Effect of Sexual Incentive Motivation Intervention on Sexual Satisfaction of Hypoactive Women

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Abstract

Background: Sexual satisfaction is vital for the durability of couple relationships. Hypoactive Sexual Desire Disorder (HSDD) is characterized by a continuous or recurring lack of sexual thoughts and desire for sexual activity, resulting in significant psychological discomfort, interpersonal problems, and other unpleasant emotional states such as sexual dissatisfaction. **Aim:** This study aimed to assess the effect of sexual incentive motivation intervention on sexual satisfaction of women. **Methods**: A quasi-experimental design was used (pre and posttest one group). **Setting:** The study was conducted at outpatient clinics at Menoufia University and Shebin El-Kom teaching hospitals. The study recruited 132 women were chosen for the research based on their responses from outpatient clinics. **Four Tools** were used for data collection: a structured interviewing questionnaire, assessment of female sexual dysfunction questionnaire, sexual dysfunctional beliefs questionnaire, and new sexual satisfaction scale questionnaire. **Results** showed that the intervention significantly improved sexual satisfaction among women relative to before the intervention levels. The total mean score was increased from 66.1667 ± 4.88676 pre-intervention to 86.0227 ± 3.94710 post-intervention ($p < 0.001$). **Conclusion:** It was concluded that the application of sexual incentive motivation intervention was beneficial in addressing sexual dysfunction issues and increasing satisfaction. **Recommendations.** Screening for sexual health should be standard practice for all healthcare providers. Maternity nurses should use sexual incentive motivation to increase sexual motivation.

Keywords: Hypoactive Women, Sexual Incentive Motivation Intervention and Sexual Satisfaction

Introduction

Hypoactive Sexual Desire Disorder (HSDD) is one of the most common sexual disorders. According to the World Health Organization (WHO), HSDD is a mental and physical sexual dysfunction in which women lose motivation or desire to have sex for at least 6 months, resulting in considerable personal suffering and a detrimental impact on the woman's or her partner's quality of life **(Pettigrew & Novick, 2021).**

Women with HSDD report fewer spontaneous sexual ideas or fantasies, reduced responsiveness to stimulation, difficulties maintaining interest through sex, lack of urge to initiate sex, and avoidance of circumstances that may lead to sexual activity, and general sexual misery **(Basson, 2021).** Depression and other physiological problems, as well as unpleasant emotional and psychological states, have been connected to hypoactive sexual desire disorder (HSDD). Some of the detrimental impacts of HSDD on women include low self-esteem, insecurity, feeling less feminine, feeling like a sexual failure, and feeling inferior in front of a sexual partner. These factors can lead to marital conflicts as a result of sexual dissatisfaction **(Clayton et al.,2018).** According to assessments, 15.2%-50.4% of women are dissatisfied with their sexual activities, and sexual dissatisfaction accounts for 50% of all divorces. Sexual fulfillment has an important role in the durability of married relationships **(Sheikhan et al.,2019).**

Sexual pleasure is defined as a pleasurable sexual encounter with a favorable sensation following intercourse. Sexual satisfaction, on the other hand, refers to all of the sensations that a person experiences throughout a sexual relationship, both positive and bad. It has a significant influence on a person's overall health. In general, those who have pleasant sexual relations have a higher quality of life than those

who are unsatisfied with their sexual relationships **(Mohammadzadeh et al.,2019).**

The International Society for the Study of Women's Sexual Health has created recommendations to help health care practitioners manage sexual dissatisfaction. To increase sexual happiness and performance among women, these guidelines recommend education, change of potentially modifiable variables, and, if required, medical therapy **(Avasthi, Grover & Rao, 2017).**

In most cases, treating sexual dissatisfaction involves a combination of psychotherapy and medicine. Women's counseling should be the first step in addressing female sexual dysfunction. This includes giving women basic sexual education and suggesting lifestyle changes to boost sexual desire, interest, and experience. Cognitive behavioral therapy, basic psychosexual counseling, and mindfulness meditation treatment are three psychotherapies that have been proven to be beneficial. The sexual incentive motivation model addressed the definition of spontaneous and responsive sexual desire, the role of motivation in sexual desire, the significance of sufficient sexual stimulation, and the influence of pleasurable sexual experiences on desire. These psychotherapies all aimed to educate women on these topics **(Clayton et al., 2018).**

Additionally, differences in responses to sexual stimuli within and between individuals are explained by the concept of sexual drive. As a result, someone who reacts powerfully to sexual stimuli is seen as highly driven, whereas someone who reacts seldom or weakly is said to have low sexual drive. Assessing the increase in vaginal blood flow in women upon exposure to sexually relevant stimuli is one method of examining responsiveness **(Ågmo & Laan, 2022).**

Sexual motivation (desire) necessitates the presence of both an active central motive state and sexually relevant inputs. When sexual desire is stimulated, it causes visceral reactions and approach behaviors toward the sexual stimulus emitter. Women engage in such activities in response to cognitive appraisals of the circumstance, which include expectations about the approaching individual's reaction. After a successful approach and physical contact, manifest sexual acts may occur. Affective reactions can become associated with stimuli experienced during sexual involvement, affecting their motivating properties. So, decreasing influence of sexual incentives would lead to weak sexual drive and hypoactive desire illness, whereas greater impact would lead to excessive sexual motivation and eventually hypersexuality **(Laan, 2022).**

