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A META-ANALYTIC REVIEW OF STUDIES EXAMINING THE EFFECTS OF
CHILDHOOD SEXUAL ABUSE IN WOMEN

by

Sheryl A. Dagang

A dissertation submitted in partial fulfillment
of the requirements for the degree

of

DOCTOR OF PHILOSOPHY

in

Psychology

Approved:

UTAH STATE UNIVERSITY
Logan, Utah

1995

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ABSTRACT

A Meta-Analytic Review of Studies Examining the
Effects of Childhood Sexual Abuse in Women

by

Sheryl A. Dagang, Doctor of Philosophy

Utah State University, 1995

Major Professors: Mark S. Innocenti, Ph.D.

Elwin Nielsen, Ph.D.

Department: Psychology

Childhood sexual abuse is a prevalent problem that impacts adult women and the mental health professionals who treat them. Decades of studies have been conducted examining the impact of childhood sexual abuse in order to be better able to treat clients with this history. Yet, few clear guidelines have resulted from these activities.

In order to gain a clearer picture of this research, a meta-analysis was conducted on 41 published studies to describe the nature of the problem, the subjects involved in these studies, the measures used to determine effect, and the impact of eight variables that potentially mediate the effect of childhood sexual abuse. The results of this meta-analysis show that authors use different definitions, sample from different populations, report different demographic data, and use different measures of outcome. Typical studies use definitions based on the relationship of the victim to the perpetrator and difference between victim and perpetrator in age. While many reviewers discuss the potential impact and importance of several demographic variables, including age, educational level, and marital status, few studies in this meta-analysis included this information.

Subjects are typically mental health clients or students; however, some studies did attempt to use a random sample from the general population. Most studies used a life-history interview or questionnaire in order to obtain demographic data and information about the nature of the sexual abuse. Most studies also utilized an objective measure of outcome, typically a measure of psychopathology; however, few studies used the same tool.

It was concluded that there is evidence to indicate a negative effect of sexual abuse in women. However, this evidence is not overwhelming. Also, it was concluded that in order to increase the level of understanding in this area, it is imperative to begin to standardize a protocol for this research. A standardized protocol would include a clearly stated definition of childhood sexual abuse, clearly stated demographic information, and clearly reported use of outcome measures and the outcomes. Standardization would enable researchers to replicate studies and compare results, processes which are invaluable to increase scientific understanding of the long-term effects of sexual abuse in adult women.

(88 pages)

This paper is dedicated to all the women who have been sexually abused as children in the hopes that we may continue to learn how to heal from the negative long-term effects of childhood sexual abuse.

ACKNOWLEDGMENTS

This document is the result of an accumulation of time, energy, tears, and hope from many people. I would first like to acknowledge the support from my co-chairs, Drs. Mark Innocenti and Elwin Nielsen, and committee members, Drs. Byron Burnham, Carolyn Barcus, Susan Crowley, and Mary Doty. Your support in the completion of this project has enabled me to find the endurance required.

I also would like to acknowledge my family. Thank you for believing in me. You have helped me learn that I could be disappointed without being disappointing. Specifically to my parents, you have spent a lifetime trying to teach me that success comes in working hard and doing my best. I think I have finally begun to understand--the learning and the joy come in the context of the journey. I will never be completely able to predict and control the outcome.

I would like to acknowledge all my friends who have been there over the years in graduate school. We have been through many a late night, cups of hot tea, and long walks. We have shared laughter, living, and life. To my friends, from California to Georgia, and all those here in Oklahoma, you have all given me so much--hugs, shoulders, and any reason to celebrate that we could find. We have worked together, sometimes with you carrying my share of the load as I needed to focus on finishing this document. You gave me the courage to continue and faith that all things eventually come to an end. When I wavered in my perseverance, you loaned me some of yours. Thank you for helping me remember why I wanted to begin this journey and for the courage to begin my next step.

Finally, I would like to acknowledge the Community of Hope, Tulsa, Oklahoma. You have enabled me to begin on this next phase. You knew I would succeed without dependence on a specific outcome long before I did. You offered to teach me about the

community. You saw the ability to stay whole in any circumstance, the grace of dignity without defensiveness, and the healing of standing in the middle of the fire, and you patiently taught me. You have offered me lessons in acceptance, brokenness that becomes wholeness, and the strength of solidarity in diversity. Thank you for reminding me that this work, and all of my work, is for the purpose of learning how to relate in healing, helpful, loving ways. Shalom.

Sheryl A. Dagang

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CHAPTER I
STATEMENT OF THE PROBLEM

Introduction

The sexual abuse of children is an increasing problem within American society (Haugaard & Raspucci, 1988). The number of adults seeking mental health treatment for the effects of childhood sexual abuse has greatly increased during the past two decades. Since the reporting of childhood sexual abuse is a rather new phenomenon, many adults who were molested as children (AMACs) are now coming forward and requesting psychotherapeutic services.

The demand for treatment of AMACs has grown to such proportions that mental health agencies have been established specifically to handle the repercussions of sexual abuse. As the demand for services to this population increases, so does the need to understand the manner in which this population would be best treated. In order to develop better treatment, it must be understood what is being talked about when discussing childhood sexual abuse.

To adequately address the issue of the impact of childhood sexual abuse in women, it is important to examine the growing incidence rate of childhood sexual abuse, review different definitions of childhood sexual abuse used by the various researchers, and identify the methodological problems of the research examining the long-term effects of childhood sexual abuse in adult women.

Issues of incidence and definition impact upon the potential outcomes of studies of people who were sexually abused as children. Knowledge of, and reliance on, these outcomes will help lead to the development of therapeutic treatments for women who have been sexually abused as children. It may be that studies using different definitions result in different outcomes. Information such as this would suggest a need to

determine the differential impacts of childhood sexual abuse based on the specific definition of the abuse used by the researchers.

It also seems clear that the issues of incidence and definition interact with the methodologies of the studies used to collect the information. What applies to one sample may not apply to another sample. Information from methodologically sound studies may provide us with different results than those from methodologically weak studies. Clearly, the relationship between methodology, defining characteristics, and outcomes needs to be established before proceeding to develop more effective treatments and to conduct better research. The purpose of this study is to examine the relationship between the various factors as they impact on women who have been victims of childhood sexual abuse. The purpose of this introduction section is to provide the reader with some information on current figures regarding the incidence of childhood sexual abuse and some information about definitions used in past research. Also, common concerns regarding methodology and research in this area are discussed. This section concludes with more specific information regarding the design of the current study.

Some researchers have discussed differences in impact of child abuse between boys and girls. However, few researchers have attempted to study the long-term effects of childhood sexual abuse in men as well as women. There appears to be a difference in impact between men and women. Therefore, this dissertation will evaluate the long-term effect of childhood sexual abuse in women only.

Incidence

In order to justify a study on the long-term effects of childhood sexual abuse, an examination of the current knowledge about the incidence is required. One consistent question has been whether the prevalence of sexual abuse has increased dramatically

in recent history or if only the number of reported cases has increased. How big a problem is child sexual abuse?

A comprehensive study (Russell, 1983), in which researchers used random sampling from the overall population of women in the San Francisco Bay Area, found that 16% of their 930 respondents had been sexually abused by at least one family member prior to the age of 14. Thirty-one percent of the same sample were sexually abused at least once by someone not considered a family member prior to the age of 14. These numbers cannot be combined to establish an approximate number of women who were sexually abused as children because some people may have been sexually abused by both family members and nonfamily members. However, even by conservative estimates, nearly one third of the sample had been sexually abused as children.

Sedney and Brooks (1984) recruited subjects from courses taught in the Department of Social Sciences at a university, as well as throughout the dormitories at the same university. The questionnaire covered the areas of background, present level of functioning, and sexual history. Responses to this questionnaire indicated that 16% of the respondents had experienced some type of childhood sexual experience with someone significantly older than themselves.

In this study, the median age of abuse onset was 9 years of age, with the sexually abusive behaviors including: exposure, touching, oral-genital contacts, masturbation, and intercourse. It is also noted that 58% of the respondents indicated that the sexual abuse was a one-time event, 26% indicated that it occurred for up to one year, and 14% indicated that the sexual abuse took place for longer than one year.

After examining incidence rates, it is apparent that childhood sexual abuse is occurring at a sufficient rate to warrant examination of the therapeutic impact. It also

seems clear that the selection of the sample from which researchers draw information influences the incidence rate. Logically, sampling concerns would also impact on outcomes.

Definition of Sexual Abuse

Authors conducting research in the area of sexual abuse have struggled with clearly defining childhood sexual abuse. The definition of sexual abuse used by researchers in this area is varied. Some definitions are extremely broad, such as "any form of coerced sexual interaction between an individual and a person in a position of power over that individual" (Dolan, 1991, p. 1). Other authors have attempted to utilize a legal definition. The use of a legal definition is complicated because each state has different definitions of child sexual abuse. For example, in the state of Washington, "intercourse with a child under eleven is criminal only if the perpetrator is over thirteen; with a child eleven, twelve, or thirteen, it is criminal when the perpetrator is over sixteen; and with a child fourteen or fifteen, when the perpetrator is over eighteen" (Haugaard & Raspucci, 1988, p. 20).

Therefore, many authors have addressed the complicated issue of defining sexual abuse by asking subjects to describe the events they are reporting as sexual abuse (Kendall-Tackett & Simon, 1987). Kendall-Tackett and Simon presented a structured questionnaire to 365 AMACs, 89% of whom were women and 11% of whom were men. All of the subjects were adults who had sought treatment for the effects of sexual abuse from an agency that specializes in the treatment of sexual abuse in the San Jose, California, area. Responses to their questionnaire indicated that the most common sexually abusive behavior was fondling from the waist down (92%), followed by fondling from the waist up (64%), oral sex (48%), vaginal intercourse (44%), attempted intercourse (19%), simulated intercourse (10%), and anal intercourse (9%).

These authors also found that the majority of the adults seeking treatment were abused by fathers or father surrogates (stepfathers, adoptive fathers, foster fathers, mothers' boyfriends). The average age at onset for this sample was 7.5 years.

Another researcher (Nelson, 1981) gathered subjects by advertising in local newspapers. A portion of the advertisement stated that the researcher was seeking respondents who were involved in incestuous relationships with either positive or negative effects. A majority of the respondents were men. The specific acts involved in the incestuous relationships included: fondling (94%), manual stimulation (84%), vaginal intercourse (54%), oral sex (53%), and anal sex (27%). It was also noted in this study that force was stated to have been used in 29% of the respondents' experiences.

Differences among definitions used has complicated efforts to synthesize and summarize information obtained. These definitional differences will be one variable evaluated in the present study.

Methodological Issues

In examining this body of literature, problems other than an inconsistency in the definition of childhood sexual abuse become apparent. Methodological differences create some difficulty in examining this body of literature and in combining these results in one review. These methodological issues can be divided into problems of sampling and problems of measurement.

Problems of Sampling

One of the problems in attempting to examine this literature is the use of different populations when evaluating the effects of child sexual abuse. Many researchers examined the impact of sexual abuse in women by conducting a study of these effects in subjects seeking psychotherapy (Benward & Densen-Gerber, 1975). Other

researchers, however, utilized a general population of women in a specific community (Fussell, 1986), or a general population of women attending college (Finkelhor, 1979). This use of different target populations among researchers increases the difficulty in summarizing the findings of these studies.

Problems of Measurement

Difficulties arise in attempting to integrate information from this literature because the measurement of the effects of childhood sexual abuse varies greatly among studies. Numerous approaches have been taken as a means to evaluate these effects: subjective statements of outcome (i.e., rating by the subject of the effect of the sexual abuse as negative, neutral, or positive); objective measures of psychopathology; or the utilization of histories that take into account different variables in the subject's life (e.g., marital history, history of need of psychotherapeutic services). Again, the use of different measures of outcome leads to difficulty in summarizing the findings of these studies. These differences in synthesizing and summarizing the data have clouded the ability to completely understand findings from previous research.

Summary

In order to begin to understand how to provide treatment to women who suffered sexual abuse in childhood, some researchers have evaluated the long-term effects of childhood sexual abuse. Different researchers have found and discussed different incidence rates, they have used different definitions of sexual abuse, and there have been problems with methodology.

