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ABSTRACT

The literature regarding the relationship between sexual abuse and eating disorders was reviewed. Overall, women with anorexia and bulimia seem to have similar to slightly higher incidences of childhood sexual abuse than has the general population. At the same times, rates of abuse among eating disordered women, including those who experienced adult sexual trauma, seem comparable to rates of abuse in the general psychiatric population. Other variables have been suggested as influencing the incidence of eating disorders subsequent to sexual abuse. Extrafamilial childhood sexual abuse and physical victimization, including rape and physical abuse, have been suggested as particularly related to bulimia. Parental lack of care and support has been identified as well as a common trait in eating disordered and abusive families. Conclusions are difficult to reach since few controlled studies have been conducted, and those with controls either covered a limited population or had limited statistical analysis. Without controlled studies, comparisons can only be made with percentage rates from different studies which almost invariably use different definitions of sexual abuse or eating disorders in obtaining their data. Such comparisons are therefore only speculative at best. To date the question of whether eating disorders and sexual abuse are related seems yet to be answered acceptably. (ABL)

EATING DISORDERS AS SEQUELAE OF SEXUAL ABUSE: A REVIEW OF RELEVANT LITERATURE

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by

Jama Leigh White

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ABSTRACT

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Research on eating disorders as sequelae of sexual abuse is reviewed and the methodology critiqued. Inconsistent definitions of the phenomena and a multiplicity of intervening variables affecting the severity of response to sexual abuse make conclusions of causality difficult to determine. Generally, women with anorexia and bulimia seem to have similar to slightly higher incidence of childhood sexual abuse than the general population. Their rates of abuse, including adult sexual trauma, seem comparable to the general psychiatric population. Further research on intervening family variables and greater use of controlled studies is suggested.

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Eating Disorders As Sequalae of Sexual Abuse: A Review of Relevant Literature

Introduction

Sexual abuse has been determined to have wide-reaching and long-lasting effects on some of its victims. One effect which has been frequently noticed by clinicians is the subsequent development of a clinical eating disorder in victims of childhood sexual abuse (Goldfarb, 1987; Sloan & Leichner, 1986; Root & Fallon, 1989). As early as 1902, the analytic literature was postulating linkages between eating disorders and general aspects of sexuality (e.g., stresses of heterosexual relationships, responses to underdeveloped sexuality or sexual frustrations were cited as precipitating anorexia) (Coovert, Kinder, & Thompson, 1989).

The first empirical study specifically addressing the relationship between sexual abuse and eating disorders was conducted in 1985 (Oppenheimer, Howells, Palmer & Chaloner, 1985). A surprising two-thirds of the female eating disordered patients in this study described having had earlier adverse sexual experiences. These early findings

spurred further research and theorizing on the influence of sexual abuse on the later development of an eating disorder.

Parallels in Symptomatology

Another factor encouraging further exploration into this question has been the parallels noted in various personality traits of sexual abuse victims and individuals with eating disorders. Problems dealing with sexuality, low self-esteem, powerlessness in relationships, depression, difficulty trusting others and problems in owning feelings, especially anger, are a few of the areas that have been included to illustrate the victim-like attitude of many eating disordered clients (Root & Fallon, 1988).

Eating disordered patients often seem to have conflicts with respect to their sexuality which may be similar to those experienced by sexual abuse victims. Schetky (1990), in summarizing the literature on long-term effects of sexual abuse, included as common sequalae, (a) detached feelings, (b) inability to trust, (c) hostility toward men, (d) sexual difficulties, (e) impaired social skills and (f) problems in separation-individuation.

Similarly, with respect to eating disorders, relational problems are a major issue. The anorexic is generally seen as afraid of becoming a teenager. Physical

maturation is warded off as something frightening or shameful (Bruch, 1979; Strober & Yager, 1985).

Wooley and Kearney-Cooke (1986) theorized that anorexia and bulimia are related to different aspects of the separation-individuation process. They asserted that anorexia centers around problems of entering into adolescence, while bulimia centers around problems of moving out of adolescence and into adulthood. The anorexic seems to falter in the early stages of transition to maturity, the development of sexuality and the shift in focus away from family toward peers. On the other hand, the bulimic begins these processes but does not adequately complete them, because of problems in enjoying intimacy in relationships and in separating from her family. As the majority of individuals affected by eating disorders and sexual abuse are women, and the studies cited in this paper focus almost completely on women, feminine pronouns are used throughout to refer to victims.

Those with eating disorders, particularly anorexia, often exhibit some of the sexual inhibitions experienced by some sexual abuse victims. In a controlled study of female anorexics and those showing some but not all of the significant anorexic symptomatology, Fernandez and Vaz Leal (1984) found frigidity significantly elevated in the

anorexics, 100% in the "true" anorexics and 76% in the other anorexic group. The investigators also found positive emotion before first sexual contact quite low in the two experimental groups, 0% and 20% respectively, compared to 89% in the control group. Although their study focused on the differences between the two anorexic groups and their proposed differing developmental histories, the presence of some type of sexual disturbance was shown in these eating disordered patients.

Coovert et al. (1989), in a thorough review of the literature on psychosexual aspects of eating disorders, made no unequivocal conclusions, but did note two basic trends. First, they noted that bulimics tend toward more past and current sexual activity than do anorexics, but with less enjoyment. Bulimics also tend to be more sexually active than non-eating disordered control subjects.