Women's sexual issues and challenges are fundamental to nursing care; it is the nurse's obligation to discover and address women's sexual wants and concerns. Nurses play a significant role in detecting these needs and raising marital happiness by improving their female patients' sexual health. Nurses should screen women for sexual problems on a regular basis since many women, particularly those diagnosed with HSDD, are hesitant to discuss such concerns on their own. Nurses can assist in preventing and treating HSDD **(Kellogg-Spadt et al., 2019).** A nurse's performance is mostly decided by their ability to instruct and counsel those who lack drive **(Mushtaq and Mir, 2021).** Above all, only a few studies have been conducted in Egypt on various motivating techniques and their effects on sexual satisfaction among HSDD patients. Egyptian women seldom discuss sexual concerns with doctors because they are ashamed; thus, the current study was conducted to investigate the efficacy of a sexual incentive motivation intervention on increasing sexual enjoyment in hypoactive women.

Significance of the Study

Sexual happiness is essential for a marriage's stability. It is thought to be a key measure of sexual health and is closely linked to relationship satisfaction and general quality of life **(Kislev, 2020).** Many sexual issues, whether medical or psychological in nature, can reduce sexual pleasure, such as hypoactive sexual dysfunction. As a result, hypoactive sexual desire disorder (HSDD) is an unpleasant sexual condition that can lead to a worse quality of life, negative feelings, lower self-esteem, diminished pleasure and satisfaction with partners, a lack of connection, emotional anguish, and overall sexual dissatisfaction. HSDD, on the other hand, affects 12.3% of persons of any age. 80% of

those who had decreased sexual desire, sexual pleasure, and related suffering did not consult with a health care practitioner, and at least half claimed embarrassment or shame contributed to their refusal to seek therapy **(Kingsberg & Simon, 2020).**

As a result, hypoactive sexual desire disorder (HSDD) is a poorly treated and underdiagnosed syndrome that is particularly frequent among women, due to cultural barriers, shame, and healthcare practitioners' limited knowledge **(Lara et al., 2021).** As a result, a greater understanding of the factors influencing sexual desire, motivation, and fulfillment is essential. According to research, sexual desire is a route via which couples may increase connection and sexual satisfaction while minimizing sexual pain for couples suffering from sexual dysfunction **(Bockaj , Rosen & Muise, 2019).**

Bockaj, Rosen, and Muise (2019) discovered that increasing autonomous sexual desire and lowering controlled motivation may help couples with HSDD feel closer, more sexually pleased, and less sexually miserable. So, the study aimed to assess the effect of sexual incentive motivation intervention on improving sexual satisfaction of hypoactive women.

Aim of the Study

This study aimed to assess the effect of sexual incentive motivation intervention on improving sexual satisfaction of hypoactive women.

Research Hypotheses

1- Hypoactive women who receive sexual incentive motivation are expected to have lower sexual dysfunction score after the intervention than before the intervention.
2- Hypoactive women who receive sexual incentive motivation are expected to have fewer sexual dysfunctional beliefs post intervention than preintervention.
3- Hypoactive women who receive sexual incentive motivation are expected to have higher sexual satisfaction score post intervention than preintervention

Subjects and Methods

Research Design:

To achieve the study's goals, a quasi-experimental one-group pretest/ posttest approach design was utilized. A quasi-experimental design is a research method that allows for the establishment of a relationship between dependent (sexual satisfaction) and independent (sexual incentive motivation intervention) variables, similar a cause-and-effect relationship **(Thomas, 2022).**

Settings:

The study was carried out at two settings: Obstetrics and Gynecological Clinics at Menoufia University and Shebin El-Kom Teaching Hospitals. These two settings provide services to the community. These settings were selected because those provide health care services for women in the form of educational nursing guidelines regarding quality of sexual life. In addition, these settings provide ongoing counseling, dietary, and follow-up services for all. Also, these setting are governmental and known to have a high flow rate of women suffering from sexual dysfunction from both rural and urban areas.

Sampling:

Sample type: A purposive sample was recruited in the study.

Sample size: It included 132 women who met the inclusion criteria.

Sample size calculation:

Based on data from literature (Masoumi et al., 2020), considering level of significance of 5%, and power of study of 80%, the sample size can be calculated using the following formula:

$$n = \frac{2(Z\alpha/2 + Z\beta)^2 \times p\,(1-p)}{(d)^2}$$

where, p = pooled proportion obtained from previous study; d = expected difference in proportion of events; $Z_{\alpha/2}$ =1.96 (for 5% level of significance) and Z_{β} = 0.84 (for 80% power of study). Therefore,

$$n = \frac{2(1.96 + 0.84)^2 \times 0.58\,(1-0.58)}{(0.17)^2} = 132.1.$$

Accordingly, the sample size required is 132.

Inclusion Criteria:

Participants in the study were married women with a diagnosis of hypoactive sexual desire disorder (HSDD) for at least a year, who avoid situations that could lead to sexual activity, have fewer spontaneous sexual thoughts or fantasies, are less responsive to stimulation, are unable to sustain interest through sex, and have lost the desire to initiate sex.