Several authors have attempted to combine and describe the information obtained from a review of the literature on the long-term effects of sexual abuse in women. Within each previous review of the literature, the authors' difficulties in

summarizing and synthesizing the data have been discussed at length. For example, Haugaard and Raspucci (1988) reviewed the literature and described the conflicting results found. As the literature is reviewed, it is possible to hypothesize that specific variables related to the abuse may be impacting the long-term effects of abuse (e.g., Dolan, 1991). For example, many authors in the clinical literature attempt to discuss the impact of variables that may mediate the effect of the sexual abuse, such as, the relationship of the perpetrator to the victim, the age at the onset of the abuse, the use of force or violence during the abusive incidents, and the duration of the abuse (Hindman, 1990). The literature that examines the effect of trauma also discusses variables that appear to mediate the impact of traumatic events. Some of these variables include the degree of life threat, potential for recurrence, degree of moral conflict inherent in the situation, and the social responsiveness to the event. The presence versus absence of these variables could begin to explain the large variability among the studies examining the long-term effects of childhood sexual abuse in women. Therefore, conflicting results among the primary research may be due to differences among the presence or absence of these trauma variables. The difficulty in summarizing this body of literature is the major problem to be addressed in the present study.

The only existing reviews of the literature in the area of the measurement of the long-term effects of sexual abuse on women molested as children are narrative in nature. Narrative reviews have, historically, been the most popular method of reviewing a body of literature. This method includes gathering studies in a specified area, reading and inspecting these studies, eliminating extremely weak ones, describing those studies remaining, and drawing conclusions based on information obtained from those remaining studies (Light & Smith, 1971). Narrative reviews, though popular, have been criticized for subjectiveness (Cooper, 1983; Jackson, 1980; Light & Pillemer, 1984).

The narrative reviews describe at length the contradictory results from the individual studies examining the long-term effects of childhood sexual abuse in women (Alter-Reid, Gibbs, Lachenmeyer, Sigal, & Massoth, 1986; Bachmann, Moeller, & Bennett, 1988; Browne & Finkelhor, 1986; Cahill, Llewelyn, & Pearson, 1991; Constantine, 1981; Finkelhor, 1990; Jehu & Gazan, 1983; Lystad, 1982; Schetky, 1990). These contradictory results then lead to several problems when attempting to integrate the literature of the effects of child sexual abuse. Therefore, the primary question is "what information and knowledge have we gained through our studies of the long-term effects of childhood sexual abuse?"

Glass (1976) attempted to address these difficulties by proposing another approach that statistically combines the data from all studies, and then allows for the analysis of this now combined body of data. He termed this approach "meta-analysis," or the analysis of analyses. According to Glass, the meta-analysis differs from other methods of review in that it: (a) defines the population of literature that is to be reviewed, (b) is explicit in the exclusionary criteria, and (c) quantifies the outcomes from all studies using a common metric. Once combined, the outcome data are described and available for statistical analyses. The procedures for data collection and rationale for conclusions are explicit and replicable.

Jackson (1980) described the importance of systematic reviews. He described the process of systematic reviews as being similar to that of conducting primary research. In order to conduct a systematic review, a set of tasks must be completed. These tasks include: (a) the selection and definition of a topic or problem, (b) review of previous reviews, (c) formulation of research questions or hypotheses, (d) selection of studies, (e) coding of study characteristics and subsequent findings, (f) data analysis and interpretation of the results, and (g) the reporting of results and conclusions.

No meta-analytic review of the literature in the area of long-term effects of sexual abuse in adult women has been completed to date. Such a review may aid understanding of the information currently available, thus establishing a basis for questions and directions for further research.

General Statement of the Problem

Given the prevalence of childhood sexual abuse, both intrafamilial and extrafamilial, it is imperative to understand the long-term effects of such abuse. Therefore, a meta-analytic investigation of experimental studies on the long-term effects of sexual abuse has been conducted.

It seems clear that issues of sampling, definition, and methodology potentially impact the outcomes obtained. However, the first step in the meta-analytic process is conducting a review of the previous reviews to more specifically define the issues to be examined. Until the review of reviews is completed, it is premature to find specific areas for analysis. The review of reviews is presented in the next section.

CHAPTER II

REVIEW OF REVIEWS

Rationale

In order to conduct a comprehensive investigation of the literature examining the long-term effects of sexual abuse in women, a review of previous reviews was conducted. In any scientific process, an examination of previous work by other researchers provides valuable information. This is also true of a review of the literature (Innocenti & White, 1993). The purpose of this review was twofold: (a) to provide a detailed description of previous research and (b) to examine the weaknesses, conclusions, and recommendations for future research obtained from the past reviews.

Selection Process

A thorough search of the psychological computerized database system of all information from 1960 through 1992 (i.e., Psychological Abstracts database system) was conducted to generate a list of reviews in which the author(s) discussed the long-term effects of sexual abuse in women. These dates were selected following a cursory review of Psychological Abstracts, which determined that few if any studies in the area of long-term effects of childhood sexual abuse were conducted prior to January 1960. This dissertation was started in early 1993; therefore, December 31, 1992, was selected as the end date based on dates of available published information at the time of the onset of this project. A final procedure in this process was a hand search of Psychological Abstracts in order to identify reviews that may have been missed by the computer search. Eleven reviews of the literature were identified following this comprehensive search--two books and nine journal articles.

Criteria were developed in order to define the specific population of reviews included here. One requirement was that the review discussed primary research in the area of long-term effects of sexual abuse. Long-term was defined as subjects who were over the age of 18 at the time of the study, and were victims of sexual abuse prior to the age of 18. Although one criterion was to limit reviews to those that discussed these effects on women, only one review was found that discussed women only. Therefore, reviews that discussed the long-term effects on women and men were included. These reviews also had to include reviews of research in which a group of women who had been sexually abused in childhood were compared with a group of women who had not been sexually abused in childhood.

Previous Reviews

In this search, two books were located that describe long-term effects of sexual abuse in adult women (Haugaard & Raspucci, 1988; Meiselman, 1990). Nine reviews of the literature on the long-term effects of sexual abuse in adult women were found to have been published in scholarly journals (Alter-Reid et al., 1986; Bachman et al., 1988; Browne & Finkelhor, 1986; Cahill et al., 1991; Constantine, 1981; Finkelhor, 1990; Jehu & Gazan, 1983; Lystad, 1982; Schetky, 1990). All of these reviews were narrative in nature. Table 1 lists all of the reviews, both in books and journal articles.

Table 1 also provides information as to whether an explanation of the criteria for including the studies in the review was presented, as well as a cursory note regarding the conclusions drawn. Only three of the reviewers specifically stated their inclusion criteria (Alter-Reid et al., 1986; Browne & Finkelhor, 1986; Constantine, 1981), and eight suggested a primarily negative impact of childhood sexual abuse.

These reviews of the literature consistently discuss several limitations in the primary research of the long-term effects of sexual abuse in adult women. These

Table 1

Overall Review of Reviews

Review	# of Articles Reviewed	Inclusion Criteria Specifically Stated	Conclusions Regarding Impact on Women
Alter-Reid et al. (1986)	24	Yes	Negative
Bachman et al. (1988)	91	No	1/4 of studies Negative
Browne & Finkelhor (1986)	26	Yes	Negative
Cahill et al. (1991)	30	No	Negative
Corstantine (1981)	30	Yes	No specific impact
Finkelhor (1990)	38	No	No specific impact
Haugaard & Raspucci (1988)	39	No	Negative
Jehu & Gazen (1983)	24	No	Negative
Lystad (1982)	28	No	Devastating
Meiselman (1990)	57	No	Negative
Schetky (1990)	70	No	Negative

limitations appear to hinder the process of conducting a comprehensive review of the literature. Four major methodological limitations of the primary research that impede the summarization of the results are (a) lack of a specific definition of childhood sexual abuse to be used in the study, (b) use of different populations from which to sample for subjects, (c) the inconsistent use of control groups, and (d) lack of consistent use of specific outcome measures.

Definitions

The following reviewers had concerns regarding definitional issues: Browne & Finkelhor, 1986; Cahill et al. 1991; Haugaard & Raspucci, 1988; Lystad, 1982; Meiselman, 1990; Schetky, 1990. First, various definitions of sexual abuse have been utilized. Different authors may include abuse by family and nonfamily members, while

other authors may limit their population to incest only. Another difference among definitions used includes age difference requirements between the victim and the perpetrator.

Description of Groups

Alter-Reid et al. (1986), Browne and Finkelhor (1986), Bachman et al. (1988), Constatine (1981), Haugaard and Raspucci (1988), and Meiselman (1990) all discussed the differences in sampling procedures as another limitation to this body of literature. Some researchers use "convenience samples" (e.g., subjects selected from samples of college students or mental health clients). Other authors utilize samples from the general population or subject pools obtained from random sampling techniques. Still other researchers use self-selected samples--volunteers solicited via advertising in local and/or student newspapers, or by posting flyers in communities and on college campuses. These differences may impact outcomes.

Use of Control Groups

The inconsistent use of control groups is another limitation discussed by reviewers (Bachman et al., 1988; Haugaard & Raspucci, 1988; Meiselman, 1990). Many researchers have used comparison groups from dissimilar samples. For example, some authors have used clients seeking mental health treatment as the experimental group and then used a control group of volunteers from the community. As many women do not recall sexual abuse from childhood until much later in life, it is possible that some of the participants in the comparison group may have been abused.

The sampling procedures and descriptions of the experimental group have also been lacking in the primary research. Including victims in the control group due to lack of memory of the abuse or a desire to deny the reality of having been abused as a child

confounds having a completely clean sample in the control group. While it is not possible to totally avoid this threat to validity of these studies, it is important to discuss the level of the threat and its potential impact on the study outcome.

It is also important to acknowledge the existence of False Memory Syndrome. This is exhibited by women who claim to remember being abused sexually as a child, when there were actually no abusive experiences endured by these women. These women would be more likely to be included in studies in which volunteers are solicited from the public via flyers, newspaper, and radio announcements. Women suffering from False Memory Syndrome may also be found in higher numbers among samples selected from clients receiving mental health treatment for the effects of childhood sexual abuse.

Outcome Measures Used

A fourth limitation of this literature discussed by the reviewers is the outcome measures used (Alter-Reid et al., 1986; Bachman et al., 1988; Haugaard & Raspucci, 1988; Meiselman, 1990). Most studies measure impact or effect of sexual abuse in adult women by using interviews that examine differences in the life histories of women who had or had not been sexually abused as children. Few studies have attempted to use objective measures of outcome. Also, according to previous reviewers, few studies have used the same objective measure of outcome, making comparisons among studies more difficult.

Limitations of Reviews

Although informative, these reviews have limitations. These limitations generally mirror the limitations of the primary research: (a) poor quality of reporting, (b) lack of specific definitions of childhood sexual abuse, (c) lack of a clear discussion of the

criteria used to include studies in the review, and (d) lack of a clear description of methods used to obtain the sample of studies to be included in the review.

Table 2 provides information about these limitations for each of the reviews. Also listed in Table 2 is information regarding the specificity of the definition of sexual abuse used in the review. The table indicates if the definition of abuse used was explicitly stated or had to be inferred from information in the text. Also, the definition of sexual abuse used by the reviewers is presented. Information also provided in Table 2 is if the sample of studies to be included in the review was specifically defined. Finally, Table 2 lists if the reviewers clearly stated how the samples of studies reviewed were obtained.

Table 2

Characteristics of Reviews

Review	Specific Definition Examined? Specific or Inferred	Definition of Abuse Used ^a	Sample Explicitly Defined?	Explanation of How Sample Obtained?
Alter-Reid et al. (1986)	Inferred	Intra/Inter, No age limit	Yes	No
Bachman et al. (1988)	Inferred	Unknown	No	No
Browne & Finkelhor (1986)	Specific	Intra/Inter, No age limit	Yes	No
Cahill et al. (1991)	Inferred	Unknown	No	No
Constantine (1981)	Inferred	Intra/Inter, No age limit	Yes	No
Finkelhor (1990)	Inferred	Unknown	No	No
Haugaard & Raspucci (1988)	Inferred	Intra/Inter, No age limit	No	No
Jehu & Gazen (1983)	Specific	Intra, Age limit	No	No
Lystad (1982)	Inferred	Intra/Inter, No age limit	No	No
Meiselman (1990)	Inferred	Intra/Inter, No age limit	No	No
Schetky (1990)	Inferred	Intra/Inter, No age limit	No	No

^a definition included intrafamilial abuse only, and intrafamilial and interfamilial abuse

While most reviewers discuss the need for a more concise definition of childhood sexual abuse to be used by the researchers conducting primary research, only two reviewers provide such a definition (Browne & Finkelhor, 1986; Jehu & Gazen, 1983). Similar to the primary research, the type of definition can frequently be inferred from the discussion within the paper. Jehu and Gazen (1983) were the only authors to limit their review to primary studies examining the long-term effects of childhood sexual abuse in which the perpetrator was a family member. These authors were also the only reviewers who required a specified age difference between the victim and the perpetrator.

