



ADVANCING HEALTH EDUCATION & RESEARCH

AVA Research Reviews provides AVA members with recent published, peer-reviewed articles in a broad array of violence and abuse topics. The goal is to highlight and disseminate violence and abuse research in a timely fashion, and to enhance healthcare providers' practice by fostering the educational mission of AVA

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# AVA Research Review

## ADVANCING HEALTH EDUCATION & RESEARCH

**Review Title:** Childhood Sexual Abuse Across Development

**Reviewer:** Brooks Keeshin, MD, Mayerson Center for Safe and Healthy Children, Cincinnati Children's Hospital Medical Center

**Article:** Trickett PK, Noll JG, Putnam FW. The impact of sexual abuse on female development: Lessons from a multigenerational, longitudinal research study. *Development and Psychopathology* 2011; 23:453-476.

**Article Summary:** The authors provide an overview on their methods and the findings of their landmark longitudinal study following sexually abused girls and a matched cohort of non-abused girls over 23 years. The data collected from the survivors, mothers of survivors and offspring of the original participants over the course of the study has provided

significant insight on the effects of sexual abuse. The authors demonstrate effects in development, psychopathology, behavior, future victimization, education, medical conditions and stress related physiologic changes, as well as intergenerational findings. The authors conclude with an overview of current treatment and public health strategies and future research directions.

#### *Brief Overview*

Many researchers have postulated that childhood sexual abuse is associated with a significantly increased risk for a variety of psychiatric, medical and social outcomes. However, the majority of these studies are cross-sectional in nature. Therefore it is difficult to assess temporal relationships between the observed associations, much less infer causation. This study recruited 84 sexually abused girls and an equal number of healthy, age and SES matched

controls who had not been abused, and prospectively studied cognitive, psychological, physiological and social development. The authors used a cross-sequential design (a quasi-experimental study design which addresses some of the limitations inherent in cross-sectional and longitudinal designs) with 6 separate assessments over a twenty-three year period to collect the prospective data. Additional information was obtained from the mothers as well as offspring of the survivors over the course of the study.

#### ***Aims/ goal of the article and methods***

There are significant challenges in conducting prospective longitudinal studies of victims of childhood sexual abuse. One aim of the article is to describe the unique study design, as well as various components and techniques used to retain participants. A second aim of the article was to provide a comprehensive summary of the differences in development, psychopathology, social and medical outcomes as compared to controls.

#### ***Relevant findings***

Retention was a crucial aspect in a cohort study that began with 84 abused girls and 82 controls, with a mean age of 11

years at the time the study began. At each of the 5 subsequent follow up assessments, at least 84% of the original cohort participated. Furthermore, when the post-pubertal assessments are collapsed, 97% of abused girls and 94% of controls participated in at least one assessment at time 4, 5 or 6, with mean ages of 18 and 25 at assessments 4 and 6 respectively. The authors note several characteristics that they believe contributed to the observed retention, including a constant, engaged staff that maintained communication with participants between assessments as well as educating families about the scientific merits of the study. The authors concluded that the families took pride in being able to contribute to meaningful research.

The reported findings included increased risk of psychopathology such as depression, PTSD, self-harm and suicidality as well as an increased risk for multiple DSM diagnoses in the abused population. Sexually abused children who exhibited sexual behavior problems early in the study predicted later sexual aversion; and by assessment 5, survivors were more likely to have become pregnant.

With regard to interpersonal relationships, by assessment 5

and 6, survivors were nearly twice as likely to have experienced sexual and physical revictimization and domestic violence. A transgenerational difference was observed, with sexually abused girls more likely to have mothers who were victims themselves. Furthermore, mothers' parenting styles at the start of the study corresponded with survivor's mental health symptoms at assessment 4 as a young adult. The children of survivors of childhood sexual abuse were more likely to display behavior problems, increased anxiety and attachment problems compared to controls.

The researcher's original psychological conceptual model was designed to explain factors (family and peer support) which modify the expression (cognitive and psychological sequelae, biological markers and medical outcomes) of trauma experiences. Dysregulation of the hypothalamic-pituitary-adrenal axis was observed in victims, as well as increased rates of obesity and accelerated pubertal development. An increased risk of gynecological problems, sleep problems and healthcare utilization among sexually abused subjects was also noted at subsequent assessments.

### *Authors' conclusions*

The authors conclude that an experience of childhood sexual abuse is associated with a myriad of psychological, physiological and social sequelae that transcend puberty and early adulthood. Some of these adverse outcomes, like anxiety and attachment problems, display intergenerational associations occurring in both the abused women as well as offspring. These associations likely have both psychological and biological underpinnings.

The authors note that programs now exist that demonstrate great efficacy in ameliorating acute psychological distress related to sexual abuse. However, the authors raise caution, noting that many of the observed sequelae were not apparent until 7 or 10 years after the sexual abuse. Ongoing treatment or sequential assessment may be needed to address outcomes that are developmentally triggered and not apparent in the acute period after sexual abuse disclosure. Subsequent interventions with adolescents and young adults with a history of childhood sexual abuse may be considered a prevention effort against early adulthood outcomes that would complement any public health sexual abuse prevention campaign.

### **Reviewer's Comment:**

This article summarizes in a succinct and readable fashion data that are essential for both clinicians and researchers. This prospective, longitudinal evidence connecting sexual abuse and associated harms is important to the daily practice of pediatricians, family practitioners, internists and OB/GYNs as well as mental health professionals and should guide case finding, healthcare surveillance and utilization and the implementation of comprehensive treatment recommendations.

For researchers, these results validate the current need for longitudinal studies that transcend important developmental stages when studying outcomes of various environmental exposures. Furthermore, the vast developmental associations observed in this study should serve as convincing evidence as to the tremendous need to collaborate with colleagues outside of traditionally well-defined academic silos. The comprehensive nature of the observations on development give tremendous weight to the argument that the path connecting sexual abuse and its sequelae likely comprise of psychological, social, intergenerational and biological components. Future

interventions that intend to bend the arc of development back to a normal trajectory will benefit from the complex but elegantly depicted abnormal developmental pathway of sexually abused girls described in this landmark study.