Published in final edited form as:
Psychol Bull. 1983 January ; 93(1): 105–136.

Primary Orgasmic Dysfunction: Diagnostic Considerations and Review of Treatment

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Abstract

As a diagnostic category, primary orgasmic dysfunction includes all women who have never experienced orgasm under any circumstances except sleep or fantasy. However, the research samples of nonorgasmic women in clinical reports and empirical investigations are heterogeneous with regard to disruption of earlier phases of the sexual response cycle and emotional concomitants of the dysfunction. The major treatment models—systematic desensitization, sensate focus, directed masturbation, and hypnosis—are presented, and empirical support is reviewed. Separate discussion is included for investigations comparing treatment modalities. Finally, a strategy for future programmatic sex therapy research is suggested within the broader context of psychotherapy outcome research.

The diagnostic category primary orgasmic dysfunction has been used to describe women who, report never having experienced orgasm under any circumstance (Kaplan, 1974a; Masters & Johnson, 1970). Despite the sexual information and treatment advances of recent years, the incidence of this sexual difficulty appears unchanged. As early as 1929, Hamilton reported that 20% of the 100 women surveyed had never experienced orgasm and an additional 11% were doubtful (Hamilton, 1929). Terman's (1938) initial study and subsequent replication (1951) were the first large-scale correlational studies of personality variables and sexual response in women. From his sample of 760 married women, 8.3% reported never reaching orgasm. The Kinsey group (Kinsey, Pomeroy, Martin, & Gebhard, 1953), interviewing 2,480 women who had been previously or were currently married, estimated that at least 10% of the female population would never experience orgasm during their life. Surveys of more recent origin identified 7% (Hunt, 1974) and 10% (Hite, 1976) of the female population as nonorgasmic. Although there are interpretive difficulties with such survey data, convergent evidence appears to indicate that primary orgasmic dysfunction remains a clinical problem of considerable magnitude.

In the absence of organic or anatomical problems, most orgasmic difficulties are regarded as psychogenic. Yet for many years traditional psychotherapy (i.e., psychoanalytically oriented treatment) was unsuccessful in treating this condition (Bergler, 1951). More recently, other therapy models have improved clients' general sexual functioning and produced changes in orgasmic status. The present article reviews the treatments for primary orgasmic dysfunction for which significant clinical support and empirical documentation exist, which include systematic desensitization, sensate focus, directed masturbation, and hypnosis. Each technique is briefly described so that the reader can discern differences between them as well as variations in their application. During the last 20 years the sex therapy literature has progressed from case studies and individual analyses, through single group designs and

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own-control group designs, to treatment comparisons with untreated controls. The reviews for each treatment will follow this framework rather than a chronological progression per se. Controlled treatment comparisons are presented in a final section.

In surveying research of primary orgasmic dysfunction it will become obvious to the reader that the women included in the investigations represent a continuum of psychological, physiological, and behavioral sexual responsivity despite their sharing the failure to have experienced orgasm. Therefore, to structure the presentation, discussion of the diagnosis of female sexual dysfunction with particular emphasis on inorgasmia is included. An effort will be made in the review to provide sufficient detail so that the reader may begin to discern not only which treatments have the greatest utility but also which treatments might be best suited for particular subgroups of nonorgasmic women.

The Diagnosis of Female Sexual Dysfunction with Particular Emphasis on Inorgasmia

Traditionally, female sexual dysfunction has been referred to by the generic term *frigidity* and considered a single syndrome. Researchers and clinicians have since devised less disparaging and more descriptive diagnostic classifications of the variations in female sexual responsiveness and functioning. The basic diagnostic distinctions that have emerged seem to parallel disruptions of the phases of the sexual response cycle—desire, excitement, and orgasm—as conceptualized by Masters and Johnson (1966) and Kaplan (1974b, 1979).

Inhibited sexual desire, defined as persistent and pervasive inhibition of sexual desire, is a recent addition to the Diagnostic and Statistical Manual of Mental Disorders (DSM-III; APA, 1980), but the most extensive description of the difficulty has been offered by Kaplan (1979). She describes an individual with low desire as one uninterested in sex. This can include an absence of fantasy, initiating behaviors, and physiological response even when stimulated. In situations that would typically be sexually arousing, inhibited female patients report an absence of feeling or negative sensations such as irritation, tension, anger, anxiety, and/or disgust. Such individuals may eventually become so avoidant as to be described as sexually phobic. Presumably, women with inhibited sexual desire could experience normal excitement and/or orgasmic phases when engaging in sexual activity, since these responses are not excluded by the definition. Clinical reports of such patterns do exist (Kaplan, 1979). More typically, however, disruption in focus, intensity, or duration of sexual activity is inevitable, and excitement or orgasm phase dysfunctions could occur concomitantly.

There has been diagnostic confusion surrounding the description of women who experience a disruption of or a total absence of the excitement phase of the sexual response cycle. DSM-III relies on a physiological definition of *inhibited sexual excitement:* recurrent or persistent inhibition that results in partial or complete failure to attain or maintain the vasocongestion and lubrication responses of early sexual arousal. Others using the same physiological criterion have added psychological or emotional concomitants to their definitions. Kaplan's definition of *general sexual dysfunction* notes that psychologically a woman would "lack erotic feelings." Munjack and Oziel (1980), in describing *general sexual inhibition*, included women whose emotional response to sexual activity varied tremendously even though all experienced disruption of vasocongestion and lubrication. Under the same rubric would be a group of women ranging from those with strong aversions to sexual activity, through those who experienced no pleasure but neutral reactions, to those emotionally satisfied with the affectional components rather than the sexual activity per se. It thus appears that some writers include emotional concomitants in excitement phase difficulties that others might describe as desire phase problems. As with desire phase

difficulties, orgasmic disruption could easily occur due to an insufficient level of excitement.

Before turning to the definition of orgasmic dysfunction, it is useful to consider discussion of the female orgasmic response. Although several definitions have been proposed (Bentler & Peeler, 1979; Fisher, 1973; Levin, 1981; Singer & Singer, 1978), it is the objective identification of a "total body response" as proposed by Masters and Johnson (1966) that has the widest acceptance. This includes facial grimacing, generalized myotonia, carpopedal spasms, contractions of the gluteal and abdominal muscles, and the rhythmic contractions of the orgasmic platform. As has been noted (Levin, 1981), all of these signs, with the exception of the vaginal contractions, can be simulated or experienced during the late plateau stage.

This author as well as others (e.g., DSM-III; Masters & Johnson, 1970; Kaplan, 1974a) relies on a purely physiological definition of orgasmic dysfunction—the absence of vaginal contractions—to describe the clinical phenomena. However, authorities differ on whether or not the definition of inorgasmia includes impairment of the desire and excitement phases. DSM-III and Tollison and Adams (1979) presume a normal sexual excitement phase. Kaplan (1974a) notes that any disruption in the excitement phase would only include the physiological response and not the psychological. Munjack and Oziel (1980) write that the inorgasmic "female spans the range of responsivity from absolute, unresponsiveness to considerable sexual responsivity" (p. 348), whereas Masters and Johnson (1970) make no mention of the earlier response phases.

Subdivisions have been made within the category of orgasmic dysfunction (Masters & Johnson, 1970). The focus of this paper, primary orgasmic dysfunction, includes women who have never experienced orgasm under any circumstance except sleep or fantasy. Such women have also been descriptively labeled as "nonorgasmic" or "preorgasmic," connoting a positive prognosis. If the woman has experienced orgasm but expresses concern with its frequency or circumstances of occurrence, then the difficulty is described as secondary orgasmic dysfunction. A common complaint here is orgasm occurring on a random basis or not with coitus.

Although the primary versus secondary distinction is not clear, attempts have been made to discover diagnostically discriminating variables. Survey research has described sexual response patterns in women and suggested personality and sexual history variables that may play a role in whether or not a woman is orgasmic. Using a combination of behavioral samples, objective and projective personality tests, Fisher (1973) proposed that a female child's relationship with her father is critical, particularly in terms of the development of love-object permanency. A woman who feels that love objects are undependable and fears their loss is threatened during sexual activity and thus "turns off" (i.e., is nonorgasmic). His proposal that such an etiological pattern would be uniquely characteristic of completely nonorgasmic women has not been supported; in fact, no personality dimension other than marital "happiness" seems related to orgasm adequacy (e.g., Gebhard, 1978;Morokoff, 1978). Raboch and Bartak (1981) surveyed 1,700 Czechoslovakian women attending an infertility clinic. They found a relationship between orgasm and age at menarche and proposed that later puberty predisposes a woman to lesser orgasmic capabilities and less frequent sexual activity. In a multivariate study of demographic characteristics, cognitive measures of sexual arousability, and sexual behavior ratings, Hoon and Hoon (1978) compared women with the lowest and highest orgasmic consistency. Women with the lowest orgasm consistency reported less frequent coitus and masturbation, found gently seductive erotic activities versus erotica more arousing, and were less aware of physiological changes accompanying sexual arousal than were women with the highest orgasm consistency.

Although this research has contrasted “never” with “always” orgasmic women rather than primary and secondary, the data weakly suggest factors that may contribute to the primary inorgasmic condition.

Investigations of women seeking sex therapy also provide information about possible distinctions between the two diagnostic categories. McGovern, Stewart, and LoPiccolo (1975) suggested that secondary couples may have greater marital distress than primary couples. Although this was the case prior to sensate focus treatment, both groups of couples improved and there were no differences between them at posttreatment. In an investigation comparing secondary with normal, not sexually distressed couples, no difference in marital satisfaction was found (Kilmann, Mills, Caid, Bella, & Wanlass, Note 1). Huey, Kline-Graber, and Graber (1981) compared the frequency of various sexual behaviors prior to treatment for primary, coitally inorgasmic secondary, and completely orgasmic women. There were no differences between the groups in terms of foreplay or intromission duration. Both primary and secondary women had a greater frequency of intercourse than orgasmic women, and secondary women masturbated more often than either of the other groups.

A few investigations have compared the response of primary and secondary subjects to treatment. Using systematic desensitization, one investigation found greater gains for secondary subjects (Sotile & Kilmann, 1978), and another noted comparable improvement across groups (Nemetz, Craig, & Reith, 1978). Masters and Johnson (1970), using sensate focus treatment, present the largest data sample. Success rates for the groups include: primary, 83%; secondary (masturbatory inorgasmia), 91%; secondary (coital inorgasmia), 80%; and, secondary (random inorgasmia), 63%. In another investigation of sensate focus, Heiman and LoPiccolo (Note 2) noted comparable improvement between primary and secondary subjects.

Although the data from the survey, descriptive, and treatment outcome investigations are far from conclusive, taken together they provide reason to continue with the working hypothesis that the primary versus secondary distinction is an important one to maintain for research, if not clinical, purposes. Certainly for both categories, the sexual response patterns of women need further description beyond the presence or absence of orgasm. The diagnostic commonality in the research reviewed here is the complete absence of vaginal contractions or orgasm. However, the sample is heterogeneous with regard to disruption of earlier phases of the sexual response cycle and the emotional concommitants of the inorgasmia condition. Descriptive clinical information provided by the investigators will be included to facilitate the identification of subgroups of primary inorgasmic women.

