

## The Role of the Family in Crime and Delinquency: Evidence from Prior Quantitative Reviews

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### *Abstract*

*There has been a large amount of research bearing, in some way, on the relationship between family factors and criminal behavior. Not surprisingly, a large number of quantitative reviews—or meta-analyses—have tried to take this literature into account. Our goal was to ascertain the relative strength and consistency of family factors as a predictor and as a target for delinquency and crime prevention treatment. This paper describes the results of a systematic search for these meta-analyses to meet those goals. Using a variety of methods, we find 26 relevant meta-analyses published in English between 1984 and 2005. These meta-analyses fell into five general categories: (1) meta-analyses of longitudinal studies; (2) meta-analyses of offender recidivism prediction studies; (3) meta-analyses of specific family factors and crime; (4) meta-analyses of family-based interventions; and (5) broader reviews that included a breakdown for family-based strategies. These meta-analyses indicate a smaller but non-trivial role for family factors in the onset of delinquency and the continuation of offending as adults. Moreover, particular family-based treatment programs appear to reduce subsequent offending behavior.*

**Key Words:** family factors, parental supervision, crime, parental attitudes toward violence

## INTRODUCTION

Policymakers, practitioners, citizens, and researchers often consider the family a critical ingredient in a child's subsequent involvement in crime (e.g., Loeber & Loeber-Stouthammer, 1986). Researchers have undertaken a number of investigations to better understand the relationship between various family factors and crime. For example, factors studied in criminological research include the role of maternal deprivation, whether a child has criminal parents, the severity of discipline administered to a child, parental neglect and abuse, inadequate parental supervision, domestic violence, age of parents at time of child's birth, parental attitudes toward violence, parental drug use, parent history of mental illness, birth order, size of the family, parent education and socioeconomic status, and parent/child separation (e.g., Loeber and Loeber-Stouthammer, 1986).

A negative family characteristic such as poor parental supervision of children is often studied as a risk factor for future delinquency or crime, and children who come from such homes are believed to be at greater risk or are more likely to commit offenses than children who do not. When the reverse occurs—such as a child growing up in a loving and supportive home—researchers often refer to these variables as “protective” factors, as they promote a child's resiliency or provide protective barriers against the onset of criminal involvement—even in the light of adverse conditions (e.g., Derzon, 2005). It is also likely that family factors interact with other factors in a complex relationship difficult for researchers to tease out (e.g., Derzon, 2005).

There are a number of studies examining the role of the family and other social, psychological, genetic, and environmental factors on crime. For example, there are longitudinal studies in which large cohorts of children are followed for years, with some becoming criminal and others remaining law-abiding. Such studies provide a fertile ground for analyzing and comparing the factors that predict the onset of criminal behavior (e.g., Farrington, 1979). Another set of studies follows a group of already identified offenders who have been released from prison, or have completed their probation or parole term. In any set of already identified offenders, some will become recidivist and others will not. Again, it provides opportunity to analyze the factors that are most persuasive in these already identified offenders becoming recidivist or not (e.g., Gottfredson and Tonry, 1997).

The enormity of the task in bringing together all of the primary studies that bear on the family-crime relationship, and to adequately identify, retrieve, code, analyze, and summarize this potentially large research base, would certainly require considerable research funding. Is there a more cost-effective way of getting a picture of what this literature tells us?

Fortunately, there have been a number of meta-analyses of longitudinal and predictor studies that are relevant to better understanding the influence of family factors in criminal behavior. In addition, a number of meta-analyses have also been reported that directly assess the effectiveness of family-based interventions in reducing subsequent delinquent or criminal behavior, either specifically examining evaluations of family-based treatment or comparing the results for such programs with other strategies. Finally, meta-analyses have been reported that assess the evidence for one family factor and subsequent criminality. These also bear in some way on the interests and concerns of policymakers, practitioners, citizens, and researchers in further understanding the role of the family in crime.

This paper brings together those reviews that bear specifically on the family-crime relationship. Essentially, we conducted a systematic review of meta-analyses (what one colleague said we should call a “systematic review squared”!). Because meta-analyses involve quantitative analyses of the impact of programs or the relationship between variables, we can use such reports to examine the impact of family factors on crime and delinquency more closely, and to compare it with the estimated effect of other factors, such as education.

Meta-analyses (and systematic reviews in general), therefore, provide a type of “criminological intelligence” that should be mined to determine what is already there, what still needs to be known, and how future research should proceed (e.g., Petrosino, Kiff, & Lavenberg, 2006). Although using reviews in this way is not common in criminal justice, there is some precedent for doing so. In 2000, when the UK National Health Service wanted to determine the evidence for its broad health agenda, it asked researchers to identify systematic reviews relevant to the paper’s recommendations (including such areas as crime and illicit drug and alcohol use, see Contributors to the Cochrane and Campbell Collaborations, 2000). In other examples, Palmer (1994), Losel (1995), and Lipsey and Cullen (2007) have summarized general offender rehabilitation meta-analyses and reviews to glean lessons.

The meta-analyses we gathered fell into five general categories: (1) meta-analyses of longitudinal studies; (2) meta-analyses of offender recidivism prediction studies; (3) meta-analyses of specific family factors and crime; (4) meta-analyses of family-based interventions; and (5) broader reviews that included a breakdown for family-based strategies. We did not attempt to quantitatively synthesize these reviews in some type of “meta-meta-analysis,” but instead describe them narratively in the text and summarize them in tables.

We have two goals in this paper. First, by examining meta-analyses of predictors, we are able to provide information about the size and consistency of the correlation between family factors and crime, as well as some sense of its relative importance compared to other measured predictors. Second, by examining meta-analyses of family-based treatment programs, we also provide information about the size and consistency of effects for programs that focus on family factors, and some sense of the relative importance compared to other intervention effects.

## METHODOLOGY

For this paper, we used systematic review methods to identify relevant syntheses. Our eligibility criteria were:

- *The review had to be a meta-analysis or include quantitative outcomes of effect size.* This permitted us to compare effects across different factors and to summarize our findings across meta-analyses. Our focus on meta-analysis was a trade-off, as we lost some of the rich descriptive information and suggestive findings reported in the narrative syntheses. There were several good systematic reviews that were also excluded because they found so few studies or such a diverse sample that they did not attempt to summarize their findings quantitatively. Reviews that used vote-counting or other summary techniques and did not attempt to create an “effect size” for the effect of family characteristics were also excluded (e.g., Chan, et al., 2004; Delsol & Margolin, 2004; Graves, Openshaw, Ascione, & Erickson, 1996).