Tools of Data Collection: Four major tools were used to collect the required data:

Tool One: A structured Interviewing Questionnaire: The researchers developed this tool after conducting a study of related literature **(Laan., 2022).**

Tool One consisted of three parts:

Part 1: Sociodemographic data: This section included age, level of education, place of residence, occupation, and perceived income.

Part II: Health conditions and sexual health among women with sexual dysfunction: It included presence of minor physical problems, gynecological problems, dysmenorrhea, use of contraceptives, pattern of menstrual cycle , physical activity body mass index, duration of marriage, number of children and frequency of sexual intercourse.

Part II: Risk factors of hypoactive sexual desire disorder: It included history of an operation, depression, injuries, or other medical condition, medications, or drugs, pregnancy, recent childbirth, menopausal symptoms, husband's sexual problems, other sexual issues and stress or fatigue.

Tool Two. Assessment of Female Sexual Dysfunction Tool: It was adopted from **Infrasca et al. (2011)** to evaluate women's preparedness and preparation for sexual function issues. There were 19 items in the tool. Three answers (always, frequently, sometimes, seldom, and never) were available for each item. Twelve questions had scores between 1 and 5, while the remaining seven items had scores between 5 and 1, which were then totaled to get a total score of 95.

The total score was then divided into three categories: mild sexual dysfunction (range: 1-32), moderate sexual dysfunction (range: 33-65), and severe sexual dysfunction (range: 66-95A).

Tool Three. Sexual Dysfunctional Beliefs Questionnaire (SDBQ): It was adopted from **Abdolmanaf et al., (2016).** The self-reported test consisted of 39 items that evaluated dysfunctional sexual beliefs. It consisted of six dimensions: sexual conservatism (11 Items) and female sexual passivity (5 Items) , masturbation-related beliefs (5 Items), age-related beliefs (5 Items), sexual desire and pleasure as sin beliefs (6 Items) , denying affection primacy (4 Items) and body image beliefs (3 Items) .

Scoring system: Women answered the questions using a 5-point Likert scale (1 = completely disagree; 2= disagree:3= don't disagree,4= agree and 5 = completely agree). Scales are computed as sums for SDBQ total score. Higher scores were associated with more dysfunctional sexual beliefs.

Tool Four. The New Sexual Satisfaction Scale: It was adopted from **Brouillard, Štulhofer, & Buško, (2019)**. It was 20 multi-dimensional self-report scale meant to evaluate sexual satisfaction as pleasure (4 Items), satisfaction (12 Items), and orgasm (4 Items).

Scoring system: For each item, respondents are asked to score their degree of satisfaction with their sex life in the prior six months using the following 5-point Likert type scale: 1 = Not at all satisfied; 2 = A little satisfied; 3 = moderately satisfied; 4 = very satisfied; and 5 = extremely satisfied. Scales are computed using sums. Higher ratings indicate greater levels of sexual satisfaction.

Validity and Reliability:

Prior to using the instruments in the study, five experts from the Maternal and Newborn Health Nursing department reviewed the items' face validity to verify that they were clear, comprehensive, and relevant. Modifications were performed to assure the study measures' relevance and integrity. Test-retest reliability and internal consistency of the study tools were computed using Cronbach's alpha coefficients. The study measurements showed revealed reliability at Cronbach's alpha 0.851 for female sexual dysfunction, 0.70 for sexual dysfunctional beliefs, and at 0.81 to the new sexual satisfaction scale. The tools were translated into Arabic, checked by an Arabic language specialist, then retranslated into English to confirm the questions' accuracy and integrity.

Administrative Approvals: An approval from the Committee of Research and Ethics, Faculty of Nursing, Menoufia University was obtained (approval number 856). An official letter was obtained from the Dean, Faculty of Nursing, Menoufia University and sent to the directors of outpatient clinics to request authorization to conduct the study.

Ethical Considerations: To get the women's agreement and participation, the researchers introduced themselves and explained the purpose and nature of the study. Also, approaches to ensure the ethical issues were considered in the study regarding confidentiality and informed consent. Before participating in the trial, the researchers obtained informed consent from each woman. The women were fully told of the study's objective, methods, and any risks or advantages. They were informed that their participation in the study was fully voluntary, and that they may withdraw at any time with no negative effects. Additionally, the women were given the chance to address any questions they had regarding the study, clarifying any misconceptions or worries they may have had.

Pilot Study: A pilot study was done to determine the instruments' feasibility, applicability, and understandability. It was performed on 10% of the whole sample (13 participating women) based on the selection criteria. The researcher revised some questions in light of the findings of the pilot study. To ensure the stability of the results and make the required adjustments, all the women who took part in the pilot study were not permitted to participate in the study.

Procedure:

After receiving official written approval from outpatient clinic administrators, the study was conducted over a 3-month period from August to November 2022.

The intervention was conducted at the outpatient clinics three days per week (Saturday, Mondays and Wednesdays) from 9:30 AM to 12 PM. Five to ten women who satisfied the inclusion requirements participated in each session.

Before gathering any data, the researchers briefly explained the study's goal to the participant who had agreed to participate.