Systematic Desensitization

One behavioral treatment that has received considerable attention in the sex therapy literature is systematic desensitization. A treatment seen as having the greatest utility when anxiety plays a central role in the dysfunction, systematic desensitization involves four components. First, the client is trained to relax the muscles of her body through a sequence of exercises. Second, a list of the specific stimuli or situations that are anxiety provoking is generated and arranged hierarchically. Third, during desensitization proper the deeply relaxed client confronts in imagination each of the feared situations as they are described by the therapist. Fourth, after the hierarchy items are imagined one by one without arousing anxiety, the client is instructed to engage in the sexual activities in real life to augment anxiety reduction and to determine whether, in fact, the stimuli have lost their anxiety-evoking properties.

Joseph Wolpe (1958) conceptualized many sexual problems, inorgasmia included, as the result of anxiety and proposed desensitization as a treatment ideally suited to sexual

dysfunction. In his view, the sympathetic activity characteristic of anxiety inhibits the local (i.e., genital) parasympathetic activity responsible for the initial phases of sexual arousal. Wolpe hypothesized that the muscular relaxation component of the treatment produces a state of parasympathetic dominance. Relaxation paired with anxiety-evoking stimuli breaks the stimulus-response bond. Thus, in the absence of these inhibiting events, the parasympathetic activity of early sexual arousal proceeds unimpaired.

The first brief case reports of the use of systematic desensitization in the treatment of female sexual difficulties appear in Wolpe's early book, *Psychotherapy by Reciprocal Inhibition* (1958). The cases involved treatment of "partial frigidity" (presumably secondary orgasmic dysfunction) for one woman and "sexual anxiety" (orgasmic capacity unknown) for another. On termination, Wolpe subjectively assessed the "partial frigidity" case as "much improved" in that he felt the client was at least 80% free of her presenting complaints. The client with "sexual anxiety" was judged as "moderately improved" (about 50% improved) but was still experiencing difficulties due to an impending divorce. Although these cases provide only preliminary support for desensitization, Wolpe's pioneering contribution should not be underestimated. His conceptualization of an interaction between anxiety and dysfunction, his introduction of the treatment, and recording of his own clinical practice served as a catalyst for further descriptive and empirical investigations.

Wolpe's colleague, Lazarus (1963), reported the first large series of women treated individually with desensitization. His report of 16 patients included women experiencing sexual desire and excitement deficits and/or orgasmic dysfunction. At the end of treatment nine patients were judged as "sexually adjusted"; that is, the woman would "look forward to intercourse," "nearly always achieve orgasm, " and on occasion "initiate sexual activity" (Lazarus, 1963, p. 227). The remaining ones terminated after less than six sessions and were regarded as treatment "failures." Lazarus described his treatment "successes" as cases in which "reasonably clear-cut areas of inhibition could be discerned" (Lazarus, 1963, p. 276), and in contrast, "failures" were seen as having more extreme attitudes, pervasive problems, or difficulty with the visualization component of desensitization. This report adds to knowledge by hypothesizing client variables that might interact with outcome, assessing the maintenance of gains, and specifying potentially relevant outcome variables.

Since these early efforts, subsequent case studies have presented modifications in the standard desensitization treatment format. In treating five nonorgasmic women who also complained of anxiety or pain during intercourse, Brady (1966) used intravenous injections of Brevital to induce relaxation. Madsen and Ullmann (1967) presented the successful use of desensitization within a conjoint therapy framework. Both a nonorgasmic woman and her partner were trained in relaxation and the partner also participated during hierarchy construction and item presentation. Ince (1973) instructed one primary nonorgasmic woman to practice relaxation prior to her in vivo sexual activities. Kraft and Al-Issa (1967) used hypnotic induction with relaxation in treating a woman whose sexual difficulties included primary orgasmic dysfunction accompanied by heterosexual anxiety and feelings of sexual aversion/disgust. After avoiding men and sexual contact for the majority of her life, following 84 desensitization sessions the woman was able to have male friends, date, and engage in intercourse without difficulty. Finally, Caird and Wincze (1974) presented the successful treatment of a nonorgasmic female who had an aversion to sexual intercourse and who generally viewed sex as disgusting and sinful. Treatment was modified by having the spouse participate as in the Madsen and Ullmann (1967) case and by presenting the hierarchy items in videotaped segments. During desensitization proper the client was instructed to visualize herself and her spouse engaging in the activities portrayed by models on film.

As with the previous clinical reports, these case studies offer no further evidence for the specific efficacy of systematic desensitization. The major difficulty is the confounding between classes of variables, "lethal" experimental design errors (Underwood, 1957). Confounding within the client domain results with the absence of control of any extratreatment influences on the clients' sexual behavior. This leaves open the possibility that improvement is due to spontaneous change in sexual functioning or change in other life areas (e.g., marital relationship) that may interact with sexual functioning. Confounding within the treatment domain also prevents establishing cause-effect relationships for systematic desensitization. Here the major difficulty is the confounding of the technique with its application by a particular therapist, such as Wolpe or Lazarus. A related source of error comes from the uncontrolled and unknown effects of just being in treatment, placebo effects, which alone may result in improved sexual functoning. If at least some form of pre- and posttreatment assessment is included for the case study, some basis of comparison is introduced. Two reports (Caird & Wincze, 1974; Kraft & Al-Issa, 1967) did supplement patient self-report with objective outcome measures. However, the confounding within the client, therapist, and treatment variable classes and the possibility of interaction between them are inherent sources of experimental error for the individual case study.

Jones and Park (1972) presented the first large-sample uncontrolled report of modified desensitization for primary orgasmic dysfunction. Brevital-assisted relaxation and inclusion of the spouse as an observer during desensitization proper were the treatment modifications for 55 treatment cases. All clients were seen individually by an unspecified number of staff gynecologists and residents. Forty-five women, 82% of the sample, had the ability to discuss sexual topics, participated in sexual activities without anxiety, and experienced orgasm following treatment. This report is essentially a combination of case studies, and therefore subject to the same "lethal" errors discussed previously. However, the presence of multiple replications across subjects and therapists increases the confidence in ruling out sources of error within these domains and strengthens hypotheses regarding the efficacy of desensitization supplemented with drug-induced relaxation and partner participation.

Sotile and Kilmann (1978) evaluated the use of desensitization with an own-control group design. Forty-three women were screened according to the following criteria: presence of either primary or secondary orgasmic dysfunction; sexual anxiety; no interfering medical or gynecologic problems; and involvement in an ongoing sexual relationship with a cooperative male partner who had no sexual difficulty. Thirty-five of 43 women met the criteria for participation, however, 13 subjects (3 with primary and 10 with secondary dysfunction) dropped out of the program for reasons of "scheduling conflicts" and "feelings that the program was not tailored to individual needs." During the introductory meeting subjects were given a scheduling conflict rationale for the treatment delay period. To control for sexual knowledge, subjects were also given written information on female sexual responsivity and were allowed to ask questions. Retesting 5 weeks later indicated significant improvement on the Locke-Wallace Marital Adjustment Scale (mean score change from 89 to 99) with all other dependent measures remaining stable. Group treatment was offered to the remaining 8 primary and 14 secondary subjects. Accelerated muscle relaxation was used, and subjects were given verbal instructions in how to construct hierarchies and were asked to bring their own to the second session. Attempts were made to individualize these hierarchies; but four standard ones were finally used; information concerning hierarchy themes is not provided. Throughout treatment, subjects were encouraged to participate in non-anxiety-arousing sexual activities and to keep daily records of their participation.

When control and treatment periods were contrasted, findings favored the treatment period. First, subjects reported decreases in overall sexual anxiety as measured on an experimenter-derived rating instrument. Second, significant positive changes were found on four of the 11

scales of the Sexual Interaction Inventory (SII; LoPiccolo & Steger, 1974), including positive changes in the ability of the men to accurately perceive their female partner's sexual likes and dislikes, decreases in couple sexual dissatisfaction, and improvement in the females' acceptance of their own and their partner's sexuality. On an experimenter-derived measure of sexual behavior and attitudes, positive changes were reported on measures of pleasure and satisfaction and decreases in anxiety during sex. Greater gains were observed for the secondary than for the primary subjects. Although ratings of sexual pleasure and the frequency of orgasm did increase for the primary subjects as a group, the exact number of subjects who became orgasmic is unknown. The Sotile and Kilmann investigation provides evidence that systematic desensitization treatment is correlated with positive changes in sexual functioning. The four repeated measurement periods and replication across clients make the possibility of change due to spontaneous fluctuations in client or environmental events occurring only during treatment less likely. This additional control strengthens hypotheses of systematic desensitization's efficacy to the level of correlational conclusions. An advance of the study was the addition of partner-dependent measures that indicated that positive changes could be achieved without in-session treatment participation. Also noteworthy is the trend for secondary subjects to have received greater benefit from treatment than primary subjects. A distressing aspect of the investigation is, however, the high dropout rate, which undoubtedly resulted in a biased treatment sample.

O'Gorman (1978) conducted an investigation comparing the effectiveness of group and individual desensitization in a partner participation format. Forty subjects complaining of "frigidity" were treated by the author. They presented with a variety of sexual difficulties, including "absence of desire for intercourse, inadequate or absent sexual arousal, dyspareunia, vaginismus, orgasmic inadequancy, or a combination of these symptoms" (p. 580). All subjects were pretested with the Sexual Interest Questionnaire (Harbison, Graham, Quinn, McAllister, & Woodward, 1974) and randomly assigned to treatment conditions. For the subjects receiving group desensitization, hourly treatment sessions were equally divided into desensitization and a sex education and discussion periods. The partners of these subjects also met as a group for a weekly discussion of their wives' progress in therapy and sexual education. A very different format was used for the subjects receiving individual treatment, Each couple met with O'Gorman for approximately 10 minutes each week; relaxation was induced by an intravenous injection of methohexitone sodium, hierarchy items (constructed conjointly) were presented by the husband, and the couples were assigned in vivo exercises.

