anderson, Romans, & Herbison, 1996). Offenders subjected to prior sexual victimization likely do not learn physically aggressive coping strategies but rather dysfunctional and maladaptive methods of sexual expression.

Regarding control variables, these data show that offenders who are at an increased likelihood of resistant behaviors are male, young adults with histories of prior violence. A modest albeit significant relationship was observed for offenders who were reported their race as Black. Violent crime type was protective when less severe levels of resistance were compared with the most severe forms of defiance and insignificant when the most severe category was compared with all other types of resistance. This finding is contrary to prior literature and could be due to a low number of offenders reporting the most severe form of resistance. Offenders who reported use of alcohol or drugs at the time of the offense were more likely to exhibit resistant behaviors. The effects of possession or use of a weapon during the offense were most extreme when the most severe category (i.e., physical resistance) was contrasted with less severe classes of resistance (i.e., police action resistance, verbal resistance, or passive resistance). It is unclear whether the time of the arrest occurred at the time of the offense, thus precluding the extraction of empirical conclusions regarding

the effects of possession or use of a weapon and use of illicit substances or drugs on resistant behaviors toward law enforcement officers.

Limitations

There are some limitations of this research that warrant elucidation. Unfortunately, differentiating between the effects of child temperament and foster care placement is outside of the purview of this study. The number of placements in foster care settings may be a function of a child's temperament or prior predisposition to externalizing behavioral problems rather than some inherent qualities of the foster care system itself or disruptions to healthy attachment formation. In addition to child temperament, it is possible that the childhood adversity predictor variables are a spurious result of excluding parenting styles from the generalized ordinal regression models. The study questionnaire did not include measurement of childrearing styles or child temperament. One could argue that resistant and aggressive behaviors toward law enforcement officers could be explained by a more complex construct of poor, harsh, or inconsistent parenting. Harsh and inconsistent parenting practices might shape offender's perceptions of authority figures from a young age. The author of this study strongly encourages readers to interpret these findings as an exploratory analysis of early developmental predictors of resistant behaviors toward law enforcement officers. Irrespective of the potential for spurious results, this study presents strong evidence that negative early developmental experiences might predict resistant behaviors toward law enforcement officers. Further studies are in order to parse out the underlying mechanisms that are driving the relationship between early developmental predictors and resistance toward law enforcement officers. It is likely that the true relationship is more complex, but this study provides cogent evidence for additional longitudinal studies.

Additionally, performing analyses on offenders sampled from inmates rather than a community-based sample restricts statistical inference and generalizability to persons who are involved in the criminal justice system rather than the general community. Statements are not possible about predictors of resistance toward law enforcement officers for persons in the general community; doing so, would introduce significant bias. For a number of the childhood adversity variables, small cell sizes were observed in categories of the ordinal outcome variable measuring resistance toward law enforcement officers. Similarly, small cell sizes precluded the possibility of analyzing the effects of different kinds of physical and sexual victimization on resistance. In this study, a constellation of negative childhood experiences (i.e., child abuse, neglect, and interpersonal violence) was distilled into a single dichotomous measurement of prior physical victimization. For the same reasons as physical victimization, all forms of prior sexual victimization were condensed into a single dichotomous variable. The imposition of a dichotomy on a heterogeneous phenomenon could mask more subtle relationships between different types of victimization and resistance toward law enforcement officers. Unfortunately, there were not enough offenders in each category to examine the effects of types of physical or sexual victimization on resistance.

None of the childhood adversity variables measured chronicity or severity of negative experiences. It is possible that the effects of sexual victimization, physical victimization, caretaker abuse of drugs, and foster care involvement on resistance are mediated by duration,

intensity, and quantity of exposures. Specifically, the effects of severe drug or alcohol abuse on secure attachment formation likely exceed the effects of occasional use. Due to limitations in the study questionnaire, when respondents indicated prior experiences of physical or sexual abuse in both childhood and adulthood, it is not possible to differentiate between circumstances that led to adult versus child victimization. Extant literature suggests that there is variation in the etiology of sexual or physical abuse experienced in childhood and trauma experienced in adulthood. As such, combining the two variables measuring sexual or physical victimization in both adulthood and childhood are crude measurements of cumulative adversity. Future research must incorporate more nuanced measurements of cumulative adversity that take into account the vastly different circumstances that lead to physical or sexual victimization in adulthood compared with childhood.