These two types of responses to sexuality are also seen in adult abuse victims. Goodwin (1990), in her review of the sexual abuse literature, stated that 61-94% of adult sexual abuse victims experience sexual inhibitions. She also noted that another common symptom is some form of re-enactment of the original sexual abuse. Prostitution, revictimization and eroticism are responses that have been noted by Schetky (1990).

Another area of similarity between incest victims and those with eating disorders is the presence of low self-esteem. Scott and Thoner (1986) conducted a study which showed strong similarities in MMPI scores between incest victims and anorexics. They studied a group of 30 incest victims in therapy, 30 anorexics in inpatient treatment and 30 matched nonpatient controls. Their findings included homogeneity between the incest and anorexic groups and significant differences from the control group on the Ego Strength scale and clinical scales 4, 6, 7, 8, and 9. Although Scott and Thoner concluded that the anorexia resulted from different developmental issues aside from incest, others have seen in these data further reason to investigate the hypothesis that incest and anorexia are in some way related.

Hypothesized Links

Various theories and hypotheses have been offered to explain the apparent relationship between eating disorders and sexual abuse. These range from interpreting eating disorders as a direct response or attempted coping mechanism in respect to sexual abuse, to seeing eating disorders and sexual abuse arising from similarly dysfunctional family systems.

In the first major theory Calam and Slade (1987) delineated bodily dissatisfaction subsequent to unwanted sexual experiences as one possible reason for a relationship between the two phenomena. Oppenheimer et al. (1985) also suggested that there might be a meaningful link between a sexual abuse victim's feelings of disgust about her own sexuality and body image and her propensity to develop an eating disorder. Women may verbalize such feelings in treatment, wanting to alter their bodies so as to repulse the perpetrator of sexual abuse or to make themselves non-sexual and undesirable (Hall, Tice, Beresford, Wooley, & Hall, 1989; Kearney-Cooke, 1988).

A second explanation for a relationship between eating disorders and sexual abuse has been offered by Root (1991). She has presented a detailed theory of eating disorders as a post-traumatic stress response for some sexual assault victims. She explained that victims may feel out of control and powerless and may focus their attempts to control their world into the arena of food. Purging and fasting may express attempts to cleanse oneself of the negative feelings of having been violated and may represent a type of undoing as a coping mechanism. Also, the binge-eating, starving and vomiting may function as a dissociative defense which serves to drive out unwanted, intrusive thoughts of the trauma.

Serving this function, the eating disorder is negatively reinforced (because it suppresses the intrusive thoughts and feelings about the trauma) and is likely to become addictive.

Root, in her earlier work with Fallon (Root & Fallon, 1989), discussed how bulimia in particular can serve nine different coping functions in prior and/or current abuse situations that provide: (a) a way to anesthetize painful feelings surrounding the abuse, (b) an attempt to cleanse the self symbolically, (c) a way to express anger in an ongoing abusive relationship, (d) a confirmation of the victim's low self-esteem and a validation of her feelings that she truly deserved the abuse, (e) an attempt to gain physical or psychological space by participating in a private ritual, (f) an effort to control the environment by controlling her body, (g) an expression of the repressed or unprocessed hatred toward the abuser by turning it against the victim's own body, (h) a creation of a predictable experience, and (i) a means of psychological and physical release from stress and tension.

A further aspect of the view that eating disorders could be a post-traumatic stress response centers on a physiologic response to stress. Prolonged stress is believed to increase the production of endorphins, the

opioid-like substances which decrease pain and stress. Schetky (1990) has recently theorized that this endorphin elevation is a possible result of sexual abuse trauma. She also noted that some victims may deliberately attempt to self-medicate by engaging in risk-taking or self-abusive behaviors. Bulimia and anorexia have both been associated with numerous neurochemical changes (Fava, Copeland, Schweiger, & Herzog, 1989). Anorexic patients seem to have elevated total opioid activity, but current research on bulimics is inconclusive. Other neurochemical changes in the noradrenergic and serotonergic systems may perpetuate pathological eating behavior and may be related to increased anxiety and depression.

A third theory that hypothesizes the linkage between eating disorders and sexual abuse was offered by Kearney-Cooke (1988) and relates to the abuse victim's difficulty in trusting her own experience. The sexual abuse victim has had a skewed experience wherein physical stimulation, which is ultimately intended to be pleasurable, is tainted with feelings of guilt, shame and confusion. Sexual stimulation now has an inappropriate meaning and the victim cannot trust her body's sensations. Similarly, the individual with an eating disorder does not give appropriate meaning to bodily messages about hunger or fullness. It is suggested that in

the abuse victim the inability to trust and interpret bodily signals relevant to sexual experiences may be carried over and expressed in disordered eating.

A fourth theory, as mentioned by Calam and Slade (1987), focuses on the family dysfunction present in both the sexually abused and those with eating disorders. The investigators suggested that some common third factors may be present which predispose persons to both phenomena.

Bulimic (and anorexic) family systems are generally characterized by strong triangulation. An inappropriate relationship between a parent and child serves to detour the direct expression of conflict. Enmeshment, involving permeable boundaries and overconnection of family members, is also likely to be evident and can be expressed in several ways, including incest. Other traits of these families include homeostasis with considerable resistance to change, and communication difficulties reflected particularly in double messages (Root & Fallon, 1986).

