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# Intergenerational Transmission of Abuse of Incarcerated Fathers: A Study of the Measurement of Abuse

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Research on the intergenerational transmission of abuse hypothesis often only examined the *existence* of abuse. The current study utilizes retrospective recalls of incarcerated male defendants (N = 414), using questions formulated from the modified Conflict Tactics Scales (Straus, 1974). Five logistic regression models are ran, representing a different physical abuse measure, including incidence of physical abuse, severity of physical abuse, and three composite measures: total frequency, total severity, and total frequency/severity. Although social desirability is a limitation in any study relying on self-report data, the comparison of the chi-square ( $\chi^2$ ) values of each model may give indication that the simpler abuse measures ("incidence of physical abuse" and "severity of physical abuse") are more predictive of later abusive behaviors than the more complex, composite measures.

**Keywords:** child abuse, child maltreatment, aggression, violence, specificity, social learning

Violence – especially experienced during childhood – can have lasting effects. The phenomenon that one's abusive experiences are transferred from one generation to another is known as the "intergenerational transmission of abuse." Curtis (1963) first posed the question of whether violence breeds violence. Over the years, many researchers have since formulated different hypotheses: abuse breeds abuse (see Straus, 1983; Pears & Capaldi, 2001; Simons, Wu, Johnson, & Conger, 1995; Widom, 1989b; Zarubin, McMillen, DePanfilis, & Risley-Curtiss, 1996), abuse breeds crime (see Smith & Thornberry, 1995; Widom & Ames, 1994), abuse breeds violent crime (see Ball, 2005; Smith & Thornberry, 1995; Weeks & Widom, 1988), and abuse breeds a life of crime (see Rivera & Widom, 1990; Widom, 1992). One of these hypotheses – "abuse breeds abuse" – has garnered a great deal of attention over the years. This hypothesis suggests that an individual who had been abused as a child by his/her parent(s) and/or guardian(s) is more likely to abuse his/her children as an adult than an individual who had not experience abuse. Widom (1989b) found that 70% of those who were abused as a child abused their children.

### *Measures of "Abuse"*

One problem with the research on the intergenerational transmission of abuse is how scholars measure abuse. In a recent article, Rohrbaugh (2006) suggested that research on abusive relationships should go beyond the mere incidence of abuse and explore different measurements of this phenomenon. Studies in this area have similar *conceptual* measurements with very different *operational* measurements of abuse (Widom, 1988). Widom (1989a, 1989c) defined "physical abuse" as that behavior which "knowingly and willfully inflicted unnecessarily severe corporal punishment or unnecessary physical suffering on a child or children" (p. 256 and 244, respectively). Acts that caused injury such as bruises, welts, burns, abrasions, lacerations, wounds, cuts, and fractures fit this definition (Rivera & Widom, 1990; Widom, 1989a, 1989c, 1992).

Other scholars have broadened the concept of abuse to be more inclusive. Straus and his colleagues (1980) measured “abusive violence” as acts that have the *potential* of injuring the victim regardless of whether the victim was actually injured or not. This measurement not only included hitting and punching but also acts that come close in proximity to injury such as throwing objects at the child but missing and spanking the child while not leaving any marks or bruises.

Not only have researchers differed in the substantive meaning of abuse, they also have differed in the methods of measuring abuse – the main thrust behind the current study. Several authors suggested that abuse was a dichotomous term – that is, the child was either abused or not (Simons, Witbeck, Conger, & Wu, 1991; Weinbach, Adams, Ishizuka, & Ishizuka, 1981). Weinbach, et al. (1981) suggested that physical discipline was on a continuum, ranging from “too little discipline” to “too much discipline.” Some forms of discipline are abusive whereas other forms are not. Simons, et al. (1991) suggested that parental discipline implied a continuum defined by the severity and frequency of parenting practices.

Straus (1983) also suggested a continuum of parental discipline, ranging from “ordinary violence” to “severe violence.” “Ordinary violence” included acts found in many family discipline relationships such as slapping, shoving, spanking, and/or throwing things whereas “severe violence” extended beyond these “ordinary” practices, included threatening and/or causing serious injury (Straus, 1983). One group of scholars addressed the severity of abuse by measuring abuse in three distinct categories: not severe, severe but not abusive, and abusive (Herrenkohl et al., 1983). They suggested that hitting/slapping so as to bruise, biting, or burning fell within the “abusive” discipline category and that spanking with a belt, for example, fell within the “severe” discipline category.

