

PROGNOSTIC FACTORS AND CLASSIFICATION ISSUES IN THE TREATMENT OF SECONDARY ORGASMIC DYSFUNCTION

EVA LIBMAN,^{1,2*} CATHERINE FICHTEN^{1,3} and WILLIAM BRENDER^{1,2}

¹Sir Mortimer B. Davis-Jewish General Hospital, Sexual Dysfunction Service, 3755 Côte Ste-Catherine Road, Montreal, Quebec H3T 1E2, Canada

²Concordia University, Montreal, Quebec, Canada

³Dawson College, Montreal, Quebec, Canada

(Received 14 June 1983)

Summary—The present study examined patient and problem characteristics as well as therapy process factors associated with success and failure in sex therapy for secondary orgasmic dysfunction. *Ss* were 23 married couples selected for emotional and marital stability; all wives were suffering from secondary orgasmic dysfunction. Sexual functioning and satisfaction were evaluated before and after 15 sessions of therapy. *Ss* also engaged in daily self-monitoring throughout the therapy program. Two criteria of therapeutic success were used: the couples' global sexual harmony and the females' frequency of orgasmic response in couple sexual activity. Higher pre-treatment masturbation rates by the female, as well as better awareness of her partner's sexual tastes and preferences, were related to poor therapeutic outcome. Greater pre-treatment enjoyment of non-genital caressing by the female as well as higher incidence of interpersonal orgasmic response in the past were associated with therapeutic success. The theoretical and research implications of the present findings are discussed.

INTRODUCTION

Because the various sexual dysfunctions may respond differentially to a sexual skills training program, a number of investigators have recommended that therapy outcome be investigated in homogeneous problem samples (Brender, Libman, Burstein and Takefman, 1983; Hogan, 1978; Jehu, 1979, 1980; Kilmann, 1978; Kilmann and Auerbach, 1979). Even within a particular problem category, however, it is now clear that considerable patient and problem variations are possible. Precise categorization of the problem and consideration of the interaction between patient and problem characteristics is essential in the pursuit of an empirical basis for matching treatments to patients.

Categorization of sexual problems

Secondary orgasmic dysfunction in women, the subject of the present study, is a label with considerable definitional confusion. Historically, 'orgasmic dysfunction' has referred to a range of deficits in female sexual responsiveness. Initially, orgasmic dysfunction was conceptualized as an inability to experience orgasm under either the 'appropriate conditions' or in response to presumably adequate sexual stimulation. For example, it was not unusual to label a woman as 'frigid' if she were unable to experience orgasm during intercourse, regardless of whether she were orgasmic by non-coital stimulation (e.g. Kleegman, 1959; Weiss and English, 1943). Similarly, she was considered 'frigid' if she failed to experience so-called 'vaginal' as opposed to 'clitoral' orgasm (e.g. Abraham, 1956; Freud, 1932, 1950).

This global labeling has been succeeded by a more dimensional view of sexual functioning. Masters and Johnson (1970) conceived of sexual dysfunction as an impairment in the interaction between two sexual systems, the biophysical (healthy body, anatomically functional sex organs) and the psychosocial (set of values and attitudes relating to sex). Sexual disorders in general were conceptualized in this fashion, with little attention to etiological factors in a specific syndrome such as orgasmic dysfunction. Kaplan (1974) was more problem-specific; she described sexual dysfunctions in terms of their history and the circumstances under which they occurred. Orgasmic disorders were classified as primary (the woman has never experienced orgasm) or secondary (the

*To whom all correspondence should be addressed at the Sir Mortimer B. Davis-Jewish General Hospital.

disorder developed after a period of being able to reach orgasm). The problem might be absolute (no orgasmic experience under any circumstances) or situational (orgasm is experienced only under limited specific circumstances).

The concept of multidimensionality, not only of etiology, but also of symptoms, was recognized by Sotile, Kilmann and Scovern (1977). They suggested that orgasmic disorders be described in terms of the point along the female sexual response cycle at which inhibition of arousal or performance occurs and included an extensive description of individual modes of responsivity in their classificatory scheme.

The Diagnostic and Statistical Manual (DSM-III) compiled by the American Psychiatric Association (1980) made further strides towards incorporating the variability and complexity of the orgasmic dysfunction syndrome. Within this system, symptoms are categorized along five axes: (1) mental disorders; (2) personality and specific developmental disorders; (3) physical disorders; (4) severity of contributing stressors; and (5) clinical judgment of the highest level of adaptive functioning. Orgasmic disorder, called 'inhibited female orgasm', is defined in DSM-III as "recurrent and persistent inhibition of female orgasm, manifested by delay in or absence of orgasm following normal excitement phase and adequate sexual activity." Orgasmic dysfunction can be manifested as either a disturbance in the subjective sense of pleasure or desire and/or disturbance in objective performance (physiological changes). The dysfunction may be either life-long or acquired, generalized or situational, and total or partial.