- *The meta-analysis had to report at least one effect size for at least one family factor.* We excluded reviews of longitudinal studies that did not include some breakdown either by family factors (e.g., Pajer, 1998) or, in the case of broader meta-analyses of “what works,” did not include a breakdown for family-based programs.
- *The meta-analysis had to include outcomes of delinquent or criminal behavior.* We focused the review on meta-analyses that included crime and delinquency outcomes. To make the searches and the review more manageable, we excluded meta-analyses of illegal drug use, child abuse/neglect, or aggressive or anti-social child conduct.
- *The meta-analysis had to provide some information about study eligibility criteria and search methods.* These did not have to be overly detailed, but they had to provide some information on how the sample of studies was put together.
- *The meta-analysis must be published in an academic journal, book, or as an easily accessible [government, quasi-government, foundation, research firm] agency report.* We did not try to retrieve the unpublished literature of conference papers, technical reports, academic theses, or other documents. Only if we came across such a report in the course of our searches, or an author generously sent it to us, did we include it.
- *The meta-analysis was published in the relatively recent time frame of 1985-2005.* Given that a criminological meta-analysis was not reported in a journal until 1985 (e.g., Garrett, 1985), we believed this time frame would cover all eligible reports.
- *The meta-analysis must be available in English.* We were unable to search for and translate reviews in other languages.

We searched 44 electronic bibliographic databases for meta-analyses (Appendix 1).<sup>1</sup> One advantage to our search is that a large number of these databases include references to unpublished but important reports (e.g., *NCJRS, Criminal Justice Abstracts*).<sup>2</sup>

There were three major statistics used in meta-analyses gathered for this paper: (1) Pearson’s correlation coefficient ( $r$ ), the Phi coefficient ( $\phi$ ), and Cohen’s effect size ( $d$ ). Note that  $r$  is about half the size of  $d$  ( $r = .5d$ ) and  $\phi$  is comparable to  $r$ .<sup>3</sup> For purposes of this review of meta-analyses, we use  $r$  to enable us to compare across meta-analyses.

1. Our search terms varied depending on the type of database. For criminal justice-focused collections such as NCJRS and Criminal Justice Abstracts, we first identified reviews by using the following search terms: meta-analy\* (retrieves meta-analysis and meta-analytic), systematic review, empirical review, quantitative review, research review, and research synthesis. When searching databases outside the field of criminology or including a broader scope of documents (e.g., PsycINFO or Sociofile), we used a combination of the review search terms above with the following identifiers for criminality: Aggress\* (retrieves aggression, aggressive), antisocial, crim\* (retrieves crime, criminal, criminological, criminals, criminogenic, criminality), delinq\* (retrieves delinquent, delinquents, delinquency), offen\* (retrieves offense, offenses, offender, offenders, offending), and violen\* (retrieves violence, violent). We also augmented these searches with other terms, including family factors, developmental, onset, and desist in combination with terms above.

2. Note, however, that a very important resource—Dissertation Abstracts International—was excluded because of the cost in accessing theses.

3. A phi correlation for two binary variables will be identical to a Pearson correlation coefficient for two binary variables (see Welkowitz, et al. 1982, p. 286).

## FINDINGS

Our search methods resulted in several hundred citations to potentially eligible review articles. We screened these citations and abstracts against our eligibility criteria, resulting in a final sample of 26 eligible meta-analyses published between 1985-2005. We briskly describe these meta-analyses below, for each of the five major categories.<sup>4</sup>

### **Meta-analyses of risk factors for onset of delinquency and crime**

We identified four meta-analyses of longitudinal studies following the same *cohort* of individuals from youth (even from birth) to adulthood. By following individuals over the “life course” and repeating measurements at various time intervals, such longitudinal studies can identify and measure factors that are present prior to the onset of crime.

Lipsey and Derzon (1998) sought to determine the factors that predict violence in persons age 15-25. To be eligible for their meta-analysis, each study had to: (1) have a design in which measurements were taken about the same individuals at two or more time periods (and provide enough information to allow for reliable inference of age of the participants at the time of measurements); (2) provide quantifiable outcomes on serious or violent offending; (3) not be an evaluation of intervention effectiveness; and (4) be conducted in a Western economy nation (e.g., U.S., U.K.) and be reported in English. They located 66 reports describing 34 distinct longitudinal studies; these included a total of 793 distinct effects. Lipsey and Derzon used statistical procedures to control for the influence of factors relevant to the methodology or characteristics of the studies or samples, and converted outcomes to Pearson's *r*. Lipsey and Derzon compared risk factors for two different age groups: those present in children 6-11 and those for children 12-14. Table 1 presents the results separately, as Lipsey and Derzon do, for these two age categories.

For the 68 studies relevant to ages 6-11, Lipsey and Derzon report on the strength of 18 different predictors, including five family factors. The average correlation across all 18 predictors is .17, ranging from .04 to .38. The average across the five family factor correlations is .12, with only one (having anti-social parents) above the average correlation for all predictors (.23). For the 87 studies that had samples of juveniles ages 12-14, they report on 19 predictors, with correlations ranging from .04-.39, with an average of .16. Again, five family factors were studied, with an average correlation of .12. Two family factors had slightly higher correlations than the average across all predictors: poor parent-child relations (.19) and having anti-social parents (.16).

Simourd and Andrews (1994) collected studies of risk factors in samples that included both male and female participants. They found 60 studies (and 464 correlations) that looked at the impact of gender separately on risk factors for delinquency. Table 1 [next page] also presents the findings for males and females separately. For both males and females, Simourd and Andrews report on eight predictors and two family factors. They found the correlations for females mirrored those for males. The “poor parent-child relations” variable is the only one above the mean across all predictors, with a correlation of .20 with onset for females and .22

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4. Note that, with the exception of Table 2, we do not specifically report the sample size of studies (or effects) that the correlation between family factor and crime is based on.