Some research suggested that a continuing pattern of severe physical abuse have long-lasting, negative effects. As the indications of abuse increase, the overall degree of deviant behavior became more severe. In a sample of over 220 training school juveniles, nearly one-third of the defendants had been beaten at least five times (Pfouts et al., 1981). Kratcoski (1982) similarly found that among abused delinquents, 85% had experienced abuse on more than one occasion. Pears and Capaldi (2001) found that parents who experienced severe abuse were more severely abusive towards their children than parents who experienced mild abuse or no abuse.

There are a variety of measurements of abuse used in the literature on the intergenerational transmission of violence. There is some research that attempts to compare different operational measures of abuse and neglect based on different coding systems (see Runyan, Cox, Dubowitz, Newton, Upadhyaya, Kotch, Leeb, Everson, & Knight, 2005). They found that the research coding systems – Maltreatment Classification System and the Second National Study maltreatment coding system – were slightly better at predicting negative effects from a history of maltreatment than the Child Protection Services classification system. Therefore, an empirical, systematic testing of different operational measures of abuse is relevant. The purpose of this study is to provide an empirical, systematic approach in examining which measurement of abuse (i.e., incidence, severity, and/or frequency) is best predictive of abusive behaviors in adulthood.

The intergenerational transmission of abuse is hypothesis that can be generated from a variety of theoretical perspectives. Although the focus of this research is not to conduct hypothesis testing of certain theoretical models, it is important to know the basis of the intergenerational transmission of abuse hypothesis. The primary theoretical perspective to influence this hypothesis is social learning (see Akers, 1985; Bandura, 1973). Learning aggressive behavior is a result of *modeling* aggressive behavior; actual exposure to physical abuse, however, is even more salient than the observation of that abuse (Herrenkohl, Herrenkohl, & Toedter, 1983). Markowitz (2001) suggested that, due to this rather limited view of the world, experiencing violent physical discipline as a child legitimizes these violent parenting techniques.

Some scholars argued that the evidence of intergenerational transmission of abuse is not a learned behavior but a transmission of social and/or economic stress (Haapasalo & Aaltonen, 1999; Kaufman & Zigler, 1991; Pears & Capaldi, 2001). Factors such as socio-economic status, early childbearing, and emotional and/or mental difficulties of the parent can increase the likelihood of abusive parenting behavior (Pears & Capaldi, 2001).

Other perspectives address attachment and deviance theories. Loeber & Stouthamer-Loeber (1986) found that the lack of parental supervision and attachment and parental rejection more strongly predicted misbehavior than any other factor. Tedeschi and Felson (1994) suggested that parents who physically abused their children may simply be responding to their children's misbehavior.

Finally, the biological and genetic attributes of children and parents can offer an explanation of the relationship between generations and their involvement in abusive parenting techniques (DiLalla & Gottesman, 1991). This perspective argued that it was not the transmission of violence that explained this cyclical pattern of violence between generations, but it was the heredity of certain biological and/or genetic predispositions (DiLalla & Gottesman, 1991). The biological predisposition for violent behavior can be inherited from generation to generation.

### *The Current Study*

The purpose of this research, though, is not to test the validity of different theoretical perspectives but to identify which measurement construct of physical abuse is the best predictor of the transmission of abuse from one generation to another. Prior research on the intergenerational transmission of abuse mostly focused on the *incidence* of abuse. The purpose of the study is to identify which measure of abuse – incidence, frequency, severity, or a combination of these measures – is the best predictor of abusive parenting practices.

## **METHODS**

### *Participants*

The current study is an analysis of secondary data collected as part of a larger research project which used individual, social, and situational characteristics to explain defendants' decisions to engage in violent activity (Horney, 2000). Participants of this study were selected from an inmate population. The sampling technique used in the larger study was a systematic sampling method – two out of every three inmates were selected. The pool of inmates from which the sample was selected entered a centralized, intake correctional facility in a Midwestern state. The overall sampling method resulted in a total of 719 subjects who were interviewed over the course of approximately ten months. The length of stay in the correctional facility was minimized as an influencing factor since the majority of inmates in this intake facility stayed less than approximately six months in that particular facility.

In order to accurately address physical abuse, the current study further reduced the overall sample to include only those respondents who had reported to have dependants (N = 414). This sampling method, though, still provides a barrier to examining which measure of abuse experience can best predict the incidence of abuse of one's own children. The data do not include any information about how much time is spent with the child or whether they lived with the child prior to their incarceration or not. There is a potential problem if the respondent reported not abusing his child because he might not have had a meaningful relationship with that child.