Although DSM-III represents a comprehensive system for all psychological disorders, it does not include the full range of specific manifestations for sexual disorders in general, and female orgasmic dysfunction in particular; yet, different forms of orgasmic dysfunction may have different etiologies and may require different treatments. In addition, the system is structured in such a way that symptoms must be categorized in order of importance, whereas such a judgment cannot yet be made in the case of the orgasmic disorder syndrome.

A further refinement has been offered by Schover and her associates (Schover, Friedman, Weiler, Heiman and LoPiccolo, 1982). They base their diagnostic system, which they term 'descriptive', on the complex nature of the human sexual response. According to Schover *et al.*, female sexual responsiveness consists of three distinguishable phases: the sexual interest or desire phase, the arousal phase and the orgasmic phase. Within each of these phases, they identify three basic components: sensory, cognitive and affective. Historical and circumstantial factors as well as other descriptors are incorporated into the classificatory scheme. For example, the specific symptoms of secondary orgasmic dysfunction may be located in one or more of the three basic phases of the sexual response. They may or may not include: aversion to sex (desire phase), decreased subjective or physiological arousal (arousal phase), or inability to achieve orgasm with a variety of forms of sexual stimulation (orgasmic phase). Moreover, each manifestation of the secondary orgasmic dysfunction syndrome may show individual variation in terms of whether or not it has always been present, whether it is global or situational, and whether it represents the individual's presenting complaint.

The more recent multi-axial classificatory or descriptive schemes indicate that considerable individual variability is possible, even within a specific problem category. Extensive, detailed taxonomies are valuable in providing a full description of how a problem can be manifested. For the clinician, however, the ultimate worth of a classificatory system lies in its ability to explain etiology and, perhaps more importantly, to predict the course and outcome of the dysfunction with and without specific types of treatment. Given the heterogeneity of symptoms in orgasmic dysfunction, the symptoms or clusters of symptoms which predict success and failure with a particular therapeutic approach need to be investigated.

In addition, a variety of patient characteristics (e.g. age, marital harmony, psychological status etc.) and therapy process factors (e.g. compliance with therapeutic homework assignments) can also influence the outcome of therapy. Thus, even within a specific problem category, consideration should be given to the interaction between patient and problem characteristics and to the investigation of variables which predict success and failure with a particular therapeutic approach. Attention to these interactions would lead to more efficient and cost-effective treatments.

A number of researchers, although not specifically investigating predictive factors, nevertheless were able to draw some conclusions concerning this issue from their data. Several investigations

have suggested that marital disharmony is related to poor treatment outcome for sexual dysfunction (Jehu, 1980; Leiblum and Rosen, 1979; Libman, Takefman and Brender, 1980; Marks, 1981; Mathews, Bancroft, Whitehead, Hackman, Julier, Bancroft, Gath and Shaw, 1976). There has been some suggestion that age may be negatively related to therapy outcome with non-orgasmic women (Schneidman and McGuire, 1976). Occupational status and 'restricted' vs 'inhibited' lifestyles have also been implicated in the treatment outcome of sexually unresponsive women (Clement, 1980). Some studies have indicated that primary orgasmic dysfunction is more successfully treated than secondary (McGovern, Stewart-McMullen and LoPiccolo, 1978). One study, however, has suggested the opposite (Munjack, Cristol, Phillips, Goldberg, Whipple, Staples and Kanno, 1976). Barbach and Flaherty (1980) conducted an evaluation of the viability of group therapy in the treatment of situationally non-orgasmic women. Although final evaluations were carried out on only a small proportion of the original sample (28 out of an initial 72) and results were difficult to assess statistically, their findings raised some interesting hypotheses concerning predictor variables for successful therapy outcome. These included: completion of difficult homework assignments, length of the sexual relationship, degree of commitment to the relationship and presence or absence of non-sexual problems.

As is evident from the foregoing review, there is little definitive knowledge regarding patient or problem variables which predict success with sex therapy for orgasmic dysfunction. Since 'success' with sex therapy for secondary orgasmic dysfunction ranges from 10% (McGovern *et al.*, 1978) to 80% (Masters and Johnson, 1970), the identification of prognostic factors seems to be of vital importance for efficient and effective treatment.

The present study examined patient and problem characteristics as well as therapy process factors associated with success and failure in the treatment of secondary orgasmic dysfunction. This study is one part of a larger investigation of the comparative effectiveness of three behavioral sex therapy formats (Libman, Fichten, Brender, Burstein, Cohen, Binik and Takefman, 1982).

METHOD

Subjects

Subjects were 23 married couples with the problem of secondary orgasmic dysfunction in the wife. These couples were participating in a larger study described by Libman *et al.* (1982) and were recruited through family physicians, gynecologists and publicity in newspapers.