TABLE 1. PREDICTORS OF CRIME AND DELINQUENCY ONSET IN LONGITUDINAL STUDIES

	L & D (1998) Ages 6-11	L&D (1998) Ages 12-14	S & A (1994) Females	S & A (1994) Males	H&P (2002) Females
<i>Total N of studies in meta-analysis</i>	68 Studies	87Studies	60 Studies	60 Studies	97 Effect Sizes (not studies)
<i>Number of predictors examined</i>	18	19	8	8	13
<i>Number of family factor predictors examined</i>	5	5	2	2	2
<i>Largest correlation reported</i>	.38 (General Criminal Offending)	.39 (Social Ties)	.39 (anti-social peers or attitudes)	.40 (anti-social peers or attitudes)	.53 (anti-social peers)
<i>Lowest correlation reported</i>	.04 (Anti-Social Peers/ Attitudes)	.04 (Ethnicity)	.07 (family structure/parental problems; lower social class)	.06 ((lower social class)	.03 (lower social class)
<i>Mean correlation for all predictors</i>	.17	.16	.20	.21	.20
<i>Mean correlation for family factors predictors only (Range)</i>	.12 (.07-.23)	.12 (.08-.19)	.14 (.07-.20)	.16 (.09-.22)	.19
<i>Family factor correlations above mean correlation for all predictors</i>	1 Anti- Social Parents (.23)	2 Poor Parent-Child Relations (.19) Anti-Social Parents (.16)	1 Poor parent-child relations (.20)	1 Poor parent-child relations (.22)	1 Prior history of child or sexual abuse (.21)
<i>Family factor correlations below mean correlation for all predictors</i>	4 Poor Parent-child relationships (.15) Other family issues (.12) Broken homes (.09) Abusive parents (.07)	3 Broken homes (.10) Abusive parents (.09) Other family characteristics (.08)	1 Family structure/parental problems (.07)	1 Family structure/parental problems (.09)	1 Family relationships (.17)

L&amp;D (1998) = Lipsey and Derzon (1998)

S&amp;A (1994) = Simourd and Andrews (1994)

H&amp;P (2002) = Hubbard and Pratt (2002)

for males. Family structure (e.g., whether it was an intact family or broken home) and parental problems had a correlation of .07 for females and .09 for males.

Hubbard and Pratt (2002) also examined predictors of delinquency for girls, and whether these variables had a different relationship than those generally reported for males. They found 97 effect size estimates (representing 5,981 females). They converted the statistical information in each study to correlation coefficients. They reported on 13 predictors, ranging from .03-.52 and averaging .20. Two could be considered family factors (with a mean correlation across the two family factors of .19). Child/sexual abuse (which largely occurs within the family) had a correlation of .21 with onset. The correlation of “family relationships” with offending was .17 across these correlations. Although the unit of analysis in this meta-analysis was the correlation and not the study, most of the correlations were still based on very small samples.

Derzon (2005) drew on an updated database (that began with the Lipsey and Derzon, 1998 collection), to conduct a meta-analysis examining the predictive strength of 21 different family factors on problem behavior, aggression, criminal behavior, or violence (he includes residential mobility and urban housing as family factors). He finds 233 reports on 119 distinct longitudinal studies reporting 3,124 predictive effects. Like Lipsey and Derzon (1998), Derzon used sophisticated statistical methods to rule out or control for methods or other characteristics of the studies so that the relationship of family factors and antisocial behavior could be better understood. Because Derzon (2005) does not report, in these particular documents, the breakdown for non-family predictors, we present his findings in a separate table. Table 2 [next page] presents the results of this meta-analysis on criminal behavior only, and does not include Derzon’s other meta-analytic outcomes of aggression and problem behavior (such meta-analyses would not have been included in our paper). We also exclude violence, as that would have been subsumed by the criminal behavior outcomes.

As Table 2 indicates, the 21 family factors studied by Derzon had an average correlation of .15 with the onset of crime, ranging from .02 for parent psychopathology to .30 for low parental education and expectations. These estimates appear quite consistent with those reported in the earlier meta-analyses reported in Table 1. Both of these family factors, it should be noted, are based on very small numbers of studies (4 for parent psychopathology and just 1 study representing low parental education/expectations).

### **Meta-analyses of studies examining predictors of adult or juvenile offender recidivism**

We identified five meta-analyses of studies that examine what factors predict whether released offenders will recidivate. The five predictor meta-analyses span a wide group of offenders, including adult felons, mentally disordered offenders, sex offenders, and juvenile offenders.

Gendreau, Little, and Goggin (1996) reviewed studies examining predictor variables on adult offender recidivism. Their eligibility criteria were: (1) studies must have collected data on the offender prior to recording criminal outcome measures, with a minimum six-month follow-up (the longest follow-up was used if multiple time intervals were reported); (2) treatment follow-up studies were not included; (3) criminal outcome measure of recidivism had to be recorded for persons 18 and older; (4) the criminal outcome measure had to have a “no-recidivism” category (i.e., studies using “more versus less recidivism” were not included); and (5) the study had to report statistical information that could be used in meta-analysis.

Gendreau and his colleagues (1996) found 131 studies with 1,141 correlations. They make a distinction between static and dynamic predictors. Static predictors are fixed and not amendable by rehabilitation or other intervention (e.g., age). Dynamic predictors are potentially alterable by intervention (e.g., social achievement).

**TABLE 2. SPECIFIC FAMILY FACTOR PREDICTORS OF CRIME AND DELINQUENCY ONSET IN LONGITUDINAL STUDIES (DERZON 2005)**

	N of Studies	N of Participants	Correlation
Broken Home	25	33,677	.10
Child rearing skills	13	4,147	.26
Discipline	9	4,201	.17
Family SES (socioeconomic status)	46	133,525	.13
Family size	9	21,296	.11
Family stress	10	6,458	.21
Foster care	5	2,845	.14
Home discord and stability	11	3,605	.26
Maltreated as a child	8	2,950	.21
Other family deviance	9	2,847	.19
Parent anti-social behavior	11	15,645	.15
Parent education and expectations	3	11,415	.30
Parent psychopathology	4	5,368	.02
Parent use & tolerate ATOD	1	632	.08
Residential mobility	3	1,650	.08
Separated from parents	2	749	.08
Supervision & involvement	10	4,075	.06
Unwanted pregnancy	5	21,256	.10
Urban housing	9	14,705	.13
Warmth & relationship	22	8,021	.18
Young parents	4	12,553	.08
AVERAGE			.15

Gendreau et al. report on 18 domains of predictors, ranging from .05 for SES and personal distress to .30 for the correlation between risk scale scores and offending.<sup>5</sup> The average correlation across all domains was .13; for family factors it was .10. Only one family factor (birth family child rearing practices) was above the overall average correlation (.13); two were below—birth family structure (.09) and birth family criminality (.07).