Clearly there are implicit and explicit similarities between these traits in eating disordered families and those of incestuous families. Triangulation, enmeshment and marred communication are equally major features of such families. The incestuous situation sets up a triangle which excludes one parent, usually the mother, and blocks the

nurturance and further attachment needed from her. The triangulation also tends to block communication, promoting secrecy between the perpetrator and victim. Because of the secrecy the victim is often cut off from the assistance she needs to change the cycle, so a pattern is established which is difficult to change (Schultz, 1990).

Though these similarities between eating-disordered and incestuous families are obviously broad and encompass many areas, more precise comparisons may eventually be able to be made. Some attempts have been made in the research to isolate specific features. Before examining and evaluating the current body of research, several methodological problems must be noted.

Methodological Problems

Several methodological issues complicate the evaluation and interpretation of the current research on the relationship between eating disorders and sexual abuse. Definition of terminology varies from study to study. Often more immediate effects are not distinguished from prolonged or delayed effects. Also, intervening variables create problems determining causality.

Inconsistent Definitions

The empirical literature has defined sexual abuse in a wide variety of ways. These definitions encompass various behaviors, ranging from sexual contact with an adult before the age of 14 (Calam & Slade, 1989), partner abuse (Bailey & Gibbons, 1989), and rape as an adult (Bailey & Gibbons, 1989; Root & Fallon, 1988), to sexual contact with a physician or therapist (Finn, Hartman, Leon, & Lawson, 1986). Sexual abuse has been measured by a number of methods, ranging from assessment with the simple question, "Have you ever been molested?" (Bailey & Gibbons, 1989) to indepth clinical interviews using a standardized questionnaire format (Finn et al., 1986; Palmer, Oppenheimer, Dignon, Chaloner, & Howells, 1990).

Eating disorders are likewise defined in numerous ways, including elevated scores on eating attitudes scales (Calam & Slade, 1987, 1989; Smolak, Levine & Sullins, 1990), to standardized DSM-III or DSM-III-R diagnoses of anorexia nervosa and bulimia (Bailey & Gibbons, 1989; Palmer et al., 1990; Piran, Lerner, Garfinkel, Kennedy, & Brouillette, 1988; Steiger & Zanko, 1990). Some studies distinguish anorexics with and without amenorrhea (Fernandez & Vaz Leal, 1984) and bulimics with a prior history of anorexia (Steiger

& Zanko, 1990). Others differentiate past and current anorexia and bulimia (Finn et al., 1986).

Blurring of Long-Term and Initial Effects

Sexual abuse has both immediate and long-range effects. Browne and Finklehor (1986) distinguished initial effects as those occurring within two years of the abuse. They also noted that some effects may be developmentally specific; that is, effects might be seen among children but not continue into adulthood, or may not be apparent in a college sample but appear in older groups. Some effects may be modified as the individual matures.

Some studies in this area have addressed both adult and childhood trauma (Oppenheimer et al., 1985; Palmer et al., 1990; Hall et al., 1989; Root & Fallon, 1988; Bailey & Gibbons, 1989; Finn et al., 1986), but there is only a very limited discussion of the issues of initial versus long-term effects. The length of time since the last abusive incident may have been determined, however, it is not discussed in the studies. Thus, if a period of molestation has extended over several years into adolescence, some women in a college sample could be experiencing initial effects of the abuse while others may be experiencing long-term effects. Also, when adult sexual trauma is included in the definition of sexual abuse, some adults will be experiencing

initial effects of rape while others will be experiencing long-term effects of childhood abuse. Thus it is difficult from the current data to determine whether eating disturbances are more likely to be initial or long-term effects.

Problems Determining Causality

Even if eating disorders appear to be more prevalent in sexual abuse victims, problems occur in determining whether or not eating disorders are causally related to sexual abuse. High base rates of both phenomena and the multiplicity of intervening variables are the major areas of difficulty.

Base rates. Because eating disorders and childhood sexual abuse have fairly high base rates in the general population, it is difficult to determine whether their co-occurrence is a representation of causality or merely of chance. Underreporting is also a significant problem in determining the incidence of sexual abuse and sexual assault (Brickman & Briere, 1984; Sheldon, 1988).

Prevalence studies for sexual abuse were summarized by Peters, Wyatt, and Finkelhor (1986) and showed base rates for females ranging from 8% in a college student sample in Seattle to 62% in a community sample in Los Angeles County. Most studies showed rates for females at 15% to 25%. For

males, prevalence was determined to be between 3% and 30%, with most studies ranging from 5% to 10%.

Brickman and Briere (1984) found a combined incidence rate for rape and sexual assault of 27% in a community sample of Canadian women. It appears that unwanted sexual experiences are quite prevalent, affecting perhaps as many as one in four women.

Studies on the prevalence of eating disorders are much fewer in number, particularly those focusing on eating disorders in the general population. Cooper, Waterman, and Fairburn (1984) found that 20.6% of women in a community sample felt that they had eating problems. Even though these women were not clinically diagnosed as anorexic or bulimic, they did show a higher mean score on the Eating Attitudes Test (EAT) than the others in the sample. Button and Whitehouse (1981) found that 5% of post-pubertal females ultimately develop a sub-clinical form of anorexia nervosa. With such limited data, it is difficult to reach a conclusion regarding base rates of eating disorders. However, it is noteworthy that considerable numbers of women may have problems with eating.