Following McGovern *et al.* (1978), for inclusion in the study, women had to have experienced at least one orgasm through some mode of sexual stimulation but have been dissatisfied because they experienced orgasm infrequently, or because the type of sexual stimulation required for orgasm was too restricted (e.g. orgasmic with oral stimulation only or not orgasmic with intercourse).

The majority of the women included in the study experienced orgasm less than 25% of the time with any type of interpersonal stimulation in the last 6 months. In addition, the following criteria were met by Ss: (a) wife aged 20–45 yr; (b) duration of problem at least 6 months; (c) couple married for a minimum of 1 yr; (d) educational level at least grade 9; and (e) both partners agreeable to therapy. Ss were excluded on the basis of: (a) current physical illness; (b) current or recent (within 1 yr) psychotherapy; (c) pregnancy or menopause; (d) severe marital discord; and (e) severe sexual problem in partner. Couples who did not conform to the inclusion criteria were offered treatment in the Jewish General Hospital Sexual Dysfunction Service or were referred elsewhere, if the couple so desired.

The final sample had the following characteristics. Couples were married between 1 and 20 yr, with a mean duration of 10 yr. They ranged in age from 25 to 44 yr; the mean was 33 yr for wives and 34 yr for husbands. Both male and female Ss had an average of 15 yr of education. The mean combined income of couples was \$36,000.

Measures

Eysenck Personality Inventory (EPI), Form A (Eysenck and Eysenck, 1968). The EPI measures two personality dimensions: Neuroticism–Stability, Extraversion–Introversion, and incorporates a Lie scale.

Jewish General Hospital (JGH) Sexual Behavior Questionnaire (Libman *et al.*, 1980). This extensive self-report instrument, consisting of questions and rating scales (e.g. nature of sexual repertoire, current frequency of sexual activities, level of sexual enjoyment etc.), is used routinely in the initial evaluation of all couples seeking help at the Sexual Dysfunction Service of the Jewish General Hospital in Montreal.

Sexual Interaction Inventory (SII; LoPiccolo and Steger, 1974). The SII is a widely-used questionnaire which incorporates six subscales measuring various aspects of sexual harmony.

Locke-Wallace Marital Adjustment Scale (L-W; Locke and Wallace, 1959). This self-report questionnaire is frequently used to assess the quality of marital functioning.

Azrin Marital Happiness Scale (Azrin, Naster and Jones, 1973). This marital-adjustment scale provides information additional to that of the L-W.

Rosenberg Self-Esteem Scale (Rosenberg, 1965). This scale measures the self-acceptance aspect of self-esteem.

Daily Self-Monitoring Form. In order to assess compliance with therapeutic assignments and to ascertain the frequency and quality of various sexual behaviors on a daily basis, Ss completed the Daily Self-Monitoring Form throughout the 14-week therapy program. The forms were returned by Ss each week. On a daily basis, Ss: (a) indicated whether they engaged in a variety of sexual behaviors; (b) rated their enjoyment of each sexual experience and of assigned exercises on an 8-point scale (0-7); and (c) specified whether they reached orgasm, and, if so, with which activity; Ss also (d) indicated what percentage of the bibliotherapy materials assigned for that week they had read; and (e) whether they had done any supplementary exercises (recommended in the readings).

Procedure

Couples underwent treatment in one of three therapy conditions: Standard Couple Therapy (husband and wife were seen conjointly by one therapist for 1 hr each week), Group Therapy (women met once a week and husbands met once every 4 weeks with a therapist) and Minimal Contact Bibliotherapy (couples met with a therapist once at the beginning and once at the end of the program). Treatment lasted 14 weeks; within each treatment condition, the therapy content, the audio-visual presentations, the reading materials and the sequence of therapeutic steps were identical. The program (Burstein, Libman, Binik, Fichten, Cohen and Brender, 1983) included information concerning sexual functioning and training in sexual communication as well as effective pleasuring techniques. Exercises included relaxation, vaginal muscle control, self-stimulation and 'Sensate Focus' assignments.

Subjects completed all questionnaire measures 1 week prior to beginning therapy (they brought the completed questionnaires to the orientation session), 1 week after completion of the program and at the 3-month follow-up. During the orientation session, both spouses met with a therapist; couples were provided with a general introduction to the program, an explanation of the merits of the specific treatment condition to which they had been assigned, and all written materials for the 14-week therapy program. Ss were instructed in the proper use of the program materials and were given instructions to complete and return the Daily Self-Monitoring Forms each week. At the end of the program, Ss met with a therapist for a final summary meeting. At this time, they were given the post-therapy questionnaires to complete within 1 week and were scheduled for a follow-up appointment in 3 months' time.