Bonta and his colleagues (1998) examined the influence of a wide range of factors on general criminal recidivism or violent recidivism in mentally disordered offenders. They considered recidivism either a new criminal justice offense or re-hospitalization for the criminal act.

5. Correlations are only provided in the article for the 18 larger predictor domains and not for the individual variables that comprise those larger domains.



They identified studies that: (1) were published or unpublished from 1959 to 1995; (2) were written in English; (3) used a longitudinal research design; and (4) reported sufficient information for meta-analysis. Approximately 64 studies reporting 774 correlations were identified. They computed a weighted correlation coefficient, and they conducted analyses to isolate the influence of studies with extreme values (i.e., outliers). They reported their results across four major predictor domains: personal demographics, criminal history, deviant lifestyle-history, and clinical factors.

Bonta et al. report on 35 correlations ranging from 0 (for SES) to .39 (for objective risk assessment), with an average correlation of .10. Only two family factors were examined as correlations with criminal offending in this sample of mentally disordered offenders: a history of family problems (.10) and being single (.07).

Cottle, Lee, and Hielbrun (2001) focused on research literature published 1983-2000, to determine what factors predicted juvenile offender recidivism. They included studies in their meta-analysis that: 1) involved juveniles ages 12-21; 2) included juveniles with at least one prior arrest; and 3) provided data on subsequent offending. Authors analyzed 22 studies and identified 30 predictor variables, with five that were family factors. Cottle and her colleagues converted raw statistics from each study into correlation coefficients.

The correlations in Cottle, et al. (2001) range from .01 for substance abuse to -.35 for age at first contact (the younger the child was at first contact, the more likely he was to be rearrested). The average correlation was .14. Two family factors had larger correlations than the average across all predictors: family problems (.23) and number of out-of-home placements (.18).

Focusing only on sex offenders, Hanson and Morton-Bourgon (2004) updated their earlier meta-analysis of recidivism prediction studies. Eligible studies were those that (1) clearly identified a sample of sex offenders; (2) examined recidivism after a period of time; and (3) provided sufficient statistical information permitting meta-analysis. They located 95 studies representing 31,000 sex offenders, and 1,974 predictive effects reported. The typical study involved a median follow-up period of five years. The average recidivism rate was 13.7% for sexual crimes, 14% for non-sexual violent recidivism, 25% for any violent, and 36.9% for any recidivism at all (violent or non-violent). Here we focus on the results for sexual recidivism.

They converted the difference between recidivating and non-recidivating groups into an effect size for use in the meta-analysis (Cohen's effect size  $d$ , weighted by sample size), which we converted into correlation coefficients. They examined seven domains of predictors with sexual offending, ranging from .01 (general psychology, clinical presentation) to .15 (sexual deviancy), with an average correlation of .07 across the larger domains. Those domains for sexual offending are actually comprised of 82 variables, including five family factors. The only family factor correlation that was above the average correlation across all predictors was separation from parents (.08).

Dowden and Brown (2002) investigated the predictive strength of substance abuse history and subsequent criminal recidivism. They included all studies that: (1) assessed substance abuse factor prior to recidivism; (2) provided sufficient statistical information to permit meta-analysis; and (3) included a recidivism and no-recidivism category. They located 45 studies and 116 effect sizes (they used Pearson's  $r$  as their effect size measure). Dowden and Brown (2002) also conducted analyses comparing results with extreme values or outliers, and without them.

TABLE 3. PREDICTORS OF CRIME AND DELINQUENCY CONTINUATION IN RECIDIVISM STUDIES

	G, L & G (1996) Adult offenders	B, L & H (1998) Mentally disor- dered offenders	C, L & H (2001) Juvenile offenders	H & M-B (2004)	D&B (2002)
<i>Total N of studies in meta-analysis</i>	131 Studies	64 Studies	22 Studies	95 Studies	45
<i>Number of predictors examined</i>	18	35	30	82	5
<i>Number of family factor predictors examined</i>	3	2	5	5	1
<i>Largest correlation reported</i>	.30 (risk scales)	.39 (objective risk as- sessment)	-.35 (age at first contact)	.53 (unvalidated objective risk as- sessment scheme)	.22 (alcohol drug problem)
<i>Lowest correlation reported</i>	.05 (SES; per- sonal distress)	0 (SES)	.01 (substance abuse)	.01 (denial of sexual crime)	-.02 (substance abuse charge)
<i>Mean correlation for all predictors</i>	.13	.10	.14	.07	.12
<i>Mean correlation for family factors predictors only (Range)</i>	.10	.09	.12	.04	.13
<i>Family factor correlations above mean correlation for all predictors</i>	1 Birth family rearing practices (.13)	1 Family problems (.10)	2 Family problems (.23) Number of out-of-home placements (.18)	1 Separation from parents (.08)	1 Parental substance abuse (.13)
<i>Family factor correlations below mean correlation for all predictors</i>	2 Birth family structure (.09) Birth family criminality (.07)	1 Single marital status (.07)	3 Living with single parent (.07) SES (.07) Parent pathology (.07)	4 Childhood neglect (0) Childhood sexual abuse (.01) Negative relation with father (.03) Negative relation with mother (.05)	0

G, L & G (1996) = Gendreau, Little & Goggin (1996)

B, L & H (1998) = Bonta, Law and Hanson (1998)

C, L & H (2001) = Cottle, Lee and Heilbrun (2001)

H & M-B (2004) = Hanson & Morton-Bourgon (2004)

D&B (2002) = Dowden & Brown (2002)

They report on five predictors, ranging from a correlation of  $-.02$  (any substance abuse criminal charge) to  $.22$  (any alcohol or drug abuse), with an average of  $.12$ . The correlation for the only family factor, “parental substance abuse,” was  $.13$ .