Childhood sexual abuse has also been shown to have a high incidence in psychiatric/psychotherapy referrals. Bryer, Nelson, Miller, and Krol (1987) found that 72% of a

sample of psychiatric inpatients had experienced some form of abuse at some point during their lives. Twenty-one percent reported sexual abuse only, 18% reported physical abuse only and 33% reported both types of abuse. Sheldon (1988) found that 20.8% of women referred to a psychotherapy unit had disclosed sexual abuse in childhood. Sheldon also reviewed four similar studies which showed the incidence of childhood sexual abuse in various psychiatric populations to be between 4% and 44%.

Intervening variables. A causal relationship is also difficult to determine because of the extensive number of variables which have been identified as contributing to the severity of childhood sexual abuse. These variables are categorized as (a) victim traits, (b) offender traits, (c) extent of the abuse, and (d) the available support system.

Victim traits which have been studied include (a) age during the abuse period, (b) the victim's fear of negative consequences to self if the abuse were revealed, (c) the victim's disclosure or non-disclosure of the abuse, and (d) the victim's effort to resist, avoid or escape. Offender traits include (a) whether the perpetrator admits or denies the abuse, (b) the closeness of relationship of the offender to the victim, (c) the sex of the offender, (d) the age of

the perpetrator, e.g., an adolescent versus adult, and (e) the giving of a reward to the victim by the offender.

Effects are also governed by the extent of the abuse, including such aspects as the duration and frequency of the abuse, the type of sexual act, and the presence of force or aggression in the abusive situation. The other set of contributing factors includes the support system available to the victim, including the presence of a supportive relationship with an adult or sibling, the presence of general characteristics of a dysfunctional family, and the parental and institutional response to the disclosure of the abuse (Browne & Finkelhor, 1986; Conte & Schuerman, 1987).

Thus there is a problem in controlling for this plethora of potential intervening variables when comparing sexual abuse victims for specific sequelae. The effects of any instance of sexual abuse are determined by a unique combination of these factors, making equivalent comparisons and, thus clear determination of causality, extremely difficult.

Initial Effects

According to Finklehor (1986), initial effects, that is, those which surface within two years of the abuse, can be seen in children who are victims of childhood sexual

abuse and also in adults who are victims of rape or similar sexual trauma. However, the relevant data in this regard are sparse.

Children

Two studies have examined self-injurious behavior in general as a response to abuse. DeYoung (1982) studied a sample of 45 paternal incest victims and inquired as to whether they had engaged in self-injurious behavior for three months or longer sometime during childhood or adolescence. A surprising 57.7% indicated that they had engaged in such behaviors ranging from cutting, scratching and burning, to attempts to break bones and self-poisoning.

DeYoung (1982) also analyzed the stated reasons for the subjects' self-injurious actions. Responses included feeling responsible for the abuse, introjecting images of self as a whore, or feeling angry with their physical bodies because they responded sexually to the abuse. Another type of motivation alluded to by each subject was a type of ego reintegration. All subjects described overwhelming guilt, fear and anger. Immediately before the self-injurious act they experienced a period of numbness or depersonalization. The sight of the injury, not the pain of it, brought them back to reality. Then, the intense depersonalization feelings subsided and some restoration of defenses occurred.

This idea of ego reintegration seems to bear some similarity to Root's (1991) ideas of disordered eating as a dissociative coping mechanism to ward off intrusive thoughts of trauma.

Carroll, Schaffer, Spensley, and Abramowitz (1980) conducted a controlled study of self-mutilating patients and found that all but one in the mutilating group had been physically or sexually abused as children. The self-mutilating served as a way of expressing anger or promoting a sense of calm and decreased tension, and it fostered a reintegration of ego defenses. This study did not clearly delineate initial and long-term effects. Subjects interviewed were adults. The study did not specify exactly when the self-mutilating behaviors occurred.

Peters (1976) conducted a study which addressed various initial effects, including a general inquiry about eating disturbances. He studied 64 children who came to a rape/sexual assault clinic for a psychiatric evaluation. In these interviews, 20% reported eating less than usual. Even though the subjects in this study were not randomly selected, the study is noteworthy in that it is one of the few that have addressed the question of eating problems as initial effects.

Conte and Schuerman (1987) also commented on eating disturbances when they investigated the factors associated with an increased impact of childhood sexual abuse. A controlled study was done using 369 sexually abused children and a comparison group of 318 community children. Conte and Schuerman found that only 0.9% of their sample of abused children had experienced eating disorders. No explanation was given as to how eating disorders were defined in this study. One possible explanation for the wide discrepancy between Peters' (1976) findings of 20% and Conte and Schuerman's (1987) findings of 0.9% with eating problems could be the investigators' different definitions for eating problems. Peters' only inquired as to "eating less than usual". Conte and Schuerman, though not expressly stated, likely utilized a much more stringent definition, particularly in light of their use of the term, "eating disorders."

Adults

Most of the empirical studies on the relationship between eating disorders and sexual trauma do not clearly delineate initial effects in adults. Some case reports, however, illustrate the phenomenon. Schechter, Schwartz, and Greenfeld (1987) offered two case reports of anorexia nervosa as a response to sexual assault. One of these was

in response to a rape with no previous history of an eating disorder, while the second was of a longstanding bulimic following an incident of rape. McFarlane, McFarlane, and Gilchrist (1988) have added two further case reports of anorexia in response to sexual assault. In the one instance, the response was to a rape with the victim having no previous history of an eating disorder. In the other, the response was of a longstanding bulimic following an incident of rape.