RESULTS

Sexual repertoire of females

Considerable variability in the women's pre-therapy sexual repertoire was observed. Results show heterogeneity in both frequency of specific sexual activities as well as in orgasmic responsiveness. Pre-treatment masturbation rates, as well as frequency with which the women engaged in manual and oral genital stimulation with a partner ranged from 0 to 7 times per month; frequency of intercourse varied between 1 and 7 times per month. Ten women in the sample were not orgasmic with any type of sexual stimulation provided by their partner. Of these, 4 had no masturbation history while masturbation frequency for the remaining 6 averaged 2-5 times per month.

Prognostic factors

In order to determine what factors predict success in sex therapy, the relation between therapy process and individual-differences variables and outcome of sex therapy was investigated. In each treatment condition, compliance with the therapy program, a therapy process variable, was related to Enjoyment and % Orgasm post-therapy for various sexual activities. In order to investigate the ability of individual-differences variables to predict the outcome of sex therapy, both stepwise regression analyses and stepwise discriminant analyses were carried out. Two measures of the outcome of sex therapy were used: the summary couple Total Disagreement scale of the SII (a questionnaire measure) and the Success:Experience ratio (a derived measure based on self-monitoring data). All questionnaire measures used in the study were entered as potential predictor variables in both types of analyses.

Compliance with therapy program. Daily Self-Monitoring Form variables were examined in order to find out how therapy condition affected compliance with the therapy program. Two-way (Therapy Condition \times Gender) between-groups [3(Couple/Group/Biblio.) \times 2 (Male/Female)] ANOVA comparisons on % of Assigned Reading Done and on % Extra Exercises Done were carried out. (All female Ss were assigned the same reading materials; all husbands were also given reading assignments. In the reading materials assigned, exercises additional to those prescribed in the program were recommended; the % Extra Exercises Done refer to these exercises.) The results of these analyses, presented in Table 1, show that couples in the Group Therapy and in the Bibliotherapy conditions carried out more of the % Assigned Reading and engaged in more Additional Exercises than did Ss in the Couple Therapy condition.

To investigate the relationship between compliance with the therapy program and outcome of sex therapy, Pearson product-moment correlation coefficients were computed. % Assigned Reading Done as well as % Extra Exercises Done, by males and by females in each therapy condition were related to post-therapy Enjoyment and % Orgasm scores on all sexual repertoire variables in the JGH Questionnaire.

Full results of these analyses are presented in Table 2. Results for females show that amount of reading done was related to increased experience of orgasm with masturbation for women in the Bibliotherapy condition. Engaging in additional exercises was consistently related to increased female orgasmic response with masturbation in all three treatment conditions. Additional exercises also were related to increased enjoyment of non-coital sexual activities for females in the Group condition. Carrying out additional exercises was related to orgasmic response with non-coital sexual activities in Couple Therapy females and to orgasm with intercourse for women in both the Couple and Bibliotherapy conditions.

Individual-differences variables: questionnaire measures. In order to determine what combination of variables best predicts post-therapy scores on the SII summary Total Disagreement scale, a stepwise regression analysis was done using females' pre-therapy scores on all questionnaire measures employed in the study. The Total Disagreement scale was selected because it has been found to be related to other measures of success with sex therapy (LoPiccolo and Steger, 1974) and because it is the only measure used in this study which reflects couple, rather than exclusively male or female responses. As there were few differences found between treatment conditions on ANOVA comparisons (Libman, Fichten, Brender, Burstein, Cohen and Binik, 1983), the

Table 1. Compliance with program: mean scores

Variable	Condition			Main findings ^a	P ^b
	Couple	Group	Biblio.		
% Assigned Reading Done					
Males	18	40	22		
Females	18	32	42	Males = Females	NS
Couples	18	36	31	G = B > C	0.05
% Extra Exercises Done					
Males	14	22	28		
Females	5	29	26	Males = Females	NS
Couples	10	26	27	G = B > C	0.05

^aComparisons between treatment conditions. C = Standard Couple Therapy, G = Group Therapy, B = Minimal Contact Bibliotherapy.

^bF-test.

Table 2. Relationship between compliance with program and sexual repertoire variables (JGH Questionnaire) post-therapy