**Other meta-analyses of family factors and crime**

We also included a number of meta-analyses that investigated the role of a particular family factor and subsequent criminal outcome. Table 4 provides the outcomes of these meta-analyses. For example, one of the most commonly accepted theories about violence is “intergenerational transmission.” The intergenerational transmission of violence refers to children growing up in abusive or violent homes, then becoming adult offenders who perpetrate abuse or violence. Stith and her colleagues (2000) examined the relationship between being abused—or witnessing domestic violence—in childhood, and later domestic violence perpetration or victimization. The authors found 39 studies published from 1978 to 1997, representing 12,981 individuals and 103 effect sizes (converted to Pearson’s  $r$ ). Overall, the relationship between childhood experience with violence and later spousal abuse perpetration is  $.18$ .

**TABLE 4. META-ANALYSES EXAMINING A SINGLE FAMILY FACTOR IN THE PREDICTION OF CRIME AND DELINQUENCY**

	<b>S, R, M, B, L &amp; C (2000)</b>	<b>G (2002)</b>	<b>W (1992)</b>	<b>W &amp; R (1991)</b>	<b>P &amp; K (2003)</b>
<i>Total N of studies in meta-analysis</i>	39 Studies	88 Studies	38 Studies	50 Studies	72 Studies
<i>Predictor examined</i>	Being abused or witnessing violence in childhood	Use of corporal punishment by parents on children	Family heredity and crime	Broken homes and delinquency	Divorce and delinquency
<i>Correlation with crime or delinquency</i>	.18	.21	.09	.11	.08

S, R, M, B, L & C (2000) = Stith, Rosen, Middleton, Busch, Lundeberg & Carlton (2000)  
 G (2002) = Gershoff (2002)  
 W (1992) = Walters (1992)  
 W&R (1991) = Wells & Rankin (1991)

Gershoff (2002) addressed the question of whether the use of physical punishment by parents has a negative impact on their children. The author located 88 studies, representing 36,309 individuals and 117 effect sizes. Studies had to measure physical punishment as a child (e.g., spank, slap) and later behavior in childhood or adulthood (e.g., aggression, delinquency). The correlation between physical punishment and later delinquency as a juvenile or criminality as an adult was identical ( $.21$ ).

Walters (1992, p. 598) conducted an “exhaustive review of the genetic literature on crime” and identified 38 studies that addressed the gene-crime relationship. Three types of studies were located: family heredity studies that compare the criminal behavior of parents and other relatives for criminals under study and compare them to a non-criminal population; comparisons of monozygotic (single-egg) twins that share 100% of the same genetic material with

dizygotic (dual-egg) twins who share 50% of the genetic material; and adoption studies in which the criminality of biological parents and adoptive parents are compared for children placed in adoption at an early age. These 38 studies produced 54 effect sizes, and Walters converted these to phi correlations. The correlations represent the strength of association between heredity and criminal behavior. After weighting the correlations by sample size across studies, he reports an average correlation of .09. He concludes (1992, p. 604) that there is “guarded optimism for a genetic interpretation of certain facets of criminal behavior.” Walters (1992, p. 607) further cautions that more recent studies, and more rigorous ones, provided less support for the gene-crime relationship.<sup>6</sup>

Wells and Rankin (1991) were interested in estimating the total effect of broken homes on delinquency, and to assess and understand the variation across these studies. They located 50 studies published from 1925-1985. They used phi correlations as the effect size, weighted by sample size. They found an association between broken homes and delinquency of .11. There is a study methodological impact, as smaller samples using non-probabilistic (convenience or purposive) samples report larger correlations than larger, probability samples.

Price and Kunz (2003) focused their study on the influence of divorce in juvenile delinquency. They identified studies published from 1930-1999 that: (1) contained a sample of children living in a single-parent family and a sample of children from intact families; (2) at least one quantifiable outcome of delinquency was reported that could be converted to a correlation; and (3) subjects had to be younger than 19 years of age. They located 72 studies. Across all studies, the mean correlation was .08.

### **Specific meta-analyses of family-based treatment**

We also collected meta-analyses that focused specifically on determining whether family-based interventions reduced subsequent delinquent or criminal offending. We found four meta-analyses that reviewed family-based treatments of all types. As Table 5 [next page] shows, the overall effect size (reported or converted to correlations) is between .15 and .28 for family-based treatment. We provide more detail on each below.

Latimer (2001) reviewed family-based treatment for juvenile delinquents. He included all studies that: (1) focused on young offenders; (2) offered one group a type of family-based treatment; (3) used a control or comparison group that did not receive the same treatment; (4) reported recidivism in a manner that allowed the researcher to compute proportion of each group that failed or succeeded; and (5) provided sufficient statistical information to permit calculation of effect size. For each study, he also assigned one point if the evaluation included random assignment, a sample size larger than 100, a follow-up measure longer than 12 months, and an external researcher (not the program staff). He located 35 studies by relying on his file of studies (from a prior review) and conducting additional electronic bibliographic searches. These 35 studies reported 50 effect sizes, and the average correlation across all studies was .15. Latimer was critical of the evidence because treatments tested in weaker studies (according to

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6. We did not include Rhee and Waldman (2002), who also conducted a meta-analysis of 51 studies examining the influence of family hereditary on anti-social behavior, but only included five crime studies, with no specific breakdown for crime or delinquency.

his methodological rigor scale) were much more effective (.33) than treatments tested in more rigorous studies (0). Latimer (2001, p. 248) concludes that the effect may be more about “how we evaluate” rather than “what works.”

**TABLE 5. SPECIFIC META-ANALYSES OF FAMILY-BASED TREATMENT STUDIES**

Study	Aim/purpose	# studies (# effects)	Types of Studies	Correlation
Latimer (2001)	Examine family-based treatment for juvenile delinquency	35 (50)	QED/RCT	.15
Dowden & Andrews (2003)	Examined family-based treatment for juvenile delinquency	38 (53)	QED/RCT	.21
Woolfenden, Williams, & Peat (2002)	Examine family and parenting interventions for conduct disorder and delinquency among juveniles between 10 and 17 years	8	RCT	.28 (on rearrests)
Farrington & Welsh (2003)	Examined family-based crime prevention programs	40	QED/RCT	.16

QED=Quasi-experimental design

RCT=Randomized controlled trial

In their Cochrane Collaboration review, Woolfenden, Williams, and Peat (2002) included only those studies that reported the results of a randomized controlled trial of a family-based intervention on juveniles between the ages of 10 and 17. The juveniles had to be referred by the juvenile justice system or be diagnosed as having a conduct disorder. They found eight experiments with a total of 749 children included. Family and parenting interventions reduced risk of rearrest and reincarceration, decreased mean length of time in institutions, and reduced sibling rearrest. The most promising mechanism for why intervention reduced delinquency included measures of “family cohesion.” The correlation for the five studies that measured the impact of family-based intervention on arrest rates was .28. They conclude that the evidence suggests that family and parenting interventions have beneficial effects on reducing criminal activity.