Pre-test (Assessment) phase:

The researchers collected data from women related to their socio-demographic status, health conditions among women with sexual dysfunction and factors that contribute to current decrease in sexual desire or interest using instrument I. Also, the women were assessed for their female sexual dysfunction using instrument II. Instrument III was used for assessing sexual dysfunctional beliefs. While instrument IV was used to evaluate sexual satisfaction of the women. The average time required to complete the questionnaires was 30-45 min.

The researchers developed hypoactive sexual desire disorder (HSDD) booklet **(EAU Guidelines on Sexual and Reproductive Health, 2022 and Clayton et al., 2018)** and counseling sessions, behavior and practices regarding hypoactive sexual desire disorder. The booklet is written in a simple Arabic language and is illustrated with colored diagrams and pictures. It includes two chapters including information about HSDD and management therapies to improve sexual desire and satisfaction.

The researcher provided three counseling sessions to the participating women. The duration of each session will range between 30-45 minutes over a period of three weeks. Telephone numbers were collected from all participating women and added to a WhatsApp group on mobile phones. Following the completion of the women counseling sessions, each member of the WhatsApp group received a PDF booklet including all of the women's HSDD resources.

Intervention phase:

To improve sexual satisfaction of hypoactive women, sexual incentive motivation intervention was presented over three stages with four counseling sessions:

Frist stage (Counselling Session one): Providing comprehensive information about Hypoactive Sexual Desire Disorder, including its etiology, physical and psychological impacts on women, and challenges for both spouses. Additionally, educate the women about normal sexual functioning, the anatomy and physiology of the male and female sex organs, the significance of sex, normal and pathological sexual activities, what is and is not true about

sex, and what is and is not reasonable sexual expectations for men and women.

Second stage (Modification therapy):

The second and third counseling intervention sessions address adjustment of elements suspected to be having a role in hypoactive sexual desire disorder (HSDD), such as lifestyle issues (eg, Physical activity, sleep deprivation and diet), stress/distraction, false mental images, thoughts, attitude and beliefs.

Second session: The second therapy session focuses on modifying lifestyle factors that may contribute to hypoactive sexual desire disorder (HSDD). Physical activity may boost energy levels, improve body image and self-esteem, and improve blood circulation, all of which can enhance sexual desire. All six investigated domains—desire, arousal, lubrication, orgasm, pleasure, and pain—can be improved especially by yoga exercise. Additional lifestyle modifications include eating a balanced diet full of antioxidants, B vitamins, and omega-3 fatty acids, which promote brain health and can help control mood, lower stress and anxiety, and improve sexual pleasure. Enhancing the length and quality of sleep may have a good impact on sexual function since desire is influenced by hormone balance, which is maintained by sleep quality.

Third session: This counseling approaches includes active listening and asking open-ended questions, women were given the opportunity to discuss their attitudes, beliefs, and feelings on sexual relationships in a private and secure setting. This session covers several sexual incentive treatments. This technique aims to assist women overcome emotional and behavioral issues by changing their mental pictures, ideas, and thought patterns. Additionally, a behavior therapy method trains women to avoid thinking about the past or the future and uses muscular relaxation to reduce anxiety in particular circumstances. It has been shown to be a useful part of treatments for sexual dysfunction that focus on sexual motivation.

Third stage (Sex Therapy):

The fourth, fifth and six counseling session include different intervention of sex therapy:

Fourth session: It includes sex therapy, a psychological treatment that concentrates on the most urgent aspects of a couple's sexual interaction. Therapy seeks to enhance a person's or couple's sexual experiences, minimize sexual activity anxiety, and educate partners so they don't blame themselves or their spouse for their sexual issues. Sexual intercourse may be used as a kind of very intimate communication. Educating the couple on how to communicate openly and honestly can help them maintain a deeper emotional connection and have better sex. Educating the couple to make time for intimacy. Schedule sex on your calendar. Also, add some spice to your sex life. Try a different sexual position, time of day, or place. At the end of each session, we answered the specific questions of the participants.

In this session knowing women normal sexual cycle . It compromises the sexual incentive motivation model stages as a framework for understanding the normal sexual response cycle as motivational intervention of sex therapy. The first stage involves Sexual Incentive Stimulus, which occurs due to physical or mental erotic stimuli that leads to sexual arousal. The second stage involves the Central Motive State, which causes enlargement of the clitoris, labia minora, and vagina. The third stage involves sexual approach behavior, which involves more physical contact to increase stimulation. The fourth stage consists of viscerosomatic reactions, such as elevated blood pressure, pulse rate, muscular tension, nipple hardness, and skin flushing. The fifth stage involves transitioning from approach to copulation, where women proceed sexual orgasm, make conscious decisions about sexual activities, enhancing general arousal. The six stage is the process of sexual climax which involves involuntary muscle contractions, and intense pleasure. The final stage involves the after-effects of sex, which returns to pre-arousal (baseline) state, with muscles relaxing, blood pressure decreasing, and breathing patterns returning to normal. This process involves the clitoris, vaginal walls, penis, and testes returning to their usual size.

Fifth session: It includes Sensate focus treatment, a technique to sex therapy that allows partners to touch each other to alleviate tension and anxiety about sexual intimacy. They were given to the partner as homework exercise procedures with five stages to do together while they are intimate.