Scholars often times have problems with not being able to capture enough violent behavior to create enough variation in their sample to study significant differences. Taking an inmate sample raises the base rate of violence which will allow the study of violent activities, including physically abusive parenting practices. In this study, 282 (68%) defendants had been previously arrested for a violent offense. Therefore, it is clear that the base rate of violence using this retrospective design was increased. A problem that arises, though, is the specific nature of the sample – that is, incarcerated fathers. The findings should not be generalized to non-incarcerated fathers. It is argued, though, that the problem of lack of external validity is offset by allowing for the base rate of violence to be increased.

All of the subjects are male given that the original data were collected from an all-male intake facility. The racial/ethnic composition of the subjects is 57.8% white and 41.8% non-white. The average age of the sample is approximately 30 years with only 1.4% (n = 10) of the sample under 18 years of age. Much of the sample resided in mid-sized metropolitan areas within the Midwestern state.

(Insert Table 1 here)

### *Procedures*

A modified Conflict Tactics Scale<sup>1</sup> (see Straus, 1974) is used to measure discipline practices.<sup>2</sup> For purposes of this study, Table 2 summarizes items in the modified Conflict Tactics Scales that are “physical abuse” items and those that are not. In each interview, the respondent indicates how often their parents displayed particular responses during conflicts with them as children. The items are represented by an ordinal scale of frequency: “never,” “once or twice,” “sometimes,” “frequently,” and “most of the times.” Table 2 summarizes the group findings for each of these items.

(Insert Table 2 here)

After giving written informed consent, most of the eligible inmates (99.3%) agreed to participate in the study. The current study collected data with a computer-assisted self-report interview instrument. In order to collect data from Spanish-speaking inmates, a research assistant who was fluent in Spanish conducted a handful of interviews using a translated version of the instrument.

### *Measures*

*Physical Abuse as an Adult (dependent variable).* For the purposes of this study, physical abuse is defined as physical discipline practices that have the *potential* to result in physical harm.<sup>3</sup> This measure of physical abuse does not limit the scope of abuse to behavior that only results in injury or that can be legally defined as child abuse. For example, throwing an object during a conflict – a form of “physical abuse” for the purposes of this research – has the potential to injure without resulting in actual injury. Threats of injury, though, are *not* physical abuse as defined in the current study.

In examining whether the different measures of physical abuse had an impact on the respondent’s physical abuse of his own children, the current study measured the respondent’s discipline of his own children as a dichotomous measure – that is, whether the respondent ever physically abused his own child(ren) or not. Any non-zero response on *any* physical abuse item (see Table 2) was coded as a 1. The current study only addressed the incidence of physical abuse for the dependent variable because, as noted in Table 2, the variation in frequency for each item in the dependent variable is low. This lack of variation in the frequency of the dependent variable may be due to the social desirability nature of self-report studies which is a limitation in the current study.

*Physical Abuse during Childhood (independent variable).* Similar to the dependent variable, in each interview the respondent indicated how often their parents displayed particular responses during conflicts with them as children. The purpose of this study is to identify which measure of past abuse – incidence, frequency, severity, or a combination of some or all of these measures – is the best predictor of the transmission of physical abuse from generation to generation. Parental discipline practices experienced as a child were measured in five different ways: incidence of physical abuse, severity of physical abuse, frequency of physical abuse, a composite measure of severity of abuse, and a composite measure of frequency and severity of abuse.

To measure the incidence of physical abuse, the current study examined whether the respondent experienced *any* of the “physical abuse” items or not regardless of frequency. A similarly simple measure of abuse is the “severity of abuse.” For the purposes of this study, incidence of physical abuse were recoded into three dummy variables – no physical abuse, mild physical abuse and severe physical abuse – with no physical abuse as the reference category in multivariate analyses.<sup>4</sup> Table 2 summarizes those items measured as “mild” and those items measured as “severe.” “Mild physical abuse” is defined as a non-zero response on at least one of the mild physical abuse items and no non-zero responses on each of the severe physical abuse items. “Severe physical abuse” is defined as non-zero response on at least one of the severe physical abuse items.

The third variable of physical abuse is a measure of overall frequency of physical abuse – that is, how often did the subject’s caregiver use a particular physical abusive response during a conflict with the subject. Summing frequency scores over the physical abuse items does not result in a count of abuse incidents due to the categorical nature of the frequency scores. Each item was scored as “never,” “once or twice,” “sometimes,” “frequently,” and “most of the times.” Due to the characteristics of the data, there is not a valid method to examine the “pure” frequency. The current research, therefore, uses a total composite score – suggested by Straus (1979) – summing across the ordinal measure responses. Summing across variables as ordinal measures allows the current study to

treat intervals equally (see Straus, 1979). On average, a higher frequency score suggests a respondent experienced physical abuse more often than one with a lower frequency score; however, these scores should not be compared between *particular* defendants due to the lack of continuousness of the measure.