Unfortunately, indicators of congruent factors during adulthood for foster care and substance abuse such as housing instability and self-reported drug/alcohol use within the home were not measured by the study questionnaire. To elucidate a richer picture of how early developmental adversity impacts encounters with law enforcement officers, future research would benefit from measuring additional variables in adulthood that are congruent with the childhood adversities included in this study such as insecure housing. Lastly, the structure of the study questionnaire precludes the creation of a temporal ordering between police use of force and combative behavior. An officer's decision to employ physical force will likely yield an impact on the decision calculus of the offender and may prompt an escalation of combative behaviors (Alpert et al., 2004).

It is noteworthy to mention that there are potentially variations by sex across several of the childhood adversities included in this study. Although none of the interactions that tested a relationship between women and any of the independent variables were significant, it is possible that the small sample size of women in the study resulted in lack of statistical power to detect significant results. This is particularly the case with variables measuring prior sexual abuse in childhood and adulthood, which was predominantly reported by women. The small number of women in the study precluded the possibility of running separate models specific to sex which would have resulted in too few respondents in each of the cells of the ordinal regression model to ensure statistical validity. Future research is necessary with larger sample sizes of women to properly elucidate how childhood adversity may impact police encounters differently for different sexes.

Despite the limitations discussed earlier, this study provides an insightful approach to understanding predictors of resistance toward law enforcement officers for several reasons. First, this study expounds upon a persistent life-course victimization pattern that is strongly predictive of future resistance toward law enforcement officers. Second, the collection of self-reported data on resistant behaviors directly from offenders imported an understudied perspective into existing research on encounters with law enforcement officers. Criminological studies have traditionally extracted information on suspect resistance from in-depth officer interviews or from the coffers of law enforcement records. Third, the creation of an ordinal outcome variable measuring resistant behaviors toward law enforcement officers facilitated a conceptually accurate examination of the predictors of various levels of severity of resistance toward law enforcement officers. Fourth, this is the

first study to suggest that interdisciplinary theories from literature on attachment and social learning theories are empirically relevant to the prediction of resistant behaviors toward law enforcement officers. Lastly, the generalized ordinal regression modeling technique used in this study permitted analysis of the effects of childhood adversities at different levels of resistance. This technique detected robust effects of physical victimization in both childhood and adulthood at greater levels of resistance.

These findings are congruent with prior life-course research and theoretical frameworks that suggest offenders can become entrenched in offending trajectories by virtue of early developmental experiences. The taxonomic theories of offending trajectories put forth by Moffitt (1993) support the findings of this cross-sectional analysis that childhood maltreatment has lasting effects on encounters with law enforcement officers later in life. This research suggests that childhood victimization may contribute to the formation of “ensnared” offenders with high arrest trajectories found in prior research by Moffitt (1993) and Constantine, Andel, Robst, and Givens (2013). Longitudinal studies are necessary with repeated assessments to elucidate the impact of childhood adversities on the development of ensnared offending trajectories similar to the patterns explicated by Moffitt (1993) and Constantine et al. (2013).

There are several cogent policy implications that arise out of a relationship between foster care involvement, childhood physical abuse and resistance toward the police. Early interventions during childhood, adolescence, and early adulthood to reduce multiple foster care placements, decrease parenting stress, increase nonviolent parenting techniques as well as community antiviolence initiatives to reduce youth exposure to violence could improve encounters with law enforcement officers during adulthood. Increased funding and enhanced training of child welfare workers and child protective services officers could shape individuals’ interactions with persons in positions of authority during adulthood. Although further research is in order, early developmental interventions may prevent young adults from forming chronic offending patterns that penetrate deep into adulthood and result in high numbers of contacts with law enforcement officers.

Conclusion

This study presented empirical evidence that childhood adversities are disproportionately represented among offenders who are resistant to law enforcement officers above and beyond the general offending population. After controlling for other predictors, childhood physical victimization and foster care placements were strong predictors of resistant behaviors toward law enforcement officers. These findings must be conceptualized within the larger context of a life-course perspective on encounters with law enforcement officers. Childhood adversities comprise one distal piece of a complex mosaic of predictors of resistance toward law enforcement officers. This study suggests that experiences that occur much earlier in the life course have an impact on the ways in which offenders interact with individuals in positions of legal authority at later points in life.