The therapy involves five stages: (1) Non-genital Sensual Touch, (2) Sensual Touch (including genitals), (3) Sensual Touch, (4) Adding Lotion and Lubricant, (4) Mutual Touching, and (5) Sensual Intercourse. The first stage involves partners exploring each other's. The second stage includes exploring the genitals and breasts without intercourse or penetration. The third stage involves using lotion and lubricant to improve friction and feeling. The final stage is sensual intercourse, focusing on noticing sensations and emotions through physical touch.

The evaluation (post-test) phase:

In this phase, evaluations were conducted after 3 months of the intervention to assess the intervention's success in terms of women's sexual dysfunctional beliefs, female sexual dysfunction, and degree of satisfaction to reach orgasm activity using instrument II, III and instrument V.

Statistical Analysis

All statistical analyses were performed using SPSS for windows version 20.0 (SPSS, Chicago, IL). Continuous data were normally distributed and were expressed in mean ±standard deviation (SD). Categorical data were expressed in number and percentage. Chi-square test (or the paired t-test when applicable) was used for comparison of variables with categorical data. Correlation co-efficient test was used to test for correlations between two variables with continuous data. The reliability (internal consistency) test for the questionnaires used in the study was calculated. Statistical significance was set at $p<0.05$.

Results

Table (1) shows the sociodemographic data of the studied women. It revealed that the majority of the studied women were rural residents , secondary educated , housewife and more than half of the women were between the age group (31-40) years old.

Table (2) represents health conditions and sexual health among women with sexual dysfunction. The table shows that there was a highly statistically significant difference between rural and urban women in terms of minor gynecological disorders, contraceptive use, and physical activity, all of which have an influence on the health of women with sexual dysfunction. Also, there was a highly statistically significant difference between rural and urban women regarding duration of marriage and frequency of sexual intercourse ($p < 0.001$).

Table (3) lists the factors that contribute to the current decrease in sexual desire or interest among women. The table reveals a highly statistically significant difference between rural and urban women in terms of sexual concerns as pain, decreased arousal or orgasm and stress or fatigue, all of which contribute to the decline in sexual desire or interest.

Table (4) illustrates assessment of sexual dysfunction among women at pre- and post-Intervention. The table displayed a highly statistically significant improvement of sexual function after the interventions compared to the pre-intervention responses. The total mean score was increased from 21.151 ± 3.831 pre-intervention to 72.181± 9.942 post-intervention ($p < 0.001$).

Table (5) represents the sexual dysfunctional beliefs score among women pre- and post-intervention. The table revealed a highly statistically significant improvement in all items related to sexual dysfunctional beliefs after the interventions compared to the pre-intervention responses ($p < 0.001$).

Figure (1) presents the sexual satisfaction score among women pre- and post-Intervention. As shown, the interventions significantly improved sexual satisfaction relative to pre-intervention levels. The total mean score was increased from 66.1667 ± 4.88676 pre-intervention to 86.0227 ± 3.94710 post-intervention ($p < 0.001$).

Figure (2) depict correlation between total female sexual dysfunction, sexual dysfunctional beliefs and sexual satisfaction score among the studied women pre and post intervention. The table shows that there was negative correlation between the increase of the total female sexual dysfunction, sexual dysfunctional beliefs and the decrease of sexual satisfaction score before the interventions ($r = 0.156$- 0.392-0.051) respectively. While there was negative correlation between the decrease of the total female sexual dysfunction, sexual dysfunctional beliefs and the increase of sexual satisfaction

score after the interventions (r = 0.098 - 0.279-0.122) respectively.

Table (6) illustrates relationship between sexual satisfaction and sociodemographic data of the studied women pre and post intervention. The table indicated a significant relationship between age of women, occupation and sexual satisfaction level post the intervention (P- value 0.033, 0.037) respectively.

Based on results shown at table 4 ,5 and figure 1; the study hypotheses can be accepted. These findings indicate that the sexual incentive motivation intervention was effective, and women were satisfied with that intervention.

Table (1): Sociodemographic Characteristics of the Studied Women (N=132).

Variables	Urban (n=27)		Rural (n=105)		χ2	P value
	No	%	No	%		
Age of women						
<2 0 yrs.	9	33.3	33	31.4		
20-30 yrs.	0	0	21	20	36.758	0.0000
31-40 yrs.	3	11.1	42	40		
> 40 yrs.	15	55.6	9	8.6		
Level of education						
Primary education	12	44.4	3	2.9		
Secondary education	6	22.2	51	48.6	38.16	0.0000
University	9	33.3	45	42.9		
Others	0	0	6	5.7		
Occupation:						
Housewife	0	0	78	74.3	8.728	0.003
Employee	27	100	27	25.7		
Income level						
Not enough	12	44.4	48	45.7	1.002	0.606
Enough	15	55.5	157	54.3		

Table (2): Health Conditions and Sexual Health among Women with Sexual Dysfunction (N=132)