McFarlane et al. (1988) hypothesized that the increased cognitions about food and weight gain replace the intrusive thoughts of the trauma. Again this hypothesis is in agreement with Root (1991) and Root & Fallon's (1989) ideas about bulimia and later about eating disorders in general. These authors theorized that eating disorders may be a post-traumatic stress response which provides relief from negative intrusive thoughts of the trauma.

Data on eating disorders as an initial effect of sexual abuse are sparse. Underlying reasons for the occurrence of eating problems immediately after the trauma seem at least in part to have some similarity to the hypothesized rationale for the later development of eating disorders.

Long Term Effects

Various studies have been conducted to determine the relationship between sexual abuse and the later development of eating disorders. Several different populations have been investigated with respect to various intervening variables.

College Student Population

Four studies have approached the question of the linkage between sexual abuse and eating disorders in a college population. Although there is much helpful data contained in these studies, a weakness noted by Calam and Slade (1989) and by Smolak et al. (1990) is that the college population may overrepresent the successful survivors of sexual abuse. As a result, those whose lives have been so deeply affected that they do not pursue further education are excluded by this design. Thus, results of these four studies are more likely to be biased toward the absence of the long-term effects of sexual abuse.

Runtz and Briere (1986) studied 150 female undergraduates, investigating 28 variables indicating various forms of adolescent acting out. They attempted to find variables which discriminated between abused and non-abused groups. Undereating was found to be a major discriminator between the two groups. Overeating, however,

was not found to be a discriminator. Runtz and Briere hypothesized that anorexic behavior could be seen as a combination of rejection of parental authority, self-punishment and a "cry for help."

Several problems are associated with intepretation of the results of this study. First, although sexual abuse was defined as sexual contact with someone five years or older before the victim had reached age 15, eating problems, ("overeating" and "undereating") were isolated according to the participants' own definitions of them. Thus a subject's admission of overeating or undereating may have had very limited correspondence to a clinical diagnosis of an eating disorder.

Second, the design did not distinguish between initial and long-term effects. Subjects were queried on symptoms present during their adolescent years which could have included initial effects for some (those who experienced a period of later abuse) but not for others. Because Runtz and Briere (1986) did not mention the percentage of their abused sample that had experienced eating disturbances, it is difficult to compare their results with other studies and population base rates.

Calam and Slade (1987, 1989) published two studies that apparently utilized the same subject pool of 130 female

undergraduates. Fifty-eight percent of their sample reported unwanted sexual experiences, while 31% reported such experiences had occurred prior to age 14. In their subsequent study, which was similar to the study by Runtz and Briere (1986), Calam and Slade (1989) found some significant differences in anorexia and bulimia as responses to various trauma. Intrafamilial sexual experiences correlated with elevations on the Dieting subscale of the EAT. Bulimia was not found to be associated with intrafamilial sexual experiences. Thus, the authors hypothesized that anorexia may be used as a way of regaining control in an abusive family system or as a way of punishing the parent who failed to provide protection. Bulimia, on the other hand, may be a symptom in situations in which the individual cannot control the abuser as, for example, in extrafamilial abuse.

Early sexual intercourse against participants' wishes correlated significantly with higher scores on the EAT and the Dieting and Bulimia subscales. However, this was the only early variable which did so. Rape and narrowly escaping sexual assault were later experiences which correlated highly with eating problems. This led to a hypothesis for subsequent investigation that physical abuse

without specific sexual intent may also trigger eating disorders.

Calam and Slade (1987) investigated body satisfaction and perceived relationships with parents as related to EAT scores and sexual abuse accounts. They found, contrary to expectations, that high scores on the bodily dissatisfaction scale did not correlate with the reported incidence of abusive experiences. Thus the common hypothesis that dissatisfaction with body image after sexual abuse can precipitate the development of an eating disorder was not confirmed. However, Calam and Slade quoted subjects who explained that the fear of being attractive to men motivated their efforts to change their body shape by excessive dieting and compulsive eating. Clinical data from other sources (Hall et al., 1989; Sloan & Leichner, 1986) have provided similar statements from patients.

Calam and Slade (1987) also found that perceived relationship with parents was related both to eating problems and to sexual abuse. Subjects who perceived their parents as low in caring were more likely to have more early sexual events as well as higher scores on the EAT. Overprotection by both parents correlated with elevated EAT scores but, not surprisingly, overprotection by fathers did not correlate with sexual abuse.

In both of their studies, Calam and Slade (1987, 1989) used a quite broad definition for sexual abuse as unwanted sexual experiences. Though the investigators primarily focused on such experiences prior to age 14, they at times also considered rape and other later experiences. The 1987 study grouped the early and later incidents together, possibly confounding their results. Also, although the EAT is a widely used test with the advantage of discriminating various patterns of disordered eating, it does not allow for assignment of DSM-III or DSM-III-R diagnoses for subjects.