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Author's Biography

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<u>Dependent Variable</u>	
Passive Resistance (1)	1) Argued/disagreed during encounter with law enforcement officer(s) (1=yes on item 1, 0=no on items 2-8)
Verbal Resistance (2)	2) Said something threatening, cursed or called the police officer names (1=yes on item 2, 0=no on items 3-8)
Police Action Resistance (3)	3) Resist being searched/having vehicle searched, 4) resist being handcuffed/arrested, 5) attempt to escape by hiding/running away/engaging in a high speed chase (1=yes on any items 3-5, 0=no on items 6-8)
Physical Resistance (4)	6) Grab, hit or fight police officer, 7) use weapon to threaten police officer, 8) use weapon to assault police officer (1=yes on any items 6-8, 0=no on items 6-8)

Figure 1.

Question items used to code levels of resistance severity in the ordinal dependent variable.

Table 1.

Distribution of the Ordinal Dependent Variable Across the Entire Sample (Weighted Percentages) ($n = 15,271$).

Level of resistance	%	n
No resistance (0)	83.69	13,053
Any resistance	16.31	2,298
Passive resistance (1)	2.52	387
Verbal resistance (2)	3.65	532
Police action resistance (3)	8.74	1,185
Physical violence (4)	1.41	194
Total		15,271

Table 2.

Bivariate Design-Based Analyses Assessing Potential Predictors of Violence Toward Law Enforcement for Analytic Variables (Weighted Percentages) (n = 15,271).

Variable	Overall, % (n)	(0) No resistance, % (n)	(1) Passive resistance, % (n)	(2) Verbal resistance, % (n)	(3) Police action resistance, % (n)	(4) Physical resistance, % (n)	F test
Physical victim overall	49.20 (7,566)	46.96 (6,163)	59.57 (235)	64.03 (343)	58.47 (696)	67.66 (129)	33.59***
Physical victim childhood	20.13 (2,806)	19.18 (2,258)	21.61 (79)	23.80 (120)	25.43 (289)	31.86 (60)	10.47***
Physical victim adulthood	14.26 (2,530)	14.31 (2,165)	17.42 (80)	14.94 (94)	13.20(168)	10.44 (23)	1.46
Physical victim both	14.80 (2,230)	13.46 (1,740)	20.55 (76)	25.28 (129)	19.84(239)	25.35 (46)	23.85***
Foster care overall	11.64 (1,708)	10.56 (1,318)	14.67 (53)	18.61 (101)	17.05 (199)	19.11 (37)	18.46***
Foster home	5.12 (780)	4.75 (620)	6.62 (26)	7.89 (42)	6.84 (77)	6.38 (15)	4.57**
Foster institution	5.20 (725)	4.71 (558)	6.65 (20)	8.26 (44)	7.5 (87)	9.34 (16)	7.30***
Home and institutions	1.33 (203)	1.14 (131)	1.40 (7)	2.46 (15)	2.67 (35)	3.05 (5)	5.98***
Sexual victim overall	8.13 (1,920)	8.27 (1,639)	6.24 (49)	8.53 (83)	7.17 (125)	8.02 (24)	1.00
Sexual victim childhood	5.47 (1,070)	5.59 (922)	3.46 (24)	5.19 (37)	4.98 (74)	6.04 (13)	0.93
Sexual victim adulthood	1.55 (477)	1.57 (405)	2.04 (16)	1.91 (24)	1.33 (28)	0.72 (4)	0.88
Sex victim both	1.10 (373)	1.12 (312)	0.75 (9)	1.43 (22)	0.87 (23)	1.26(7)	0.863
Caretaker abuse alcohol or drugs	32.81 (4,525)	31.69 (4,123)	38.77 (151)	35.72 (201)	38.50 (468)	38.41 (78)	7.53***

**
p < .01.

***
p < .001.

Table 3.

Bivariate Design-Based Analysis Assessing Potential Predictors of Violence Toward Law Enforcement for Control Variables (Weighted Percentages) ($n = 15,271$).