Three major findings were reported. First, six subjects, all but one from the individual treatment format, did not complete conjoint treatment. O'Gorman reported that these subjects found the program "too difficult." Second, with the remaining patients, 63% of the group subjects and 47% of the individually seen subjects rated their treatment as "successful" (i.e., good, very good, or excellent). Third, significant improvements for subjects in both treatment groups who had rated themselves as "successful" were also found on the Sexual Interest Questionnaire. With the O'Gorman investigation, a number of differences between the two treatment conditions make a clear comparison difficult and may have contributed to the superiority of the group treatment. First, group participants had the benefit of sexual education, the absence of which many (e.g., Masters & Johnson, 1970) believe to be a contributory factor to dysfunction. Second, the strategy for including partners in the treatment process was different for the two formats. Third, group treatment subjects also had the benefit of group discussion of sexually relevant topics. Fourths it might be suggested that the "per person" therapy time between formats differed. Even though a formula does not exist for equating "time in treatment" when conducting individual and group treatment comparisons, no investigator to date has used only 150 minutes (approximately three sessions) as a sufficient length of treatment time. Although this

treatment length was sufficient for almost half of the individually treated subjects, this short treatment time may have contributed to the limited gains of the other subjects. These difficulties raise questions of the internal validity of the comparative aspects of. the investigation, but the greatest weakness of the research strategy stems from the absence of any control condition. This factor alone reduces the possible level of knowledge about the efficacy of systematic desensitization from a cause–effect statement to a correlational one as obtained with the prior case studies and own-control repeated measure design.

Wincze and Caird (1976) conducted a controlled investigation comparing desensitization with and without videotape vignettes for the sexual hierarchy. From 100 applicants referred for the treatment of “frigidity,” 21 subjects fulfilled the following criteria: presence of primary orgasmic dysfunction, although approximately 25% of the cases accepted were secondary; absence of psychopathology, medical, or gynecologic difficulties; and agreement by the subject’s partner to participate in assessment. All subjects complained of inhibited sexual excitement, excessive anxiety associated with most or all aspects of sexual activity, and an absence of pleasurable sexual/erotic sensations. Subjects were randomly assigned to one of two treatment conditions or a delayed treatment control. Imaginal desensitization subjects met individually with a therapist. Subjects assigned to the video desensitization condition received identical treatment with the exception that hierarchy scenes were presented via videotapes and subjects were instructed to try to visualize themselves and their partner in the scenes. In fact, each scene presented in imagination was an exact verbal description of the scenes used in the video desensitization procedure. Individuals assigned to the control condition were told that treatment would be delayed for at least 4 weeks, and following this period subjects were randomly assigned to one of the two treatments.

Treatment effects were assessed with analysis of covariance on change scores. Due to significant differences at pretest between treatment and control groups on one measure, the Fear Survey Schedule (FSS; Wolpe & Lang, 1964), the meaningfulness of the significant differences on the posttest is in question. However, significant improvements for both treatment groups were observed on the Heterosexual Behavior Hierarchy (HBH; Bentler, 1968) and a similar anxiety card-sort rating of sexual activities. There were no changes on the Neuroticism Scale (Willoughby, 1934) or a questionnaire tapping assertive behavior. Following treatment of the individuals in the control condition, addition of their scores to their respective groups resulted in no significant differences between treatments at posttreatment on any measure. Wincze and Caird also obtained ratings from the subjects and their partners on their subjective impression of their improvement. All but one couple in the video desensitization condition rated their improvement in the “much” or “very much” category at posttest and follow-up. Six of the 10 couples in the imaginal condition rated their improvement as “much” or “very much” immediately after therapy, but only three of nine reported the same at follow-up. Finally, of the women who were nonorgasmic, only 25% became orgasmic following treatment. The investigation by Wincze and Caird demonstrated treatment efficacy as well as that of an economical alteration in the standard technique for item presentation. Because it includes a control group, this investigation constitutes a “true” experiment. This additional group automatically Controls for fluctuations in sexual behavior over time, reactive effects of assessment, measurement errors over time, or statistical regression, since these factors should affect both treatment and control groups equally. Both desensitization conditions produced clear reductions in subject ratings of heterosexual anxiety, although a greater number of video subjects were pleased with their improvement. An additional factor that needs control in future research is the component of “modeling” of sexual behavior that films provide.

Nemetz et al. (1978) conducted a controlled investigation comparing individual and group video-assisted desensitization. Of the 29 women originally referred, 22 subjects were

selected for treatment according to the following criteria: presence of anxiety or discomfort about sexual activity, absence of acute marital difficulties, and availability and cooperation of a regular male sexual partner. Fifteen subjects were described as having secondary orgasmic difficulties and the remaining 7 as primary inorgasmic. The first 16 subjects accepted for treatment were randomly assigned to a treatment condition and the last 6 were assigned to a 6-week waiting-list control. The treatments were conducted in an identical manner. All subjects learned progressive relaxation by an audiotape presentation or a card-form summary of the procedures and were instructed to practice at least twice a day. Following a period of relaxation, one of 45 videotape vignettes was presented for progressively longer intervals (lasting from 15 to 60 sec), interspersed with periods of relaxation. Subjects were instructed to visualize themselves and their partners engaging in the sexual activity and were then instructed to practice the viewed activities at home with their partner. To maximize similarity with the individual treatment conditions, subjects in the group were discouraged from discussing the program, problems, or progress with each other, and opportunities to do so within the session were kept to a minimum.

A variety of attitudinal and behavioral measures were used, but conclusions are difficult to draw due to subject assignment procedures that resulted in large pretreatment differences between the treatment and control groups for which analysis of covariance was used. However, in general, all treated subjects improved and there was a slight trend toward greater gains for those receiving group treatment. Control subjects showed no improvement and indicated deterioration on some measures during the waiting interval. Although the treatment appeared to produce changes in attitudinal and behavioral indexes, a nonsignificant increase in orgasm frequency was noted. As with the previous investigation, this one also establishes cause–effect relationships between the application of systematic desensitization and improved sexual functioning. It is important to note, however, that such conclusions cannot be made about therapist characteristics separate from treatment techniques, client characteristics separate from their sexual dysfunction, or specific therapeutic elements separate from nonspecific placebo effects. Such questions are more appropriate for factorial designs.

Husted (1972, 1975) reported on a comparison of imaginal and in vivo desensitization. Women reporting anxiety or negative emotional reactions in sexual situations were selected for treatment. In addition, many also reported having orgasmic difficulties. A standard 30-item hierarchy with items ranging from “you are dancing with your husband while fully clothed” to “you are stimulating you husband’s genitals with your lips and tongue,” was used for both treatment conditions. Half of the women were treated with standard systematic desensitization, and the treatment for the remaining women was in vivo desensitization, pairing sexual arousal with progressively intimate sexual activities during extratherapy sexual activities. Subjects from each, condition were to progress to the next hierarchy item only after completing an earlier one on two successive occasions (either in session or at home) without anxiety. Treatment conditions were also subdivided on the factor of partner participation in treatment. Thus, the design was a 2 × 2 factorial with levels of treatment (imaginal vs. in vivo) and partnelr participation (conjoint vs. individual). A fifth no-treatment group controlled for the passage of time.

Analyses indicated significant gains for all treatment subjects. There appeared to be no differential effect of partner involvement and the major difference between imaginal and in vivo desensitization was in terms of efficiency; imaginal desensitization required approximately 8 sessions, whereas in vivo desensitization averaged 13 sessions. Husted speculated that three factors contributed to these results. First, in vivo subjects experienced numerous distractions (e.g., house guests, overtime work, etc.) that often interfered with the completion of their at-home treatment activities, whereas as long as imaginal subjects

attended their sessions, treatment could progress. Second, women treated with imaginal desensitization reported relatively little or no anxiety when sexual activities were engaged in at home, whereas in vivo subjects often had to repeat the sexual activities several times before anxiety diminished. Finally, Husted reported that when anxiety was reduced for secondary orgasmic dysfunction subjects, the frequency of orgasm increased; for primary subjects, anxiety reduction did not necessarily lead to their becoming orgasmic. The Husted investigation makes a clinically meaningful and theoretically important comparison between sexual arousal and relaxation as alternative responses incompatible with anxiety, as hypothesized by Wolpe. In this particular investigation these elements are confounded. However, the factor of partner involvement was available for analysis, and the investigation provides evidence that partner involvement is not critical for enhancement of female sexual functioning. In addition, the study addressed several clinical issues requiring further study. First, the data indicate that imaginal desensitization may be a more efficacious treatment, and both the relaxation and imaginal components appear to be important. Second, it calls attention to the variety of environmental factors that can affect the occurrence and possibly the success of in vivo exercises. Finally, the data suggest that for nonorgasmic women, anxiety reduction may only be a first step, and additional treatment strategies may be necessary to produce orgasm.

Summary

Table 1 presents a summary of the client characteristics, treatment variables, outcome criteria, and results. A review reveals data for over 140 patients treated by more than a dozen therapists. The majority of these investigators report uncontrolled case studies and single group studies that provide correlational support for the treatment efficacy, but controlled group and treatment format designs provide cause–effect data. By way of summary, five topics merit discussion.

First, a diagnostic and demographic description of the patients treated with desensitization provides information on the applicability of the treatment across these domains. The nonorgasmic treatment subjects have had a variety of emotional and physical concomitants. Understandably, all complained of sexual anxiety accompanying their inorgasmia, but instances of desire problems (Ince, 1973; Lazarus, 1963; O'Gorman, 1978), aversion (Caird & Wincze, 1974; Kraft & Al-Issa, 1967; Lazarus, 1963), and dyspareunia (Brady, 1966; Ince, 1973; O'Gorman, 1978) were also common. In contrast, the research population was demographically homogeneous. Most women were married and young; the entire sample ranged in age from 18 to 39 years, with the exception of the O'Gorman study with an age range from 18 to 48 years and a mean age of 36 years. Other relevant subject variables, such as education, socioeconomic status, motivation for treatment, or personality variables, have rarely been described or assessed by researchers.

Second, description of the range of therapist characteristics and treatment settings is notably lacking. With the exception of two investigations (Husted, 1972, 1975; O'Gorman, 1978), the therapists have been male, though information on age, theoretical orientation, and training in anxiety reduction procedures or sexual therapy is absent from all reports except one (Sotile & Kilmann, 1978). The settings in which treatments were conducted cover a full range, including private, hospital, and university clinics, and offices in medical schools. Although no meaningful comparison can be made across studies on these variables, no suggestive evidence exists at present for interactions between therapist characteristics and/or treatment environments and outcome.

Third, even when the term *systematic desensitization* is limited to a treatment package involving relaxation, hierarchies, imaginal presentation, and in vivo tests, variation is possible. The majority of the investigations used progressive relaxation; however, drugs

(Brady, 1966) and hypnotic inductions (Kraft & Al-Issa, 1967) have also been used successfully. In only one investigation (Husted, 1972, 1975) has sexual arousal been used as the mutually incompatible response, and this preliminary evidence indicates that relaxation and imaginal desensitization may be a more efficacious strategy. Although there are few published sources for hierarchy construction (most clinicians "pass on" the strategy to young trainees), there is considerable uniformity across studies. Most investigators construct a single hierarchy for an individual woman or patient group with the actual number of items varying betwen 30 and 50 items. Item content varies along a dimension of increasingly intimate heterosexual contact, which is surprising in light of the wide variation among clients in the specific elements of a situation that can produce or exacerbate anxiety. There is diversity across studies on the session length (10 minutes to 1 hour), the number of sessions required (a range of 5 to 84 sessions), and the actual treatment duration (a range of 2 weeks to 6 months) necessary to produce change. Whereas some of this diversity is certainly due to variation in hierarchy length, other unique and as yet unspecified factors are presumably determining length of treatment.