Smolak et al. (1990) studied 298 female undergraduates, 23% of whom had experienced childhood sexual abuse (clearly defined as sexual contact under 16 years of age with someone 5-10 years older). Eating disorders were assessed through a questionnaire which did not give criteria for DSM-III diagnosis but provided data on various tendencies useful in discriminating true eating disorders from less serious eating problems. In the study, the childhood abuse victims scored higher overall on the eating disorders questionnaire than did non-victims, but no clear differences were observed on the individual subscales. Scores on the eating disorders inventory were unrelated to severity of abuse and familiarity with the abuser.

A separate multivariate analysis was performed to determine the influence of various aspects of parental support on the eating disorder scores. A strong relationship was found between elevated eating disorder inventory scores and parental unreliability. Parental irresponsibility and unsupportiveness were also significant factors. However, much of the variance was unaccounted for, leaving the authors to conclude that "the path from child sexual abuse to an eating disorder involves a complex interplay of familial and, quite possibly, personal factors" (Smolak et al., 1990, p. 176).

Smolak et al. (1990) made a valuable effort to clarify the mitigating family factors which either foster or prevent the development of an eating disorder subsequent to having experienced childhood sexual abuse. Despite the investigators' intricate statistical analyses, however, the complexity of the situation remains readily apparent. Their study does seem to add support for the contribution of parental irresponsibility and unreliability to the problem. This conclusion by Smolak et al. seems to fit with Calam and Slade's (1987) conclusions of low parental care correlating with both sexual abuse and eating problems. However, Calam and Slade's findings about parental overprotection seem in contrast to those of Smolak et al. with respect to parental

irresponsibility. Family variables seem to be significant influences in both mitigating and intensifying sexual abuse sequelae. Further research is needed to delineate specific effects more accurately.

Eating Disordered Patient Population

Various studies have been conducted with eating disordered patients in clinic or inpatient settings. Some of these studies have included adult sexual trauma, along with childhood sexual abuse and, as such, results may be confounded. Also, as previously noted, incidence of sexual abuse in the general psychiatric population has become elevated, thus it would seem that base rates for this population would tend to be higher than in the general population.

Beginning the empirical work on this topic, Oppenheimer et al. (1985) studied 78 patients admitted consecutively to an eating disorders clinic. Anorexia, bulimia or a combined diagnosis was assessed by DSM-III criteria. Adverse childhood sexual events included both contact and non-contact experiences for a person under 13 or for a person 13 to 16 with someone at least five years older. Such events were found for 29.5% of the sample, while another 34.6% experienced adverse sexual events where the age criteria were not met. The authors expressed that their findings

were likely to be underestimated since, of the 14% who failed to complete the questionnaire, several appeared to have experienced abuse as well.

A subsequent study by some of the same authors was conducted with a sample of 158 female eating disordered patients from an eating disorders clinic (Palmer, Oppenheimer, Dignon, Chaloner, & Howells, 1990). Diagnoses were made according to DSM-III criteria for either anorexia or bulimia. Percentages of the sample who had experienced sexual abuse were similar to those in the previous study--31% experienced adverse childhood sexual experiences while 26.6% had other adverse sexual experiences.

Palmer et al. (1990) also investigated Calam and Slade's (1989) hypothesis that anorexics are likely to have experienced intrafamilial abuse and may use the anorexia to punish the abusing parent. Their findings did not support this hypothesis, as there was no significant relationship between a particular diagnosis and whether the abuse was intrafamilial or extrafamilial. Since both of these studies had small samples, further research would be helpful to reach a more definitive conclusion on this possible correlation.

A high percentage of abuse was found in a sample of eating disordered inpatients by Hall, Tice, Beresford,

Wooley, and Hall (1989). Of the DSM-III-R diagnosed bulimics and anorexics, 50% had experienced some form of sexual abuse. Sexual abuse was broadly defined to include incest, fondling, rape and homosexual assault. This 50% rate of abuse is congruent with other studies which have included adult sexual trauma in the definition of sexual abuse. Even though Hall et al. indicated that 85% of the incidents of sexual abuse incurred by their patient sample occurred before age 17, it is unclear how many incidents occurred in the same individuals. Thus the results do not clearly separate childhood abuse and adult trauma despite the inference that the majority of the abuse was early.

Also, Hall et al. (1989) may have obtained a higher percentage of eating disordered patients with a history of abuse because they utilized clinical interviews and subsequent clinical intervention to ascertain abuse. Thus they were able to overcome the problem incurred by Oppenheimer et al. (1985) when later clinical work revealed that an abuse history seemed likely in some members of the non-abused sample. Noteworthy was the finding that the 50% rate of abuse in anorexics and bulimics was significantly higher than the 28% rate for those in the sample with other diagnoses (e.g., obesity, medical diagnoses of the GI tract).

Much lower rates of abuse were found in a study by Piran, Lerner, Garfinkel, Kennedy, and Brouillette (1988). Their study focused primarily on the presence of certain personality disorders in the eating disorders population but also included data on childhood events, not excluding sexual abuse. Abuse rates in the sample were surprisingly low, even lower than abuse rates for the general population. Of their anorexic sample, none had been abused and of their bulimic sample, 7.9% had been abused. This discrepancy is likely due to the investigators' method of assessment of sexual abuse (simple inquiry in the course of a structured interview about child-adult sexual abuse). Victims may have been reluctant to disclose their history and may not have viewed whatever occurred as child abuse, especially in such a brief assessment.

