A STUDY ON SEXUAL DYSFUNCTION IN MALES: COGNITIVE AND BEHAVIORAL CORRELATES

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Abstract

Six measurement tools used in the present study personal data sheet, international index for erectile function, sexual dysfunctional beliefs, questionnaire sexual modes, questionnaire self-esteem and relationship questionnaire in erectile dysfunction and erectile dysfunction. Inter-correlations of the study variables were conducted separately for the Dysfunctional and the Control groups and tests of significance of difference between the pairs of correlations were done using Fishers Z transformation. The results showed that out of a total of 210 different correlations possible among 21 variables within each sub-group, 110 correlations relating to the dysfunctional group and 82 correlations relating to the control group were statistically significant.

Keywords

Erectile function, Sample selection, Variables, Chi- Two-way MANOVA

Introduction

Male sexual competence is often narrowly conceived in terms of penetration by a hard huge penis and prolonged sexual performance. Many men view penile erection as symbolizing male power and potency and penetration as the subsequent success of male power, needed to win women. Ejaculation is considered to reflect mainly achievement of prolonged intercourse and the capacity for achieving fatherhood. According to Jamieson (2002), male sexuality is seen as a 'phallocentric view of heterosexual sex; something that men do to women', with emotional and cognitive dimensions of male sexuality often overlooked. Buchbinder (1998) has also observed that 'masculinity is phallocentric' and that 'masculinity is a negotiated system of identities, one aspect of which is the ritual display of phallic attributes'.

Tathapi (2000) & Khan et al., (2002) have found that misconceptions about human sexuality are prevalent among men and that such misconceptions often make sex unsatisfying. According to Tathapi (2000), men entertain contradictory beliefs about their own sexuality and sexual potency. Outwardly, or in the peer-sex culture, men generally hide their sexual tensions and overstate their masculine sexual power that ultimately decreases their self-esteem and confidence. Their inner or private beliefs are often full of fear, threat, confusion, myths and tensions. In other words, public bravado and private fears about 'performance' are flip sides of male sexuality, which exist together. Most men are threatened by macho media images portrayed, which are exaggerated and reinforced by peers.

In India, marriage is viewed as a mandatory social act which is necessary for social and economic stability. Failure by an individual to fulfill social expectations regarding family and children may demoralize one's self-respect and self-esteem as 'man'. In a patriarchal society like ours, men are expected to take the lead role in almost everything including sex, and hence, it is not easy for them to come to terms with sexual inadequacy and assume a role subordinate to women in sex.

Sexual dysfunctions make marriage impossible or ill fated and impart a pernicious effect upon the mental life of both the husband and the wife. The term 'Erectile dysfunction' (ED) has been used to signify the inability of the male to achieve an erect penis as part of the overall multifaceted process of male sexual function. Erectile dysfunction has a significant impact on the quality of an individual and it is a common problem affecting more than 100 million men worldwide. Cognitive behavioral approach towards management of sexual dysfunction reveals that males presenting with sexual dysfunction, namely, premature ejaculation and erectile problems, express belief in a number of sexual 'myths' or misconceptions. However, there has not been sufficient empirical research on the role of cognitions (the belief and thoughts of an individual) in the aetiology of sexual problems in men.

It was in this context that the present study was undertaken. The study was aimed at exploring in detail the complex inter-relationships among the variables of sexual performance, thought process, beliefs and attitudes, and emotional responses. In all these respects, men having sexual difficulties were compared with their 'functional' counter parts to find out how the two groups of people differ systematically from each other. It was hoped that analysis of the data obtained in the study using sophisticated multivariate statistical procedures may help to differentiate the variables considered into antecedents, correlates and consequents.