Extending Straus's (1979) suggestion to include a severity component, the current study uses a composite severity measure across the physical abuse items as a fourth way to measure physical abuse experienced as a child. The current research codes non-zero responses on "mild" abuse items as a 1 and non-zero responses on "severe" abuse items as a 2.<sup>5</sup> The current research then sums across all of these items to obtain a composite variety and severity score. This score results in a composite score of severity across the physical abuse items.

A final measure included in this study is a composite score of frequency and severity of physical abuse. The current study multiplies the severity score by the frequency score of each item and then sums across all items. By combining frequency and severity scores, the current study should be able to examine any differences in effects between chronic, minor abusive behavior and infrequent, explosive abusive behavior. This composite score indicates a combination of frequency and severity of physical discipline.

### *Control Variables*

There are a number of control variables to consider when addressing physical abusive parenting practices. The first control variable is race which is treated as a dichotomous variable. Race is included because it has been shown to relate to harsh physical abuse practices (see Smith & Thornberry, 1995; Widom, 1989b). The selected sample restricted this analysis to a dichotomous measure since there is a lack of variation in a number of racial categories.<sup>6</sup>

Age is also used as a control variable. Age is especially important when understanding the impact of physical abuse on later physical abusive parenting practices as an adult. Depending on the age of the respondent, older respondents may have more opportunities to physically abuse their own child(ren) than younger respondents.

Finally, as noted earlier, a few scholars (see Kaufman & Zigler, 1987; Smith & Thornberry, 1995) suggested that research on the intergenerational transmission of abuse should include social/economic stressors as control variables. Although the data were not greatly equipped for such analyses, the current study attempts to accomplish this task by controlling for whether the respondent reported that his family was ever on welfare or not – a proxy for economic stress – and whether the respondent reported whether he lived in a one-parent home or not – a proxy for social stress. As Smith and Thornberry (1995) noted, family structure can often lead to social stress within the respondent's family. A parent has more opportunity to feel stress if s/he has the sole responsibility of child rearing.

### *Analyses*

A limitation of past research on the intergenerational transmission of abuse is that the analyses are fairly limited and simple. The current study increases the level of robust analyses by performing several multivariate regression models and comparing goodness of fit statistics between the models.<sup>7</sup> Five logistic regression models are run. Each model consists of one of the

five physical abuse measures as well as the inclusion of all of the control variables. The current research then examines which model best predicts the dependent variable by comparing the chi-square ( $\chi^2$ ) values associated with the maximum likelihood function over each of the five models. This statistic indicates the goodness of fit of each model and allows for comparison between models. Since the only difference between the models is the measure of "physical abuse" experienced as a child, then it can be deduced that a larger chi-square ( $\chi^2$ ) indicates a physical abuse measure with more predictive power, keeping every thing else constant.<sup>8</sup>

## **RESULTS**

### *Descriptive Analyses*

The descriptive analyses shown in Table 1 indicate that less than half (43.5%) of the respondents reported that they physically abused their children. Approximately 90% of the defendants reported that they had experienced physical abuse as a child; half of the defendants reported experiencing severe physical abuse. Over one-third of the sample grew up in a single-parent family (44.3%) or lived in a family who was on public assistance (39.9%).

### *Multivariate Analyses*

The effects of experiencing physical abuse as a child on current parenting practices would be best understood in the context of multivariate analysis, controlling for potentially confounding variables such as race, age, social stress, and/or economic stress. The logistic regression for each abuse measure is presented in Table 3.

(Insert Table 3 here)

Only two models – incidence of physical abuse and the severity of physical abuse – are statistically significant in predicting whether a respondent ever physically abused his children ( $p < .05$ ). In both of these models, the physical abuse variables are the only statistically significant variables ( $p < .05$ ).<sup>9</sup> In other words, race, age, economic stress (poverty), and social stress (single-parent families) are not direct effects on the likelihood of physically abusing one's child.

Coefficients from logistic regression models can be calculated into an odds ratio by exponentiating the coefficient (Aldrich & Nelson, 1984; Menard, 2002). In Model 1, the odds ratio for the incidence of physical abuse variable is  $\exp^{(1.717)} = 5.656$ . The odds of a respondent reporting that he had physically abused his child(ren), keeping everything else constant, are over 5½ times greater than if he had not reported experiencing physical abuse. In Model 2, the odds ratio for the mild physical abuse and severe physical abuse measures are 6.900 and 4.748, respectively. This finding is surprising given that it is expected that a more severe measure of physical abuse would result in a higher likelihood of the defendant's physical abuse of his child(ren) than a less severe measure. Approximately only 13% of defendants who had not experienced physical abuse as a child physically abused their own children. Although 50% of defendants who had experienced "mild physical abuse" physically abused their own child(ren), only 42% of those who had experienced "severe physical abuse" had physically abused their child(ren). The implications of this finding are later addressed in the discussion section.