Another limitation of these reviews is that only two (Alter-Reid et al., 1986; Browne & Finkelhor, 1986) discussed the inclusion criteria used. Specific statements regarding the inclusion criteria make it possible for future reviewers to expand and update the review. All reviews of the literature will require some limitations as to which studies will be included and appropriate, and which studies will be excluded and inappropriate. It is difficult to fully understand the results found from a review of the literature when there is no explanation of how the studies were selected.

As listed in Table 2, three of the reviewers (Alter-Reid et al. 1986; Browne & Finkelhor, 1986; Constantine, 1981) specifically defined the sample of primary studies used. None of these reviewers clearly explained the procedures used to obtain the sample of studies. Some reviews included only published data, while others included unpublished dissertation data, information obtained from conference presentations, and data obtained via personal communications. Although all reviewers find it necessary to limit the review for the purpose of the study, one procedure that aids in the understanding of the findings is to fully discuss the inclusion and exclusion criteria.

Summary

All previous reviews are narrative in nature. While these reviews provide descriptive information, they do not provide enough information to accurately evaluate the body of literature examining the long-term effects of childhood sexual abuse. Narrative reviews tend to be subjective, scientifically unsound, and inefficient (Light & Pillemer, 1984).

Nine of the 11 reviews concluded that sexual abuse in childhood leads to some negative long-term effects on adult women. The conclusions drawn vary, depending on the approach utilized by the specific author. For example, Bachman et al. (1988) concluded that one fourth of the studies examined demonstrated a negative long-term effect, whereas Jehu and Gazen (1983) reported that one third of the studies examined demonstrated a negative long-term effect. Lystad (1982) simply concluded that the long-term effect was devastation. Two other reviewers (Browne & Finkelhor, 1986; Schetky, 1990) attempted to explain the variables in the abuse that led to these negative effects. Brown and Finkelhor concluded that, based on the data in the studies they reviewed, abuse perpetrated by a father or stepfather, abuse that included genital penetration, and abuse that included force led to negative long-term effects. Schetky concluded, similarly, that sexual abuse perpetrated by a father or stepfather, as well as sexual abuse that occurred with increased frequency and/or duration, led to negative long-term effects. There appears to be a negative effect of childhood sexual abuse on women. At the same time, the degree of the effect, as well as the best manner in which to study this effect, calls for further examination.

After reviewing the previous reviews, the following statement of the problem and the purpose and objectives of the present study are presented.

General Statement of the Problem

Given the prevalence of childhood sexual abuse, both intrafamilial and extrafamilial, it is imperative to understand the long-term effects of such abuse. Therefore, a meta-analytic investigation of experimental studies on the long-term effects of sexual abuse has been conducted. It seems clear from the review of reviews that issues of sampling, definition, and methodology potentially impact on the outcomes obtained.

Purpose and Objectives

The purpose of the present research was to conduct a meta-analysis of the literature to carefully and systematically describe studies which examined long-term effects of childhood sexual abuse in women. Specific objectives for this study included:

1. Summarize
 - (a) characteristics of primary studies of childhood sexual abuse and
 - (b) characteristics of subjects used in the primary studies of childhood sexual abuse.
2. Compare
 - (a) the effect size differences among studies utilizing different types of subjects,
 - (b) the effect size differences among studies utilizing different definitions of childhood sexual abuse,
 - (c) the effect size differences among studies utilizing different measures of effect of childhood sexual abuse, and
 - (d) the effect size differences among studies found to have different levels of adequacy of description for coding.

CHAPTER III

METHOD

Purpose

To gain additional information about the long-term effects of childhood sexual abuse in women, a meta-analysis was conducted. Studies were selected according to specific inclusion criteria. The procedures used to locate all studies used in this meta-analysis were specific and are clearly defined in the next section.

Selection of Studies to Be Included

Attempts were made to include all published English-language studies between 1960 and 1992 in which the sample was women sexually abused as children. Women are defined as female subjects who are over the age of 18 at the time of the study. Sexual abuse is defined to include abuse perpetrated by family or nonfamily members; for the purpose of this study, there is not a required age difference between the victim and the perpetrator. For the abuse to have occurred in childhood, the abuse must have occurred before the woman was 18 years old. Children are defined as people under the age of 18.

Inclusion Criteria

Reports included in this study were those that met the following criteria.

1. The study addressed the effects of childhood sexual abuse in women.
2. Subjects in the study had to be over the age of 18 years at the time of the study.

3. The study included was published in English-language journals.
4. The study had to compare two groups, a comparison group and an experimental group.

Location procedures. Due to the importance of obtaining an unbiased, comprehensive sample, every effort was made to secure all the research reports dealing with outcomes for women sexually abused in childhood. Three major steps were taken.

1. A computer-assisted search (Psychological Abstracts, Dissertation Abstracts International, and Education Resources Information Center) was completed. Relevant reports from this search were obtained and compiled. Keywords used included: effects, sexual, abuse, incest, and adult.

2. After obtaining the reports from the above sources, all their reference lists were searched. Experimental literature cited in previous reviews of the literature were also located.

3. A manual search of Psychological Abstracts and Social Sciences Citation Index was also completed.

Determination of the relevance of reports was made by first reading the abstract. If the study appeared to meet inclusion criteria (i.e., from the information obtained via the abstract, the study fit the inclusion criteria explained above), the entire report was then read for determination of appropriateness. If the report was evaluated and met the inclusion criteria, it was then coded along the variables discussed at length later in this section.

Data and Instrumentation

The primary instrument was a coding sheet, developed through a five-step process: (a) development of the original coding sheet, (b) pilot test of the coding sheet, (c) refinement of the coding sheet, (d) test again (steps a to c were repeated three times for the present study), and (e) final draft of the coding sheet. The preliminary coding sheet was developed based on information obtained from the review of reviews. Data collected included the following: if childhood sexual abuse was explicitly defined; if defined, the definition used; characteristics of subjects in the sample; the sampling procedure; and a list of possible outcome measures used with corresponding statistical data. This preliminary version was subjected to testing with 10 studies selected at random. The coding sheet was then revised based on information from the pilot test. The final draft was developed after three preliminary coding sheets had been tested and revised (see Appendix A for coding sheet).

Data were collected from the the individual studies by coding the relevant information in a quantified format. Relevant information included: (a) subject characteristics for both the control and the experimental groups; (b) methodological characteristics (i.e., sample size, dependent variables); and (c) outcome measures used.

In the final version, variables coded consisted of study characteristics, definition of sexual abuse, sample characteristics, types of outcome measures used, and the common metric used for objective measures of outcome. Also, each study was rated and coded for several different measures of the adequacy of the study. Adequacy was defined as the ease of coding for the purpose of this meta-analysis, or in other words, as a qualitative means to describe the ease of obtaining needed information for

inclusion in a meta-analysis. For more specific information regarding the coding sheet and these variables, see Appendices A and B. Each variable that was coded was first clearly defined and operationalized. Specific information regarding these conventions is detailed in Appendix C.

Data Analysis

The statistic used for dependent measures in present meta-analytic review is the standardized mean difference (SMD; Glass, 1976), a standard measurement used to assess the difference between two groups. For the purpose of the present meta-analytic review, the term "effect size" will refer to the standardized mean difference. This statistic, also known as Glass's Delta, is the difference between a treatment mean and a comparison group mean divided by the comparison group standard deviation. Data are presented as comparisons of independent variables from different groups, such as women who have and women who have not been sexually abused as children. As a reference, an effect size of 0.50 indicates that women who had been sexually abused scored one-half standard deviation higher on a measure of pathology than women who had not been sexually abused as children.

An effect size of -0.50 indicates that women who were sexually abused in childhood scored one-half standard deviation below women who had not been sexually abused on a measure of pathology. All effect sizes in this meta-analysis were formulated so that a positive effect indicates an increase in pathology; a negative effect indicates less pathology for the women abused as children. For the purpose of this study, a mean effect of 0.50 is considered clinically significant. There is no consensus on what level of an effect is significant; however, effect sizes of 0.50 or above are generally considered significant (Cohen, 1977; Glass, 1976; Innocenti & White, 1993;

Tallmadge, 1977). Also, after reviewing the sample sizes used by the studies in this meta-analysis, the statistical power for different effect sizes, and the psychometric qualities of the instruments used in the studies, it was decided that .50 is a rigorous but clinically meaningful effect size criterion.

Following a descriptive analysis of the meta-analysis studies, inferential analyses are presented to examine issues related to characteristics of the studies in the meta-analysis. While the use of inferential statistics with meta-analytic data has become common in the meta-analysis literature, there is some debate as to the appropriateness of such a practice. Shaver (1991) discussed the difficulties in justifying the use of inferential statistics when the reviewer has conducted an exhaustive search of the literature and has presented and analyzed the accessible population of studies. When the reviewer has analyzed the data from the entire population, inferences need not be made as the parameters can be calculated directly. However, some opponents to the use of inferential statistics in meta-analyses have conceded the usefulness of such measures in the context of social convention (e.g., Glass, McGaw, & Smith, 1981).

Other researchers have discussed the usefulness of inferential statistics (although not in the traditional sense) in the examination of data obtained from a meta-analytic review (Becker & Schram, 1994; Hedges, 1994; Hunter & Schmidt, 1994; Raudenbush, 1994). According to these authors, the statistical inferences obtained from a meta-analysis are inferred to the universe of possible studies rather than to the population parameter (Hedges, 1994).

The basic issue regarding the use of inferential statistics for Hedges (1994) and other proponents of inferential statistics is one of how the results of the meta-analysis are to be interpreted. The meta-analytic studies are viewed as a sample from a

hypothetical universe of studies. The set of studies included in any meta-analysis constitutes a sample from a universe of "possible" studies, studies that realistically could have been conducted or that might be conducted in the future. This view of populations as infinite is consistent with generalizing to a universe of possible observations (Raudenbush, 1994). The statistical inferences apply to the universe of studies from which the study sample was obtained (Hedges, 1994).

The use of inferential statistics, therefore, enables the researcher to account for the uncertainty that arises when the studies are viewed as a representative sample from a larger universe rather than constituting the entire universe. The uncertainty being accounted for arises because study contexts, treatments and procedures will inevitably vary in many ways, and these variances may influence results (Raudenbush, 1994). Given these various issues, a decision was made to use inferential statistics in the current meta-analysis. The inferential statistics meet the expectations of many social science researchers and can be theoretically justified by considering the current meta-analysis studies as a part of the possible universe of studies in this area.

In order to meet objective one (summarize characteristics of primary studies of childhood sexual abuse and characteristics of subjects used in the primary studies of childhood sexual abuse), descriptive information was compiled. Frequency counts were obtained of the different definitions of childhood sexual abuse, distinguishing characteristics of the subjects (e.g., students, clients of mental health centers) and characteristics of measures used (e.g., life history, objective measures, Likert scales). Effect sizes were calculated as the common metric.

To address objective 2 (compare the effect size differences among studies utilizing different types of subjects, among studies utilizing different definitions of childhood sexual abuse, among studies utilizing different measures of effect of

childhood sexual abuse, and among studies found to have different levels of adequacy), descriptive analyses were conducted using effect sizes by variables of interest.

Inferential statistics were then used to examine if differences existed between groups on the above study variables.

CHAPTER IV

RESULTS AND DISCUSSION

The typical study included in this review was a quasi-experimental design study that included women who had been sexually abused in childhood as the experimental group and women who had not been sexually abused in childhood as the comparison group. A total of 38 studies, published in 37 articles, met the inclusion criteria.

Analysis was completed following the coding of each article by entering the data in an SPSS-PC+ computer program. Appropriate descriptive statistics for the effect sizes for each variable are provided. Variables described include: abuse characteristics, comparison and control group characteristics, sample characteristics, outcome variables, and variables related to the adequacy of the design and reporting of the study.

Overall Study Population

Although all 38 studies included in this meta-analysis adequately fit the inclusion criteria, the differences among the studies become quickly apparent. From the 38 studies coded, 22 studies provided adequate information in order to calculate 56 total effect sizes.