Control variable	Overall, % (n)	(0) No resistance, % (n)	(1) Passive resistance, % (n)	(2) Verbal resistance, % (n)	(3) Police action resistance, % (n)	(4) Physical resistance, % (n)	F test
Age at arrest between 18 and 25 years	38.99 (5,493)	37.09 (4,424)	46.45 (166)	50.02 (250)	48.63 (562)	50.36(91)	23.59***
Male	92.96 (11,885)	92.62 (9,976)	92.49 (299)	92.70 (412)	96.25 (1,037)	94.34(161)	14.49***
Female	7.04 (3,386)	7.38 (2,997)	7.51 (88)	7.30 (120)	3.75 (148)	5.66 (33)	14.49***
White	35.37 (5,420)	35.64 (4,630)	35.15 (135)	36.50 (197)	32.44 (391)	35.04 (67)	1.13
Black	40.28 (5,993)	39.86 (5,036)	43.75 (162)	42.08 (223)	43.02 (501)	37.67(71)	1.64
Hispanic	18.45 (2,928)	18.72 (2,531)	14.68 (62)	15.31 (81)	17.74 (214)	21.81 (40)	1.94
Other	5.90 (930)	5.79 (776)	6.42 (28)	6.12 (31)	6.80 (79)	5.49 (16)	0.52
Unemployed	39.49 (6,338)	38.08 (5,219)	46.86(185)	45.65 (263)	47.17 (581)	46.14 (90)	12.80***
Violence history	19.08 (2,626)	17.84 (2,067)	22.99 (79)	25.95 (135)	25.15 (288)	30.51 (57)	16.19***
Violent crime at arrest	45.56 (6,030)	46.07 (5,110)	41.04(138)	40.71 (174)	42.11 (477)	57.44 (104)	5.54***
Possess or use weapon	21.53 (3,062)	20.42 (2,447)	20.67 (75)	23.65 (125)	28.49 (339)	40.32 (76)	8.33***
Influence of alcohol or drugs at offense	48.95 (6,520)	47.03 (5,783)	51.66 (195)	59.51 (308)	59.82 (701)	62.26(122)	24.63***

***
 $p < .001$.

Table 4.

Cumulative Odds Ratios in the Generalized Logistic Regression Model for Aggression Toward Law Enforcement Using the Partial Proportional Odds Model($n = 15,271$).

Variable	(1) 0 vs. 1,2,3,4		(2) 0,1 vs. 2,3,4		(3) 0,1,2 vs. 3,4		(4) 0,1,2,3 vs. 4	
	OR	95% CI	OR	95% CI	OR	95% CI	OR	95% CI
Childhood adversity								
Physical victim childhood	1.55 ***	[1.35, 1.76]						
Physical victim adulthood	1.30 **	[1.12, 1.51]						
Physical victim both *	1.88 ***	[1.63, 2.17]	1.86 ***	[1.61, 2.17]	1.66 ***	[1.40, 1.96]	2.05 ***	[1.46, 2.93]
Foster institution	1.31 **	[1.08, 1.59]						
Foster home	1.31 **	[1.06, 1.60]						
Home and institution	1.99 **	[1.40, 2.81]						
Sexual victim childhood	.78 *	[.63, .99]						
Sexual victim adulthood	1.07	[.76, 1.51]						
Sexual victim both	0.9	[.63, 1.30]						
Caretaker abuse alcohol or drugs	1.05	[.94, 1.17]						
Control variables								
Age at arrest between 18 and 25 years	1.50 ***	[1.35, 1.67]						
Male ***	1.39 ***	[1.20, 1.61]	1.50 ***	[1.27, 1.76]	1.83 ***	[1.52, 2.22]	1.12	[.76, 1.67]
Black	1.15 *	[1.02, 1.29]						
Hispanic	1.02	[.88, 1.18]						
Other race	1.14	[.92, 1.41]						
Unemployed	1.21 ***	[1.10, 1.35]						
Violence history	1.45 ***	[1.28, 1.63]						
Violent en me at arrest ***	0.72 ***	[.64, .79]	0.72 ***	[.64, .80]	0.74 ***	[.65, .84]	1.18	.82, 1.69
Possess or use weapon **	1.31 ***	[1.15, 1.48]	1.39 ***	[1.22, 1.58]	1.48 ***	[1.28, 1.71]	1.84 ***	[1.27, 2.67]
Influence of alcohol or drugs at offense	1.49 ***	[1.35, 1.66]						

Note. CI = confidence interval. $F = 1.20$, $p = .1582$ (final model with variables that do not violate the proportional odds assumption). $F = 18.40$ *** for the whole model.

* $p < .05$.

** $p < .01$.

*** $p < .001$.