Farrington and Welsh (2003) also conducted a systematic review of family-based crime prevention programs, but included experimental and quasi-experimental evaluations. They included studies that: (1) focused on family as the target for the intervention; (2) had an outcome measure of delinquency, antisocial behavior, or disruptive child behavior in the study; and (3) included at least 50 persons. The authors located 40 studies and looked to provide effect sizes for four different effects: (1) short-term effects on delinquency; (2) short-term effects on child antisocial behavior; (3) long-term effects on offending; and (4) long-term effects on antisocial behavior. Short-term was one year (unless only two-year data available) and long-term was three years. Offending was measured by either official records or self-report, which were averaged in cases in which both were reported. The exception was in cases in which the official data were poor and self-report were better. The overall correlation was .18. One difficulty pointed out by the authors is that many family-based interventions are delivered when children are very young, and that long-term follow-ups of offending behavior have not been conducted or have yet to be reported.

Dowden and Andrews (2003) responded to the pessimistic conclusions of Latimer (2001) by conducting their own meta-analysis of 38 studies and 53 tests (89% of their sample overlapped with Latimer). They use Latimer's methodological rigor score. They report a slightly higher overall correlation (.21) than Latimer (.15). Their findings—not surprisingly, given the overlap between the two samples—replicate Latimer's findings on rigor. Stronger methodological studies report smaller effects. Treatments, however, that “appropriately target criminogenic needs of offenders” achieved an average correlation of .23 even in methodologically rigorous studies, compared to .04 if they inappropriately targeted needs.

### **Broader reviews of intervention effectiveness**

We also sought to identify meta-analyses that tackled broader topics, such as “what works to reduce juvenile delinquency.” We only included these broader interventions if they reported correlations for specific treatment types, including family-based treatment. Eight such meta-analyses were located for this paper.

In her review, Garrett (1985) gathered evaluations of institutional-based treatment for juveniles. She looked at all studies that: (1) were reported between 1950-1983; (2) evaluated a residential or institutional program; (3) included only adjudicated (officially defined) delinquents; and (4) included a control procedure (including pre-post only designs). Garrett located 111 studies, 225 comparisons, and 433 effect sizes, with 13,055 juveniles total participating. The correlation for recidivism specifically was .07 (only 34 studies provided recidivism data). She reports that family-based treatments, including only three studies and seven effect sizes, had an overall correlation of .14 on recidivism. Garrett (1985, p. 297) describes the result as “promising but tentative.”

Roberts and Camasso (1991) collected 46 juvenile offender treatment program evaluations published in major criminal justice and psychology journals from 1980 to 1990. Studies including random assignment, quasi-experimental design, or a pre-post only test, were included. “Family therapy” has an average correlation of .28 (based on eight studies) on criminal recidivism. These positive findings for family therapy were sustained even when looking at studies with large samples (more than 200 juveniles), longer follow-up periods (more than 12 months), and strong statistical controls. They concluded that (1991, p. 438): “...it is also important to recommend to juvenile justice administrators that they replicate family counseling in their respective jurisdictions.”

Lipsey (1992) reviewed treatment programs for juvenile delinquency recidivism. He included those evaluations that: (1) tested a treatment or intervention that aimed to reduce recidivism; (2) included a majority of participants who were 21 or younger; (3) had at least one delinquency outcome measure used to compare a treatment with a control or comparison condition; (4) had a control or comparison group that was randomly assigned, or had a quasi-experimental comparison with evidence that groups were equivalent before the study began; (5) came from English-speaking countries; and (6) were published or available since World War II. Summarizing 397 evaluation reports, the overall correlation was .05 and shows little difference between random and non-random assignment studies, likely a testament to the strong quasi-experimental studies included in his sample. Lipsey (1992), however, finds that the average effect size for the six experimental or quasi-experimental evaluations of family therapy for

delinquents within the juvenile justice system was an almost negligible .01. There is a slightly higher correlation for family treatment programs for juveniles outside the system (.05).

Petrosino's (1997) study conducted a meta-analysis of randomized experiments testing any crime reduction program delivered to individuals. Petrosino included studies that: (1) used random or quasi-random (odd/even or alternation) allocation to assign participants; (2) were written in English; (3) were published between 1950-1993; and (4) included some quantifiable outcome of official crime (e.g., arrests, convictions). Petrosino located 300 experimental reports and randomly selected 150 for the meta-analysis. The overall correlation of .05 mirrored Lipsey (1992), but, in contrast, the average correlation across four family counseling experiments in his sample is .17.

Lipsey and Wilson (1998) synthesized treatment evaluations for serious and violent juvenile offenders. Few studies specifically focused on serious offenders, so the authors focused on evaluations in which (1) the great majority of offenders were adjudicated delinquents, with most having prior record of person or property offenses and not primarily status, drug, or traffic crimes; (2) the referral to the program was made by juvenile justice agents and not schools or parents; and (3) studies were added if most or all of the juveniles had an "aggressive history" or the intervention was an attempt to change aggressive behavior. Authors report on 200 experimental or quasi-experimental evaluations. The majority of studies were conducted since 1990 in the U.S., with largely male, Anglo or mixed ethnic samples, and evaluating an intervention mandated by the juvenile justice system. Authors used police contact/arrest as the outcome measure.

The overall correlation is .06, but there was a lot of variability across the studies. Lipsey and Wilson report that five methodological features explained the variation in effect size: nature of assignment to groups; attrition; type of outcome measure selected; sample size; and statistical power. They report a "method-adjusted" effect size that controls for the influence of methodological variables. They report observed-effect sizes, method-adjusted effect sizes, and equated effect sizes for types of treatment. They report these for studies with institutionalized (83) or noninstitutionalized (117) offenders. Family-based programs had generally positive but inconsistent effects on noninstitutionalized offenders (.10, based on eight studies).