Table 3 presents overall data from each of the studies. Each study was given an identification number. The group sizes for the experimental and the comparison group are listed, as is the abuse definition. Some authors explicitly stated the definition of childhood sexual abuse used, while in the other studies the definition could be inferred from the text. This information is also listed. Abuse definitions have been coded using a 1 to 4 numbering system; (1) abuse perpetrated by family members, with a specified difference in age between the victim and the perpetrator; (2) abuse perpetrated by

Table 3
Variables from Studies Used

	Study ^a	# Subjects Abused/ Not Abused	Definition Stated	Abuse Definition ^b	Population Sampled (Abused X Not Abused)
1	Alexander & Lupfer (1987)	339/339	yes	4	Student X Student
2	Bagley (1990)	240/510	yes	4	General X General
3	Bagley (1991)	240/510	yes	4	General X General
4	Bagley & Ramsay (1986)	82/285	yes	3	General X General
5	Benward & Densen-Gerber (1975)	52/66	yes	2	Mental Health X Mental Health
7	Bess & Janssen (1982)	10/22	yes	2	Mental Health X Mental Health
8	Bifulco, Brown, & Adler (1991)	22/87	no	4 ^c	General X General
9	Briere & Runtz (1986)	133/62	yes	3	Mental Health X Mental Health
10	Briere & Runtz (1988)	41/237	no	4 ^c	Student X Student
12	Bryer, Nelson, Miller, & Kroil (1987)	36/12	yes	4	Mental Health X Mental Health
13	Bulik, Sullivan, & Rorty (1989)	12/23	no	2 ^c	Mental Health X Mental Health
14	Charmoli & Athelstan (1988)	377/224	yes	2	General X General
15	Chu & Dill (1990)	35/63	no	4 ^c	Mental Health X Mental Health
17	Craine, Henson, Colliver, & Maclean (1988)	54/59	yes	3	Mental Health X Mental Health
18	Cunningham, Pearce, & Pearce (1988)	27/33	no	4 ^c	Mental Health X Mental Health
22	Fromuth (1986)		yes	3	Student X Student
24	Gold (1986)	103/88	yes	3	General X General
45	Gorcey, Santiago, & McCall-Perez (1986)	41/56	no	4 ^c	General X General
26	Greenwald, Leitenberg, Cado, & Tarran (1990)	54/54	yes	3	General X General
27	Harter, Alexander, & Neimeyar (1988)	29/56	no	2 ^c	Student X Student
29	Jackson, Calhoun, Amick, Maddever, & Habif (1990)	22/18	yes	1	General X General
30	Meiselman (1980)	16/16	no	2 ^c	Mental Health X Mental Health

(table continues)

	Study ^a	# Subjects Abused/ Not Abused	Definition Stated	Abuse Definition ^b	Population Sampled (Abused X Not Abused)
31	Morrison (1980)	33/27	no	4 ^c	Mental Health X Mental Health
44	Murphy et al. (1988)	207/184	yes	4	General X General
32	Owens (1984)	17/17	no	4 ^c	Mental Health X Mental Health
23	Paden-Gelster & Feinaur (1988)	14/14	yes	4	Mental Health X Mental Health
33	Palmer, Chaloner, & Openheimer (1992)	57/58	no	3 ^c	Mental Health X Mental Health
34	Parker & Parker (1991)	135/357	no	4 ^c	Student X Student
35	Peters (1988)	71/48	yes	4	General X General
36	Pribor & Dinwiddie (1992)	52/230	yes	3	Mental Health X Mental Health
37	Rew (1989)	21/34	no	4 ^c	Student X Student
38	Roland, Zelhart, Cochran, & Funderburk (1985)	26/25	yes	3	Mental Health X Mental Health
39	Saunders (1991)	33/29	yes	3	Mental Health X Mental Health
40	Saunders, Villeponteaux, Lipovsky, Kilpatrick, & Veronen (1992)	131/260	no	4 ^c	General X General
41	Scott & Thorner (1986)	30/30	no	2 ^c	Mental Health X Mental Health
42	Sedney & Brooks (1984)	51/250	yes	4	Student X Student
43.1	Tsai, Feldman-Summers, & Edgar (1979)	30/30	no	4 ^c	Mental Health X General
43.2	Tsai et al. (1979)	30/30	no	4 ^c	General X General

^a Studies are listed with their corresponding coded study numbers, to be referred to throughout the remainder of the paper

^b Definition types: 1. Abuse perpetrated by family members, with a specified difference in age between the victim and the perpetrator. 2. Abuse perpetrated by family members and nonfamily members, with a specified difference in age between the victim and the perpetrator. 3. Abuse perpetrated by family members, no specified difference in age between the victim and the perpetrator. 4. Abuse perpetrated by family and nonfamily members, no specified difference between the victim and the perpetrator.

^c Definition inferred from text, not specifically stated

family members and nonfamily members, with a specified difference in age between the victim and the perpetrator; (3) abuse perpetrated by family members, with no specified difference in age between the victim and the perpetrator; and (4) abuse perpetrated by family and nonfamily members, with no specified difference between the victim and the

perpetrator. Also included in Table 3 is a description of the samples of the study (university students, mental health clients, or the general population).

Many authors have discussed the importance of different subject demographics (e.g., Finkelhor, 1990). These demographics include age of the subject, educational level, and marital status (see Table 4). Of all 38 studies, only 13 specifically state the age of the subjects used. Both level of education and the marital status of the women who have been sexually abused have been discussed as important potentially confounding variables throughout this body of literature. Four studies included this information in their demographic description of the subjects. It is important to note that some of these studies may have inquired regarding this information and then not reported it; however, this raises the question of disseminating all pertinent information obtained while conducting a study of this type. There appears to be no clear pattern as to which subject characteristics are obtained nor what has been explicitly reported.

Issues of types of samples used as well as the definition of childhood sexual abuse used have been discussed earlier in this document. These have been described by previous reviewers as variables that may influence the outcome of the specific study. Specific effect size differences among types of samples used, as well as differences in definition of sexual abuse, will be discussed later in this chapter.

Table 4

Characteristics of Subjects

Subject Characteristic Reported	Number of Studies	% of Studies	Mean
Age	13	31.71	29.69
Level of Education	4	9.76	9.72 ^a
Years Married	4	9.76	9.44

^a grade level

Abuse Characteristics

The specific definition of childhood sexual abuse used by each study was coded (Table 5). Many authors ($N = 17$) did not specifically state their definition of sexual abuse in the discussion of the methods. A t-test was computed to determine the difference between studies that specifically stated the definition of childhood sexual abuse used and studies that did not specifically state the definition of childhood sexual abuse used. There were no statistically significant differences ($t = 0.88$).

For studies where the definition was not explicitly stated, the definition could be inferred from the discussion of the results. For example, a study that did not specifically define sexual abuse may have discussed the relationship of the victim to the perpetrator as well as the importance of any differences in age between them in the text of the paper.

Table 5

Definition of Sexual Abuse

Definition Type ^a	Number of studies (N)	Number of effect sizes (Nes)	Mean of effect sizes (\bar{X}_{es})	Standard deviation of effect sizes (S_{es})
1	1	1	0.70	-
2	7	15	0.98	0.98
3	10	11	0.59	0.39
4	20	24	0.51	0.41

^a definition types:

1. Abuse perpetrated by family members, with a specified difference in age between the victim and the perpetrator.
2. Abuse perpetrated by family members and nonfamily members, with a specified difference in age between the victim and the perpetrator.
3. Abuse perpetrated by family members, no specified difference in age between the victim and the perpetrator.
4. Abuse perpetrated by family and nonfamily members, no specified difference between the victim and the perpetrator.

Most studies ($N = 20$) used a definition of sexual abuse in which the perpetrator may or may not be a family member and in which there is no clearly specified age difference required between the victim and the perpetrator—a liberal definition of sexual abuse. Ten studies defined sexual abuse as intrafamilial, or incestuous only, and did not require that there be a minimum age difference between the perpetrator and the victim. Fewer studies required an age difference between the victim and the perpetrator, either incestuous abuse only ($N = 1$) or not incestuous only ($N = 7$).

Mean effect sizes were calculated for studies that utilized specific definitions of childhood sexual abuse. Clinically significant effect sizes were found between groups regardless of definition. However, the standard deviations for the various effect sizes were very large, indicating large variance among the studies included in this meta-analysis.

The largest effect was found in studies that utilized a definition not limited to incestuous abuse yet required a specified age difference between the victim and perpetrator ($N = 7$, $\bar{X}_{es} = 0.98$, $S_{es} = 0.98$) (definition #2). Those studies that did not require an age difference between the victim and the perpetrator also found clinically significant differences between women who had been sexually abused in childhood and women who had not been sexually abused in childhood (intrafamilial abuse only, definition #3, $N = 10$, $\bar{X}_{es} = 0.59$, $S_{es} = 0.39$; and intra- and interfamilial abuse, definition #4, $N = 20$, $\bar{X}_{es} = 0.51$, $S_{es} = 0.41$).

An ANOVA was calculated to determine the statistical significance of these effects ($F = 2.31$, $p = 0.09$) (Table 6). The group for Definition Type 1 was not included in this analysis in order to conform with the assumptions necessary to compute an analysis of variance. No statistically significant results were found.

Table 6

Analysis of Variance Definition Types

Sources of Variance	<u>SS</u>	<u>df</u>	<u>MS</u>	<u>F</u>	<u>p</u>
Between Group	2.63	3	0.88	2.31	0.09
Within Group	19.72	52	0.38		
Total	22.36				

Sample Characteristics

Studies used different groups for their samples (Table 7). Most studies used clients receiving services for treatment from a mental health facility as their sample base for both the abused and not abused groups ($N = 19$). Other studies used samples of college students ($N = 7$) or samples from the general population ($N = 12$). One study compared a group of women who had been sexually abused as children who were seeking mental health treatment to a group of women who had not been sexually abused who had been selected from the general population.

Table 7 presents effect sizes, mean effects, and standard deviation of effect sizes for studies by sample characteristics. The largest mean effect size was when both the abused and nonabused groups were sampled from the women seeking mental health treatment ($N = 18$, $\bar{X}_{es} = 1.03$, $s = 0.82$). When the abused group is selected from

Table 7

Effect Sizes by Subject Characteristics

Abused X Not Abused	<u>N</u> studies	<u>Nes</u>	<u>\bar{X}_{es}</u>	<u>Ses</u>
Student X Student	7	18	0.29	0.22
Mental Health Clients X Mental Health Clients	18	22	1.03	0.82
General Population X General Population	12	15	0.44	0.24
Mental Health Clients X General Population	1	2	0.52	

women seeking treatment, and the nonabused group is selected from the general population, the results are larger ($N = 1$, $\bar{X}_{es} = 0.52$, $s = 0.22$) than results from studies in which both groups are selected from samples of students ($N = 7$, $\bar{X}_{es} = 0.29$, $s = 0.22$), or when both samples are selected from the general population ($N = 12$, $\bar{X}_{es} = 0.44$, $s = 0.24$).

In examining the differences among samples used, abused women who were mental health clients demonstrated clinically significantly more pathology than women who had not been abused and were also seeking mental health treatment. Abused women who were seeking mental health treatment also demonstrated more pathology than nonabused women from the general population. However, when abused women are compared with women who had not been abused, and the populations sampled are students or from the general population, differences found were not at the level considered clinically significant.

An ANOVA was calculated to determine the statistical significance of the differences among the populations sampled ($F = 8.73$, $p = 0.00$) (Table 8). To conform with the necessary assumptions of an analysis of variance, the group with one subject (Mental Health Clients X General Population) was not included in this analysis. Because statistical significance was found, a Tukey B procedure on SPSS-PC was conducted in order to assess within which dichotomies statistically significant differences were occurring. Studies that sampled from a population of mental health clients demonstrated greater effects (statistically significant at $p \leq 0.05$) than studies that sampled from a population of students or studies that sampled from the general population.

These findings clearly suggest that there are differences between those women who had been sexually abused as children who seek mental health treatment and those

Table 8

Analysis of Variance Populations Sampled

Sources of Variance	<u>SS</u>	<u>df</u>	<u>MS</u>	<u>F</u>	<u>p</u>
Between Group	5.69	2	2.85	8.73	0.00
Within Group	16.63	51	0.33		
Total	22.33				

who are seeking mental health treatment but had not been sexually abused. It makes intuitive sense that those women sexually abused in childhood who seek mental health treatment would demonstrate a higher level of pathology.

Outcome Measures

Outcome measures (i.e., the dependent variables) utilized by these researchers included subjective ratings, objective measures of psychopathology, and differences in reported life histories. Life history information was obtained via interviews or questionnaires. All authors conducted a life history interview, or had the subjects complete a life history questionnaire as one manner of examining the long-term effects of childhood sexual abuse in adult women. Effect sizes could not be calculated for these. Likert-type scales used by any study were specifically designed for use by that particular study. Of the four studies that utilized Likert-type scales, only one reported data in a manner that allowed an effect size to be calculated ($\bar{X}_{es} = 0.85$) (Cunningham et al., 1988).