	Individual sexual activities		Non-genital caressing	Couple sexual (Non-coital) activities		Intercourse	
	Enjoyment	% Orgasm	Enjoyment	Enjoyment	% Orgasm	Enjoyment	% Orgasm
% Assigned Reading							
Couple							
Females	+0.162	+0.416	-0.433	-0.123	-0.029	+0.431	+0.413
Males	+0.335	+0.113	+0.082	+0.453	-0.185	+0.336	+0.030
Group							
Females	-0.353	+0.054	-0.136	-0.103	-0.292	+0.391	-0.292
Males	-0.189	-0.114	+0.091	+0.031	+0.217	-0.535***	-0.580***
Biblio							
Females	+0.002	+0.559***	-0.008	-0.414	-0.297	+0.371	+0.240
Males	+0.124	-0.263	-0.041	+0.320	+0.051	+0.695*	+0.001
% Extra Exercises							
Couple							
Females	+0.283	+0.878**	-0.308	-0.288	+0.583	+0.188	+0.782*
Males	+0.090	+0.767*	+0.262	+0.359	+0.061	+0.318	+0.001
Group							
Females	+0.424	+0.663*	+0.169	+0.730*	+0.264	+0.084	+0.264
Males	+0.357	+0.368	-0.623*	+0.067	+0.796*	+0.337	-0.339
Biblio							
Females	+0.679*	+0.617***	-0.254	+0.538	+0.281	-0.164	+0.831**
Males	+0.228	+0.162	-0.553***	-0.094	-0.198	+0.149	-0.256

Pearson *r* values.* $P < 0.05$; ** $P < 0.01$; *** $P < 0.10$.

treatment condition variable was not considered in this analysis. The two variables that best predicted post-therapy SII Total Disagreement scores were selected on the basis of relative increase in multiple *R*. In order of weighted importance these were: females' pre-therapy ratings of % Orgasm with Partner in the Past and Knowledge of Partner's Sexual Preferences (by Self) on the JGH Questionnaire [i.e. higher % Orgasm with Partner in the Past and lesser Knowledge of Partner's Sexual Preferences (by Self) were related to lower (better) Total Disagreement scale scores]. These two predictor variables accounted for 42% of the variance in Total Disagreement scores ($R^2 = 0.420$, $P < 0.01$).

A stepwise discriminant analysis was conducted to assess whether females' pre-therapy scores could distinguish between the 11 'successful' couples whose post-therapy Total Disagreement scale score was equal to or less than 77 (the mean for couples post-therapy) and the 12 'unsuccessful' couples whose post-therapy Total Disagreement scale score was greater than 77. The discriminating variables used were females' pre-therapy scores on all questionnaire measures employed in the study. Since there were more variables entered into the analysis than there were *S*s, only the two best discriminating variables were selected in order to make the findings meaningful. When predicted group membership was compared to actual group membership, it was found that 19 of the 23 couples (i.e. 83%) were correctly classified on the basis of information from the two variables used (see Table 3). That is, the stepwise discriminant analysis demonstrated that females' pre-therapy scores on two measures were able to predict, with 83% accuracy, those couples who succeeded or failed post-therapy. The two measures that separated the two groups, in descending order of discriminating power, were: females' pre-therapy knowledge of Partner's Sexual Preferences (by Self) (Wilks' lambda = 0.551, $P < 0.01$) and Masturbation Frequency (Wilks' lambda = 0.291, $P < 0.01$). Means for these predictor variables and for the predicted variable (Total Disagreement scale score) for the Success and Failure groups are presented in Table 3.

In summary, the results of the discriminant analysis indicate that females who felt, pre-therapy, that they did not have a good knowledge of their partner's sexual preferences and who masturbated infrequently were more likely to succeed in sex therapy (when success was measured by the SII summary Total Disagreement scale post-therapy) than females who felt that they had a better knowledge of their partner's sexual preferences and who masturbated more frequently.

Individual-differences variables: self-monitoring measure. As the SII is a questionnaire measure, stepwise regression and stepwise discriminant analyses were performed on self-monitoring data as well. The predicted variable in these analyses was improvement by females pre- to post-therapy on the Success:Experience ratio. This ratio, which has been found by other investigators to

Table 3. Ss' predicted and actual membership in Success/Failure groups as well as predictor and predicted variables

Predicted/actual comparison		Predictor/predicted variables			
Predicted group	Actual group		Variables	Actual group means	
	Success (n = 11)	Failure (n = 12)	Sexual Interaction Inventory (SII) ^a	Success (n = 11)	Failure (n = 12)
Success	11	4	<i>Predictor variables (pre-therapy)</i>		
			Knowledge of Partner's Sexual Preferences (by self) ^b	0.73	1.52
Failure	0	8	Masturbation Frequency/month	1.78	4.40
			<i>Predicted variable (post-therapy)</i>		
			SII Total Disagreement scale	57.64	113.00
			Success:Experience ratio ^c		
	(n = 8)	(n = 15)		(n = 8)	(n = 15)
Success	5	3	<i>Predictor variables (pre-therapy)</i>		
			Enjoyment Receiving Non-genital Caressing ^b	6.50	4.38
Failure	3	12	% Orgasm with Partner in the Past	35	25
			<i>Predicted variable (change pre to post)</i>		
			Success:Experience ratio	+0.23	-0.03

Stepwise discriminant analyses.

^aThose whose post-therapy SII Total Disagreement scores were ≤ 77 were considered Successes; those whose scores were > 77 were considered Failures.