Methods

Sample selection

A case-control study (matched for age, educational level, religion, and socio economic status) was conducted using a sample of 100 subjects, aged 21 to 60 years, diagnosed as having Failure of genital response (F52.2) or Premature ejaculation (F52.4) as per ICD-10 DCR criteria (the dysfunctional group), and a matched control group of 100 subjects who were free of any sexual problems. Individuals having any psychiatric disorders including substance abuse, individuals not knowing to read and write in English or Malayalam, and individuals not knowing to read and write in English or Malayalam, and individuals not consenting to participate in the study were excluded from the study. The subjects in the control group were selected from among the relatives of those who were included in the dysfunctional group and also from the general public (Table 1- 4).

Personal Data Sheet:

Used to get information about the socio-demographic variables and also regarding variables like anticipatory anxiety and performance anxiety with regard to sex and history of sexual abuse during childhood.

International Index for Erectile function:

(IIEF; Rosen, et al, 1997): A 15-item, self-administered questionnaire developed for the assessment of erectile function.

Sexual Dysfunctional Beliefs Questionnaire:

Male version (SDBQ; Nobre*et al.,* 2003): A 40-item self-reported measure consists of an assessment of specific stereotypes and beliefs identified in the clinical literature as related to sexual dysfunctions in males.

Sexual Modes Questionnaire:

Male version (SMQ; Nobre& Pinto-Gouveia, 2003): Consisted of 30 items which represented different thoughts one can have during sexual activity. Three different aspects relating to these thoughts were measured using the questionnaire, viz., (1) frequency of automatic thoughts; (2) The intensity of sexual response associated with each specific thought; and (3) the different kinds of emotions experienced in connection with the thoughts.

Self-Esteem and Relationship Questionnaire in Erectile Dysfunction:

(SEAR; Cappalleri et al, 2004): A 14-item self-rated questionnaire which yields scores on 3 different domains of psychosocial variables in men with erectile dysfunction, viz., Sexual Relationship, Self-Esteem and Overall Relationship.

Erectile Dysfunction:

Effect on Quality of Life (ED-EQoL; Macdonagh, et.al; 2002): A questionnaire consisting of 15 questions related to the impact of problems of sexual adequacy in the overall life of an individual.

Variables

The variables taken for the study included the various sub-scales of the tools used for the study. This resulted in a total of 38 variables at the beginning of the study, which was later reduced to 21 at the time of detailed analysis of the data, on the basis of factor analysis of the scores on the different dimensions of the tools.The 21 variables that were retained at the final phase of the study for detailed analysis included 2 variables on sexual functioning (viz., Sexual desire and Sexual functioning), 3 variables on beliefs and attitudes (Restrictive attitude towards sex, Sex as an abuse of man's power, and Dysfunctional beliefs), 1 variable on quality of life (Quality of sexual life), 1 variable on self-esteem (Sexual-esteem), 2 variables on frequency of sex related thoughts (Erotic thoughts and Dysfunctional thoughts), 2 variables on response intensity of sex related thoughts (Erotic thoughts and Dysfunctional thoughts), and 10 variables on emotional experiences associated with sex related thoughts (Shame, Anger, Pain, Anxiety, Sadness, Disillusionment, Fear, guild, Pleasure, and Satisfaction).Socio-demographic variables such as age, education level and religion and socio-economic status were also considered in the study. A few other variables, viz., presence of anticipatory anxiety and performance anxiety with regard to sex and history of sexual abuse during childhood were also included in the study as they were believed to have significant bearing on the main dependent variable under study and sexual dysfunction.

Hypothesis

The major hypotheses of the study were the following Sex related information, History of Childhood sexual abuse, Anxiety related to sexual activity, Measures of sexual functioning, Beliefs related to sexuality, Esteem and confidence in sex,Sex related quality of life, Frequency of sex related automatic thoughts, Response intensity in relation to sex related automatic thoughts and Nature and extent of emotions experienced in connection with sex related thoughts.

Statistical Techniques

The various statistical techniques employed in the present study are Factor analysis, Chi- Two-way MANOVA, Discriminant Function analysis, Correlation and Path analysis.