Table 9 lists the different classes of objective measures used, the specific measures, and the number of studies using each measure. These objective measures included paper-and-pencil tests of mental health as well as psychopathology. Twenty-two studies provided adequate information in order to calculate a total of 56 effect sizes.

Table 9

Outcome Measures Used

Type of Measure	Measure	# of Studies
Depression	Beck Depression Inventory (Beck, 1972)	6
	Center for Epidemiological Studies - Depression (Radloff, 1977)	2
	Hopkins Symptom Checklist - Depression (Derogatis, Lipman, Rickels, Uhlenhuth, & Covi, 1974)	1
	Middlesex Depression Inventory (Bagley, 1980)	1
Self-esteem	Rosenberg's Self-esteem Scale (Rosenberg, 1965)	1
	Tennessee Self-Concept Scale (Roffe, 1981)	2
Other	Family Adaptability and Cohesion Evaluation Scale - II (FACES-II) (Olson, Russell, & Sprenkle, 1983)	1
	Eysenck Personality Inventory (Campbell & Reynolds, 1982)	1
	Hopkins Symptom Checklist (Derogatis et al., 1974)	3
	Middlesex Hospital Questionnaire (Bagley, 1980)	1
	Minnesota Multiphasic Personality Inventory (Clopton, 1978)	5
	Derogatis Symptom Checklist-90 Revised (Derogatis, 1977)	5
	Coopersmith Self-esteem Inventory (Bagley, 1989)	1
	Social Adjustment Self-Report (Weissman, Prusoff, Thompson, Harding, & Myers, 1978)	1
	Rorschach (Exner, 1986)	1
	Texas Social Behavior Inventory (Helmreich & Stapp, 1974)	1

As is evident in the list of objective measures used (Table 9), authors have attempted to examine this issue in different ways.

The most frequently used types of measures of pathology were measures of depression, anxiety, and self-esteem or self-image. Measures included in the "other" column included projective measures (such as the Rorschach) as well as general measures of psychological and emotional functioning.

Ten studies used measures of depression in order to gain information regarding the long-term effects of childhood sexual abuse in adult women (Table 10). These

Table 10

Effect Sizes for Studies Measuring Depression

Study	Measure Used	Effect Size
02	CES-D	0.84
03	CES-D	0.24
04	Middlesex Depression Inventory	0.67
10	Hopkins Symptom Checklist - Depression	0.27
13	Beck Depression Inventory (BDI)	0.0
22	BDI	0.1
24	BDI	0.6
29	BDI	0.7
37	BDI	0.76
45	BDI	0.0

authors found that, overall, there was no clinically significant difference between abused women and their nonabused counterparts on measures of depression ($\bar{X}_{es} = 0.42$, $S_{es} = 0.31$).

Only one study used a measure of anxiety ($\bar{X}_{es} = 0.31$) with no clinically significant difference between groups. Three studies utilized measures of self-esteem in order to determine the long-term effect of childhood sexual abuse in adult women (Table 11). These differences were not clinically significant.

Table 11

Effect Sizes for Studies Measuring Self-Esteem

Study	Measure	Effect Size
01	Tennessee Self-Concept Scale	0.29
03	Tennessee Self-Concept Scale	0.33
37	Rosenburg Self-Esteem Scale	0.57

Twelve studies ($N_{es} = 42$) used other measures of pathology to examine differences between abused and nonabused women (Table 12). The women who had been sexually abused in childhood demonstrated clinically significantly greater pathology than women who had not been abused in childhood ($\bar{X}_{es} = 0.62$, $S_{es} = 0.65$). An ANOVA was calculated to determine if the use of different measures of pathology impacted the size of the effect, no statistically significant differences were obtained (Table 13).

Table 12

Effect Sizes for Studies Using Pathology Measures

Study	Measure	\bar{X}_{es}
03	Middlesex Hospital Questionnaire	0.31
03	SEI	0.25
10	Hopkins Symptom Checklist (HSCL) - Somatization	0.35
10	HSCL - Intensity	0.06
10	HSCL - Obsessive - Compulsive	0.20
10	HSCL - Dissociation	0.30
12	SCL-R-90	1.14
15	SCL-R-90	0.00
22	SCL-R-90	0.14
24	HSCL - Intensity	0.49
24	HSCL - Psychiatric	0.12
26	SCL-R-90	0.93
27	FACES - Cohesion	0.53
27	FACES - Adaptability	0.57
27	FACES - Social Isolation	0.47
27	FACES - Poor Social Adjustment	0.45

(table continues)

Study	Measure	\bar{X}_{es}
30	Minnesota Multiphasic Personality Inventory - 4	3.22
32	Rorschach - Texture	1.50
32	Rorschach - Popular	0.92
32	Rorschach - r	0.88
32	Rorschach - Blood	0.90
34	Texas Social Behavior Inventory	0.02
34	Eysenk Personality Inventory	0.00
24	Social Adjustment-Self Report	0.00
38	MMPI - 1	1.24
38	MMPI - 3	1.09
38	MMPI - 4	0.78
38	MMPI - 5	0.70
41	MMPI-1	0.00
41	MMPI-3	0.00
41	MMPI-4	1.98
41	MMPI-5	0.00
41	MMPI-6	1.53
41	MMPI-7	1.34
41	MMPI-8	2.70
41	MMPI-9	1.16
41	MMPI-0	0.70
43.1	MMPI-4	0.52
43.1	MMPI-8	0.52
43.2	MMPI-4	0.52
43.2	MMPI-8	0.52
44	SCL-R-90	0.34

Table 13

Analysis of Variance Types of Outcome Measures Used

Sources of Variance	<u>SS</u>	<u>df</u>	<u>MS</u>	<u>F</u>	<u>p</u>
Between Group	1.03	3	0.36	0.87	0.46
Within Group	21.28	52	0.41		
Total	22.36				

The combined mean effect of all objective measures is 0.63 ($\text{Ses} = 0.63$), indicating that on the average, the women who had been sexually abused in childhood scored over one-half standard deviation above those women who had not been sexually abused in childhood. When examining the data holistically, there is not a clear clinically significant difference (defined by this author as an effect size of 0.50) between those who were sexually abused in childhood and those who had not been sexually abused. There is not a significant difference on depression measures, on anxiety measures, or on self-esteem measures. There is only a slight difference among all other measures.

Information from these data was then divided by sample groups, as the largest clinically significant difference found was between women who had been sexually abused as children who were seeking mental health treatment and women who had not been sexually abused as children who were seeking mental health treatment.

Table 14 lists information regarding the number of studies for each of the types of sample groups selected and the corresponding outcome measures used. From the information presented, the two clinically significant differences are found in (a) the use of other outcome measures among women who had been sexually abused as children and are seeking mental health treatment versus women who had not been sexually abused in childhood and are seeking mental health treatment and (b) the use of

Table 14

Effect Sizes by Sample Groups and Outcome Measures

Outcome Measure Used	Sample											
	Mental Health X Mental Health				Student X Student				General Population X General Population			
	<u>N</u>	<u>Nes</u>	<u>\bar{y}es</u>	<u>Ses</u>	<u>N</u>	<u>Nes</u>	<u>\bar{y}es</u>	<u>Ses</u>	<u>N</u>	<u>Nes</u>	<u>\bar{y}es</u>	<u>Ses</u>
Depress	1	1	0.0		3	3	0.38	0.30	6	6	0.51	0.29
Self-Concept	0				2	2	0.43	0.14	4	12	0.26	0.21
Other	7	22	1.04	0.80	4	12	0.26	0.21	4	6	0.41	0.28

measures of depression among women who had been sexually abused in childhood who had been sampled from the general population and women who had not been sexually abused in childhood who had been sampled from the general population. Although these data are not overwhelming, they tend to suggest that there may be different types of outcomes in the different populations. This information may be important for future research.

Study Quality and Outcome

Quality of studies was determined by rating each study along a three-point Likert-type scale (see Appendices B and C for coding manual and conventions). This three-point scale was created by this author for the purpose of this study (a score of 1 = an adequate rating, a score of 2 = a fair rating, and a score of 3 = a poor rating). Studies were rated as to the adequacy of the description of the design of the study, the adequacy of the description of the analysis of the study, and the adequacy of the description of the outcome of the study. Adequacy of description was defined as the "description was clear and codable."

ANOVAs were calculated in order to determine the statistical significance of the differences among each of the measures of the adequacy of the study. No statistically significant differences were found among ratings for the adequacy of the description of the design (Table 15), the adequacy of the description of the analysis (Table 16), or the adequacy of the description of the outcome (Table 17).

Table 15

Analysis of Variance Adequacy of Description of Design

Sources of Variance	<u>SS</u>	<u>df</u>	<u>MS</u>	<u>F</u>
Between Group	1.78	2	.89	2.28
Within Group	17.77	54	.39	
Total	19.55			

Table 16

Analysis of Variance Adequacy of Description of Analysis

Sources of Variance	<u>SS</u>	<u>df</u>	<u>MS</u>	<u>F</u>
Between Group	-2.29	2	-1.15	2.88
Within Group	21.84	54	0.40	
Total	19.55			

Table 17

Analysis of Variance Adequacy of Description of Outcome

Sources of Variance	<u>SS</u>	<u>df</u>	<u>MS</u>	<u>F</u>
Between Group	-1.77	2	-0.89	-2.28
Within Group	21.32	54	0.39	
Total	19.55			

An overall rating of adequacy was also done. A score of 3 to 6 equals a Low rating, a score of 7 to 9 equals a Medium rating, and a score of 10 to 12 equals a High rating. Each study was rated on the 3-point rating scale, equivalent to the rating scale for the specific areas of adequacy. These codes were then combined to provide an overall measure of adequacy (Table 18).

Table 18 demonstrates a fairly even distribution of effects across studies of all levels of adequacy. A clinically significant mean effect was found in each of the three categories. A trend is seen toward higher effects among lower rated studies. Also, the standard deviation is extremely high, and in the case of the lower rated studies, larger than the mean effect. An ANOVA was computed to determine the statistical significance among the overall rating of adequacy of each study (Table 19). No differences were found.

Table 18

Overall Adequacy of Studies

Rating	# of Effect Sizes	# of Studies	Mean Effect Size	Standard Deviation of Effect Sizes
Low	9	10	0.73	0.90
Medium	8	7	0.69	0.47
High	39	21	0.60	0.58

Table 19

Analysis of Variance Overall Adequacy

Sources of Variance	<u>SS</u>	<u>df</u>	<u>MS</u>	<u>F</u>	<u>p</u>
Between Group	0.49	2	0.25	0.60	0.55
Within Group	21.86	53	0.41		
Total	22.36				

Studies were also rated as to the potential level that selection bias as a threat to internal validity may have contributed to the outcome of the study. These codes were divided on a four-point scale from 0 = a score of no plausible threat to a score of 3 = a very plausible alternative explanation that could explain most or all of the observed results. Again, these codes were created by this researcher for the purpose of the present study. None of the 37 articles received a score of 0, and selection bias posed no possible threat to internal validity; therefore, this category has been dropped from the analysis. Mean effect sizes were calculated across all levels for these qualities (Table 20). There was a trend toward studies given a lower rating (higher score) on selection bias as a threat to internal validity demonstrating larger effects.

Finally, all studies were coded as to whether the authors or raters used in the experiment were "blind" or "not blind" to the purpose of the study (Table 20). Both the studies that required the examiner to be "blind" to the purpose and the studies that did not require this of the experimenter demonstrated clinically significant effect sizes. There is no statistically significant difference between "blind" studies and "not blind" studies ($t = 0.56$).

Table 20

Adequacy and Effect Sizes

Measures of Adequacy	Rating Level	# of Studies	# of Effect Sizes	\bar{X} es	<u>Ses</u>
Blind to Study ^a	0	8	47	.64	.66
	1	30	10	.54	.48
Select in Bias ^b	1	10	18	.30	.14
	2	23	33	.80	.71
	3	5	6	.61	.13

^a 0 = "Blind" 1 = "Not Blind"

^b 1 = Mild threat to validity
2 = Moderate threat to validity
3 = Very plausible threat to validity

CHAPTER V

GENERAL DISCUSSION

Purpose and Objectives

The purpose of this investigation was to carefully and systematically clarify the findings of studies that examined the long-term effects of childhood sexual abuse in adult women. The first objective was to summarize: (a) characteristics of primary studies of childhood sexual abuse and (b) characteristics of subjects used. The second objective was to compare effect size differences among: (a) studies that used different subject characteristics, (b) studies that used different definitions of childhood sexual abuse, (c) studies utilizing different measures of effect of childhood sexual abuse, and (d) studies found to have different levels of adequacy.