Variables	Urban (n=27)		Rural (n=105)		χ2	P value
	No	%	No	%		
Health Conditions						
Body mass index						
< 25	15	55.6	27	25.7	8.86	0.012
25–30	6	22.2	36	34.3		
≥ 30	6	22.2	42	40		
Presence of minor physical problems	0	0.0	18	17.1	5.359	0.012
Present	27	100	87	82.9		
Absent						
Presence of minor gynecological problems	12	44.4	15	14.3	12.006	0.001
Present	15	55.6	90	85.7		
Absent						
Pattern of menstrual cycle						
Regular	15	55.6	84	80.0	6.844	0.011
Irregular	12	44.4	21	20.0		

Presence of dysmenorrhea						
Present	9	33.3	33	31.0	0.036	0.510
Absent	18	66.7	72	68.6		
Use of contraceptives						
Yes	27	100.0	60	57.1	17.557	0.000
No	0	0.0	45	42.9		
Physical activity						
Sedentary	0	0.0	72	68.6		
Irregularly active	6	22.3	18	17.1	52.102	0.0000
Active	12	44.3	6	5.7		
Very active	9	33,3	9	8.6		
Sexual Health						
Number of children						
Zero	9	33.3	48	45.7		
One	9	33.3	33	31.4	17.947	0.003
Two	0	0	15	14.3		
Three	0	0	9	8.6		
> Three	3	3	0	0		
Duration of marriage						
< 2	9	33.3	48	45.7		
2–5	3	11.1	48	45.7	68.066	0.0000
6–10	15	55.6	0	0		
>10	0	0	9	8.6		
Frequency of sexual intercourse						
>3 times per week	0	0	21	20		
2–3 times per week	12	44.4	60	57.1	19.528	0.0000
2–3timesper month	9	33.3	21	20		
Once a month	6	22.2	3	2.9		

Table (3): Factors Contributing to the Current Decrease in Sexual Desire among Women (N=132).

Variables	Urban (n=27)		Rural (n=105)		χ2	P value
	No	%	No	%		
An operation, depression, injuries, or other medical condition						
- Yes	3	11.1	24	22.9	1.821	0.138
- No	24	88.9	81	77.1		
Medications or drugs are currently taking.						
- Yes	3	11.1	12	11.4	0.002	0.633
- No	24	88.9	93	88.6		
Pregnancy, recent childbirth, or menopausal symptoms						
- Yes	18	66.7	51	48.6	2.819	0.071
- No	9	33.3	54	51.4		
Other sexual issues (pain, decreased arousal, or orgasm)						
- Yes	27	100	63	60	15.840	0.000
- No	0	0.0	42	40		

Husband's sexual problems						
- Yes	0	0.0	9	8.6	2.484	0.118
- No	27	100	96	91.4		
Dissatisfaction with your husband						
- Yes	12	44.4	60	57.1	1.397	0.167
- No	15	55.6	45	42.9		
Stress or fatigue						
- Yes	12	44.4	96	91.4	31.871	0.0000
- No	15	55.6	9	8.6		

Table (4): Assessment of Sexual Dysfunction among Women Pre- and Post-Intervention (N=132).

Variables	Pre-Intervention		Post Intervention		Paired T-Test	P. Value
	No	%	No	%		
Like to talk about sex					**-29.440**	**0.000**
Always	0	0.0	30	22.7		
Often	0	0.0	88	66.7		
Sometimes	30	21.6	14	10.6		
Rarely	90	64.7	0	0.0		
Never	12	8.6	0	0.0		
Like to tell jokes about sex					**-19.821**	**0.000**
Always	0	0.0	0	0.0		
Often	0	0.0	90	68.2		
Sometimes	120	90.9	40	30.3		
Rarely	12	9.1	2	1.5		
Never	0	0.0	0	0.0		
Feel inhibited toward sexuality					**-19.432**	**0.000**
Always	29	29.0	0	0.00		
Often	117	88.6	0	0.00		
Sometimes	12	9.1	12	8.6		
Rarely	3	2.3	30	21.6		
Never	0	0.00	90	64.7		
Keep sexuality hidden					**-17.338**	**0.000**
Always	19	19.0	0	0.00		
Often	120	90.9	0	0.00		
Sometimes	12	9.1	8	6.1		
Rarely	0	0.00	90	68.2		
Never	0	0.00	34	25.7		
Speak to sex with husband					**-52.725**	**0.000**
Most of the time	45	45.0	0	0.00		
Almost always	0	0.0	53	40.2		
Sometimes	20	15.1	58	43.9		
A few times	43	32.6	15	11.4		
Rarely	69	52.3	6	4.5		

Live sexual in a rigid manner						
Always	0	0.00	0	0.00	**-32.649**	**0.000**
Often	54	40.9	0	0.00		
Sometimes	66	50.0	0	0.0		
Rarely	12	9.1	39	29.5		
Never	0.0	0.0	93	70.5		
I live better without sexuality						
Always	50	37.9	0	0.00	**-30.421**	**0.000**
Often	51	38.6	0	0.00		
Sometimes	31	23.5	0	0.00		
Rarely	0	0.00	45	34.1		
Never	0	0.0	87	65.9		
My sexual life planned						
Always	0	0.00	0	0.00	**-30.421**	**0.000**
Often	48	36.3	0	0.00		
Sometimes	64	48.5	24	18.2		
Rarely	20	15.2	38	28.8		
Never	0	0.00	70	53.00		
I like to talk during sex						
Always	0	0.00	0	0.00	**3.632**	**0.000**
Often	0	0.00	8	6.1		
Sometimes	22	16.7	25	18.9		
Rarely	66	50.0	30	22.7		
Never	44	33.3	69	52.3		
Take an active role during sex						
Always	0	0.0	30	22.7	**-29.440**	**0.000**
Often	0	0.0	88	66.7		
Sometimes	30	21.6	14	10.6		
Rarely	90	64.7	0	0.0		
Never	12	8.6	0	0.0		
Total scoring Mean±S.D	**21.151 ± 3.831**		**72.181± 9.942**		**-60.546**	**0.000**

Table (5): Sexual Dysfunctional Beliefs Score among Women Pre- and Post-Intervention (N=132).