^bThe higher the score, the greater.

^cThe Success:Experience ratio is a derived score based on self-monitoring data. It is the ratio of number of orgasms divided by number of sexual encounters. Females whose post-therapy Success:Experience ratio was $>$ their pre-therapy ratio were considered Successes; those whose post-therapy ratio was \leq their pre-therapy ratio were considered Failures.

discriminate successfully from unsuccessfully treated patients (e.g. Auerbach and Kilmann, 1977), is the number of orgasms experienced divided by the number of sexual encounters (for the purposes of the present study, both couple sexual non-coital activities as well as intercourse were considered sexual encounters). The pre-therapy Success:Experience ratio is based on weeks 2, 3 and 4 of the therapy program while the post-therapy ratio is based on weeks 11, 12 and 13. In both analyses, all female Ss' pre-therapy scores on all questionnaire measures employed in the study were used; the therapy condition variable was, again, excluded from the analyses.

In the stepwise regression analysis, none of the variables were found to predict, at the 0.05 level or better, improvement on the Success:Experience ratio. The stepwise discriminant analysis was conducted to assess whether females' pre-therapy scores could distinguish the 8 'successful' females whose post-therapy minus pre-therapy Success:Experience ratio scores were greater than 0 from the 15 'unsuccessful' females whose post-therapy minus pre-therapy ratio scores were 0 or less. Again, only the two best discriminating variables are reported.

Table 3 shows that when predicted group membership was compared to actual group membership, it was found that 17 of the 23 females (i.e. 74%) were correctly classified on the basis of information from the two variables used (Wilks' lambda = 0.582, $P < 0.05$). That is, the stepwise discriminant analysis demonstrated that females' pre-therapy scores on two measures were able to predict, with 74% accuracy, those who improved (Successes) or did not improve (Failures) post-therapy. The two measures that separated the groups, in descending order, were pre-therapy scores on: Enjoyment in Receiving Non-Genital Caressing (Wilks' lambda = 0.746, $P < 0.10$) and % Orgasm with Partner in the Past (Wilks' lambda = 0.582, $P < 0.10$). Means for these predictor variables and for the predicted variable (pre-therapy to post-therapy change on Success:Experience ratio) for the Success and Failure groups are presented in Table 3. To summarize, the stepwise discriminant analysis results show that females who enjoyed receiving non-genital caressing pre-therapy and whose % orgasm with their partner in the past was higher were more likely to succeed on this measure of the outcome of sex therapy than females who did not enjoy non-genital caressing very much and whose past % orgasm with their partner was lower.

DISCUSSION

Sample characteristics

The sample of secondary non-orgasmic women selected for the present study was characterized by two clinically-important features. One was the long-standing nature of the problem, in most

cases coinciding with the duration of the couples' relationship. The second was the variability in pre-treatment sexual repertoire and the frequency with which the women had experienced orgasm. Pre-treatment masturbation rates varied from 0 to 7 times per month. The frequency with which the women engaged in manual and oral genital stimulation with a partner and intercourse was equally variable. Prior to the therapy program, 10 of the women were not orgasmic with any type of sexual stimulation provided by their partner. This included 4 *Ss* who masturbated very rarely or not at all and 6 for whom masturbation represented a stable and satisfying aspect of their sexual repertoire. These observations suggest that the secondary non-orgasmic classification contains at least two subcategories: women who have never effectively *learned* the orgasmic response (i.e. those who had only experienced orgasm once or twice in their lives, in a random fashion), and those who have not *transferred* the orgasmic response from the solitary to the interpersonal setting. This formulation, supported by the findings on prognostic factors below, suggest a different treatment focus for women in each of these subcategories, and underlines the importance of a detailed problem assessment, using a comprehensive classificatory scheme, even within a homogeneous problem category.

Prognostic factors

As retrospective and on-going measures can yield different results (Fichten, Libman and Brender, 1983a), two criteria of therapeutic success were used: the couples' global sexual harmony and the females' frequency of orgasmic response in couple sexual activity. When the criterion measure was sexual harmony, success was predicted by the woman's pre-treatment: (a) orgasmic responsiveness with a partner in the past (positively related); (b) knowledge of the partner's preferences (negatively related); and (c) masturbation frequency (negatively related).

When the criterion for therapeutic outcome was the behavioral measure of the female's orgasmic experience with her partner (Success:Experience ratio), success was predicted by the woman's pre-treatment: (a) level of enjoyment from receiving non-genital caressing prior to therapy (positively related); and (b) orgasmic responsiveness with a partner in the past (positively related)—the same variable which was found to predict global sexual harmony).

