

Volume 7

1979

**Progress
in Behavior
Modification**

Edited by

Michel Hersen
Richard M. Eisler
Peter M. Miller

**PROGRESS IN BEHAVIOR
MODIFICATION**

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PROGRESS IN BEHAVIOR MODIFICATION

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THE ASSESSMENT OF SEXUAL AROUSAL IN WOMEN

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I. INTRODUCTION

A review of studies dealing with assessment and modification of sexual arousal has revealed that considerably more of this literature deals with sexual arousal in males than in females. Though it is unclear why women have received less attention in this area of study, a brief examination may underscore both the importance and the need for cognitive and physiologic research of female sexual arousal.

1. *Sexist bias among sex researchers and clinicians.* The focus of much literature has been on male sex problems, such as rape, pedophilia, exhibitionism, and homosexuality. One legitimate explanation may be societal concern about violent behavior which victimizes children and women. However, two explanations which seem less legitimate are the facts that there are more male than female researchers and clinicians and that these males may at times be influenced in their work by a homophobic concern with homosexuality. In a refreshing vein, one male clinical psychologist recently refused to treat male homosexuals and argued for a change in societal attitude instead (Davison, 1976). Also encouraging is work by Barlow, Abel, Blanchard, Bristow, and Young (1977), who presented procedures for developing social skills and empathy in male sex offenders in lieu of the earlier practice of single-mode aversion therapy treatment aimed exclusively at problematic behavior (Feldman & MacCulloch, 1965).

As desirable as these changes on the part of male workers may be, the problems of women have received far from equal attention in the process (Rosen, 1976). For example, no one has described a treatment program for lesbian women seeking sexual object-choice change, regardless of whether such a therapeutic goal is appropriate. The possibility that lesbian women may need therapy programs aimed at enhancing erotic arousal with their partners has not received clinical attention. Perhaps most distressing, however, is the fact that there are only three controlled studies in the literature which examine the reduction of female heterosexual anxiety (Obler, 1973; Reith, Caird, & Ellis, 1974; Wincze & Caird, 1976) and two controlled investigations which test therapeutic techniques of enhancing female heterosexual erotic arousal (Mathews, Bancroft, Whitehead, Hackman, Julier, Bancroft, Gath, & Shaw, 1976; Wincze, Hoon, & Hoon, 1978). It is hoped that an awareness of women's rights and needs will percolate into the consciousness of sex researchers and clinicians, and this situation will change.

2. *Failure to recognize how widespread sexual problems are in western heterosexual unions.* Caird and Wincze (1977) estimate that the incidence of sexual problems may be 50-60%. Though some of these complaints emanate from males, many of them may be due to female dissatisfaction with the capacity to become sexually aroused and to enjoy sex with a loved one. For example, in a

multivariate study of a normative sample of American and Canadian women of higher socioeconomic status, Hoon and Hoon (1978) found that only one out of three sexual expression styles was related to satisfaction with sexual responsiveness, and that this style accounted for only 20% of the total variance under study. If female sexual arousal insufficiency is as common as the limited data suggest, then any clinical label for the phenomenon is a misnomer. What we appear to have is a social problem larger than issues pertaining to modification of sex-object choice for homosexuals and lesbians. Interestingly, male sexual arousal insufficiency in both homo- and heterosexual relationships also may be more frequent than currently suspected (E. Hoon, 1977).

3. *A lack of technology for assessing sexual problems of women, and specifically, sexual arousal.* Computer multivariate software that is well documented and accessible did not appear until recently; thus the development of psychometric measures of sexual arousal was hindered. Similarly, new solid-state electronics components and microprocessors—spinoffs of the American space race—have not been available until very recently. These components make possible for the first time the measurement and processing of minute changes taking place inside female genitalia.