Results and Discussion

Reduction of measurement dimensions

The six measurement tools used in the present study and mentioned under section 5.3 together yielded a total of 38 variables to be analyzed. Dealing with such a large number of variables was felt to be cumbersome and unwieldy, and hence, an attempt was made to reduce the number of variables without major loss of information. Accordingly, principal component analyses of the subcomponents of the different tools were conducted and those components which had very high loading on a single factor (a loading of 0.89 or above) were combined to form a new composite variable.

Comparison of Dysfunctional and Control Groups:

The two groups of subjects involved in the study, viz., the Dysfunctional and the Control groups, were compared on the basis of information obtained using the various tools, with a view to find out the pattern of differences between them. Comparisons were also made among sub-groups based on a few socio-demographic variables like age (classified into 4 groups, viz., 21-30 yrs, 31-40 yrs, 41-50 yrs and 51-60 yrs), and education (classified into 3 groups, viz., +2 or below, graduate, and PG or above). Different statistical techniques like Chi-square, Two-way MANOVA, and Duncan's test were employed for the purpose. The important conclusions arrived at on the basis of these analyses were the following:

The results of chi-square analysis showed that relatively greater proportion of subjects in the dysfunctional group experienced both anticipatory and performance anxiety when compared to the control group. There were no significant differences in the proportion between the two groups in the variable 'History of sexual abuse' and 'Exposure to scientific information on matters related to sexuality'.Analysis of the differences between the two groups in the mean scores on the 21 variables using MANOVA showed that the Dysfunctional and the Control group differed significantly from each other in all of the variables subjected to study.

Differences among the sub-groups based on age was found in 13 variables, viz., Sexual Desire, Sexual Functioning, Quality of Sexual Life, Sexual-Esteem, Frequency of Dysfunctional Thoughts, Anger, Pain, and Sadness. The results also revealed that mean differences based on age was more pronounced in the dysfunctional group than the control group.The impact of education was found to be significant in

10 variables, viz., Sexual functioning, Restrictive attitude towards sex, Dysfunctional beliefs, Quality of sexual life, Frequency of dysfunctional thoughts, Anger, Pain, Anxiety, Fear, and Satisfaction. Better sexual functioning, more satisfaction, and more fear in relation to the automatic thoughts were found among participants who had average level of education (viz., graduation) when compared to those who had lower (up to higher secondary) and higher educational levels (Post graduation and above).

Discriminant function differentiating the Dysfunctional and the Control groups

A discriminant function analysis based on the scores on the 21 variables showed that a function consisting of 14 variables could differentiate between the Dysfunctional and the Control groups with 100% accuracy. The variables which entered into the function (and their standardized function coefficients) were: Sexual Functioning (2.893), Sexual Desire (0.466), Sex as an abuse of Man's Power (0.648), Quality of sexual life (0.75), Frequency of Dysfunctional Thoughts (3.787), Guilt (0.52), Pleasure (0.464), Satisfaction (0.851), Dysfunctional Beliefs (-1.087), Erotic thoughts (-0.396), Response intensity of dysfunctional thoughts (-1.449), Anger (-1.094), Pain (-0.561), and Anxiety (-0.689). The centroid of the function for the Control group was found to be 7.217 and that for the Dysfunctional group was -7.217. it may be noted that higher scores in those variables with positive function coefficients as well as lower scores in those variables with negative coefficients characterized the members of the Control group while the opposite pattern of scores characterized the Dysfunctional group.

Differences in the inter-correlations among the variables

Inter-correlations of the study variables were conducted separately for the Dysfunctioanl and the Control groups and tests of significance of difference between the pairs of correlations were done using Fishers Z transformation. The results showed that out of a total of 210 different correlations possible among 21 variables within each sub-group, 110 correlations relating to the dysfunctional group and 82 correlations relating to the control group were statistically significant. The results of Fisher's Z test for significance of difference between the pairs of correlations showed that the dysfunctional and the control groups differ considerably in the nature and extent of inter relationships among the variables. It was seen that out of the total of 210 pairs of correlations, statistically significant differences between the two groups existed in 84 pairs. A summarization of the differences in the pattern of correlations obtained with the two groups was achieved using path analyses of the two correlation matrices, the results of which are summarized below (Table 5-7).