### *Comparison of Chi-Square ( $\chi^2$ ) Values*

The real question for this study, though, is which physical abuse measure better predicts whether a defendant reports physically abusing his child(ren) or not. Which model (each with a different abuse measure) is a better fit? If the only difference between the two models is the measurement of physical abuse as a child, then the larger chi-square ( $\chi^2$ ) value of one logit model over the other would indicate a "better" measure of physical abuse.<sup>10</sup> Keeping all other variables constant, the model with the discipline measure that more accurately predicts the likelihood of physical abuse toward one's own child(ren) should result in a larger chi-square ( $\chi^2$ ) value.<sup>11</sup>

The results of this comparison are presented in Table 4 which indicates that the "incidence of physical abuse" and the "severity of abuse" models have substantively higher chi-square ( $\chi^2$ ) values than any other models. It is important not to overemphasize the slightly higher chi-square value of the "severity of abuse" model than the simpler dichotomous model since there is no method to test the statistical significance of these differences. Therefore, it can be intimated that the simpler measure of physical abuse is more predictive measure than the more complex measures.

(Insert Table 4 here)

## **DISCUSSION**

The purpose of this study was to examine which measures of physical abuse best predicted the outcome variable under the guise of the intergenerational transmission of abuse hypothesis. Several analyses of the intergenerational transmission of abuse have been limited to bivariate examinations (see Kratcoski, 1982; Rivera & Widom, 1990; Weeks & Widom, 1998) whereas a limited number of researchers used multivariate analyses (see Fagan & Wexler, 1987; Pears & Capaldi, 2001; Widom, 1989a; and Widom & Ames, 1994). Multivariate analyses are more robust since they control for potentially confounding variables.

The multivariate analyses completed for the current study indicated interesting results. Only two multivariate models – "incidence of physical abuse" and "severity of physical abuse" – were statistically significant. Within each of these models, the physical abuse variables were the only variables that were statistically significant. Social stress and economic stress were not found to be significant factors in predicting physical abusive parenting techniques as an adult. It is possible – even probable – that the variables used were not accurate proxies for social

and economic stress. Stress is a much more complex term than whether one's family was on welfare or whether one's family was a one-parent or two-parent family. Therefore, the lack of relationship between "social stress" and "economic stress" and the likelihood of incidence of physical abuse may be a result of invalid proxies.

At first glance, the simpler measures of physical abuse ("incidence of physical abuse" and "severity of physical abuse") are more predictive of one's involvement in abusive behavior towards one's own child(ren). Comparison of the chi-square ( $\chi^2$ ) values suggests similar findings. The models with the simpler measures have higher chi-square ( $\chi^2$ ) values than the more complex combination measures. The self-reported decision to physically abuse one's own child does not seem to depend on how often and/or the variety of abuse the subject reported experiencing physical abuse as a child but rather depends on whether the respondent simply experienced physical abuse or not and the severity of that abuse. However, one should caution that the results of this study are not conclusive. Although, on its face, these analyses seem to suggest that the simpler measures are better predictors than the more complex measures, model construction requires improvement.

A surprising result was found in the severity model. It was found that defendants who experienced more severe abuse as a child had a *lower* likelihood of abusing their own children than those who had experienced less severe abuse as a child. There are a few possible explanations to this surprising finding. First, this finding could be an instrument of the coding scheme of the study. The labeling of certain items as more severe and other items as less severe is not without potential pitfalls. With no consistent construct of severity of abuse and no qualitative data to address differences in abusive parenting styles, the notation of certain items as "more severe" and others as "less severe" can lead to these surprising results. Another possible explanation is one of social desirability. Those who experienced severe abuse may already know the stigma that this kind of abuse carries. Therefore, they may be misleading in answering questions regarding their own abuse of their kids. A final possible explanation – and, probably least likely – is that defendants who experienced more severe abuse may not want to carry forward this abuse to their own child(ren). It can be suggested that they may have learned from the "sins" of their own parents.