Two somewhat less obvious, but equally important, reasons why the development of female sexual arousal measures deserves attention are: (1) Sexual arousal is the beginning of a sequence of behaviors leading to the expression of sexual needs and fulfillment (Barlow, 1977). (2) The intensity and nature of the arousal process is considered by many to be indicative of the pleasure and satisfaction that is ultimately derived from sexual activity. An adequate understanding of this process, then, has a bearing on the adequacy and satisfaction derived from any other aspect of sexual activity. Many women agree that it is not sexual behavior in an objective or technical sense that is important, but the capacity to become sexually aroused and to share and enjoy sexual behavior in the context of a loving relationship with another person. Therefore, the assessment of sexual arousal has broad social implications for the basic researcher and clinician alike.

In the text to follow, sexual arousal is defined, followed by discussion of four current approaches to its assessment: self-report, behavioral, nonspecific physiologic, and groin measures. Sections follow discussing survey and experimental research with measures of female sexual arousal; bioelectronic problems with vaginal plethysmography; methodologic research innovations of relevance to female sexual arousal; future research questions; and practical and ethical considerations in the assessment of female sexual arousal. Since little female sexual arousal research has been done, clinical questions seem to hinge on more basic research issues. Therefore, these issues and clinical concerns will be closely tied together. Also, frequent reference is made to male research for two reasons: Male work is further along, and issues which have been examined for

men portend future issues in female sexual arousal research. Also, distinctive aspects of female sexual arousal are underscored by highlighting sex differences where they exist.

II. DEFINITION OF SEXUAL AROUSABILITY

In this chapter, sexual arousability refers to the capacity of a woman to become sexually aroused in the presence of some form of an erotic stimulus. The stimulus may be either external (i.e., pictures, partner, or literature) or internal (i.e., fantasy or imagery). Sexual arousal may occur along either a physiologic dimension (i.e., vaginal lubrication, blood pressure increases, engorgement of breasts, uterus, and vagina) or along a cognitive dimension (subjective self-report of sexual arousal). It is important to note that there may be a dissociation between cognitive and physiologic arousal: One form may be present without the other (Caird & Wincze, 1977; Heiman, 1976; Zuckerman, 1971).

Sexual arousability appears to be a relatively long-term response to erotic stimulation and is distinct from sexual interest, which seems best defined as initial approach to an erotic stimulus.

Though it has been suggested that latency to orgasm and orgasm frequency might be measures of sexual arousability (Zuckerman, 1971), it has yet to be determined if these measures are related to the intensity of other physiologic changes which accompany sexual arousal from its onset to orgasm in women. Zuckerman (1971) has summarized evidence showing that different neural mechanisms may underlie the process of sexual arousal and ejaculation in males, and Caird and Wincze (1977) have observed clinically the dissociation between orgasm capability and reported sexual arousal and pleasure in their female patients. Therefore, the conditions under which sexual arousability is related to orgasmic capability in women are not clear at this time.

III. FEMALE SEXUAL AROUSAL ASSESSMENT TECHNIQUES

A. Self-Report

1. INTERVIEW

Clinicians may find interview-assessment techniques and categories described by Goldfried and Pomeranz (1968) and Goldfried and Davison (1976) of value in planning treatment programs for women seeking to enhance their capacity for sexual arousal. Caird and Wincze (1977) provide extensive guidelines for

clinical assessment of sex problems. Though such a process is important during work with an individual client, exclusive reliance on interview-obtained assessments of sexual arousal (Saghir & Robins, 1969) has several drawbacks in the long run: The interview data do not permit the clinician to determine relative degrees of sexual arousability impairment, nor can comparisons be made with other cases or with women who do not report sexual arousal insufficiency. It is difficult, if not impossible, to make objective assessments of changes in sexual arousability as a function of treatment.

2. INDIRECT METHODS

When indirect methods of assessing sexual arousal are used, it is assumed that a measure of sexual arousal will emerge when the patient is describing an ambiguous visual stimulus. Under these circumstances, the patient is supposedly unaware of the true assessment intents of the investigator.

Leiman and Epstein (1961) found that females with high sex guilt as measured by Mosher's (1968) forced-choice guilt questionnaire gave fewer sexual responses in stories to a sex-relevant TAT picture. In the same study, anger arousal elicited by a confederate increased women's sexual motivation in stories given to the TAT pictures. The reliability of the criteria by which Leiman recorded sexual responses and sexual motivation was unavailable.