In terms of specific outcome, the investigations by Wincze and Caird (1976), Nemetz et al. (1978), and Husted (1972,1975) present controlled demonstrations of the effectiveness of systematic desensitization. It should be noted that secondary orgasmic subjects were also included in these studies. However, across studies subjects have uniformly reported reductions in sexual anxiety and on occasion increases in such sexual behaviors as coital frequency. Change in orgasmic status is often not observed. In the uncontrolled case reports, the majority (i.e., at least 53%) of the subjects experienced orgasm either during treatment or shortly afterward. Control group or factorial designs revealed that there was either no change in orgasmic status (Sotile & Kilmann, 1978) or only insignificant to moderate gains (Nemetz et al., 1978; Husted, 1972, 1975; Wincze & Caird, 1976). Although a number of reasons for this finding can be postulated, two seem obvious. The results may simply reflect a selection factor that covaries with outcome. Case reports may be clinical examples that are exceptional in some way; more severely distressed, motivated, and so forth. In contrast, the women in controlled comparisons often entered treatment following treatment announcements provided to community clinics or newspapers. In other respects, group treatment may be more efficient, but it may preclude the individualization necessary for maximum benefit. Whereas anxiety reduction may be accomplished fairly easily, change in orgasmic status may require more tailoring of the treatment process (e.g., hierarchy items with finer discriminations or altered themes). Regardless of the mechanism, however, if anxiety reduction or change in orgasmic status is achieved, follow-up data indicate that gains will be maintained.

The present series of studies have also addressed questions relevant to the format for conducting treatment. Video hierarchy presentation appears to be as effective as verbal presentation, and, in fact, subjects appear satisfied with the strategy (Nemetz et al., 1978; Wincze & Caird, 1976). Further investigation needs to distinguish the effects due to viewing sexually successful models from the technique of automated hierarchy presentation. When interested partners participate in desensitization treatment, they appear to have either neutral or positive impacts on treatment gains for the female patients (Caird & Wincze, 1974; Husted, 1972,1975; Madsen & Ullmann, 1967;O'Gorman, 1978). When partners are not involved in the treatment process, preliminary evidence indicates improvements in conjoint sexual satisfaction (Sotile & Kilmann, 1978).

Fourth, a variety of experimenter-derived and published assessment measures have been used to supplement client self-report. However, a major weakness of this research area is the lack of objective measures of sexual anxiety. Facing this situation, many investigators have devised their own scales or card sort procedures or added a rating scale to a behavior

hierarchy. This strategy has been supplemented with global measures of personality, anxiety, or marital satisfaction. Despite the use of a treatment that rests on a presumed physiological mechanism, investigators have avoided the use of such indices in the assessment of change. These factors alone significantly hamper the evaluation of systematic desensitization.

Finally, mention needs to be made of the research developments relevant to the theoretical underpinnings of systematic desensitization. The widely held view that parasympathetic innervation is dominant during moderate levels of sexual arousal and sympathetic innervation is dominant during high levels of sexual arousal and orgasm has received much of its support from the application, by analogy, of findings of male physiology (Montcastle, 1974; Wenger, Averill, & Smith, 1968). However, the current theory of parasympathetic dominance during the initial stages of sexual arousal in women has little direct scientific support (Hoon, Wincze, & Hoon, 1977; Geer & Quartararo, 1976). Furthermore, a precise test of Wolpe's model using a physiological measure (i.e., vaginal blood volume) provided only partial support for the notion of sexual and anxiety arousal states as mutually inhibitory (Hoon et al., 1977). Thus, aside from the straightforward efficacy of systematic desensitization as a technique, the actual mechanism for producing change remains unclear.

Sensate Focus

No review of sexual therapies would be complete without discussion of the sensate focus program developed by Masters and Johnson (1970). Theirs is a skills learning approach designed to change behavior and communication patterns to remediate sexual dysfunction. As originally conceived, the program is offered to couples during an intensive 2-week period and directed by a male–female cotherapy team. Couples with primary orgasmic dysfunction are first encouraged to create a nondemanding climate for completing the sexuality exercises; the nonorgasmic woman is given permission to express her sexual feelings without focusing on her partner. In a step-by-step sequence the couple is guided through a program of body touching exercises designed to teach each person his or her own sexually sensitive body areas, those of the partner, and ways to exchange this information to heighten sexual tensions. The specific activities developed for primary orgasmic dysfunction include nondemand genital touching by the partner, female guidance of her partner's hands to sensitive genital areas, penile stimulation with direction by the woman, coital positions maximizing stimulation potential, and stop-start pelvic thrusting to enhance the female's pleasure.

While Masters and Johnson do not present descriptive statistics on the nonorgasmic treatment sample, they do describe the entire clinical group of 790 cases treated at the Foundation during the 10-year treatment evaluation period. There were 510 married couples treated, and in approximately 45% of the cases both members were sexually dysfunctional. The treatment sample was drawn from the middle or upper-middle class, was predominantly college educated, and was referred to St. Louis from throughout the United States and Canada. Over one-half of the sample had received prior psychotherapy for their sexual difficulties. During the years 1959 to 1964, three cotherapy teams saw 193 cases of primary orgasmic dysfunction, and approximately 84% of the cases experienced complete orgasmic responsiveness. After a 5-year follow-up period, two patients were again symptomatic, resulting in an overall "success" rate of 82%. Masters and Johnson have been criticized for their select clinical sample and absence of objective measures of outcome (Zilbergeld & Evans, 1980). However, in comparison to the research samples of investigators using other treatment techniques, theirs appears comparable if not superior due to the wide age range and geographic distribution and the presence of multiple sexual difficulties complicating the treatment process. The high percentage of couples who had failed previous treatment, the

numerous replications, and the long follow-up period strengthens the confidence in their data despite the absence of control and objective measurement.

Subsequent investigations have included the techniques as outlined by Masters and Johnson but with modification in strategy. An uncontrolled clinical report by Blakeney, Kinder, Creson, Powell, and Sutton (1976) described an intensive 2½-day treatment workshop format. Following individual history-taking and diagnostic sessions, couples meet in a group treatment format with several therapists. Couples are provided with information and instructions for practice sessions that alternate with the group meetings, and as many as 12 treatment hours per day are included. Therapists are available for individual consultation, and at least one such meeting is held each day with a couple. Of the 10 primary orgasmic dysfunction couples treated, complete symptom reversal was reported by four women during the workshop and by another three during follow-up. Although improvement at termination was approximately one-half that reported by Masters and Johnson, data from follow-up indicated that gains eventually approximated those achieved from the 2-week format.

Empirical data on these techniques have only recently been provided by Herman and LoPiccolo (Note 2) with an own-control group design. Twenty-five primary nonorgasmic subjects were included in a larger outcome project. Twenty-eight of 69 participating couples were treated by cotherapy teams of clinical psychologists and psychiatrists at the University of Oregon, and the remainder were treated at the State University of New York at Stony Brook. Following an intake and wait period of 1 to 2 months, significant changes indicated that the entire female sample of primary and secondary subjects reported less sexual dissatisfaction and greater marital happiness. Subject couples received treatment that was described as “a model of direct intervention, using home assignments, cognitive behavioral techniques, communication training and systems conceptualization” (p. 8). Exact treatment format, 15 consecutive days or one session per week for 15 weeks, was randomly determined.

At the time of treatment termination, primary subjects reported improvement on all scales of the Sexual Interaction Inventory and the Marital Adjustment Test (MAT; Locke & Wallace, 1959). They also reported significantly longer duration of foreplay and intercourse and greater frequency of orgasm during masturbation, manual stimulation by the partner, and intercourse. No significant treatment format effects emerged. Follow-up data revealed a stabilization of gains for the 68% of the sample providing data. The original primary nonorgasmic subjects again reported experiencing orgasm 60%–65% of the time during masturbation, 40%–45% during manual partner stimulation, and 25% of the time during coitus. Overall, the pattern of results found in the Heiman and LoPiccolo investigation provides correlational support for these techniques, regardless of the total duration of the treatment period. Although this investigation significantly adds to the literature with a pretreatment control period, multiple measures of outcome, and replications across therapists, the rationale for including a separate group for control purposes can be cogently made. At the conclusion of the waiting period the analyses indicated less sexual dissatisfaction and greater marital adjustment for the female subjects. This could be an indication of a trend that was to continue regardless of the application of treatment or a circumstance that could have interacted with • treatment, producing gains greater than those obtainable under baseline conditions. Hypotheses of this type cannot be ruled out with an own-control group design.

A 2 × 2 factorial design of formats for conducting sensate focus treatment was provided by Carney, Bancroft, and Mathews (1978). Thirty-two women with orgasmic dysfunction and general sexual unresponsiveness were randomly assigned to either weekly or monthly sensate focus treatment formats. Weekly treatment was conducted for 16 sessions and

monthly treatment included 5 sessions. All subjects were seen with their partners by one male therapist. The role of chemotherapy was also examined within this design. Half of the subjects within each condition took a hormonal treatment (testosterone) and the other half an anxiety-reducing drug (diazepam) on a daily basis during treatment. Nested within each treatment format-drug cell were equal numbers of subjects who described themselves as experiencing high and low levels of sexual anxiety. Carney et al. hypothesized that women with the lowest levels of anxiety would respond most favorably when receiving testosterone and those with the highest levels would respond best with an anxiety-reducing drug.

There were no differences between the two treatment formats on experimenter-derived measures of sexual response. A semantic differential scale of sexual attitudes indicated more favorable results for the monthly format, indicating that the male partners responded in a more “loving” fashion. Differences between groups on the basis of drug condition favored the testosterone subjects. There were greater gains at termination on an independent assessor’s ratings of impairment, the female’s frequency of orgasm and dyspareunia, and a semantic differential indicating that the male partners of the testosterone subjects were regarded as more loving, good, and attractive. Although some of these gains were not maintained at follow-up, improvement was noted by the testosterone subjects on such variables as greater vaginal lubrication, pleasant sexual feelings, and the subject’s sexual satisfaction. Finally, the hypothesis regarding the interaction between levels of anxiety and drug-treatment format combinations was not supported by changes on measures relating to sexual responsiveness or behavior. A noteworthy finding of the Carney et al. investigation is the significant gains achieved by subjects receiving testosterone and the maintenance of gains at follow-up, 6 months after drug discontinuation. Continued research is necessary to document these effects with endocrine assessments. For example, the effects may be due to a negative effect of diazepam on sexual responsiveness. This investigation only provided a weak test of the possible interactions between anxiety and drugs so that future research might provide a more rigorous assessment of anxiety, crossed rather than nested factors, and sufficient sample sizes. As important, though, would be the inclusion of the appropriate control conditions. Possibilities include placebo conditions for therapy as well as drug conditions and a no-treatment control.