#### *Limitations*

The first limitation to the current study is that it is a retrospective recall design. Widom (1990) suggested that this type of design is dangerous because of "retrospective recall bias" in which "distortion and loss of information from recalling events from a prior time period" is virtually inevitable (p. 142). This limitation is also related to the social desirability effect that most self-report studies have with such a sensitive topic. One's responses may either be too negative about one's own past or be too positive about one's current situation or both.

It is important to note, though, that there are also relevant limitations to prospective designs. Prospective designs can be costly and often inconvenient and, like most research, the current study experienced time restraints and a lack of financial resources. Although the developmental questions in this type of research cannot be answered given the cross-sectional nature of this study, the data collected for this study were from a secondary data source. Therefore, the best available data for this study were generated through a retrospective recall design. It is also important to raise the base rate of violence. Violent acts are not common in the general population; therefore, the data for this project was collected from incarcerated fathers. It is argued that those who are incarcerated are more likely to have engaged in violent acts than those in the general population. Sampling from a pool of subjects under a prospective design often results in a lower likelihood of accomplishing a high base rate of violence.

Although this study was intended to alleviate specificity problems, there remain obstacles to specifying accurately the phenomenon at hand. This problem is rampant in this line of research. The definition and measure of abuse in the literature has been inconsistent. The current study included items that were generally not understood to be physical abuse – for example, spanking – in order to attain a more continuous concept of physical abuse rather than merely abuse versus no abuse (see Simons et al., 1991; Straus et al., 1980; Weinbach et al., 1981).

Since this study was intended to be a measurement examination of the intergenerational transmission of abuse hypothesis, the techniques for classifying severity and frequency of physical abuse could be improved. The classification of "severity" of abuse was arbitrary; however, this study was meant to be exploratory into a research question that has had limited success. The classification of "frequency" of abuse was not precise – that is, the responses should have been count estimations instead of ordinal categories. However, Straus's Conflict Tactic Scales originally defined frequency into categories instead of estimated counts.



Other limitations of this study can be attributed to the secondary nature of the data. First, no data were collected for the length of time defendants spent with children under their care. Since the original study was most interested in situational explanations of adult violent episodes, appropriate data to measure the intergenerational transmission of violence were not collected. Second, data on the economic and/or financial stress may not have been appropriately measured. Finally, although the data were collected in such a way as not to address the amount of interaction between the parent and the child, the current study presumed – albeit weakly – that respondents who reported having a dependent child had some contact with that child. It is possible that individuals in this sample may have never had contact (and, the opportunity to engage in any form of abuse) with their dependent children. These fathers would be defined similarly as those who had frequent contact with their children. Therefore, important differences in abuse levels may be muted since some fathers have zero contact with their children. Since these data were secondary in nature, using whether the inmates had dependent children or not was the best way to identify them as fathers who might have had the opportunity to engage in abuse. Although this current study is exploratory, future studies need to address these limitations.

### *Implications*

The purpose of the current study is to provide a more robust set of physical abuse measures beyond the simple, dichotomous measure so often used. The current study attempts to examine physical abuse on a wide range of continuums ranging 1) from no physical abuse to chronic physical abuse and 2) from mild physical abuse to severe physical abuse.

This study can have a strong impact on the types of screening and/or services provided for incarcerated fathers during their aftercare. It was hypothesized that if a respondent experienced persistent, violent physical abuse, then he would be more likely to physically abuse his child as compared to infrequent, mild physical abuse. If this were true, it might be important to specialize parenting and anger management services on a graduated scale.

However, the proposed hypothesis was not confirmed. The basic finding is that incarcerated fathers who reported experiencing any physical abuse as a child were more likely to report that they physically abused their own children than if they had not experienced physical abuse at all. Although services for parenting, anger management, and/or conflict resolution *are* necessary to limit the effect of transmitting abuse from one generation to another, graduated specialized services, although appealing, may not be necessary. In addition, more simplified screening tools may address this transmission of abuse regardless of frequency and/or severity of abusive parenting techniques and can shed light to important services during aftercare as they adjust to their future family relationships outside of incarceration. However, these suggestions are tempered with the limitations of this research; more research – with better proxies – could reveal different findings and result in different suggestions for policy and/or assessment changes.

### *Suggestions for Future Research*

One suggestion for future research is to use samples that raise the base rate of violence. Too often there are either low numbers of subjects who had committed violent acts – especially in prospective studies – or low numbers of incidents of violent acts per subject. The current data did include self-reported violent incident measures over a specified calendar time period (see Horney, 2000 for more details on this technique). Future research could benefit from this technique in raising the base rates of violence.