Variables	Pre-Intervention	Post Intervention	Paired t- test	P .value
Factor 1: Sexual conservatism and female sexual passivity				
M ± S.D	39.159 ± 1.369	49.310±1.393	-67.169	0.000
Factor 2: Masturbation-related beliefs				
M ± S.D	42.363± 1.573	49.310 ± 1.393	-42.750	0.000
Factor 3: Age-related beliefs				
M ± S.D	13.545 ± 1.850	23.840 ± 0.651	-55.020	0.000

Factor 4: Sexual desire and pleasure as sin beliefs				
M ± S.D	21.886 ± 0.834	10.931 ± 1.242	81.328	0.000
Factor 5: Denying affection primacy				
M ± S.D	4.772 ± 0.861	13.113 ± 0.737	28.025	0.000
Factor 6: Body image beliefs				
M ± S.D	7.363 ± 1.499	3.583 ± 0.781	28.025	0.000

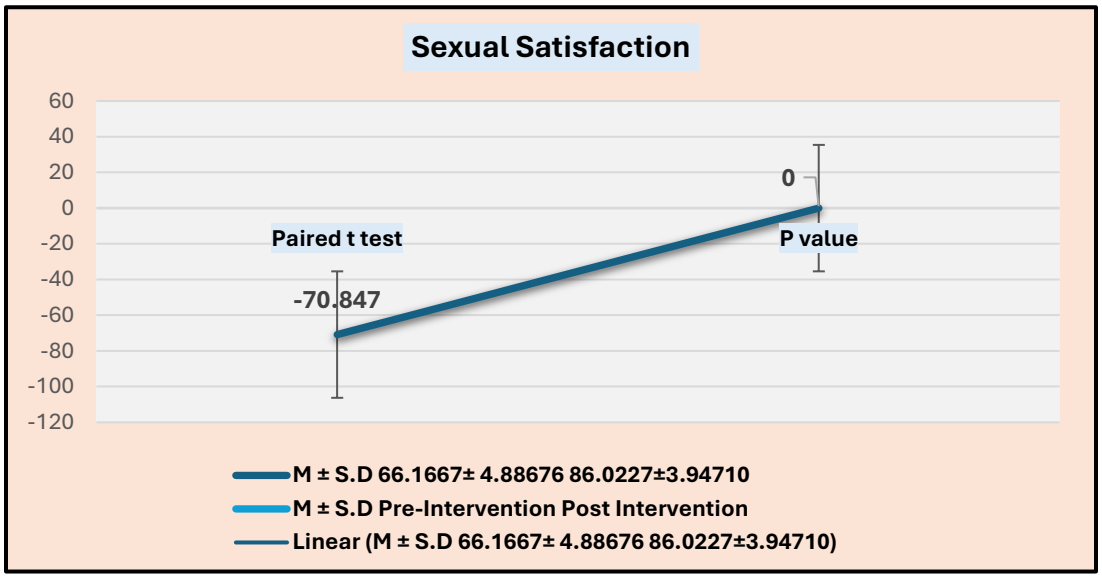

Figure (1): Sexual Satisfaction Score among Women Pre- and Post-Intervention

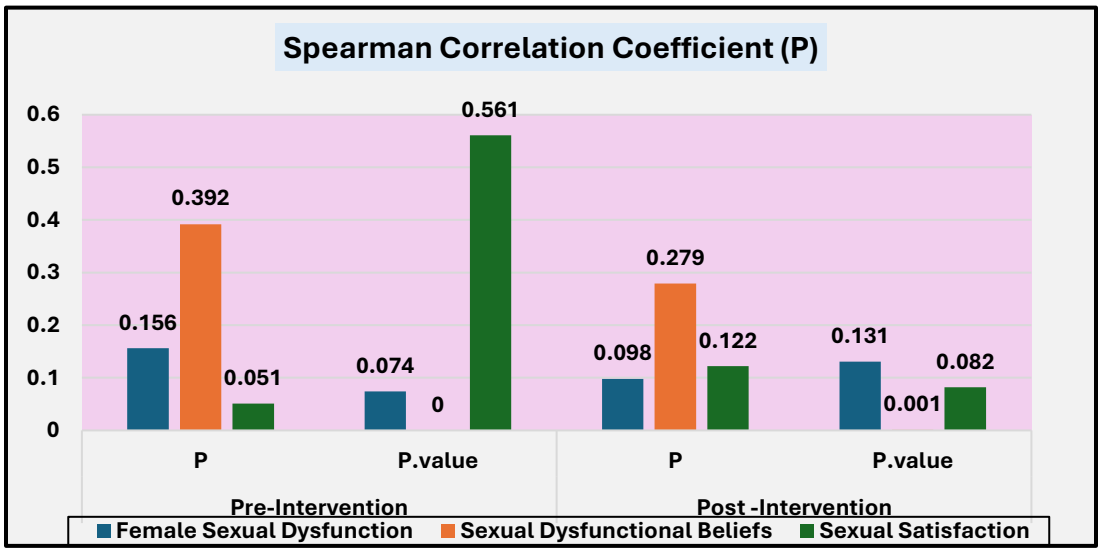

Figure (2): Correlation between Total Female Sexual Dysfunction, Sexual Dysfunctional Beliefs and Sexual Satisfaction Score among the Studied Women Pre and Post Intervention

Table (6): Relationship between Sexual Satisfaction, Demographic Data and Frequency of Sexual Intercourse of the Studied Women Pre and Post Intervention

Variables	Pre-Intervention				Post- Intervention			
	Little		Moderate		Very satisfied		Extremely satisfied	
	No	%	No	%	No	%	No	%
Demographic Data								
Age of women								
-<2 0 yrs.	35	33.0	7	26.9	3	10.7	39	37.5
20-30 yrs.	14	13.2	7	26.9	6	21.4	15	14.4
31-40 yrs.	36	34.0	9	34.6	13	46.4	32	30.8
> 40 yrs.	21	19.8	3	11.6	6	21.5	18	17.3
χ2	**3.501**				**7.448**			
P.value	**0.688**				**0.033**			
Level of education:								
Primary education	14	13.2	1	3.8	4	14.3	11	10.6
Secondary education	43	40.6	14	53.8	16	57.1	41	39.4
University	43	40.6	11	42.3	7	25.0	47	45.2
Others	6	5.6	0	0.0	1	3.6	5	4.8
χ^2	**3.950**				**4.144**			
P.value	**0.989**				**0.098**			
Occupation:								
Housewife	23	21.7	4	15.4	2	7.1	25	24.0
Employee	83	78.3	22	84.6	26	92.9	79	76.0
χ2	**0.511**				**3.876**			
P.value	**0.359**				**0.037**			
Residence:								
Urban	23	21.7	4	15.4	6	21.4	21	20.2
Rural	83	78.3	22	84.6	22	78.6	83	79.8
χ2	**0.511**				**0.021**			
P.value	**0.339**				**0.535**			
Frequency of sexual intercourse								
>3 times per week	19	17.9	2	7.7	1	3.6	20	19.2
2–3times per week	52	49.1	20	76.9	20	71.4	52	50.0
2–3timespermonth	27	25.5	3	11.5	5	17.9	25	24.0
Once a month	8	7.5	1	3.9	2	7.1	7	6.3
χ2	**6.549**				**5.634**			
P.value	**0.088**				**0.081**			

Discussion

Female sexual dysfunction is prevalent and frequently remains undiagnosed and undetected. The management of it belongs to patient-centered primary care. Primary care professionals can identify and assess their patients' sexual health issues, inform them about usual sexual activity, and handle or refer as necessary **(Faubion & Parish 2017).** Therefore, the current research was carried out with the purpose of exploring the impact of sexual incentive motivation intervention on improving sexual satisfaction of hypoactive women.

