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Invited Commentary

Sexual abuse of children—Unique in its effects on development?

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The covariation between childhood abuse and various forms of maldevelopment is currently above dispute. Both short and longer term psychological, emotional, social, and physiological sequelae have been documented. Over the past 10 years a host of retrospective findings have been prospectively confirmed and/or replicated in increasingly controlled studies. Thus scientific rigor in the field of child abuse and neglect has been elevated. Despite these advances, there continues to be skepticism regarding the extent to which childhood abuse constitutes a *unique* contributor to maldevelopment when in company with socioeconomic disadvantage, family dysfunction, and other environmental and contextual factors that could serve as potential confounds. Moreover, there are continued assertions that childhood abuse is merely at the extreme end of a continuum of childhood stressors, thus calling into question whether childhood abuse is, in and of itself, mechanistic of maldevelopment and independently predictive of subsequent deleterious outcomes. This is an important distinction because to relegate childhood abuse to a category of inordinate stressors will open the door to increasingly homogenized treatments and intervention models for use with all types of childhood adversity. Hence, in this climate of continued skepticism regarding the relative impact of childhood abuse on development, to limit conceptual models to the testing of abused versus non-abused group differences will simply not be enough. The article by Fergusson, Boden and Horwood published in this issue (2008) is one example of innovative research that will bolster the promotion of treatment models and research paradigms that vary according to the type of adversity they seek to address.

The Fergusson et al. (2008) paper reports findings from a study of a representative New Zealand birth cohort ($N = 1,265$) who were followed throughout development and assessed on a wide range of mental health, social, and family factors. The chief aim of the article was to test whether the experience of differing types of abuse—childhood physical abuse (CPA) and childhood sexual abuse (CSA)—had unique and/or differing associations to subsequent, long-term mental health outcomes. Consistent with a host of previous literature, Fergusson and colleagues found that the effect of CSA were somewhat stronger and more consistent than those for CPA. Within the cohort, more than twice as many mental health disorders occurred for individuals experiencing sexual abuse involving attempted or completed sexual penetration as compared to those who were not exposed. These results persisted after statistical control of a host of confounding demographic and family variables. CPA, due in part to its relatively high association with socioeconomic disadvantage and family factors, was not as strong an indicator of later mental health problems. The authors also took into account the substantial comorbidity between CPA and CSA by placing both variables in regression equations thus allowing them to compete with one another for outcome variance. CSA remained a strong predictor whereas CPA did not.

The authors devote surprisingly little text to the speculation of “Why?”—Why would CSA be a particularly salient risk-factor in the development of mental health problems? There are several plausible (theoretical and empirical) explanations that merit discussion. For example, as Finkelhor and Browne have championed (Finkelhor & Browne, 1986), the stigma, powerlessness, and boundary violations often experienced by sexual abuse victims may relate directly to mental health outcomes. Many researchers suspect (e.g., Herman, Russel, & Trocki, 1986; Noll, Trickett, & Putnam, 2003; Stevens-Simon & Reichert, 1994) that due to its explicit nature the experience of childhood sexual abuse may place victims (females in particular, but not exclusively) at increased risk of continued emotional trauma and interpersonal difficulty by virtue of early sexual boundary violations and a likely pairing of sex with extreme violence and/or the intimacy and love of caregivers. Thus, significant cognitive and affective distortions may develop possibly resulting in subsequent involvement with exploitive or violent sex partners. Moreover abuse perpetrated by a biological father is often done so in the absence of physical force or violence (Noll, Trickett, & Putnam, 2000; Russell, 1988). A victim not physically coerced into adult-child sexual relations may be more likely to consider herself a willing participant in the abuse and engage in self-blame to a greater degree than

someone for whom culpability lies indisputably with the perpetrator. This guilt and self-blame may result in considerable confusion about issues surrounding sexual arousal and intimacy. A bit less obvious might be the increased use of drugs or alcohol as a means to overcome untreated PTSD or the anxiety associated with situations reminiscent of the original sexual trauma.

The importance of ascertaining and evaluating the relative impact of childhood sexual abuse throughout development cannot be understated. Some forms of early abuse sequelae do not manifest until late adolescence or young adulthood, and many victims display “*sleeper effects*” of trauma (Briere, 1992) that are triggered as issues associated with being abused become increasingly salient later in development (e.g., issues of sexual identity, romantic relationships, sexual advances, romantic partner violence, and becoming a parent). Hence, the article by Fergusson et al. (2008) is all the more important because it is one of the few prospective studies examining maladjustment in young adulthood—a developmental period in which good adaptation bodes well for continued health and well-being throughout adulthood years (Roisman, Masten, Coatsworth, & Tellegen, 2004). Moreover, the article identifies mood disorders as a young adulthood sequelae which has been shown to have a substantial impact on the next generation (Downey & Coyne, 1990; Lovejoy, Graczyk, O’Hare, & Neuman, 2000). Such maternal distress is thought to be related to children’s poor physical health (Billings & Moos, 1983; Weissman et al., 1986), impaired cognitive ability (Brennan et al., 2000), disrupted infant/mother attachment (Teti, Gelfand, Messinger, & Isabella, 1995), and risk of multiple forms of maltreatment (De Bellis, Broussard et al., 2001). The intergenerational transmission of the effects of maternal childhood abuse are thus underscored.