The finding that enjoyment of non-genital caressing was associated with success suggests that a sex-therapy program for orgasmic dysfunction which relies heavily on 'Sensate Focus' exercises may be more effective for women who already enjoy affectional contact. That higher orgasmic rate with a partner in the past was related to success with sex therapy appears to be a reaffirmation of the old maxim, "The best predictor of future behavior is past behavior". The third finding that knowledge about the partner's sexual preferences is associated with failure might reflect that these women may be focusing on their partner's pleasure (spectatoring), at a cost to their own sexual responsiveness. The clinical implication here would be a therapy program which includes not only a self-focus component but also techniques for eliminating maladaptive concern with the partner's pleasure. With respect to the finding that high masturbation frequency is associated with failure, it is possible that women who masturbate frequently have become strongly conditioned to solitary sexual activity and its associated stimulus conditions, making the transfer to the interpersonal context more difficult.

The findings on prognostic factors support the suggestion made earlier concerning the existence of at least two subcategories in the secondary non-orgasmic syndrome: one in which the woman must learn or re-learn the orgasmic response, and the other in which she must transfer the response to the interpersonal setting. The 'successful' women, i.e. those who had low masturbation frequency, who were not inclined to 'spectatoring', who enjoyed affectional contact and who had had greater orgasmic responsiveness with a partner in the past, probably needed further learning of the orgasmic response in the couple context. As sex-therapy programs for orgasmic dysfunction tend to foster such learning experiences, it is not surprising that such women would succeed. The women who masturbated regularly, who did not enjoy affectional contact, who had probably established a habit of 'spectatoring' and who had always had low orgasmic response with a partner, did not do well with the present program; for these women, whose problem appears to be one of transfer rather than of inadequate learning, the techniques currently in use do not appear to be as effective. This formulation is consistent with findings from previous studies which have suggested that sex therapy is more effective with the learning rather than the transfer of orgasmic response

(cf. McGovern *et al.*, 1978). Fichten, Libman and Brender (1983b) have suggested that, as sex-therapy programs are multidimensional, the effects of different therapy components should be investigated. The present findings further suggest that different therapy components may have differential effects on women who fall into the subclassifications of secondary orgasmic dysfunction.

Compliance with program

Since Group and Bibliotherapy couples completed more of the assigned reading and recommended exercises than did spouses in Standard Couple Therapy, it would appear that Ss receiving Couple Therapy perceived these assignments as redundant with the intensive therapist contact to which they were exposed. Engaging in additional exercises was related to enhanced sexual enjoyment and orgasm, suggesting that actual practice of various activities (assigned additional exercises) benefited Ss more than reading educational and instructional material.

CONCLUSIONS

It is noteworthy that only sexual variables predicted success and failure in sex therapy; neither personality factors nor marital adjustment were related to therapy outcome. Another important aspect of the present findings was the suggestion that predictor variables can differ, depending on the nature of the outcome criterion selected. Overall, the present investigation highlights the necessity for precise and multidimensional definition of both problem characteristics and of outcome criteria. An additional proposal suggested by this study is the routine use of regression and discriminant analyses in sex-therapy outcome research. In this way, an empirically-based prognostic system related to the range of sex-therapy formats, patient populations and individual differences could be developed.

Acknowledgement—This research was funded as part of a larger study by le Comité de la Recherche Socio-économique, Ministère des Affaires Sociales (RS 315 S79 3).