Dowden and Andrews (1999a) investigated evaluative studies testing the effects of some intervention on subsequent offending by youths. They relied on samples used in prior meta-analyses, resulting in 229 tests from 134 studies. The overall effect size was .09, but there was great heterogeneity in the sample. Dowden and Andrews stress the importance of treatment targeting appropriate criminal needs. Two "family factors" were among the most effective needs targeted for youths: "parental supervision" (.35) and "within family affection" (.33). Treatments that appropriately targeted these family factors—increasing expressed affection within a family and increasing proper supervision by parents of their children—reduced offending (interventions that targeted vague family factors were categorized as "non-criminogenic needs," and the effect sizes were much smaller).

In a different meta-analysis, Dowden and Andrews (1999b) reviewed the treatment studies pertaining to exclusively or predominantly female offenders. Again using their own files, they identified 26 studies (with 46 effect sizes) that: (1) were composed predominantly or entirely of female offenders; (2) included a follow-up period (the longest one was taken); (3) compared a treatment group to a control or comparison group that did not receive treatment; and (4) in-

TABLE 6. EFFECTS FOR FAMILY-BASED TREATMENT IN LARGER META-ANALYSES OF TREATMENT

	G (1985) Institutionalized Youth	C&R (1991) Youths	L (1992) Youths	P (1997)	L&W (1998) Serious & Chronic Ju- veniles	D&A (1999a) Youths	D&A (1999b) Females	L, D & M-B (2003) Youths
<i>Total N of studies in meta-analysis</i>	111	46	397	150	200	134	26	154
<i>Type of Evaluations included</i>	QED/RCT	QED/RCT	QED/RCT	RCT	QED/RCT	QED/RCT	QED/RCT	QED/RCT
<i>Number of programs examined</i>	13	10	29	40	27	13	8	10
<i>Largest correlation reported</i>	.46 (milieu)	.03 (restitution)	.19 (employment)	.34 (individual psychological counseling for adults)	.23 (individualized counseling)	.39 (other criminogenic needs)	.38 (anti-social cognition; family process needs)	.16 (multi-focused; family-focused)
<i>Lowest correlation reported</i>	-.07 (academic)	.41 (group therapy)	-.12 (deterrence)	0 (drug testing; adult citizen volunteer program; vocation for adults)	-.09 (vocational)	.04 (substance abuse treatment)	.10 (school/work needs)	-.09 (wilderness)
<i>Mean correlation across all programs</i>	.07	.09	.05	.05	.06	.09	.17	.09
<i>Mean correlation for family-based treatment</i>	.28	.28	.01 justice/ .05 non-justice	.17	.10	.35 family supervision needs .33 family affection needs	.38 family processes .30 family and peers	.16
G (1985) = Garrett (1985) C&R (1991) = Camasso & Roberts (1991) L (1992) = Lipsey (1992) P (1997) = Petrosino (1997) L&W (1998) = Lipsey & Wilson (1998) D&A (1999a) = Dowden & Andrews (1999a) D&A (1999b) = Dowden & Andrews (1999b) L, D & M-B (2003) = Latimer, Dowden & Morton-Bourgon (2003)								
QED=Quasi-Experimental Design RCT=Randomized Controlled Trial								



cluded some measure of recidivism that permitted meta-analysis. As with their meta-analysis on youth programs, family variables were among those with the highest effect sizes if “appropriately targeted by treatment” (i.e., “family processes” .38, “family and peers” .30).

In 2003, Latimer, Dowden, and Morton-Bourgon looked at juvenile treatment programs. They included studies if they: (1) examined a non-traditional response to youth delinquency (i.e., not traditional probation or custody); (2) consisted of youth under 18 who committed an offense by current adult standards; (3) used a control or comparison group without the same treatment; (4) provided sufficient statistical information; and (5) measured at least one outcome of interest (i.e., recidivism, academic performance/attendance, psychological well-being, family functioning, employment, social skills, anti-social attitudes, substance abuse, anger management, anti-social peer pressure, and cognitive skills). They located 154 studies that reported 332 unique effect sizes, published from 1964 to 2002. The average correlation was .09, and family-focused interventions had the largest average correlation of .16 (multi-focused intervention also averaged .16). Latimer, et al., (2003, p. 19) assert the positive impact for family-based treatment, concluding that the “...results demonstrate the potential of treatment to improve communication within families as well as parental performance on such concepts as monitoring and supervision.”

## DISCUSSION

Derzon (2005) once asked if the family was the “wellspring of crime.” A commonly held notion by policymakers, practitioners, and the general public is that the major cause of criminal behavior is problems in the family. We have pulled together a number of meta-analyses to examine the relationship of family factors to the onset, continuation, and treatment of criminal behavior.

From these prior meta-analyses, we gleaned the correlations of family factors with the onset and continuation of delinquency and crime (Tables 1-4). For onset, the correlations range from .12 to .19, and for continuation, they range from .04-.13. For those meta-analyses focused on a sole family factor, the range of correlations is somewhat similar (.08-.21). One immediate question is whether these correlations are large enough that intervention programs should be designed to address them. The answer is somewhat subjective. Recall that Cohen (1988), in a famous treatise, considered correlations of .10 or less a weak effect, with moderate correlations at .25 and large correlations at .50. None of the correlations with onset or continuation would reach the subjective standard of “moderate strength.” Furthermore, if one were to focus on variance explained ( $r^2$ ), a correlation of .10 means that only 5% of the variation in the crime outcome is explained by the presence or absence of that family factor. Clearly, from these data, families are not the wellspring of crime and delinquency.

But these data show that family factors are, for the most part, a consistently small and non-trivial factor in onset and continuation. Even if the correlations are considered, by subjective standards, to be small, they still may represent important differences in crime outcomes between criminal and non-criminal groups. For example, an  $r$  of .10 would correspond to a 10% increase in the onset of crime for the group having a certain negative family factor (e.g., “family problems”) compared to the group not having the same factor, assuming that the baseline was 50% recidivism in each group prior to the program (Lipsey, 1992).

Meta-analyses that specifically reviewed family-based treatment program evaluations reported positive findings for such interventions on criminal behavior, with correlations ranging from .15-.28. Again, Cohen (1988) would consider such correlations (with the exception of the Woolfenden et al. 2002 review of the impact of family-based treatment on rearrests) to be small. Still yet, such correlations would be equivalent to 8-14% reductions in crime for treatment groups compared to control groups (assuming a baseline recidivism rate of 50% in each group). Some would argue such a reduction is not trivial but sizable and important.