Two studies focusing on post-traumatic stress and dissociation have provided additional data on eating disorders and sexual abuse (Coons, Cole, Pellow, & Milstein, 1990; Coons, Bowman, Pellow, & Schneider, 1989). Coons, a long-standing author in the area of multiple personality disorder, utilized eating disordered patients as control groups, in studies focusing on sexual abuse and dissociation. He found eating disordered patients sufficiently similar to the general psychiatric population

in incidence of incest to use them as control subjects. Though other investigators previously addressed in this present review generally agreed that their results do not conclusively link eating disorders and abuse, most would probably not support the use of eating disordered patients as representative of the general patient population.

Root (1991), as previously mentioned, has viewed eating disorders as a specific type of post-traumatic response, which would tend to confound Coons' results. Coons et al. (1990), however, showed that there were significant differences between their women outpatients and bulimic outpatient controls both in instances of abuse or trauma, and in symptoms of post-traumatic stress and dissociation. Only 10% of the bulimic controls were found to have experienced childhood sexual abuse as compared to 56% of the women outpatient therapy group. However, 30% percent of the bulimic patients had experienced some type of abuse or trauma, compared to 87% of the other group. Coons et al. also found the outpatient group women significantly higher than the bulimic women in recurrent dreams of trauma, flashbacks of trauma, events reminiscent of the trauma, and intrusive thoughts of trauma.

The major difficulty with the Coons' et. al. (1990) study is that the experimental sample came from a single

clinic. Although the clinic was described as dealing with women's issues across a broad spectrum of areas, it may have had some actual areas of special focus. The 87% of patients who had experienced abuse or trauma is much higher than the general percentage of psychiatric patients who have experienced abuse. It appears that the clinic may have attracted abused individuals tending toward dissociative experiences, given the authors' specialization in this area. The study as such may support the view that women with dissociative symptomatology are more likely to have been abused than are women with eating disorders.

Coons et al. (1989) found 10% of the bulimics had been sexually abused as children, with another 20% having experienced physical or verbal abuse or neglect. Fifteen percent had experienced adult sexual trauma. Of the anorexic sample 40% had experienced some type of childhood abuse, 20% had been victims of childhood sexual abuse, and 20% had undergone adult trauma. An additional finding was that bulimic patients were less likely to dissociate than anorexic patients. However, the authors indicated that 2 of their anorexic sample of 10 were eventually discovered to have atypical dissociative disorder.

It is evident that eating disordered patients experience significant childhood and adult trauma. It

appears that they experience less than some who develop certain dissociative diagnoses, yet it is unclear whether they generally experience more trauma than the general patient population.

Special Focus on the Bulimic Population

Some researchers have focused especially on the bulimic population in order to determine whether there are links between this disorder and sexual abuse. Bulik, Sullivan, and Rorty (1989), while investigating family histories of women with bulimia, conducted a post-hoc study of childhood sexual abuse in their sample of 35 community women. They found that 12 of their sample, or 34.4%, had experienced early sexual abuse. The investigators' definition of abuse included father-sister incest when the subject was not a participant. This definition is not commonly used in studies, and as such may have elevated to some degree their percentage of abuse victims. However, Bulik and her associates noted that they could have had some undetected cases of sexual abuse given the rather non-specific nature of their inquiry regarding sexual abuse. Because of these two factors, their results overall need to be held rather tentatively.

Bulimic women in treatment were evaluated for various types of victimization by Root and Fallon (1988). DSM-III

criteria were used to determine the diagnosis of bulimia and sexual abuse was assessed through a questionnaire and a clinical interview. Sixty-six percent of their sample was found to have been physically victimized in some way. Four categories of victimization were addressed including (a) rape, 22.7% of the sample women; (b) childhood sexual abuse, 28.5%; (c) childhood physical abuse, 29.1%; and (d) battery, 22.7%. After allowing for overlap in some categories, physical or sexual abuse as children involved 46.5% of the women.

Root and Fallon (1988) indicated that their results should be considered conservative, because victims are likely to block out or minimize violence as a way of coping. This would be true of most of the studies of victimization. Problems with the Root and Fallon study are similar to those found in other studies dealing with eating disorders and sexual abuse, including the lack of a control group and the probability of a multiplicity of intervening variables which may have affected subjects' coping abilities.

Bailey and Gibbons (1989) conducted a similar study on physical victimization and bulimia with a college student sample. They found 3% of the females were bulimic, while 28% had experienced some type of physical victimization. Rape, partner abuse, physical abuse and sexual molestation

were included, assessed by a simple yes/no question. Physical abuse was found to be correlated significantly with bulimia. While each of the other victimization experiences were more prevalent in the bulimics than in the controls, the differences were not significant statistically.

Also included in this study was a multiple regression analysis of the severity of bulimic symptoms based on the various types of physical victimization. The investigators found that child abuse contributed to the severity of the bulimic symptoms.

Because the sample of bulimics in the study was quite small (9 of 294), conclusions from the Bailey and Gibbons study should be viewed with some degree of caution. Also, the investigators' method of assessing abuse and victimization, that is, utilizing only one yes or no question, likely made disclosure difficult. Thus, estimates of victimization may have been minimized.