Summary

Despite their popularity and visibility, sensate focus techniques have been the subject of few empirical investigations and at present have only received correlational support for their effectiveness with primary nonorgasmic women. Several variable domains require further description, quantification, and control or manipulation in this research area.

Within the domain of client characteristics, detailed clinical descriptions of the primary nonorgasmic population have not been provided and are necessary. With regard to relatively stable personal or social characteristics, the 250 participants in these investigations included a wider range of age and socioeconomic status than ones in investigations of other treatment modalities. However, since the majority of the participants paid for their treatment, this may indicate a sample more motivated for treatment than those in investigations of other modalities. At present, there are no data on the interaction of these variables with sensate focus treatment.

Within the domain of therapist characteristics, the individuals conducting treatment have come from the professions of psychology, psychiatry, medicine, and social work, although further description of such variables as clinical experience, therapeutic orientation, or confidence is lacking. With the exception of one report (Carney, Bancroft, & Mathews, 1978), a male–female cotherapy model was always used. The settings for treatment included university clinics in the department of psychology or psychiatry in medical schools. Due to

the preliminary nature of the data for these variables, comparison across studies is difficult. However, at present there is suggestive evidence that greater gains were achieved by the couples treated by the Masters and Johnson cotherapists.

Since sensate focus can include a variety of components, future investigators are urged to explicate their strategies or replicate those detailed by Masters and Johnson (1970). In terms of the actual effectiveness of the treatment, estimates range from 40% to 83% of the subjects becoming orgasmic. However, only one investigation (Heiman & LoPiccolo, Note 2) has introduced even the most modest of control conditions. At this time manipulations of treatment format appear premature in the absence of controlled investigation. In terms of assessing change, only the investigations by Carney et al. (1978) and Heiman and LoPiccolo (Note 2) used objective self-report measures of outcome across a range of sexual behaviors, responses, and partner factors.

At present, sensate focus exists as a clinical technique without ties to other treatments or theoretical notions of the female response or sexuality, although discussion of partner interactions leading to sexual dysfunction has been made (Master & Johnson, 1970). Study of the mechanism of treatment effectiveness, conditions for success, or client or therapist variables has not begun. As such, this research area can be regarded as being at a preliminary stage.

Directed Masturbation

A more recent innovation in the treatment of primary inorgasmia has been the use of graduated masturbation exercises and follows the work of LoPiccolo and Lobitz (1972) with variations introduced by others (Annon, 1973; Barbach, 1975; Kline-Graber, 1975). The treatment involves the completion of a series of extratherapy sexuality and masturbatory activities. The exercises begin with the patient examining her body and genitals with the aid of full-length and hand mirrors. Women are often furnished with diagrams of female genital anatomy and are asked to identify the various areas on their own body in the privacy of their home. The next phase involves tactual body and genital self-examination to discover pleasurable whole-body and genital sensations. During the next phase, areas of pleasurable sensation are made the focus of increasingly intense manual stimulation. The woman is then asked to masturbate until “something happens” or until she becomes tired or uncomfortable. If after extending the practice over several sessions she does not experience orgasm, the woman is asked to incorporate the use of a vibrator into her self-pleasuring activities. During these later sessions, the woman may request her partner to join her. In this way, the partner learns which body areas are sensitive and effective styles of stimulation and can receive corrective feedback from the woman during the touching exercises.

Masturbation exercises are regarded as potentially useful to nonorgasmic women for a number of reasons. First, as a sexual practice, masturbation is the technique that is the most likely to produce orgasm. Kinsey et al. (1953) reported that the average woman reached orgasm during 95% of her masturbatory attempts versus 75% of her coital attempts. Second, through masturbatory activities women can learn to redirect their attention to their own physical sensations and sexual feelings. Third, autoerotic activity is viewed as potentially less anxiety producing (and more sexually arousing) because direct partner evaluation can be eliminated, and the nature and intensity of the stimulation is under the woman’s control. Thus, directed masturbation has been regarded as a viable treatment for producing orgasm.

LoPiccolo and Lobitz were the first to out-line a program of directed masturbation and report on its success with 21 primary nonorgasmic cases. All women were seen individually in treatment and after experiencing their first orgasms, their partners then participated in the masturbatory activities, though for some patients the partners participated during the entire

treatment period. Within approximately 15 sessions, all women experienced orgasm with masturbation. In one study (LoPiccolo & Lobitz, 1972), six of eight women also experienced orgasm during coitus; however, two of these individuals also required concurrent manual stimulation. In another report (Lobitz & LoPiccolo, 1972), 13 treated women became orgasmic and were so during at least 50% of the coital opportunities. Similar results were reported with a couples group format (Kirkpatrick, Mc-Govern, & LoPiccolo, 1977). Four primary inorgasmic women were treated with their partners, three of whom were premature ejaculators. Treatment included sensate focus activities supplemented with directed masturbation. Following treatment, all females reported becoming orgasmic during masturbation and three became coitally orgasmic.

Thus, these preliminary uncontrolled case reports and similar ones (Annon, 1973) of directed masturbation were encouraging— 100% success for all subjects treated. Other case studies produced similar results and supplemented patient self-report with more objective outcome measures such as heart rate data (Reisinger, 1974), ratings of arousal experienced during sexual activity (Kohlenberg, 1974), and measures of body attitude and assertion (Leiblum & Ersner-Hershfield, 1977). Although cause–effect relationships between treatment and outcome cannot be determined, the presence of multiple replications across clients and therapists and the encouraging follow-up data offered directed masturbation as a viable treatment program requiring further empirical support.

Barbach (1974) and Wallace and Barbach (1974) presented the first large sample of data on directed masturbation exercises. Barbach's approach is unique in that treatment is conducted in a women-only group format. Typically six preorgasmic females meet with two female cotherapists for ten 1½-hour sessions. In the first report (Wallace & Barbach, 1974), the outcome for 17 subjects treated in three treatment groups was presented. Following treatment, all subjects reported orgasm with masturbation, and 87% also reported orgasms during partner-related sexual activities. However, there were no significant changes on measures of self-esteem (Rosenberg, 1965), body concept (Second-Jourard, 1953), marital adjustment (Locke & Wallace, 1959), and attitudes about women (Spence & Helmreich, 1972). A subsequent report (Barbach, 1974) summarized the outcome for 83 women. Following treatment, 91% of the subjects reported becoming orgasmic. These reports provide correlational support for the directed masturbation program and for its specific efficacy when conducted within a women-only format. The data raise questions concerning the contribution of group process to outcome, the impact of partner exclusion, and the mechanism for generalizing orgasm learned through self-activities to partner activities.

Heinrich (1976) conducted the first controlled investigation of directed masturbation treatment. Forty-four women were selected from 140 applicants and were serially assigned to one of two treatment conditions or a waiting list control. The two treatment conditions followed content guidelines of Barbach (1974) and LoPiccolo and Lobitz (1972). Subjects in one treatment condition followed the Barbach group model. Subjects receiving the other treatment met once and received all the information and materials needed to self-direct their treatment. Thus, the two experimental conditions were designed to differ only in the extent of interactions with a therapist and other nonorgasmic women.

At the 2-month followup, 100% of the group treatment subjects, 47% of the self-directed treatment subjects, and 21% of the waiting list control subjects reported becoming orgasmic. Orgasm during coital activities occurred for 47% of the group treatment subjects and 13% of the self-directed subjects but for no members of the waiting list control. Although the group treatment subjects reported increases in the frequency of and pleasure from sexual activities as measured on an experimenter-derived instrument, initial pretreatment differences between groups weaken these findings. No differences between groups were found on the Self-

Esteem Scale (Rosenberg, 1965), the Body Cathexis Scale (Secord & Jourard, 1953), the Marital Adjustment Test, or the Sexual Interaction Inventory. Interestingly, however, significant changes were found on a version of the Internal–External Locus of Control Scale (Rotter, 1966). All treatment subjects scored higher in the internal direction following treatment and follow-up, with the greatest changes occurring for the self-directed subjects. In contrast, the waiting list subjects scored higher in the external direction. Heinrich's investigation is significant in that it was the first controlled investigation and it also provided preliminary data on treatment components. It appears that the combined effect of twice-weekly meetings with a therapist and nonorgasmic peers has a significant impact on outcome. It is noteworthy that the changes in orgasmic status were not accompanied by change in other aspects of personal or partner-related sexuality, yet the locus of control data could be interpreted as meaning the women felt more in control of the events in their lives. The investigation also provides useful information on the change occurring during a waiting period. The act of identifying a sexual difficulty and taking preliminary steps to alleviate a problem may be sufficient for some women to independently begin their own treatment.

McMullen and Rosen's (1979) investigation extended these findings. Sixty subjects were randomly assigned to one of two treatment conditions or a waiting list control, and within each group equal numbers of single and married subjects were nested. Subjects in one condition self-directed their treatment, much like the subjects in Heinrich's study. However, rather than meeting and receiving all the information on one occasion, subjects came to an outpatient clinic once a week for 6 weeks to read a written text describing assignments for becoming orgasmic. These women were also allowed to take the booklets home for further reference. Subjects in the other condition also visited the clinic weekly to view a series of six 20-minute videotape sequences portraying the week's assignment. The texts and videotapes had previously been rated as informational equivalents.

A number of dependent measures were used to assess outcome; however, only the questionnaire assessing orgasmic abilities was readministered to the control subjects. At the conclusion of treatment, 13 (65%) of the subjects using a text and 11 (55%) of the subjects using the videotapes had experienced orgasm during masturbatory activities, while all control subjects remained nonorgasmic. In addition, 10 (50%) of the text subjects and 6 (30%) of the video subjects also had experienced orgasm during intercourse. Between subjects there was a trend, though not significant, in favor of the married subjects to be more orgasmically responsive. At the time of posttesting both treatment groups had made several significant gains on other measures in comparison to their pretreatment levels. All subjects reported greater Variety in sexual experiences, more acceptance of the male partner's sexuality, increased female pleasure from sexual activity, and decreases. in the couples' disagreement about their sexual relationship, irrespective of the treatment format. The McMullen and Rosen (1979) investigation provides useful information on the effectiveness of treatment variations. The percentage of women becoming orgasmic from either format exceeded that reported for Heinrich's (1976) bibliotherapy subjects. Although the texts may have differed, it is also possible that the weekly visits to a clinic prompted the subjects to remain more active in reading and self-directing their treatment. The numbers of women becoming orgasmic did not significantly differ between the two formats, but it is somewhat surprising that the video subjects did not improve more since their treatment could be conceptualized as information supplemented with a modeling component. Nevertheless, a high percentage of subjects in both treatments became orgasmic without therapist involvement. Unlike the Heinrich (1976) investigation, none of the controls became orgasmic during the waiting period. It is unlikely that there would have been much change by the control subjects on the other dependent measures had they been posttested, thereby strengthening the confidence in the pre–post data of the treatment groups.