The final study population consisted of 38 studies with 56 effect sizes on the long-term effects of childhood sexual abuse in adult women. All studies compared one group of women who had been abused in childhood with a group of women who had not been sexually abused in childhood. Several outcome measures were used.

Few sample characteristic variables were consistently reported among studies. For example, approximately one third of the studies reported the ages of the subjects used. Less than one tenth of the studies reported either the level of education of the subjects or the marital status. However, many reviewers have discussed the importance of these characteristics in the evaluation of the difference between women who have been sexually abused in childhood versus those women who have not been sexually abused in childhood.

Overall, the results suggest that there is a clinically significant effect size (\bar{X} es = .63), indicating that women who reported having been sexually abused in childhood

have greater pathology than women who have not been sexually abused. The standard deviation of this effect size is very large, and in many areas as large as the mean. The large standard deviation of the effect size is indicative of a large range of variability among the studies examining the long-term effects of childhood sexual abuse in women.

These findings suggest that some of the more pertinent variables are missing in this research. Given these findings, it seems clear that the variables that lead to differences are not being adequately described.

Different Sample Characteristics

One objective of this study was to summarize the differences among studies that used different samples and different definitions. Clinical effect sizes are found whether using different populations or different definitions.

The largest effect was found among studies that used women seeking mental health treatment in both the experimental and comparison groups. This approach has some face validity because it would be expected that women who are seeking treatment are experiencing, or claiming to be experiencing, greater difficulties. Clinicians have reported the large and diverse difficulties experienced by women who were sexually abused in childhood; this may begin to explain the difference found between these two groups of women. Women who have been sexually abused may present to therapy with a variety of symptoms, including characterological disorders, depression, posttraumatic stress disorder symptoms, as well as other vague complaints about overall dissatisfaction with life (Dolan, 1991).

Again, the lack of consistency within the field hinders the researcher's or clinician's ability to understand the outcome of the studies. Many studies used undergraduate students, while others used clients involved in either inpatient or

outpatient psychiatric services. It cannot be assumed that these two populations are the same because of the similarities in their childhood experiences. Also, the lack of consistency of the demographic information reported impairs the full understanding of the literature. Perhaps if readers were informed regarding the age, marital history, and level of education of the subjects, as well as other variables, it would facilitate increased understanding of differences among studies. One possible solution would be for the field to agree on salient demographic characteristics and hold researchers accountable for this information.

Definition

Overall, four different definitions of childhood sexual abuse have been used. These can be divided along two dichotomous variables: (a) if the definition included the requirement that the perpetrator and the victim be related and (b) if the definition included the requirement that there be a stated difference in age between the perpetrator and the victim. The most frequently occurring definition included nonfamily members and had no stated age difference between the victim and the perpetrator.

The largest effect was found among studies in which sexual abuse was loosely defined as inappropriate sexual activities between people not necessarily related but the perpetrator must be a specified number of years older than the victim. The requirement of an age difference between victim and perpetrator may work to increase the effect of abuse as demonstrated by these studies in that this rules out sexual experimentation between same-aged peers and relatives. There was only one study that included women whose perpetrators were immediate family members and required a specified difference in age between the victim and the perpetrator.

These results indicate the impact of the difference in age between the victim and perpetrator. Many reviewers discussed the relevance of an age difference between the

victim and the perpetrator. Although there were no statistically significant differences among studies with women who had been abused by family members, all groups demonstrated the negative effects of childhood sexual abuse.

In order to adequately study the long-term effects of childhood sexual abuse in women, it is imperative that a consistent definition be utilized or that researchers agree on different levels of interpretation. It is not possible to fully combine and understand results from studies in which childhood sexual abuse is defined, for example, as "any physical touching perceived by the subject as abusive" with those studies that define sexual abuse as "inappropriate sexual touching between family members at least 5 years apart in age." Perhaps a difficulty in understanding this body of literature is that we have attempted to combine all studies. Therefore, this may not be one body of literature, but may actually be multiple literature bases.

Outcome Measures

All studies utilized a life history interview as one means of determining the outcome or effect of sexual abuse in adult women. One reason for the use of the life history interview was also to determine the nature and the extent of the sexual abuse endured in childhood.

Six studies utilized a Likert-type form, and many studies utilized an objective assessment of pathology as a means to determine the effect of childhood sexual abuse in adult women. However, across 38 studies, 28 different measures were utilized. This creates a difficulty in combining information obtained from the various studies. There has not been a standardized format for interviewing survivors of sexual abuse nor has there been consistency regarding selection of specific diagnostic tools.

There appears to be a negative effect of sexual abuse in women as evidenced by a positive overall mean effect size. Women who have been sexually abused in

childhood score approximately one half of one standard deviation above women who have not been sexually abused in childhood on objective measures of psychopathology. No statistically significant effect size differences were found in comparing results from different measures of pathology. There were not statistically significant differences among studies that used measures of depression or anxiety or self-esteem. However, clinically significant differences were not found for depression measures or self-concept measures. Further, the results of more detailed analysis of outcome measures by population of study (e.g., mental health clients, general population, etc.) found clinically significant outcomes on measures of psychopathology for the mental health group studies but not for the general population studies.

Quality

Effect sizes were computed in order to measure the impact of quality of the study. Adequacy was defined as the ease of coding the study for this purpose of this meta-analysis, or in other words, as a qualitative means to describe the ease of obtaining needed information for inclusion in a meta-analysis. These analyses revealed a pattern of higher levels of effect in the fair to poorly described studies versus those studies in which the description of the information needed was described as adequate. However, all mean effect sizes were clinically significant regardless of study quality.

Summary

Overall, clinically significant differences are found whether using different populations, definitions, or outcome measures. Quality of the research does not seem to greatly impact the study's results. The overall findings indicate a negative long-term effect of childhood sexual abuse. However, there are a number of concerns raised by this meta-analysis. These concerns are exemplified by the lack of information provided

regarding the subjects involved in the studies, by the subject populations selected for comparison, and by the results on different types of outcome measures.

These concerns are best exemplified by the results obtained in the study population by outcomes analysis. Clinical significance varied dependent on outcome measure and population. Producing a matrix neither affected nor easily explained these differences. The concern raised by these results raises issues regarding the failure of the literature to identify variables that may be mediating the impact of the childhood sexual abuse.

As the literature is reviewed, it is possible to hypothesize that specific variables related to the abuse may be impacting the long-term effects of abuse (e.g., Dolan, 1991). For example, many authors in the clinical literature attempt to discuss the impact of variables that may mediate the effect of the sexual abuse. These variables include the relationship of the perpetrator to the victim (Cahill et al., 1991; Constantine, 1981; Finkelhor, 1990), the age at the onset of the abuse (Finkelhor, 1990; Jehu & Gazen, 1983; Meiselman, 1990; Schetky, 1990), the use of force or violence during the abusive incidents (Constantine, 1981; Finkelhor, 1990; Meiselman, 1990), and the duration of the abuse (Hindman, 1990).

The literature that examines the effect of trauma also discusses variables that appear to mediate the impact of traumatic events. Some of these variables include the degree of life threat, potential for recurrence, degree of moral conflict inherent in the situation, and the social responsiveness to the event. The presence versus absence of these variables could begin to explain the large variability among the studies examining the long-term effects of childhood sexual abuse in women. Studies are needed that examine the mediating effects of these variables on the outcome differences between

women who have not been sexually abused and women who have been sexually abused in childhood.

Weaknesses of the Literature

A number of weaknesses were found in this body of literature that made data integration difficult. These weaknesses were most apparent in the areas of the lack of consistency in the definition of abuse, the lack of consistency in the characteristics of subjects used (as well as the discussion of these characteristics), the lack of standardized outcome measures, and the quality of the reporting. First, there is little consistency in the definition of childhood sexual abuse used among studies in this body of literature. Some studies did not clearly explain the definition of sexual abuse used, and most studies used a combination of women who had been abused by a family member and those abused by nonfamily members.

Second, there was no consistency in the characteristics of subjects used. In order to completely integrate the information from this body of literature, studies that used college students as their sample, or mental health clients, or volunteers responding to a published advertisement, or responses from a general survey, must be combined.

Many extraneous variables could potentially explain the lack of consistency found among studies. Volunteer samples, and those found from a general population survey, will vary greatly simply based on the type of people who would respond to a published advertisement asking for volunteers to participate in a study measuring the long-term effects of sexual abuse. In this same vein, women seeking psychotherapeutic services for the effects of childhood sexual abuse will differ greatly from college undergraduates who are revealing this information on an anonymous questionnaire. These variables

might be manageable if it were possible to discuss the impact. However, there is also inconsistency in the discussion of what may be extraneous variables (i.e., marital status, level of education). A comparison of these variables may be beneficial; however, the information is not consistently available from the original studies.

Additional variables not discussed or examined by the researchers have been termed potential mediating variables (Hindman, 1990). These are variables related to the type of sexual abuse endured by the victim that could mediate, or potentiate, the outcome of studies of the long-term effects of childhood sexual abuse. Hindman (1990) discussed four major variables that could potentially mediate the long-term effects of childhood sexual abuse. These four variables are (a) age of onset of the abuse, (b) frequency and duration of the abuse, (c) relationship between the victim and the perpetrator, and (d) the use of force or violence during the sexually abusive act. Other authors have discussed the potential impact that the response of an adult at disclosure of the abuse can have on the long-term effects of childhood sexual abuse (Cahill et al., 1991; Haugaard & Raspucci, 1988; Meiselman, 1990). Negative mediators may arrest the healthy psychological development of the victim, leading to pathological behaviors (Dolan, 1991; Finkelhor, 1979; Haugaard & Raspucci, 1988; Hindman, 1990).

From the research examined in the present study, there appears to be an assumption that merely having been sexually abused as a child would be traumatic for the woman later in her life. Clinicians would actively disagree with this concept, as there is evidence of a resiliency among some children, and later women, who have been sexually abused. Therefore, one underlying assumption, that the sexual abuse is the necessary and sufficient event to cause trauma, may be false. All of these issues need to be examined more specifically in the area of long-term effects of sexual abuse in adult women.

Third, it is difficult to integrate information from the body of literature on the long-term effects of sexual abuse in adult women because there is a lack of consistency in the outcome measures used. As mentioned earlier, clinicians have noted an overall psychological developmental delay with women who had been sexually abused in childhood. Since this delay is pervasive, traditional measures such as depression, anxiety, and self-esteem inventories may not be able to discriminate between sexual abuse, more generic emotional or physical abuse, and other etiological factors. Measures of pathology need to be used that indicate overall functioning (level of emotional and cognitive development, PTSD symptoms, etc.) and are more characteristic of this population than the general public. Most studies utilize some form of a life history interview or questionnaire. This could be valuable information if the information obtained was reported in a consistent fashion.

Finally, the poor quality of the reporting introduces the largest obstacle in research integration. It was often difficult to understand from the reading of the paper, the exact procedures used, the methods used, or the analysis conducted.

An overall weakness, and in summary of the weaknesses of this body of literature, is that the research has been largely atheoretical in nature. This field of study has grown rapidly. The studies conducted on the long-term effects of childhood sexual abuse in adult women have varied on the level of scientific rigor, but little solid theory has guided the field. Research on the long-term effects of childhood sexual abuse in adult women has been in a pre-paradigmatic state, or one in which there has been no consensus regarding the methods for gathering and interpreting data (Kuhn, 1970; Odom, 1988). Researchers in this area need to develop consensus regarding methods for studying specific questions (therefore becoming paradigmatic) in order for the field to grow.

Recommendations for Further Research

The primary recommendation for future research is that it should address the limitations inherent in this body of literature, as well as the weaknesses in the current study. Based upon an examination of the literature, problem areas that need to be addressed include lack of consistency in the definition of childhood sexual abuse, the characteristics of subjects used (and the discussion of these characteristics), the lack of consistency of standardized outcome measures, as well as the poor quality of reporting.