This small body of research focusing on bulimia does not really distinguish bulimia from anorexia or from mixed diagnoses in relation to sexual abuse sequelae. The question of the effect of physical victimization on the development of eating disorders is addressed by these studies. Findings from the Calam and Slade (1989), Bailey and Gibbons (1989) and Root and Fallon (1988) studies all

suggest at least some relationship between physical victimization and eating disorders. Further research on victimization (physical and sexual) and eating disorders seems to be indicated.

Controlled Studies Utilizing Different Populations

A major problem in evaluating the conclusions from research on the relationship between eating disorders and sexual abuse is that very few of the studies included a control group, or if one was included, the sample was obtained from only an inpatient or a college student population. Two studies, however, did include stronger control groups.

Finn, Hartman, Leon, and Lawson (1986) investigated a sample of women in therapy with a variety of diagnoses to determine whether a relationship exists between eating disorders and sexual abuse. The investigators employed a broad definition of sexual abuse, including not only incest and sexual contact against the wishes of the subject but also sexual contact with a treating physician or therapist. Childhood abuse and adult sexual trauma were not delineated. Subjects were divided into abused and control groups, but no significant differences were found between the two groups on incidence of bulimia or other abnormal eating patterns which did not meet the DSM-III criteria for an eating disorder.

Found in the Finn et al. study were extremely high base rates for sexual abuse (70%) and for an eating disturbance of a moderate to severe nature at some point during the subject's lifetime (82%). These high base rates could be accounted for by the broad definitions used for these phenomena. Further, Finn et al. drew a segment of their sample from a clinic specializing in treating women who had been sexually abused. Thus the sample is not necessarily representative of the patient population in general. Nonetheless, the sample is sizable enough to make some meaningful comparisons. No significant differences were found in the incidence of eating disorders between the abused and control groups. Because a control group was used in the design of this study, its findings should be given careful consideration.

Steiger and Zanko (1990) conducted the only study of its kind in this field. Their study compared women diagnosed as having some type of eating disorder with other women who had experienced psychiatric disturbances and with a normal control group. Steiger and Zanko found that an elevated incidence of sexual trauma was found frequently in psychiatrically disturbed females, whether eating disordered or not. The investigators also concluded that 30% of eating disordered women had experienced some form of childhood

sexual trauma. Such experiences were found to be rare among anorexics and more prevalent in bulimics with no anorexic history. Extrafamilial abuse was unexpectedly high in bulimics in this sample, thereby corroborating an earlier hypothesis of Calam and Slade (1989) that bulimia is more likely to be associated with extrafamilial abuse.

Steiger and Zanko (1990) also studied defense styles and found incest victims to be reliant on "self-sacrificing" defenses more than were other victims or controls. However, the investigators did not report the presence or absence of significant between group differences, either on the defenses portion of the study or on the evaluation of incidence of sexual trauma. Even though their design utilizing control groups from different populations is excellent and much needed, results must be viewed with some degree of caution. Steiger and Zanko themselves summarized their study conservatively, recognizing incest and abuse as evidence of other family features which may have pathogenic effects on children, not the least of which may be the later development of eating disorders.

In summary, Finn et al. (1986) and Steiger and Zanko (1990) have contributed significantly to the body of research in this field because of the use of control groups in the design of their studies. However, similar research

is required to offset the studies' drawbacks. Finn et al. (1986) studied only women who were in therapy and their sample was rather heavily weighted with abused women. Steiger and Zanko (1990) utilized an excellent design but either did not perform a complete statistical analysis of their data or did not report non-significant results. More studies expanding on their work would be helpful.

Discussion and Implications for Future Research

The empirical literature regarding the relationship between sexual abuse and eating disorders has been reviewed along with an overview of various theories of causality. The reviewed studies have provided some additional data but no conclusive answers have been obtained at this stage of the research.

Overall, women with anorexia and bulimia seem to have similar to slightly higher incidences of childhood sexual abuse than has the general population. At the same time, rates of abuse among eating disordered women, including those who experienced adult sexual trauma, seem comparable, to rates of abuse in the general psychiatric population.

Other variables have been suggested as influencing the incidence of eating disorders subsequent to sexual abuse. Extrafamilial childhood sexual abuse and physical

victimization, including rape and physical abuse, have been suggested as particularly related to bulimia. Parental lack of care and support has been identified as well as a common trait in both eating disordered and abusive families.

Nonetheless, conclusions are difficult to reach, as few controlled studies have been conducted, and those with controls either covered a limited population or had limited statistical analysis. Without controlled studies, comparisons can only be made with percentage rates from different studies which almost invariably have used different definitions of sexual abuse or eating disorders in obtaining their data. Such comparisons are therefore only speculative at best.

The need for more research on intervening family variables seems obvious. Because of a myriad of potential variables satisfactory studies are liable to be quite complex. Parental support, enmeshment, irresponsibility and inappropriate boundaries are only a few of the traits which could be investigated. Humphrey (1989) completed a study utilizing a structural analysis of social behavior differentiating between anorexics and bulimics in various family interaction traits. If a study of this nature could be carried out to include abusive families, common familial traits might be identified.

Another type of study which could prove informative is a longitudinal study of child abuse victims. Data on eating patterns and the development of eating disorders could then be collected and analyzed.

To date, the question of whether eating disorders and sexual abuse are related seems yet to be answered acceptably. Though empirical evidence does not provide a conclusive answer, clinical data continues to suggest that a relationship exists. Future studies which overcome the methodological problems suggested in this review may help provide needed answers.

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