Although there were no significant improvements in the prediction of adult abusive behaviors using more complex measures of abusive experiences, future research could benefit from more robust measurements. The current research was limited, in part, by the structure of the Conflict Tactics Scale. Future research should address more precise measurement on frequency and severity of physical abuse.

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**Table 1. Coding and Descriptive Statistics for Dependent and Independent Variables**

Variable	Code	N	%	Mean (S.D.)	Max	Min
<i>Dependent Variable</i>						
Ever physically abuse own child	1 = yes	180	43.5			
	0 = no	234	56.5			
<i>Independent Variables</i>						
<u>Physical Abuse Measures</u>						
Incidence of physical abuse	1 = yes	379	92.7			
	0 = no	30	7.3			
Experience mild physical abuse	1 = yes (mild abuse only)	159	38.9			
	0 = no	250	61.1			
Experience severe physical abuse	1 = yes	220	53.8			
	0 = no	189	46.2			
Mean of MCTS <sup>+</sup> by frequency				7.44 (6.751)	0	32
Mean of MCTS by severity				5.04 (4.594)	0	19
Mean of MCTS by frequency and severity				9.72 (9.869)	0	45
<u>Control Measures</u>						
Mean age				33.62 (9.326)	17	65
Race	1 = non-white	198	47.8			
	0 = white	216	52.2			
Family ever on welfare	1 = yes	166	39.9			
	0 = no	246	59.1			
Both parents at home	1 = no	182	44.3			
	0 = yes	229	55.7			

<sup>+</sup>Modified Conflict Tactics Scales

**Table 2. Descriptive statistics of the items in the Modified Conflict Tactics (MCT) Scales**

<b>Experienced as a Child</b>		Never		1-2 times		Sometimes		Frequently		Most of the times	
		N	%	N	%	N	%	N	%	N	%
Mild Physical Abuse	Throw something that could hurt	316	77.3	35	8.6	37	9.0	14	3.4	7	1.7
	Twist arm or hair	293	71.6	27	6.6	62	15.2	23	5.6	4	1.0
	Push or shove	241	58.9	40	9.8	88	21.5	28	6.8	12	2.9
	Grab	155	37.9	51	12.5	146	35.7	50	12.2	7	1.7
	Slap or spank	55	13.4	46	11.2	177	43.3	94	23.0	37	9.0
Severe Physical Abuse	Use a knife or gun	398	97.3	10	2.4	1	0.2	0	0.0	0	0.0
	Punch or hit with something that could hurt	221	54.0	46	11.1	89	21.8	36	8.8	17	4.1
	Choke	384	93.9	12	2.9	9	2.2	3	0.7	1	0.2
	Slam up against a wall	303	74.1	46	11.2	47	11.5	11	2.7	2	0.5
	Beat up	323	79.0	26	6.4	33	8.1	23	5.6	4	1.0
	Burn or scald on purpose	397	97.1	11	2.7	1	0.2	0	0.0	0	0.0
	Kick	348	85.1	29	7.1	24	5.9	5	1.2	3	0.7
<b>Discipline Practices as a Parent</b>		Never		1-2 times		Sometimes		Frequently		Most of the times	
		N	%	N	%	N	%	N	%	N	%
Mild Physical Abuse	Throw something that could hurt	414	100	0	0.0	0	0.0	0	0.0	0	0.0
	Twist arm or hair	404	97.6	7	1.7	3	0.7	0	0.0	0	0.0
	Push or shove	385	93.0	22	5.3	7	1.7	0	0.0	0	0.0
	Grab	325	78.5	41	9.9	40	9.7	7	1.7	1	0.2
	Slap or spank	255	61.6	63	15.2	88	21.3	5	1.2	3	0.7
Severe Physical Abuse	Use a knife or gun	414	100	0	0.0	0	0.0	0	0.0	0	0.0
	Punch or hit with something that could hurt	403	97.3	5	1.2	5	1.2	1	0.2	0	0.0
	Choke	414	100	0	0.0	0	0.0	0	0.0	0	0.0
	Slam up against a wall	404	97.6	6	1.4	3	0.7	1	0.2	0	0.0
	Beat up	413	99.8	1	0.2	0	0.0	0	0.0	0	0.0
	Burn or scald on purpose	414	100	0	0.0	0	0.0	0	0.0	0	0.0
	Kick	414	100	0	0.0	0	0.0	0	0.0	0	0.0

The following items of the Modified Conflict Tactics (MCT) Scales are measured as “non-physical abuse items”: “threaten with a knife or gun,” “shout or yell,” “discuss an issue calmly,” “stomp out of room/house/yard during a disagreement,” and “threaten to hit or throw something”