REFERENCES

- Abraham H. (1956) Contribution to the problem of female sexuality. *Int. J. Psychoanalysis* **37**, 351–353.
- American Psychiatric Association Task Force (1980) *Diagnostic and Statistical Manual of Mental Disorders (DMS III)*, 3rd edn. APA, Washington, D.C.
- Auerbach R. and Kilman P. R. (1977) The effects of group systematic desensitization on secondary erectile failure. *Behav. Ther.* **8**, 330–339.
- Azrin N. H., Naster B. S. and Jones R. (1973) Reciprocity counselling: a rapid learning procedure for marital counselling. *Behav. Res. Ther.* **2**, 365–382.
- Barbach L. and Flaherty M. (1980) Group treatment of situationally orgasmic women. *J. Sex marital Ther.* **6**, 19–29.
- Brender W., Libman E., Burstein R. Takefman J. (1983) Effectiveness of behavioral sex therapy in a clinical setting. *J. Sex Res.* In press.
- Burstein R., Libman E., Binik Y., Fichten C. S., Cohen J. and Brender W. (1983) A short-term treatment program for secondary orgasmic dysfunction. Submitted for publication.
- Clement U. (1980) Sexual unresponsiveness and orgasmic dysfunction: an empirical comparison. *J. Sex marital Ther.* **6**, 274–281.
- Eysenck H. J. and Eysenck S. B. G. (1968) *Manual for the Eysenck Personality Inventory*. EdITS, San Diego, Calif.
- Fichten C. S., Libman E. and Brender W. (1983a) Outcome criteria and maintenance in sex therapy: an illustrative example of methodological issues in the treatment of secondary orgasmic dysfunction. Submitted for publication.
- Fichten C. S., Libman E. and Brender W. (1983b) Methodological issues in the study of sex therapy: effective components in the treatment of secondary orgasmic dysfunction. *J. Sex marital Ther.* In press.
- Freud S. (1932) Concerning the sexuality of women. *Psychoanalyt. Q.* **1**, 191.
- Freud S. (1950) Female sexuality. In *Collected Papers*, Vol. 5. Hogart, London.
- Hogan D. R. (1978) The effectiveness of sex therapy: a review of the literature. In *Handbook of Sex Therapy* (Edited by LoPiccolo J. and LoPiccolo L.). Plenum Press, New York.
- Jehu D. (1979) *Sexual Dysfunction*. Wiley, New York.
- Jehu D. (1980) Recent developments in therapy for sexual dysfunction. *Aust. Psychol.* **15**, 19–31.
- Kaplan H. S. (1974) *The New Sex Therapy*. Brunner/Mazel, New York.
- Kilman P. (1978) The treatment of primary and secondary orgasmic dysfunction: a methodological review of the literature since 1970. *J. Sex marital Ther.* **4**, 155–175.
- Kilman P. R. and Auerbach R. (1979) Treatments of premature ejaculation and psychogenic impotence: a critical review of the literature. *Archs sex. Behav.* **8**, 81–100.
- Kleegman S. (1959) Frigidity in women. *Rev. Surg. Gynec. Obstet.* **16**, 243.
- Leiblum S. and Rosen R. (1979) The weekend workshop for dysfunctional couples: assets and limitations. *J. Sex marital Ther.* **5**, 57–69.

- Libman E., Takefman J. and Brender, W. (1980) A comparison of sexually dysfunctional, maritally disturbed and well-adjusted couples. *Person. individ. Diff.* **1**, 219-227.
- Libman E., Fichten C. S., Brender W., Burstein R., Cohen J., Binik Y. and Takefman J. (1982) Evaluation of behavioral sex therapy in the treatment of secondary orgasmic dysfunction: therapeutic formats, components of treatment and prognostic factors. Final Report, Conseil Québécois de la Recherche Sociale (RS 315 S79 3).
- Libman E., Fichten C. S., Brender W., Burstein R., Cohen J. and Binik Y. (1983) Evaluation of behavioral sex therapy: A comparison of three therapeutic formats in the treatment of secondary orgasmic dysfunction. Paper presented at the *Association for the Advancement of Behavior Therapy World Congress*, Washington, D.C.
- Locke H. J. and Wallace K. M. (1959) Short marital adjustment and prediction tests: their reliability and validity. *Marr. Fam. Living* **21**, 251-255.
- LoPiccolo J. and Steger J. (1974) The sexual interaction inventory: a new instrument for assessment of sexual dysfunction. *Archs sex. Behav.* **3**, 585-595.
- Marks I. (1981) Review of behavioral psychotherapy—II. Sexual disorders. *Am. J. Psychiat.* **138**, 750-756.
- Masters W. H. and Johnson V. E. (1970) *Human Sexual Inadequacy*. Little Brown, Boston, Mass.
- Mathews A., Bancroft J., Whitehead A., Hackman A., Julier D., Bancroft J., Gath D. and Shaw P. (1976) The behavioral treatment of sexual inadequacy: a comparative study. *Behav. Res. Ther.* **14**, 427-436.
- McGovern K., Stewart-McMullen R. and LoPiccolo J. (1978) Secondary orgasmic dysfunction—I. Analysis of strategies for treatment. In *Handbook of Sex Therapy* (Edited by LoPiccolo J. and LoPiccolo L.). Plenum Press, New York.
- Munjack D., Cristol A., Phillips D., Goldberg A., Whipple K., Staples F. and Kanno P. (1976) Behavioral treatment of orgasmic dysfunction: a controlled study. *Br. J. Psychiat.* **129**, 497-502.
- Rosenberg M. (1965) *Society and the Adolescent Self-image*. Princeton Univ. Press, N.J.
- Schneidman B. and McGuire L. (1976) Group therapy for non-orgasmic women: two age levels. *Archs sex. Behav.* **5**, 239-247.
- Schover L. R., Friedman J. M., Weiler S. J., Heiman J. R. and LoPiccolo J. (1982) Multiaxial problem-oriented system for sexual dysfunctions. An alternative to DSM III. *Archs gen. Psychiat.* **39**, 614-619.
- Sotile W. M., Kilmann P. R. and Scovern A. W. (1977) Definitions and classifications of psychogenic female sexual dysfunctions. *J. Sex Educ. Ther.* **3**, 21-27.
- Weiss E. and English O. (1943) *Psychosomatic Medicine*. Saunders, New York.