Ersner-Hershfield and Kppel (1979) examined the roles of partner involvement and session spacing on the effectiveness of the group directed-masturbation treatment. Subjects included 22 women who had never or only rarely experienced orgasm. The investigation was a 2 × 2 repeated measures factorial with conditions differing in terms of treatment format (couples vs. women-only groups) and session spacing (two sessions per week for 5 weeks vs. one session per week for 10 weeks). All conditions followed the Barbach (1975) and Heiman, LoPiccolo, and LoPiccolo (1976) guidelines; however, the couples and women-only groups differed in two additional ways. First, the women-only groups were led by two female therapists, whereas the couple groups were led by male–female cotherapists. Second, couple group leaders attended to communication problems and provided specific encouragement and guidance for the male partners with erection or ejaculation problems.

No significant changes were reported during a waiting period, but improvements on 16 of 25 dependent variables were found at the time of posttesting and follow-up irrespective of format or spacing. The mean Marital Adjustment Test score improved as well as all couple-activity measures (except Frequency of Dissatisfaction from the Sexual Interaction Inventory) during treatment. During follow-up significant decreases occurred for only the frequency of individual sexual activities, Perceptual Accuracy scores of the SII, and slight decrements for the MAT, although there were slight increases in the number of ways women were orgasmic. The majority of the data for all experimental phases failed to demonstrate significant differences between couple or women-only groups. The only significant findings were those that indicated differential maintenance of gains for women-only group subjects reporting lower frequencies of sexual dissatisfaction during follow-up, and subjects in the couples groups reporting greater pleasure during couple sexual activity at follow-up than subjects in the women-only groups. Session spacing did not significantly influence any variable during the entire program; however, despite this lack of change, 5-week groups rated the spacing of their sessions significantly less helpful than did the 10-week groups. Overall, 91% of the women from the entire sample became orgasmic by follow-up. The Ersner-Hershfield and Kopel investigation examined two important questions regarding the format for conducting directed masturbation treatment, and although neither factor appeared critical, small sample sizes may have contributed to the difficulty in determining differential effects. If these findings are replicated, they directly question the practice of either including or excluding partners in treatment. Data from this investigation indicated that women-only groups can have beneficial effects on couples' sexual relationship, and participating partners do not interfere with women assuming responsibility for the improvement of their sexual responsiveness.

Summary

Table 2 presents a summary of client characteristics, treatment variables, outcome criteria, and results. Published reports document the use of directed masturbation by over 15 different therapists treating 250 women. Participants in these investigations have spanned an age range from 18 to 55 years, with the average age in the mid to late 20s, and were married or engaged in ongoing heterosexual relationships. With the exception of the description of the orgasmic dysfunction, investigators seldom provided other diagnostic information. The sample may clearly represent a diagnostically "pure" group that experiences minimal disruption of desire and excitement phases and yet is presently nonorgasmic. If so, this may be one factor influencing the very high treatment success rate.

As with other treatment literatures, description of therapist characteristics and treatment environments is lacking. However on the most obvious level, over one-half of the subjects received treatment from female therapists. Although this does not appear to be a factor correlated with outcome, it may be significant when comparison is made with other

treatments. Treatment environments included large city outpatient clinics, university-based psychology clinics, and outpatient clinics of medical centers.

At present directed masturbation is a multicomponent treatment package. It has no particular theoretical basis but appears instead to be a straightforward behavior analysis approach. Research has not investigated treatment components, and some are included or excluded according to the proclivity of the investigator. For example, Kegel exercises are inconsistently recommended yet no research documents their unique contribution, despite rather vigorous proponents (e.g., Kline-Graber & Graber, 1975).

There is a progression from case reports to controlled investigation and factorial designs of therapy formats. The investigations of Heinrich (1976) and McMullen and Rosen (1979) document that the treatment, whether offered in a group or bibliotherapy format, results in at least 47% and often 100% of the sample's attaining orgasmic responsiveness. Group comparison and factorial designs have indicated that the absence of partner participation appears to have no detrimental effect on a woman's achievement of her own sexual goals or the partners' enhancement of their sexual relationship; directed masturbation can be successfully offered to a majority of patients in a bibliotherapy or video form; and although a twice-a-week-for-5-weeks treatment format has been common, a 10-weeks schedule of weekly meetings may be more helpful.

Although initial case reports of directed masturbation relied on patient self-report, group designs have included multiple measures of sexual functioning and responsiveness. These have included experimenter-derived sexual activity measures or the Sexual Interaction Inventory (LoPiccolo & Steger, 1974). Investigators have also attempted to gather partner data to corroborate findings. Measures of marital adjustment, locus of control, or personality dimensions are inconsistently used. Physiological data have never been gathered.

At present, the treatment has demonstrated its success in improving orgasmic status. However, beyond the diagnostic category of primary orgasmic dysfunction, it is not known how appropriate the treatment is for women with accompanying desire or excitement phase deficits. Perhaps more importantly, the actual mechanism of the treatment's success has not been the focus of inquiry. Until further analyses, the technique is a viable option, although its contribution to the study of female sexuality remains unclear.

Hypnotic Techniques and Hypnotherapy

It has been suggested that treatment of female sexual dysfunction can be most effectively accomplished through a combined treatment approach of behavior therapy and hypnosis, (Beigel & Johnson, 1980). Hypnosis has been used for a variety of clinical problems, and a small case literature exists for the treatment or orgasmic difficulties.

Hypnotic techniques have been used as adjuncts for several cases. Hypnotic induction has been used as a substitute for progressive relaxation (Ince, 1973), but more frequently, hypnotherapists have used direct suggestions, such as stating the patient will be able to respond in a more sexually functional manner in the near future, as explicit verbal techniques. Alexander (1974) illustrated this in the treatment of a patient who described inorgasmia and sexual anesthesia during intercourse. The patient was given posthypnotic suggestions to "please herself in bed," emphasizing that sex should be "pure enjoyment, without any thought." During the next week the patient reported experiencing her first orgasm, and 2 months later the patient estimated her orgasmic frequency at 75%. Fabbri (1976) reported using direct suggestion techniques in combination with systematic desensitization and assertion training. When using this combination of techniques with 78 cases of primary orgasmic dysfunction, 72% of the women became regularly orgasmic.

Hypnosis employed as a form of therapy has received only preliminary documentation. Coulton (1960) described the treatment of a 32-year-old married patient in which hypnosis was used to determine the origins of her emotional reactions to sexual activity. While under trance, the patient related adolescent experiences of normal heterosexual curiosity and body explorations and described her feelings of shame and guilt when discovered by her parents. Coulton then assisted the patient in reliving these experiences and reinterpreted their outcome. After three trance sessions, the woman reported the frequency of intercourse to increase to two to three times weekly with orgasm occurring on approximately two-thirds of the occasions. Gains were maintained through the year follow-up.

Although such a strategy is afield from the other interventions described here, some therapists (e.g., Crasilneck & Hall, 1975; Ward, 1975) have suggested that hypnosis should only be combined with the therapeutic principles of Freud, Breuer, Sullivan, and Horney to achieve lasting improvements in sexual functioning. At present, support for the efficacy of hypnosis, either as a technique or therapy, is at the level of clinical case reports. Research needs to document the efficacy of the treatment and discover the patient, therapist, or therapy variables that may interact with outcome. At present, any controlled research would significantly advance knowledge.

Treatment Comparison Investigations

Aside from the investigations demonstrating the efficacy of a particular therapy, there have been four investigations comparing different treatment modalities, as displayed in Table 3. Two of the investigations (Andersen, 1981;Riley & Riley, 1978) include only primary nonorgasmic women, and the others (Mathews et al, 1976;Obler, 1973) are larger outcome projects also including other diagnostic groups.

Obler (1973) conducted the first investigation comparing a modified version of systematic desensitization with psychoanalytically oriented therapy. Individuals were referred for treatment from community clinics and university-based counseling centers in the New York City area. Applicants were interviewed, tested, and screened according to the following criteria: presence of either primary or secondary orgasmic dysfunction; absence of psychopathology or physiologically based sexual difficulty; a low score (i.e., less than 34) on the Manifest Anxiety Scale (MAS; Taylor, 1953); an educational background that included at least one year of college; and motivation for treatment. Of the 235 male and female volunteers, Obler selected 37 primary or secondary orgasmic dysfunction females, matched them on the classification and duration of dysfunction and marital status, and randomly assigned them to one of the treatment groups or a no-treatment control. Systematic desensitization subjects were seen individually by Obler. Hierarchy presentation was supplemented with films or slides portraying an actual instance of sexual dysfunction (e.g., a woman having difficulty becoming aroused) when subjects had difficulty imagining a particular item. Hierarchy length ranged from 12 to 25 items. The treatment was also modified by including four sessions of assertion and confidence training to assist subjects in overcoming heterosexual social anxiety, and hierarchy items were modified to include these themes. During treatment subjects were asked to refrain from any sexual activity that caused them anxiety The psychoanalytic therapy was conducted in a group format by two psychotherapists who described themselves as neo-Freudian. Group sessions included discussion of the subjects' sexual and social problems, with the analyst providing interpretations of etiology and specific recommendations for overcoming the dysfunction. These groups were shown the same films as the desensitization subjects and reactions to them were incorporated into the sessions.

Obler used a variety of measures to assess outcome. A straightforward measure of success (i.e., the number of individuals who experienced orgasm for the first time or during a desired occasion) included 85% of the desensitization subjects, 36% of the psychoanalytic subjects, and 23% of the control group members. The success ratios (i.e., the number of successes to the number of attempts) during treatment were .42 for the desensitization group and .03 and .02 for the psychoanalytic and control groups, respectively. Galvanic skin response and heart rate measures of the subjects' responses to films portraying specific sexual failure scenes (e.g., a woman becoming anxious during sexual activity) were recorded pre-, during, and posttreatment. Following treatment, mean responses for the desensitization subjects were consistently lower than those for other groups. Reports of sexual and global anxiety as measured by the Manifest Anxiety Scale (Taylor, 1953) were significantly reduced for all treatment subjects. Thus, on several dimensions Obler's modified desensitization treatment appeared to increase the likelihood that subjects would become successful in alleviating their particular dysfunction, lower physiological arousal (and presumably anxiety) to vicarious sexual failure, and reduce subjective reports of sexual and general anxiety. In contrast, the therapeutic effects of the psychoanalytic treatment appeared comparable with those from no treatment, with the exception of individuals' subjective reports of anxiety. Unfortunately, comparison between the treatments is difficult because potentially relevant variables such as format (individual vs. group treatment), length of contact (11 vs. 15 therapy hours), therapist (Obler vs. two other clinicians), and the inclusion of assertive confidence training in desensitization, were allowed to vary, preventing an unconfounded treatment comparison. Nevertheless, the inclusions of a control group and both subjective and physiological measures add merit to this important investigation.