For the meta-analyses examining the crime reduction effectiveness of family-based treatment as well as other interventions, the findings are more variable. They range from .01 in Lipsey's (1992) meta-analysis for family-based treatments delivered within the juvenile justice system to .38 for interventions that specifically target "family processes" in the homes of female offenders (Dowden & Andrews, 1999b).

Ultimately, large and small are terms best understood in the context of their application. If an intervention is inexpensive and can be widely disseminated, than a small effect may translate into many large reductions in antisocial behavior. For example, a meta-analysis of mass media interventions for substance use by Derzon and Lipsey (2002) found that although their effects were quite modest ( $r=.02$ ), the cumulative effect over 10 years could be expected to result in 5.5 million fewer cigarette users. If, on the other hand, an intervention is expensive, or tightly focused on a small group of individuals, even a very large effect, a very successful intervention, may not be justified as it ultimately affects very few of those who are ultimately criminal.

Contrary to common notions, family factors may have a role to play in criminal offending but are not the major reason why most persons become criminal (Derzon, 2005). For those meta-analyses that examined a range of variables and their association with the onset and continuation of crime, family factors were never the largest correlation; in fact, the average correlation across family factors never surpassed the average correlation across all predictors.

Derzon (2005) raises the possibility that if family constructs are important in the development of antisocial behavior, it may require a more complicated model to account for their influence. In other words, for family factors to produce antisocial behavior, they require the presence of other conditions. Rather than a risk factor, certain family characteristics may serve as protective factors, by generating or providing resilience to adversity, or otherwise minimizing the effects of adversity. Thus, certain family factors become protective only in the presence of adversity. Most children with negative family characteristics will not commit crime, and many others without such negative family factors will be antisocial at an early age and continue. It is possible that family factors play a complex, interactive role with other predictor variables. For example, good family functioning may act as a protective factor in a child's life, helping to counter adverse conditions that would normally become criminogenic. On the other hand, negative family factors may interact with other criminogenic predictors so that their combined predictive influence is more powerful in a child's life. In other words, perhaps it is the combined effect of multiple adverse factors that leads to the onset and continuation of criminal behavior. Although multivariate meta-analysis is still underdeveloped, (e.g., Becker, 1992; Lipsey, 1992), a systematic assessment of the multivariate evidence of family predictors with later antisocial behavior would have great utility for understanding how family factors influence later criminality. If family factors are, in fact, protective, it is in their interaction with other family, setting, and individual conditions that their true merit will be uncovered.

The continued implementation and evaluation of family-based treatment for juveniles is encouraged by this research. From the correlations in Tables 1-4, we see that family factors are generally more strongly correlated with onset and recidivism for juveniles than with adult offender recidivism. Moreover, a wave of meta-analyses of specific and broad-based treatment effectiveness meta-analyses generally supports the theory of targeting *malleable* or changeable conditions within the juvenile's family for intervention. In fact, in those meta-analyses that compare family-based treatment with other interventions, the correlation for family-based treatment is always larger than the average across all other interventions (with the exception of the Lipsey .01 finding for family treatment within the juvenile justice system). In fact, given the "weak" correlations presented in Tables 1-4 for family factors with onset and continuation of crime, family-based treatments may be addressing additional non-family risk factors for offending to achieve the generally larger correlations viewed in Tables 5 and 6.

Though some programs have been encouraged as evidence-based interventions, it is important that these continuously be evaluated using rigorous designs. There is room for innovative, new treatments as well, but these too must be subject to careful evaluation so that governments can learn what works and contributions can be made to the criminological knowledge base. Note that successful intervention at the earliest life stages (e.g., ages 6-11 or earlier) could result in greater reduction in human misery and costs due to crime than intervention later in the child's life.

Many of the meta-analyses that we collected involved very small cells when they examined a particular family factor and its relationship to the onset or continuation of crime. This is because the number of primary studies that provided data on that relationship is often sparse. We issue a call to investigators who are studying the onset or continuation of crime to include a variety of family factors and to provide the effects of that relationship in accessible reports. This is the only way that knowledge can be accumulated and lessons learned.

Finally, we plan to update this review to search for and incorporate more recent meta-analyses (e.g., Piquero, et al., 2008). Moreover, updates of this work should incorporate dissertations and unpublished literature, and also consider expansion of the review beyond crime and delinquency to include meta-analyses focused on illicit drug use, child abuse and neglect, and aggressive or anti-social conduct by children. In this way, a more comprehensive picture of the role of family factors in all types of problematic societal outcomes can be gleaned.

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## **APPENDIX: LIST OF BIBLIOGRAPHIC DATABASES SEARCHED**

- Academic Search Premiere (EBSCO)
- Bibliography of Nordic Criminology
- Chalk's e-Library Collection
- Campbell Collaboration Reviews of Intervention and Policy Effects (C2-RIPE)
- Campbell Collaboration Social, Psychological, Educational and Criminological Trials Register (C2-SPECTR – also includes over 300 systematic reviews)
- Cochrane Database of Systematic Reviews
- Criminal Justice Abstracts
- Criminal Justice in Denmark
- Database of Reviews of Effectiveness (DARE)
- EBSCO Megafile
- Econlit
- ERIC
- Expanded Academic ASAP
- Full-Text of OVID Journals
- Google and Google Scholar
- Health Technology Assessment Register
- Housing and Urban Development (U.S.) "HUD USER"
- Index to Current Urban Documents
- Inside Info Plus (British Public Library)
- International Bibliography of Social Science
- ISI Web of Science
- Medline
- National Criminal Justice Reference Service (NCJRS) abstracts and full-text documents
- National Clearinghouse of Child Abuse and Neglect (NCCAN)
- PAIS Archive
- PAIS International
- Periodical Contents Index
- PolicyFile
- Psychology and Behavioral Sciences Collection
- PsycInfo (includes PsychLit)
- Sage Family Studies Abstracts
- Sage Journals Criminology Full-Text Collection

- Sage Journals Management and Organizational Studies Full-Text Collection
- Sage Journals Political Science Full-Text Collection
- Sage Journals Sociology Full-Text Collection
- Sage Urban Studies
- Social Service Abstracts
- Social Service Research Network
- Social Work Abstracts
- Sociological Abstracts
- UNESCO (UNESDO and UNESBIB)
- Wider Public Health Agenda Project Report (annotations of relevant reviews)
- Worldwide Political Science Abstracts
- World Bank Documents

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