Overall, research in this area needs to become more theoretically driven. Researchers should clearly state and explain the theoretical or philosophical base for their research, show that the base is supported by current research, and demonstrate that the choice is appropriate for both the target population and the question being investigated. According to LeLaurin and Wolery (1992), this first step is required in order to achieve scientific rigor. These authors have stated that research questions should be derived from theory, and that the theoretical orientation of research should relate specifically to an appropriate theory, if the results are to contribute meaningfully to an area (e.g., psychopathology). Dunst, Snyder, and Mankinen (1989), in a review of early intervention research, indicated that the absence of a theoretical or conceptual basis related to the absence of specificity in the variables, subject definition, and design components they examined. First, and probably most important, more precise reporting is needed of patient characteristics, definitions used, and measures utilized. Without this, it is difficult to replicate studies or conduct a thorough systematic review.

Researchers need to better define what outcomes may be expected and look specifically at characteristics of subjects who did not demonstrate major pathology versus those subjects who did demonstrate major pathology. A large-group descriptive study that would examine the relationships between specific subject variables and

different outcome variables is recommended. Also helpful would be a resiliency study that looked at those subjects who had been sexually abused and did not demonstrate significant pathology to determine what common factors were present among these women.

Summary

The findings of the current study highlight the problematic areas within the body of literature in the long-term effects of sexual abuse on adult women. First, in order to be able to study the effects of sexual abuse, it is important to define what researchers, as well as clinicians, mean when they talk about childhood sexual abuse. In the 30 years of literature examined in the present study, this first and most imperative step has yet to be taken.

Second, researchers need to better define the common issues for examination within this body of work. In order to describe the long-term effects of sexual abuse in women, it is important to discuss the characteristics of the subjects in a similar manner.

In summary, the purpose of the current study was to integrate the literature on the long-term effects of sexual abuse in adult women so as to promote a better understanding of the efficacy of potential treatments, both from an historical perspective and a contemporary perspective. It is hoped that this study will provide a foundation for future research endeavors. The result of these activities brings a better understanding of the long-term effects of childhood sexual abuse in order to ultimately improve the quality of life for the woman who has been sexually abused as a child.

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APPENDICES

Appendix A
Coding Sheet

Coding Sheet

A Meta-Analytic Review of Studies Examining Abuse Effect

FIRST CARD

ID _____ CARD1 _____ YEARPUB _____
DEFABUSE _____ DEFTYPE _____ SIZE _____
AGE _____ STUD _____ MH _____ EDUC _____ MAR _____
CONTSIZE _____ CONTAGE _____ CONTSTUD _____
CONTMH _____ CONTEDUC _____ CONTMAR _____

SECOND CARD

CARD2 _____ STUDXSTUD _____ MHXMH _____ GPXGP _____
MHXGP _____ LIFEHIST _____ LIKERT _____ OBJ1 _____
OBJ2 _____ OBJ3 _____ OBJ4 _____
OBJ5 _____ OBJ6 _____

THIRD CARD

CARD3 _____ BLIND _____ SELECT _____
ADEOUT _____ ADEDES _____ ADEANA _____

Appendix B
Coding Manual

Coding Manual

Meta-Analytic Review of Studies Examining Abuse Effect

<u>Variable</u>	<u>Description</u>	<u>Code</u>
ID	ID number	001-999
CARD1	Card Number	1
I. Study Characteristics		
	(Missing Data = 0 or 00.0 or -1)	
YEARPUB	Year Published	19xx
DEFABUSE	Definition of abuse	1-2
DEFTYPE	Type of definition	1-3
II. Abused Group Characteristics		
	(Missing Data = 0 or 00.0 or -1)	
SIZE	Sample Size	001-999
AGE	Mean Age	00.1-99.9
STUD	Students	0-1
MH	Mental Health	0-1
EDUC	Educational level in years	
MAR	percent of sample married	00.1-99.9
III. Not Abused Group Characteristics		
	(Missing Data = 0 or 00.0 or -1)	
CONTSIZE	Sample Size	001-999
CONTAGE	Mean Age	00.1-99.9
CONTSTUD	Students	0-1
CONTMH	Mental Health	0-1
CONTEduc	Education level in years	
CONTMAR	percent married	00.1-99.9
IV. Sample Characteristics		
	(0=no, 1=yes)	
STUDXSTUD	Student x Student sample	
MHXMH	Mental Health x Mental Health	
GPXGP	General Pop. x General Pop.	
MHXGP	Mental Health x General Pop.	
V. Outcome Variables		
	(0 = no, 1 = yes, Missing Data = 9.99)	
LIFEHIST	Life history information gathered	
LIKERT	Likert type scale used	
OBJ1	Effect Size calculated	
OBJ2	Effect Size calculated	
OBJ3	Effect Size calculated	
OBJ4	Effect Size calculated	
OBJ5	Effect Size calculated	

OBJ6 Effect Size calculated

VII. Design and Reporting

BLIND	blinding of data collector	1=yes 2=no
SELECT	Selection threat	0-3
ADEOUT	adequate descrip. of outcome	1-3
ADEDES	adequate descrip. of design	1-3
ADEANA	adequate descrip. of analysis	1-3

Appendix C
Conventions Manual

Conventions Manual

Meta-Analytic Review of Studies Examining Abuse Effect

I. STUDY CHARACTERISTICS

Study ID#-Each article is assigned a three-digit identification number.

Year Published-The last two digits of the year in which the study was published.

Definition of Abuse-Does the study give an operational definition of childhood sexual abuse

0 = no

1 = yes

Definition Type-How abuse is defined in the study

1 = incest only, requirement of specified age difference between the victim and the perpetrator.

2 = not limited to incest, requirement of specified age difference between the victim and the perpetrator.

3 = incest only, no required age difference between victim and perpetrator.

4 = not limited to incest, no required age difference between victim and perpetrator.

II. ABUSED GROUP CHARACTERISTICS

Size-Sample size, record the size of the comparison group sample, in three digits

Mean Age-Record the mean age of the comparison group, round to one decimal place.

Students-This code indicates if the sample was one of students, or not students. Mixed groups coded as not students.

0 = not students

1 = students

Mental Health Clients-This code indicates if the sample was one of persons seeking mental health treatment, either inpatient or outpatient. Mixed groups were coded as not mental health clients.

0 = not mental health clients

1 = mental health clients

Education Level- This code indicates the mean number of years of education completed by the sample.

Percent Married-Record the percent of the sample currently married.

III. NOT ABUSED GROUP CHARACTERISTICS

Size-Sample size, record the size of the control group sample, in three digits

Mean Age-Record the mean age of the control group, round to one decimal place.

Students-This code indicates if the sample was one of students, or not students. Mixed groups coded as not students.

0 = not students

1 = students

Mental Health Clients-This code indicates if the sample was one of persons seeking mental health treatment, either inpatient or outpatient. Mixed groups were coded as not mental health clients.

0 = not mental health clients

1 = mental health clients

Education Level- This code indicates the mean number of years of education completed by the sample.

Percent Married-Record the percent of the sample currently married.

IV. SAMPLE CHARACTERISTICS

Student by Student-Record if both the comparison group and the control group were groups of students.

0 = no

1 = yes

Mental Health Clients by Mental Health Clients-Record if both the comparison group and the control group were groups of mental health clients.

0 = no

1 = yes

General Population by General Population-Record if both the comparison group and the control group were selected from the general population

0 = no

1 = yes

Mental Health Clients by General Population-Record if the comparison group was a group of mental health clients and the control group was selected from the general population.

V. OUTCOME VARIABLES

Life history-Record if a life history (psychosocial history) was gathered

0 = no

1 = yes

Likert-Record if a form of a Likert scale was used to measure effect of sexual abuse

0 = no

1 = yes

Outcome effect sizes-Compute and code effect size differences between the abused group and the not abused group for as many applicable variables, including likert scales and objective outcome measures.

VI. DESIGN AND REPORTING

Blinding of the Data Collector-Code if the individual(s) who collected data for the study was (were) blind to the purpose of the study.

Selection Bias as a Threat to Internal Validity-Each study coded to the intensity of selection bias as a threat to internal validity. Selection bias occurs when subjects are selected for membership in the comparison and control groups in a fashion that resulted in their being unequal with regard to variables that are casually related to the outcome variables. The following is a list of codes for each threat:

0 = Not a plausible threat

1 = Potential minor threat in attributing the observed effect to outcome. By itself, not likely to account for a substantial amount of the observed results.

2 = Very plausible alternative explanation which could account for a substantial amount of the observed results. This code requires evidence rather than simple suspicion of threat.

3 = Very plausible alternative explanation which could explain most or all of the observed results. The evidence of this threat is clear and substantial

Adequate Descriptions-The following are coded as to the adequacy of the description and explanation in the text of the study.

1 = adequate

2 = fair

3 = poor

1. Adequate description of outcome-description of the outcome of the abuse are clear and codable.

2. Adequate description of design-description of the design of the study is clear.

3. Adequate description of analysis-description of analysis of measure of outcome of abuse is clear.

VITA

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Educational History

Utah State University, Logan, Utah

Major:	Combined Professional-Scientific	
Major:	Analysis of Behavior	
Degree:	Dual Ph.D.	1995
Honors:	Dean's Scholar	1987-1989

Dissertation: A Meta-analytic review of the effects of juvenile sexual abuse
 (Chairpersons: Mark Innocenti, Ph.D. and Elwin Nielsen, Ph.D.)

Master's Thesis Project: Establishing classes of equivalent stimuli via observational
 learning (Chairperson: J. Grayson Osborne, Ph.D.)

California State University at San Jose, San Jose, California

Major:	Psychology	
Major:	Behavioral Sciences	
Degree:	B. A., with Great Distinction	1986
Honors:	Honors Program	1982-1986
	Kathryn Uhl Carr Scholarship	1983-1986
	Dean's Scholar	1983-1986
	Member Phi Kappa Phi	1985
	Member Golden Key Honor Society	1985

Children's Medical Center, Tulsa, Oklahoma

Psychology predoctoral Intern	1993-1994
APA-approved internship program, Child and adolescent focus	
Co-Directors: Carolyn Kramer, Ph.D. Jennifer Daniel, Ph.D.	
Completion Date: August 31, 1994	

Clinical Training

Psychologist-in-training

1989-1993

Utah State University Psychology Department Community Clinic, Logan, Utah
Clinical Practica

Duties: Provide therapeutic support for child, adolescent, and adult clients presenting with various emotional and behavioral problems utilizing various therapeutic modalities. Intake interviews. Psychodiagnostic assessments.

Supervisor: David M. Stein, Ph. D., Clinic Director

Psychologist-in-training

1990-1991

Utah State University Counseling Center, Logan, Utah
Counseling Practica

Duties: Provide therapeutic support for adult clients presenting to a University Counseling Center with various emotional and behavioral problems utilizing various therapeutic modalities. Intake interviews. Conduct case presentations.

Supervisor: David Bush, Ph. D., Director of Practicum Services

Psychologist-in-training

1991-1993

Behavioral Health Center, Logan Regional Hospital, Logan, Utah
Part-time position

Duties: Provide group, individual, marital and family therapeutic services to patients in an acute care hospital setting. Provide comprehensive psychological assessments as required, attend treatment team meetings and provide inservice training to nursing and technical staff.

Supervisor: Bruce Johns, Ph. D.

Psychology Intern

1993-1994

Children's Medical Center, 5300 East Skelly Drive, Tulsa, Oklahoma 74135
Full-time position. Rotations (Full-time, 3 months):

Children's Unit: Conduct group, individual, and family therapy for patients in inpatient and day treatment units for children 6 to 12 years of age. Provide psychological assessment for diagnostic and treatment decision. Write diagnostic reports. Participate in team planning meetings and provide case management for individual patients.

Supervisors: Carol Ann Drummond, Ph.D., Susan S. Howard, Ph.D.

Adolescent Unit: Conduct group, individual, and family therapy for patients in inpatient and day treatment units for children 12 to 18 years of age. Provide psychological assessment for diagnostic and treatment decision. Write diagnostic reports. Participate in team planning meetings and provide case management for individual patients.

Supervisors: Laura Fisher, Ph.D., Nancy Mize, Ph.D.

Outpatient Unit: Conduct intake diagnostic assessments of children of all ages. Conduct individual and family therapy. Provide psychological assessment of children and families for diagnostic and treatment decisions. Interpret and write diagnostic reports.

Supervisors: Bob Clapp, Ph.D., Paula Monroe, Ph.

Early Childhood Development/Pediatrics: Conduct group, individual, and family therapy for patients in inpatient and day treatment units for children 6 to 12 years of age. Provide psychological assessment for diagnostic and treatment decision. Write diagnostic reports. Participate in team planning meetings and provide case management for individual patients.