As part of a comparative study of treatment strategies for sexually dysfunctional couples, Mathews et al. (1976) examined the relative efficacy of systematic desensitization plus counseling, sensate focus exercises plus counseling, and sensate focus bibliotherapy with limited therapist contact. Thirty-six couples, 18 of whom had primarily male problems and 18 primarily female, were randomly assigned to treatment conditions. Among the female subjects, 13 were primary nonorgasmic. Seventeen of the 18 subjects also complained of low desire and arousal from sexual activity. All 18 female partners of the male subjects reported at least some type of orgasmic difficulty and 13 also reported disruption of sexual desire or arousal. After assignment to treatment conditions, groups were subdivided for either single therapist or male–female cotherapy teams. Six therapists, either psychiatrists or clinical psychologists, provided treatment, though it is not known whether or not therapists were balanced across treatment conditions. Desensitization treatment included couple relaxation training and hierarchy construction. In the early treatment stages imaginal desensitization was conducted and then repeated at home by the couple. Final hierarchy items were completed by the couples at home, and therapy sessions were devoted to discussion of problems during in vivo activities and counseling for sexual attitudes or beliefs preventing the couples from open sexual communication. The sensate focus treatment was conducted on an outpatient basis as outlined by Masters and Johnson, with counseling provided as for the desensitization subjects. The sensate focus bibliotherapy treatment included three sessions (first, mid, and last treatment) and weekly mailed instructions to the subjects; also included were questions to the subjects on their progress, which were to be returned and reviewed by the therapist. The three therapy sessions were problem focused and excluded counseling discussions.

Ratings of the couple's general and sexual relationship were completed by subjects, therapists, and an independent psychiatrist. Between-therapists reliability estimates ranged from .79 to .99, However, therapist–psychiatrist reliabilities ranged from .15 to .63 for the general relationship and ranged from .65 to .95 for the sexual relationship. No significant differences between treatment conditions were found either at posttreatment or follow-up for

any of the ratings. It did appear that there was greater variability with the two sensate focus formats and at least one-half of the desensitization subjects experienced no change. Data trends indicated that the effectiveness of sensate focus was enhanced with cotherapy teams. Only two of the 18 female subjects had improved orgasmic responsiveness at follow-up. As with the Obler (1973) investigation, differences between the treatment groups prevent a clear comparison between the many varieties of treatment examined by Mathews et al. More important, however, is the absence of control conditions. For this investigation several would have been necessary to assess the independent effects of systematic desensitization, counseling, sensate focus, and bibliotherapy. At present there is not sufficient knowledge of improvement rates of orgasmic dysfunction with these treatments or no treatment to justify the absence of control. Even if improvement rates were available, a control group such as a no-treatment one could have ruled out other threats to internal validity.

Riley and Riley (1978) compared the efficacy of sensate focus exercises and the exercises supplemented with a program of directed masturbation. Thirty-seven patients were recruited, excluding those who had pain, discomfort, or negative attitudes toward intercourse. Patients in both conditions were seen in conjoint therapy with male and female cotherapists during a 3-month treatment period. A Masters and Johnson style program was used for sensate focus and directed masturbation program as outlined by LoPiccolo and Lobitz. At the end of the treatment period, 8 of 15 patients (53%) in the sensate focus-only condition could attain orgasm by any means, and 18 of 20 (90%) patients using sensate focus and directed masturbation had experienced orgasm. In addition, 47% and 85% of the women from the sensate focus and directed masturbation conditions, respectively, were orgasmic during intercourse. These findings were substantiated by partner report. At the 1-year follow-up, all but two patients were contacted, and the patients who were originally orgasmic remained so. Again, the inclusion of appropriate controls and objective measures of change would have substantially strengthened this report.

Andersen (1981) reported on the controlled comparison of systematic desensitization and directed masturbation. Thirty female subjects were selected from a pool of 70 seeking treatment for primary inorgasmia, possibly accompanied by anxiety or aversion to sexual activity. Subjects were pretested with a sexual assessment battery, matched, and randomly assigned to one of the two treatment conditions or a waiting list control. Both treatments were offered in a group format and led by one of two female advanced clinical psychology graduate students, each administering both treatments. After the treatment period all subjects were again tested, and the control subjects were offered directed masturbation treatment. Following treatment for the control group, all subjects were tested for a third time, which constituted a 6-week follow-up for the two original treatment conditions and a posttreatment testing for the controls.

Data analyses indicated a significant change for treatment groups due to time on all subscales of the Sexual Interaction Inventory except Dissatisfaction. Experimental Condition X Time interactions indicated that both treatments were equally effective in improving subjects' sexual self-acceptance; however, these gains were only maintained by systematic desensitization subjects. The Heterosexual Behavior Hierarchy was used as a measure of sexual anxiety. Changes were negligible for the heterosexual items, but subjects receiving directed masturbation treatment reported being significantly less anxious about masturbation following treatment and during follow-up. Analyses with the Sexual Arousability Inventory (Hoon, Hoon, & Wincze, 1976) indicated that the directed masturbation subjects reported being significantly more sexually aroused to a variety of erotic experiences following treatment. At the time of posttesting, 10%, 20%, and 10% of the desensitization, masturbation, and waiting list subjects, respectively, were orgasmic. However, during the follow-up interval an additional 20% of the directed masturbation

subjects became orgasmic and 66% of the wait list control subjects became orgasmic after receiving directed masturbation treatment. For the two samples of subjects that received directed masturbation treatment, the waiting list results not only replicated those of the first directed masturbation treatment group but were also of greater magnitude.

Conclusions and Recommendations

Although sex therapy is often not construed as psychotherapy, the domains of client, therapist, and treatment variables; the strategy for conducting programmatic research; and the questions of treatment efficacy are relevant. For knowledge to accumulate, investigators need to consider the same research dilemmas (e.g., Garfield & Bergin, 1978; Paul, 1967) faced by psychotherapy outcome researchers. The following is a summary of areas important for future research.

Client Variables

Investigators need to provide a more comprehensive clinical description of the nonorgasmic sample. This would include detailing disruption of earlier physiological stages of sexual arousal and accompanying emotional or cognitive components that appear contributory. At present it appears that the sexually anxious women participating in the systematic desensitization investigations realized anxiety reduction but not inorgasmia reversal. Sensate focus and directed masturbation treatments alter orgasmic status. It is not known whether or not the subject sample across investigations of different treatment modalities are comparable, though it is probable that they are not. Only data from the treatment comparison investigations can begin to address this issue. With a nonorgasmic sample reporting low desire and arousal, Mathews et al. (1976) reported few differences between systematic desensitization and sensate focus, with negligible change in orgasmic status for either treatment. With a nonorgasmic sample representing a continuum of sexual anxiety and arousal, Andersen (1981) found systematic desensitization and directed masturbation equally effective in reducing sexual anxiety, although directed masturbation was more effective in increasing sexual arousal and changing orgasmic status. When investigators provide greater clinical detail of the primary nonorgasmic samples, then treatment effectiveness with such women as those with sexual anxiety, low desire, or satisfactory arousal will be more clearly discerned.

Similarly, demographic information such as age, marital status, socioeconomic status, and education need description so that comparability or diversity of samples across studies can be identified. Finally, subjects may also vary on other dimensions related to outcome, such as motivation for treatment, expectancy regarding outcome, or personality variables of theoretical relevance to sexuality or sexual responsiveness. Such variables are appropriate for control if not manipulation.

Therapist Variables

This domain has received minimal attention. Most important is a complete description and documentation of the therapeutic techniques used. Next, variables descriptive for therapists, such as sex, age, training, clinical and sex therapy experience, theoretical orientation, and confidence in conducting treatment, need to be provided. Finally, the environment and circumstances for conducting treatment (e.g., fee vs. no fee; outpatients vs. research project participants) need mention. This information is necessary in making comparisons-across investigations, and such variables are also appropriate for manipulation with treatments with the most advanced research histories (e.g., the effectiveness of directed masturbation when administered by novice vs. experienced therapists).

Research Design and Strategies for Control

To answer questions of treatment efficacy, investigators must make tactical choices among experimental designs. If this is done, data output will be maximized and will represent advances to knowledge rather than replications of less rigorous investigations. This design issue has also been discussed in the context of research on sexual dysfunction among female cancer patients (Andersen & Hacker, in press). The treatments reviewed here are at different levels of empirical support. Controlled investigations of systematic desensitization with waiting list controls have been conducted, so that continued research could pursue such avenues as examining client variables (e.g., subpopulations of a nonorgasmic sample), continuing the study of therapist variables (as Nemetz et al., 1978, examined the use of videotapes), or including other control conditions to examine nonspecific treatment elements. Directed masturbation research could make continued use of factorial designs in examining treatment components, formats, or effectiveness with subpopulations of nonorgasmic women. Factorial study of sensate focus techniques appears premature until their absolute effectiveness has been documented under controlled conditions. Investigation of the use of hypnosis or hypnotic techniques would be advanced with the introduction of modest documentation as that achieved with case studies with assessment or own-control single group designs.

Assessment Strategy and Outcome Criteria

To date sex therapy researchers have regarded change in orgasmic status as the primary outcome variable. However, an estimate of the reliability of the response as well as the generality of the response change also needs to be provided. Assessment of other aspects of sexual functioning, emotional concomitants, or life adjustment has been inconsistent in strategy and focus. Systematic desensitization researchers have generally attempted to assess sexual anxiety, and directed masturbation researchers have assessed such variables as degree of sexual pleasure or dissatisfaction experienced, accuracy of partner's perceptions of sexual enjoyment, and marital adjustment.

All of these measures have used a self-report strategy, occasionally supplemented by partner data. Although the standard comment could be made of the frailties of self-report measures, consideration needs to be given to the obvious difficulties entailed in using measures other than self-report when studying sexual behavior. Nevertheless, sex therapy researchers could profit from the current advances in psychophysiological measurement of female sexual responding (Hoon, 1979) as one example of a supplementary assessment strategy.

Theoretical Contributions

The sex therapy research literature for primary orgasmic dysfunction has attempted to make few theoretical contributions to broader understanding of female sexual arousal or female sexuality. Systematic desensitization is the only treatment model with a conceptualization of orgasmic dysfunction and a proposed mechanism for the treatment's operation. If sex therapy research was considered in these broader contexts, its contribution may be additional to that of clinicalutility. Theoretical constructs of female sexual arousal and strategies for altering responsiveness could guide the selection of measurement strategies and facilitate hypothesis testing of treatment efficacy and theories of female sexuality. With such a focus, sex therapy researchers could advance basic and applied study of female sexuality and knowledge of the process of sexual dysfunction.

Acknowledgments

Preparation of this article was supported in part by a University of Iowa Old Gold Fellowship awarded to the author. John Cacioppo, Neville Hacker, and Susan Schrader provided critical readings of an early version and Becky Huber was instrumental in manuscript preparation.