**Table 3. Logistic Regression Coefficients and Odds Ratio for Predictors of Physical Abuse Outcome<sup>1</sup>**

	<i>Model 1*</i>		<i>Model 2*</i>		<i>Model 3</i>		<i>Model 4</i>		<i>Model 5</i>	
	<i>b</i>	<i>Odds Ratio</i>	<i>b</i>	<i>Odds Ratio</i>	<i>b</i>	<i>Odds Ratio</i>	<i>b</i>	<i>Odds Ratio</i>	<i>b</i>	<i>Odds Ratio</i>
Incidence of Physical Abuse	1.717*	5.565								
	(0.553)									
Severity of Physical Abuse (ref. category: "non-abuse")										
mild physical abuse			1.931*	6.900						
			(0.566)							
severe physical abuse			1.558*	4.748						
			(0.560)							
Frequency of Physical Abuse					0.007	1.007				
					(0.015)					
Severity Composite Score							0.013	1.013		
							(0.023)			
Frequency & Severity Composite Score									0.001	1.005
									(0.010)	
Current Age	0.022	1.022	0.020	1.020	0.022	1.022	0.021	1.021	0.022	1.064
	(0.012)		(0.012)		(0.012)		(0.012)		(0.012)	
Non-white	0.113	1.120	0.090	1.094	0.091	1.095	0.074	1.077	0.081	1.297
	(0.212)		(0.213)		(0.211)		(0.211)		(0.211)	
Whether family was On welfare	-0.097	0.907	-0.096	0.908	-0.082	0.921	-0.104	0.901	-0.078	1.087
	(0.225)		(0.225)		(0.222)		(0.221)		(0.221)	
Single parent family	0.314	1.369	0.305	1.357	0.251	1.286	0.253	1.288	0.251	1.269
	(0.223)		(0.224)		(0.220)		(0.219)		(0.220)	
Constant	-2.758		-2.673		-1.154		-1.122		-1.103	
	(0.733)		(0.735)		(0.502)		(0.500)		(0.498)	
N of cases	399		399		399		401		399	
X <sup>2</sup> values	17.504		20.553		4.448		4.397		4.276	
Pseudo R <sup>2</sup>	0.043		0.050		0.011		0.011		0.011	

\* p < .05

<sup>1</sup> standard errors are given in parentheses

**Table 4. Differences in Chi-Square of Physical Abuse Models**

	Chi-Square	df	Difference
Controls Only	4.089	4	----
Incidence of Physical Abuse	17.504 *	5	13.415
Severity of Physical Abuse	20.553 *	6	16.464
Frequency of Physical Abuse	4.448	5	0.359
Severity Composite Score	4.397	5	0.308
Frequency & Severity Composite Score	4.276	5	0.187

\*  $p < .05$

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<sup>1</sup> Straus (1974) developed the Conflict Tactics Scale. The Conflict Tactics Scale was slightly modified before my arrival to the project. These modifications, however, did not result in a significant impact on their usefulness to this study.

<sup>2</sup> Due to my late arrival to this project, other instruments were not used such as the Child Abuse Potential Inventory (CAPI) to address psychological abuse (see Milner, 1994).

<sup>3</sup> The definition used in this study is the similar to the one used in Straus et al. (1980).

<sup>4</sup> Please refer to Herrehkohl et al. (1983) for similar distinctions.

<sup>5</sup> Since this research is exploratory, it utilizes a fairly arbitrary quantitative classification of the difference between the mild and severe categories. In future research, this technique should be developed further.

<sup>6</sup> The race of the defendant was also recoded to create a three-category variable to include: white, black, and Hispanic. The analyses did not produce any statistically significant effects for race given this recode. Therefore, the dichotomous measure was used.

<sup>7</sup> Namely, the multivariate regression analysis used is logistic regression because the dependent variable ("incidence of physical abuse") is a dichotomous measure (see Aldrich & Nelson, 1984).

<sup>8</sup> There is a caveat with this technique. This study is explorative; therefore, the specificity of model construction still needs improvement. This study is intended to be a first glance to a research question not previously answered in such a robust way

<sup>9</sup> The analysis was rerun with a more complex measure of the defendant's frequency and severity of physical abuse of his own child(ren). The results are similar to this incidence dependent variable. The only

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exception is the finding of a statistically significant effect for age of the defendant; however, this effect was not substantively significant

<sup>i0</sup> Comparing chi-square values between two models allows the researcher to compare the fits of the models (see Bachman & Paternoster, 2004; Steffensmeier, Kramer, & Ulmer, 1995).

<sup>i1</sup> There are no known significant tests of comparing chi-square values.