The above discussion does not necessarily negate skepticism that childhood sexual abuse is at the extreme end of a continuum of childhood stressors. Indeed many would agree that sexual abuse is among the most egregious experiences a child can endure and that many forms of abuse co-occur or are comorbid with a host of family dysfunction and adversity. Several researchers report larger effects for more severe forms of CSA (e.g., Bulik, Prescott, & Kendler, 2001), and still others utilize samples of abused children as an ethical means for testing human models of chronic stress (e.g., Cicchetti & Rogosch, 2001). Despite the findings reported by Fergusson et al. (2008) and other evidence supporting the unique contribution of CSA to later maldevelopment (Kendler, Gardner, & Prescott, 2002), causal assertions remain difficult to uphold. Because it is not performed in laboratories where every variable is controlled or where participants function in a closed system, it is unlikely that this type of behavioral research will ever be elevated to bench science standards where causal assertions are routinely entertained.

However, there is much to learn from some impressively designed studies that are attempting to isolate unique effects of childhood maltreatment (as compared to alternative adversity) and its various forms (i.e., contrasting neglect versus sexual abuse versus physical abuse). These are studies by Teicher (e.g., Teicher et al., 1997) and, in particular, De Bellis (e.g., De Bellis et al., 2000) highlighting resultant neurologic maldevelopment following childhood abuse. Teicher and colleagues, utilizing psychiatric controls, have shown volumetric decreases in abused children using MRIs. DeBellis and colleagues have several studies (De Bellis, 2001, 2002; De Bellis et al., 2000; De Bellis, Hall, Boring, Frustaci, & Moritz, 2001; De Bellis et al., 2002) utilizing impressively rigorous research designs (e.g., one-to-one matching with non-abused controls, stringent inclusion/exclusion criteria, substantiated abuse, prospective designs, multi-trait-multi-method designs, relatively large samples, etc.) with findings suggesting volumetric/structural (MRI) and functional (fMRI) differences with pronounced maldevelopment characterizing abused children and adolescents as compared to their non-abused peers. Although not exclusively focused on sexual abuse, both of these researchers acknowledge that the influences of abuse (and other adverse life circumstances that often co-occur with abuse) on biological stress system regulation and brain development are complicated and very difficult to disentangle. These are examples of innovative research that is forging causal inferences, identifying mechanisms, and testing plausible theory. Hence the science is evolving.

Any discussion of the effects of childhood sexual must include the likelihood that a substantial portion of victims overcome these effects or are remarkably resilient. Such observations make it reasonable to begin an organized pursuit of factors that work to curtail the deleterious effects of abuse. In other literature, longitudinal studies indicate that resilient individuals are adept at utilizing economic, psychological, and social resources (Furstenberg & Hughes, 1995), beginning in early life and culminating in emerging adulthood (Masten et al., 2004), that point to indicators of how certain children are able to escape powerful disadvantages. Resilient maltreated children have been characterized as possessing positive self esteem and ego control (Cicchetti & Rogosch, 1997), receiving emotional support, psychotherapy and stable home environments (Egeland, Jacobvitz, & Sroufe, 1988), and having an ability to recall and integrate past adversity into current life circumstances (Egeland & Susman-Stillman, 1996). It will become increasingly important to examine how resilience varies across individuals, fluctuates across the life span, and is challenged in the face of developmental change (Bonanno, 2004).

In this era of shrinking resources, when programs for children in adversity are low priority and findings from loosely designed behavioral research are increasingly overlooked, it is of the utmost importance to promote multivariate research that is aimed at isolating the unique effects and alternative developmental trajectories for victims of differing forms of childhood adversity. In this respect, the Fergusson et al. (2008) study is a design to emulate and expand upon. The ultimate goal is to help children in ways that have maximum efficacy. Research that isolates unique pathways, identifies variables that mediate and moderate deleterious sequelae, and articulates points in development wherein victims are at peak or particular risk, will inform prevention and intervention strategies that are tailored to impact specific types of adversity. Such designs will include developmental theory, integrative bio-psycho-social models, and identifiers of resilient strategies.

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