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Table 1

Summary of Systematic Desensitization Research for Treatment of Primary Orgasmic Dysfunction

	Client characteristics				Treatment			Outcome			
Study	***N***	***Age***	**Marital status**	**Related conditions**	**Type**	**No. of sessions**	**Total duration**	**Measures[a]**	**Termination**	**Follow-up period**	**Follow-up**
Lazarus (1963)	16	*M* = 25	Married	"Majority found coitus to be meaningless, somewhat unpleasant or utterly repugnant"	Individual	*M* = 29	≤6 mo.	Partner report; therapist judgment	53% (9 of 16) "successful"	15 mo.	Data for 4 of 9 "successes"; gains maintained/improved
Brady (1966)	5	17–30	Married	Anxiety and dyspareunia	Individual	10–14	3–14 wks.	Therapist judgment	4 of 5 coitally orgasmic	3–8 mo.	Gains maintained
Madsen & Ullmann (1967)	1	"young"	Married	Coital anxiety	Individual with partner participation	12		Partner report	Coitally orgasmic	9 mo.	Gains maintained
Ince (1973)	1	21	Married	Absence of desire; anxiety during all sexual activity; and dyspareunia	Individual		1 mo.		Coitally orgasmic		
Kraft & Al- Issa (1967)	1	25	Divorced	Heterosexual social anxiety; sexual anxiety; and aversion/ disgust with sexual activity	Individual	84		Eysenck (1962) Maudsley Personality Inventory; TMAS	Orgasmic capability not reported; social and sexual anxiety reduced	9 mo.	Gains maintained
Caird & Wincze (1974)	1	24	Married	Strong aversion to all sexual activity	Individual with partner participation	7	2 wks.	Partner report; Willoughby (1934) Neuroticism Scale; Wolpe & Lazarus (1966) Assertive Questionnaire; FSS	Coitafly orgasmic; anxiety reduced	6, 9 mo.	Gains maintained
Jones & Park (1972)	55			Anxiety, shame, or sexual embarrassment	Individual with partner participation	*M*= 14			45 (82%) orgasmic and sexual anxiety reduced		Global measures of anxiety returned to pretreatment levels
Sotile & Kilmann (1978)	22 (8 primary, 14 secondary)	*M* = 27	Unknown; however all had partners	Sexual anxiety	Group	16	8 wks.	Partner report; EC sexual behavior, attitudes, and anxiety scales; MAT; SII	Sexual anxiety reduced; sexual satisfaction increased; orgasmic frequency for primary subjects increased	6 wks.	Gains maintained except sexual pleasure decreased
O'Gorman (1978)	40	18–48*M* = 36		Absence of desire, inadequate or absent sexual arousal, dyspareunia, and/or vaginismus	Group and partner-only groups vs. Individual with partner participation	20 1-hr, vs. 15 10-min.	10 wks.	Partner rating of progress; Harbison et. al. (1974) Sexual Interest Questionnaire	63% successful; 47% successful		
Wincze & Caird (1976)	21 (16 of which are primary)	18–38	Married	Inhibited sexual excitement; sexual anxiety	Individual; Imaginal vs. Video vs. Waiting list	*M* = 10	2–7 wks.	EC anxiety card sort; Willoughby (1934) Neuroticism Scale; Wolpe (1969) Assertive Scale; FSS; HBH	18% orgasmic; anxiety reduced; no differential effect of imaginal vs. video	1–3 mo.	25% orgasmic
Nemetz et al.,(1978)	22 (7 of which are primary)	21–39 *Mdn* = 27		Sexual anxiety	Video; Individual vs. Group vs. Control	5	3 wks.	EC anxiety card sort; Rotter (Note 3) Sex Attitude Scale; HBH	No change in orgasmic status; anxiety reduced; greater gains for group treatment	3 wks.; lyr.	Gains maintained; nonsignificant change in orgasmic status

	Client characteristics				Treatment			Outcome			
Study	***N***	***Age***	**Marital status**	**Related conditions**	**Type**	**No. of sessions**	**Total duration**	**Measures[a]**	**Termination**	**Follow-up period**	**Follow-up**
Husted (1975; 1972)	30 (Unknown no. of which have orgasmic difficulties)		Unknown; however all had partners	Anxiety or nega- live responses in sexual encounters	Imaginal with in-dividual or conjoint sessions vs. in vivo with individual or conjoint sessions	Imaginal *M* = 8; In vivo *M*= 13			Little change in orgasmic status for primary subjects; anxiety reduced; coital frequency, noncoital orgasm, and self-ratings of improvement increased; no differential effect of partner involvement		

[a]Patient self-report was used for all investigations and is not specifically listed. Abbreviations for other dependent measures include: EC, experimenter constructed assessment measures; FSS, Wolpe and Lang (1964) Fear Survey Schedule; HBH, Bentler (1968) Heterosexual Behavior Hierarchy; I-E, Rotter (1966) Internal-External Locus of Control Scale; MAT, Locke and Wallace (1959) Marital Adjustment Test; SII, LoPiccolo and Steger (1974) Sexual Interaction Inventory; and TMAS, Taylor (1953) Manifest Anxiety Scale.

Table 2

Summary of Directed Masturbation Research for Treatment of Primary Orgasmic Dysfunction

	Client characteristics				Treatment			Outcome			
Study	***N***	**Age**	**Marital status**	**Related conditions**	**Type**	**No. of sessions**	**Total duration**	**Measures[a]**	**Termination**	**Follow-up period**	**Follow-up**
LoPiccolo & Lobitz (1972)	8				Individual	15			100% orgasmic	6 mo.	Continued improvement
Lobitz & LoPiccolo (1972)	13				Individual	15			100% orgasmic		
Kirkpatrick, McGovern, & LoPiccolo (1977)	4				Group			MAT;SII	100% orgasmic; 75% coitally orgasmic		
Annon (1973)	2	24; 27.	1 single; 1 married	Slight arousal during sexual activity; a plateau of arousal during sexual activity	Individual		4 wks.		100% orgasmic		
Reisinger (1974)	1	23	Single	Enjoyed sexual activity	Individual	8		Heart rate	Orgasmic with mas- turbation	6 mo.	Coitally orgasmic
Kohlenberg (1974)	3	28–33	Married	Neutral or unpleas- ant feelings during sexual activity	Conjoint	10	10 wks.	Partner report; EC arousal ratings	100% orgasmic with masturbation	6 mo.	coitally orgasmic
Wallace & Barbach (1974)	17	19–34 *M* = 27	11 of 17 married; all with partners		Group	10	5 wks.	Rosenberg (1965) Self-Esteem Scale; Secord-Jourard(1953) Body Cathexis Scale; Spence & Helmreich (1972) Attitudes toward Women Scale; MAT	100% orgasmic with masturbation; 87% orgasmic with partner	8 mo.	Gains maintained
Barbach (1974)	83	19–43			Group	10	5 wks.		92% orgasmic with masturbation		
Leiblum & Ersner-Hershfield (1977)	5	23–43			Group	8	8 wks.	EC body attitude scale and assertion inventory	80% orgasmic with masturbation		
Heinrich (1976)	44	18–40 *M* = 25	45% married; 55% in stable heterosexual relationships		Group vs. Self-directed bibliotherapy vs. Wait list	10 1	5 wks,5 wks	Rosenberg (1965) Self-Esteem; Secord-Jourard (1953) Body Cathexis Scale; SII; I-E		2 mo.	Orgasmic with masturbation: 100%,47%, 21%; Coitally orgasmic: 47%, 13%, 0%
McMullen & Rosen (1979)	60	19–55 *M* = 29	30 married; 30 single		Bibliotherapy vs. Instructional videotape vs. Wait list	6 6	6 wks, 6 wks.	Robinson (1974) general information questionnaire, sexual behavior inventory, and sexual attitude change scale; MAT	Orgasmic with masturbation: 65%, 55%, 0%; Coitally orgasmic: 50%, 30%, 0%	1 yr.	Gains maintained and/or improved upon
Ersner-Hershfield& Kopel(1979)	22	20–34 *M=26*			Group w/wo partner participation and massed or spaced sessions	10 10 10 10	5 wks. 5 wks. 10 wks. 10 wks.	EC general information questionnaire and survey of sexual activities; SII	91% orgasmic by self-stimulation; 73% orgasmic during partner activities; no differential effect of treatment groups	10 wks.	82% orgasmic during partner activities

[a]Patient self-report was used for all investigations and is not specifically listed. Abbreviations for other dependent measures include: EC, experimenter constructed assessment measures; I-E, Rotter (1966) Internal-External Locus of Control Scale; MAT, Locke and Wallace (1959) Marital Adjustment Test; and SII, LoPiccolo and Steger (1974) Sexual Interaction Inventory.

Table 3

Summary of Treatment Comparison Investigations for Primary Orgasmic Dysfunction

	Client characteristics				Treatment and control descriptions					Outcome			
Study	***N***	**Age**	**Marital status**	**Related conditions**	**Systematic desensitization (SD)**	**Sensate focus (SF)**	**Directed masturbation (DM)**	**Other treatment**	**Control condition**	**Measures[a]**	**Termination**	**Follow-up interval**	**Follow-up**
Obler (1973)	37[b]		Matched across groups		Individual SD with video-tapes; 15 weekly 45-min. sessions			Group psychoanalytic treatment with vid-cotapes; 10 weekly 1½-hr. sessions	Wait list	GSR and HR to sexual films; TMAS	SD>PA		
Mathews etal. (1976)	18 (13 primary; 5 secondary)	*M* = 28		17 of 18 reported low desire and arousal	Conjoint imaginal SD with partner participation; Counseling on sexual attitudes and beliefs; 10 weekly sessions	Conjoint SF; Counseling on sexual attitudes and beliefs; 10 weekly sessions		Sensate focus bibliotherapy; 3 sessions and weekly mailing for 10 weeks		Client, therapist, and independent assessor ratings	No difference between groups	4 mo.	No difference between groups
Riley & Riley (1979)	37	*M* = 26	Married			Conjoint SF; 6 weekly and 6 bi-monthly sessions		Conjoint SF and DM treatment; 6 weekly and 6 bimonthly sessions		Partner report	DM + SF > SF		
Andersen (1981)	30	19–42 *M* = 25 *Mdn* = 21	25 married or with partners; 5 w/o regular partners	Possible anxiety and/ or aversion to sexual activity	Group SD; 10 biweekly sessions	Group DM; 10 bi-weekly sessions			Wait list	HBH; SII; SAI	SD = DM on SII self-acceptance; no change on measures of sexual anxiety; DM > SD on SAI; DM. > SD, WL on orgasmic response	6 wks.	SD > DM on SII self-acceptance; DM = SD on SAI; DM > SD on orgasmic response

[a]All investigations included client self-report data. Abbreviations for other measures include: GSR, galvanic skin response; HBH, Heterosexual Behavior Hierarchy (Bentler, 1968); HR, heart rate; SAT, Sexual Arousability Index (Hoon, Hoon, & Wincze, 1976); SII, Sexual Interactipn Inventory (LoPiccolo & Steger, 1974); and TMAS, Manifest Anxiety Scale (Taylor, 1953).

[b]These are summary statistics for all participants in this investigation, which included cases of primary orgasmic dysfunction as well as other sexual dysfunctions.