Path model representing the relationships among the variables in the Control and the Dysfunctional Groups:

A path analyses of the correlation matrices relating to the Dysfunctional and the Control groups were undertaken with a view to integrate the voluminous information revealed through regression analysis of the data regarding the predictors of sexual functioning, sexual esteem, sexual desire, and quality of sexual life among the participants of the study.

An acceptable path model of the inter-correlations among the variables obtained with the dysfunctional group indicated that it revolved four independent variables, viz., Dysfunctional thoughts, Dysfunctional beliefs, Guild feelings, and Intensity of emotions with regard to Erotic thoughts. These independent variables were connected to three dependent variables, viz., Sexual Functioning, Sexual Esteem, and Sexual Desire, via, causal paths. The squared multiple correlation (R2) relating to the above three dependent variables in the model (viz, 0.75; 0.52; and 0.54 respectively) were found to be appreciably high and statistically significant ($P < .001$) the coefficients associated with the paths leading from the variables Dysfunctional Thoughts to Sexual functioning (-0.80), Sexual esteem (-0.67) and Sexual desire (-0.71) were all negative and highly significant. Dysfunctional beliefs was found to have a positive path coefficient (0.42) leading to sexual desire. Similarly, Intensity of emotional response in Erotic thoughts had significant positive path coefficient with both Sexual Functioning (0.34) and Sexual Esteem (0.27).

The path model proposed for the control group also involved four independent and three dependent variables. The four independent variables in the model were Dysfunctional Beliefs, Intensity of emotional response in Erotic thoughts, Restrictive attitude towards sex, and belief in Sex as an abuse of man's power, while the dependents were Sexual Functioning, Sexual Esteem, and Quality of sexual life. The variable 'Quality of Sexual life' was found to be the most important variable in the model, in the sense that it had the highest multiple correlation (R2 = 0.49) and significant path coefficients from all the four predictors in the model. The path leading from the predictor 'Intensity of emotional response in Erotic thoughts' to 'Quality of sexual life' had the largest path coefficient in the model (-0.58). The other predictors of the variable were 'Dysfunctional beliefs' (path coefficient = -0.29), and 'Sex as an abuse of man's power' (path coefficient = -0.26). the predictors of 'Sexual esteem', (R2 = 0.38) in the model were 'Dysfunctional beliefs' (path coefficient = 0.32) and 'Intensity of emotional response in Erotic thoughts' (path coefficient = 0.52) the third dependent variable in the model, viz., 'Sexual functioning' (R2 = 0.11), was predicted by 'Restrictive attitude towards sex' (path coefficient = 0.33).The two different path

models obtained with the Dysfunctional and the Control groups revealed that there existed significant and meaningful differences between the two groups in terms of the dependent variables, the predictors, and the nature of relationships among them (Table 8-10).

Conclusion:

The findings of the present study have implications both for assessment and treatment of men with sexual dysfunction. The study has produced empirical evidence showing that faulty beliefs and automatic thoughts are intimately related to problems in sexual arousal and sexual functioning in men. This underscores the fact that cognitive restructuring combined with the traditional sex therapy techniques can go a long way in helping peoples suffering from sexual difficulties.The finding that majority of the members of the control group had received prior scientific information on sexuality point towards that possibility that proper sex education may be helpful, at least to some extent, in curtailing the incidence of dysfunctions in men.