Supervisors: Sandy Crews, Ph.D., Janet Willis, Ph.D., Kathryn Goevarts, Ph.D.

Professional Positions

Peer Counselor

1981

Child Sexual Abuse Treatment Center, Department of Juvenile Justice, San Jose, California (Half-time position)

Duties: Provide peer counseling for child and adolescent victims of sexual abuse. Organize counseling groups for sexually abused girls. Organize informative materials for governmental agencies regarding childhood sexual abuse and incest.

Supervisor: Diane Gomez, Program Coordinator

Inservice Trainer

1980-1986

Institute for the Community as the Extended Family/Parents United and Daughters and Sons United, San Jose, California (Part-time position)

Duties: Provide training to judges, probation officers, police officers, social workers, teachers, counselors, school administrators, and other professionals in effectively working with, interviewing, and communicating with victims of childhood sexual abuse and their family members. Create video-taped training materials.

Supervisor: Hank Giarretto, Ph.D., Program Coordinator

- Tutor 1985-1986
Department of Psychology, California State University, San Jose, California
(Part-time position)
Duties: Provide tutorial services to undergraduates in research methodology and child psychology classes.
- Respite Careworker 1985-1986
Community Association for the Retarded, Palo Alto, California
(Half-time position)
Duties: Design and implement behavioral treatment programs for infant, child, adolescent and adult clients, with various handicapping conditions. Work as an interdisciplinary team member.
Supervisor: Cheryl Chancellor, M. A.
- Counselor/Supervisor 1985-1986
Campbell, California (Half-time position)
Duties: Supervise and counsel 15 year-old girl with alcohol and drug dependency. Report to her parent and school any changes in her behavior. Develop and implement behavioral programs to be used in the home.
Supervisor: Ruth Manor, parent
- Psychology Specialist 1986-1989
Clinical Services Program of the Division of Services, Developmental Center for Handicapped Persons, Logan, Utah (Half-time position)
Duties: Coordination of multi-disciplinary evaluation teams. Intake interviews. Psychoeducational evaluations and written reports. Development of treatment programs. Recommendations generated for education purposes, home/family interventions, and counseling. Referrals. Case consultation for other staff, graduate and undergraduate social work, special education, psychology, and communicative disorders interns.
Supervisor: Phyllis Cole, Ph. D.
- School Psychological Consultant 1986-1988
Blackfoot School District, Blackfoot, Idaho (Part-time position)
Duties: School psychological services to children from kindergarten through grade 12. Provide behavioral assessments and psychological testing.
Supervisor: Phyllis Cole, Ph.D.

- Psychological Consultant 1987-1989
- Cache Workshop, Logan, Utah (Part-time position)
- Duties:* Psychological services to adult clients receiving Title XIX benefits. Provide behavioral assessments and psychological testing.
- Supervisor: Phyllis Cole, Ph.D.
- Psychological Consultant 1987-1989
- Bear River Adult Skills Center, Brigham City, Utah (Part-time position)
- Duties:* Psychological services to adult clients receiving Title XIX benefits. Provide behavioral assessments and psychological testing.
- Supervisor: Phyllis Cole, Ph.D.
- Behavioral Specialist 1988-1989
- Utah School for the Deaf, Ogden, Utah (Part-time position)
- Duties:* School psychology services to school-aged children receiving services at the Utah School for the Deaf and in satellite classrooms in communities in Logan, Ogden and Salt Lake City, Utah. Provide behavioral assessments and psychoeducational testing. Implement behavioral programs. Sign language required.
- Supervisor: J. Grayson Osborne, Ph.D.
- Behavioral Specialist 1989
- Utah School for the Blind, Ogden, Utah (Part-time position)
- Duties:* School psychology services to school aged students receiving services at the School for the Blind and in satellite classrooms in communities in Ogden and Salt Lake City. Provide behavioral assessments and psychoeducational testing. Make recommendations and write reports.
- Supervisor: J. Grayson Osborne, Ph.D.
- School Psychological Consultant 1989-1990
- Cache County School District, River Heights, Utah (Part-time position)
- Duties:* School psychology services, educational and psychological assessments. Write reports. Provide psychological and educational recommendations.
- Supervisor: Kathleen Kennedy, M. A., School Psychologist

Research Assistant/Data Analyst

1990-1991

Early Intervention Research Institute, Developmental Center for Handicapped Persons, Logan, Utah (Half-time position)

Duties: Analyze and interpret data concerning different types of interventions, particularly with children born prematurely with intraventricular hemorrhage. Travel throughout the western states and conduct assessment of children's progress and the effectiveness of interventions provided.

Supervisor: Nancy Immel, M. A.

Co-facilitator

1990-1991

AIDS/HIV+ Support Group, Bear River Mental Health Center, Logan, Utah (Part-time position)

Duties: Co-facilitate a support group for the friends and family members of persons with Acquired Immunodeficiency Syndrome or those who test positive for HIV. Provide support to persons with AIDS and/or are HIV+ and their friends and family members. Provide information to other community based organizations, and media regarding AIDS and HIV.

Supervisor: Anne Bertoch, M. A., R. N.

Therapist

1990-1992

Intermountain Sexual Abuse Treatment Center, Logan, Utah (Full-time position)

Duties: Provide individual and group psychotherapy for sexually abused children, adults molested as children, adult and adolescent perpetrators and their families. Therapeutic techniques utilized included art, play, and verbal therapies. Intake interviews, diagnostic evaluations of child and adult victims, and adolescent and adult perpetrators. Write comprehensive evaluation reports. Provide supervision of undergraduate social work practicum students. Conduct case presentations.

Supervisor: C. Y. Roby, Ph. D., Executive Clinical Director

Mental Health Coordinator

1990-1993

Bear River Head Start/Home Start, Logan, Utah (Part-time position)

Duties: Provide mental health services to children attending the Head Start/Home Start program and their families. Services including crisis counseling, individual, marital and family therapy, behavioral observations and programming, and referrals. Provide inservice training to parents of Head Start - Home Start children and staff on topics of sexual/physical abuse, stress management and relaxation.

Supervisor: Elwin Nielsen, Ph.D.

- Youth Corrections Technician 1993
- Division of Youth Corrections, Logan, Utah (Part-time position)
- Duties:* Provide group, individual, marital and family therapeutic services to youth ages 13 to 18 in a correctional setting. Provide comprehensive psychological assessments as required, attend treatment team meetings.
- Supervisor: Clint Farmer, MSW
- Coordinator, Eastern Oklahoma 1994-present
- Regional AIDS Interfaith Network, Tulsa, Oklahoma (Full-time position)
- Duties:* Provide direct training and supervision of volunteers in Eastern Oklahoma who are providing direct care and direct service to persons living with HIV/AIDS. Provide educational programs on HIV/AIDS to schools, civic groups, and faith communities.
- Supervisor: Mary Catherine Smothermon
- Teaching Experiences**
- Instructor 1988
- Social Work 350, Treatment of Adolescents with Compulsive Behavior Disorders*
Department of Social Work, Utah State University, Logan, Utah
(Part-time position)
- Duties:* Develop and teach undergraduate class.
- Supervisor: Jan Bacon, M. A.
- Instructor 1990-1991
- Psychology 380, Introduction to Statistics in Behavioral Sciences*
Department of Psychology, Utah State University, Logan, Utah
(Part-time position)
- Duties:* Plan and teach undergraduate class. Prepare and deliver lectures. Prepare and organize learning activities for the class. Prepare, deliver, and grade homework assignments and exams. Determine final course grades.
- Supervisor: J. Grayson Osborne, Ph.D.
- Instructor 1990
- Psychology 366, Educational Psychology*
Department of Psychology, Utah State University, Logan, Utah
(Part-time position)

Duties: Plan and teach undergraduate class. Prepare and deliver lectures. Prepare and organize learning activities for the class. Prepare, deliver, and grade homework assignments and exams. Determine final course grades.

Supervisor: Lani VanDusen, Ph.D.

Instructor 1991

Psychology 421, Theories of Personality and Psychotherapy
Department of Psychology, Utah State University, Logan, Utah
(Part-time position)

Duties: Plan and teach undergraduate class. Prepare and deliver lectures. Prepare and organize learning activities for the class. Prepare, deliver, and grade homework assignments and exams. Determine final course grades.

Supervisor: Susan L. Crowley, Ph.D.

Teaching Assistant 1991

Psychology 632, Projective Techniques
Department of Psychology, Utah State University, Logan, Utah

Duties: Aid in planning and teaching graduate class in Rorschach and Exner scoring system. Prepare and deliver lectures. Prepare and organize learning activities for the class. Prepare, deliver, and grade homework assignments.

Supervisor: Susan L. Crowley, Ph.D.

Teaching Assistant 1992

Psychology 321, Abnormal Psychology
Department of Psychology, Utah State University, Logan, Utah

Duties: Plan and teach undergraduate class. Prepare and deliver lectures. Prepare and organize learning activities for the class.

Supervisor: Jay R. Skidmore, Ph.D.

Teaching Assistant 1992-1993

Psychology 636, School Psychology Practicum
Department of Psychology, Utah State University, Logan, Utah

Duties: Supervise masters level school psychology graduate students in on-site practicum. Prepare and organize learning activities for the students. Supervise individual therapy cases and classroom behavioral programming.

Supervisor: Kenneth Merrill, Ph.D.

Membership in Professional Associations

American Psychological Association
 Association for the Advancement of Behavior Therapy
 The Association for Behavior Analysts
 Western Psychological Association
 Northern California Association for Behavior Analysts

Professional Activities

Administrative

<p><i>Student Senator</i> Department of Psychology Utah State University Graduate Student Senate Utah State University</p>	<p>1991-1992</p>
<p><i>Students' Representative</i> Combined Professional-Scientific Program Department of Psychology Utah State University</p>	<p>1992-1993</p>
<p><i>Certified HIV/AIDS Educator</i> Oklahoma State Department of Health</p>	<p>1994-present</p>
<p><i>Steering Committee</i> NAMES Project Tulsa Chapter, Education and Outreach Co-Coordinator Tulsa, Oklahoma</p>	<p>1995-present</p>

Papers Presented

1995

Dagang, S. A. (June, 1995). Caring for Caregivers. Round table discussion at Oklahoma HIV/AIDS State Conference, Tulsa, Oklahoma.

Daily, R.S., Hanson, C.A., Touchet, B., Dagang, S.A., & Toussieng, P. (May, 1995). Post-disaster counseling for children. Panel discussion at Oklahoma's 4th Annual Statewide Children's Mental Health Conference, Oklahoma City, Oklahoma.

1994

Dagang, S. A. (October, 1994). Incestuous family patterns: A genogram in four generations. Poster presented at the Kansas Conference on Clinical Child Psychology, Lawrence, Kansas.

1993

- Dagang, S. A. (July, 1993). Identification and treatment of children who have been abused. Paper presented at 2nd annual conference on At Risk Youth. Utah State University, Logan, Utah.
- Dagang, S. A., Thompson-Cundy, S., and Athorp, A. L. (April, 1993). Homophobia: A survey of therapists' perspectives. Paper presented at the combined conference of the Western and Rocky Mountain Psychological Associations, Phoenix, Arizona.

1992

- Dagang, S. A. (July, 1992). Identification and treatment of children who have been abused. Paper presented at 1st Annual Conference on Youth at Risk. Utah State University, Logan, Utah.
- Dagang, S. A. & Osborne, J. G. (May, 1992). Establishing classes of equivalent stimuli via observational learning. Paper presented at the 18th Annual Convention of the Association for Behavior Analysis: An International Organization, San Francisco, California.
- Dagang, S. A. & Stein, D. M. (April, 1992). Restraint theory and food consumption: A review of the empirical literature. Paper presented at the Annual Meeting of the Western Psychological Association, Portland, Oregon.
- Bell, K. & Dagang, S. A. (April, 1992). Intervening with children who have experienced trauma or abuse. Paper presented at the Conference of the Utah Council for Children with Behavior Disorders, Salt Lake City, Utah.

1991

- Dagang, S. A. (October, 1991). The phase system: One agency's model of treatment for child victims of sexual abuse. Paper presented at the First Annual ISAT Conference on Sexual Abuse, Salt Lake City, Utah.
- Dagang, S. A. & Stein, D. M. (May, 1991). Restraint theory and the prediction of eating: A meta-analytic review. Poster presented at the Second Annual Rocky Mountain Conference on Eating Disorders, Colorado Springs, Colorado.

Papers Currently In Review

- Dagang, S. A. & Stein, D. M. Restraint theory and eating behavior: A review of the empirical literature, Addictive Behaviors.