Three groups of female subjects consumed different amounts of alcohol and were exposed to an erotic film (Wilson & Lawson, 1976). Following exposure to the sexual film, a TAT measure of sexual arousal was obtained. A physiologic measure of the amount of engorgement present in the vagina was highly sensitive to differential blood-alcohol concentration levels, but TAT measures were completely unresponsive to the alcohol effects. In a similar design with males, Briddell and Wilson (1976) found a TAT measure of sexual arousal insensitive to differential blood-alcohol levels and negatively correlated with male penile tumescence.

3. DIRECT METHODS OF COGNITIVE SEXUAL AROUSAL ASSESSMENT

a. *Unitary Scales.* Kinsey, Pomeroy, Martin, and Gebhard (1953) were among the first investigators to obtain reports of various stimuli which mediated erotic arousal: *in vivo* erotic experiences, vicariously mediated erotic activities via media, and portions of the male and female body. Subjective rating scales were not applied to these categories, so their relative arousal-enhancing capacity was unassessed.

In the 1960s, Likert rating scales had become a common methodologic tool for social psychologists, and concern by politicians and the public sparked a series of government-supported investigations into the effects of pornography on

human emotions and subsequent sexual behavior in the United States and Sweden. Several investigators had volunteers rate sexual arousal and other affective dimensions after exposure to visual erotica (Byrne & Lamberth, 1970; Jakobovits, 1965; Sigusch, Schmidt, Reinfeld, & Wiedemann-Sutor, 1970). Most of these studies found that at the time it was viewed, pornography did indeed increase self-rated sexual arousal (Jakobovits, 1965; Mosher, 1973) and occasionally arousal of other affective states (Mosher, 1973). Observers engaged in higher rates of customary sexual behavior after viewing pornography (Sigusch & Schmidt, 1970), though this typically did not have deleterious attitudinal effects, nor did it lead to changes in sexual behavior or sexual values (Reifler, Howard, Lipton, Liptzin, & Widmann, 1971). The Nixon Administration refused to accept the findings of studies it had sponsored, which emphasized the benign effects of pornography on adult males and females (Byrne & Lamberth, 1970).

Additional work in the 1960s determined the effects of different emotional states and interpersonal variables on sexual arousal. One study examined the effect of sexual arousal (presumably elicited by exposure to an erotic stimulus) upon subsequent elicited aggression (Baron, 1974), and a second (Griffitt, May, & Veitch, 1974) determined the effects of similarly mediated sexual arousal on heterosexual behavior (attractiveness of and visual attention to opposite-gender slides; sitting next to opposite-gender confederates). Unfortunately, these two studies failed to include subjective ratings of sexual arousal, and so it was not clear that erotic exposure actually had the effect of increasing sexual arousal in women.

Other studies which included subjective ratings of sexual arousal examined the effects of the following variables: presence or absence of an experimenter after erotic arousal upon self-rated anxiety (Mosher & Greenberg, 1969); the sexual connotation of advertising products (Morrison & Sherman, 1972); the effect of sex guilt on sexual arousal after viewing erotic stimuli (Ray & Walker, 1973); male-female differences in self-rated sexual arousal and guilt after reading erotic literature (Izard & Caplan, 1974); sexual adjustment and rated sexual arousal during exposure to erotic slides (Steele & Walker, 1974); the effect of sexual experience on rated arousability of erotic slides (Griffitt, 1975); the interpersonal context of erotic activity upon erotic arousal (Herrell, 1975); and the effect of sex guilt in combination with the presence or absence of a female experimenter upon sexual and anxiety arousal ratings (Mosher & Greenberg, 1969).

b. Multiitem Scales. In the above study by Mosher and Greenberg (1969), female sexual arousal was assessed with a multiitem scale, thus initiating a degree of psychometric sophistication for the first time. These investigators used seven sexual-arousal adjectives: titillated, sensuous, aroused, tantalized, passionate, excited, and hot. The ratings were summed to provide a total arousal