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Group	Age Group				Total
	21-30	31-40	41-50	51-60	
Control Group	16	100	33	9	100
Dysfunctional Group	23	100	34	11	100
Total	39	200	67	20	200

Table 1 Split up of the sample based on age

Group	Up to Plus two	Graduate	PG or above	Total
Control Group	17	68	15	100
Dysfunctional Group	22	59	19	100
Total	39	127	34	200

Table 2 Split up of the sample based on educational status

Group	Religion			Total
	Hindu	Islam	Christian	
Control Group	49	22	29	100
Dysfunctional Group	32	41	27	100
Total	81	63	56	200

Table 3 Split-up of the sample based on religion

Group	Socio Economic Status			Total
	High	Average	Low	
Control Group	12	82	6	100
Dysfunctional Group	6	83	11	100
Total	18	165	17	200

Table 4 Split-up of the sample based on socio economic status

	Erectile Function	Orgasmic Function	Sexual Desire	Intercourse Satisfaction	Overall Satisfaction
Erectile Function	1	.919**	.705**	.964**	.962**
Orgasmic Function	.919**	1	.653**	.879**	.917**
Sexual Desire	.705**	.653**	1	.722**	.658**
Intercourse Satisfaction	.964**	.879**	.722**	1	.935**
Overall Satisfaction	.962**	.971**	.658**	.935**	1

Table 5The inter- correlations among the various domains of the IIEF

**Correlation is significant at the 0.01 level (2- tailed)

Table 6 Inter correlations among the subscales in SDBQ

	Sexual Conservatism	Female Sexual Power	Macho Belief	Beliefs about Women's sexual Satisfaction	Restrictive attitude towards sex	Sex as an abuse of Man's Power
Sexual Conservatism	1	.714**	.644**	.608**	.539**	.624**
Female Sexual Power	.714**	1	.811**	.815**	.598**	.619**
Macho Belief	.644**	.811**	1	.837**	.514**	.465**
Beliefs about Women's sexual Satisfaction	.608**	.815**	.837**	1	.419**	.496**
Restrictive attitude towards sex	.539**	.598**	.514**	.419**	1	.467**
Sex as an abuse of Man's Power	.624**	.619**	.465**	.496**	.467**	1

** Correlation is significant at the 0.01 level (2-tailed).

Table 7 Inter-correlations among the subscales of the SEAR Questionnaire

	Sexual Relationship	Confidence	Overall Relationship
Sexual Relationship	1	.953**	.665**
Confidence	.953**	1	.659**
Overall Relationship	.665**	.659**	1

Table 8The results of two way MANOVA with Group and Age group as classifying variables

Effect	Pillai's Trace	F	Hypothesis df	Error df	P	Partial Eta Squared
Group	.984	492.4	21.000	172.00	<.0001	.984
Age-group	1.355	6.824	63.000	522.00	<.0001	.452
Group * Age-group (Interaction)	1.406	7.309	63.000	522.00	<.0001	.469

Table 9 Results of two-way MANOVA with group and Educational status as classifying variables

Effect	Value	F	Hypothesis df	Error df	Sig.	Partial Exta Squared
Group	.975	327.6	21.000	174.000	.000	0.975
Edu Stat	.823	5.822	42.000	350.000	.000	0.411
Group* Edu_Stat	.981	8.015	42.000	350.000	.000	0.490

Table 10 Group Centroids of the Unstandardized Canonical Discriminate Function

Variable	Unstandardized Function	Standardized Function
Sexual Desire	0.290	0.466
Sexual Functioning	0.470	2.893
Sex as an abuse of Man's Power	0.413	0.648
Dysfunctional Beliefs	-0.096	-1.087
Quality of Sexual Life	0.070	0.750
Erotic thoughts	-0.151	-0.396
Frq. of Dysf. Thoughts	0.283	3.787
Rsp. In. of Dys. Thoughts	-0.186	-1.449
Anger	-0.105	-1.094
Pain	-0.062	-0.561
Anxiety	-0.048	-0.689
Guilt	0.371	0.520
Pleasure	0.108	0.464
Satisfaction	0.238	0.851
(Constant)	-20.647	

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