Congruent with studies conducted in this field, the study findings declare effectiveness of sexual incentive motivation intervention on improving sexual satisfaction of hypoactive women**.** The findings will be discussed in the following order:

The results of the present study reported that most of the women in the study were from rural area, secondary educated , housewife and more

than half of the women were >30 years old. This piece of result agreed on by **Ahmed et al., (2022)** who studied the effectiveness of PLISSIT model on sexual dysfunction at woman's health hospital, Assiut University, Egypt and reported that, the average age of the investigated women was 31.06±4.47, from rural area, housewives and graduated from secondary school.

Regarding the health conditions assessed amongst the subjects of inquiry, it indicates a highly statistically significant difference between rural and urban women in terms of minor gynecological disorders, contraceptive use, and physical activity, all of which have an effect on the health of women with sexual dysfunction. This result was in line with **Jiannine & Reio (2018)** who studied the physiological and psychological effects of exercise on sexual functioning and reported that general wellness was closely linked to reproductive health, highlighting the necessity of giving knowledge on the benefits of physical exercise and fitness in regard to sexual wellness in adult health education curricula. Additionally, another study conducted by **Casado-Espada et al., (2019)** reported that hormonal contraceptives reduce circulatory androgen levels and adverse effects on sexual life with combined hormone oral contraceptives (CHC). This Finding contradicted by **Satake et al., (2018)** who revealed health issues were not linked to female sexual dysfunction. Women that have problems with their sexuality experienced changes in all aspects of the sexual response cycle ($P < 0.001$).

In relation to female sexual function among women at pre- and post-implementation of the incentive motivation intervention findings of the present study indicated a highly statistically significant improvement of mean score of female sexual function post the interventions compared to the pre-intervention ($p < 0.001$). This result was in harmony with **Ahmed et al., (2022)** who revealed substantial variations were found between pre- and post-implementation mean scores of female sexual functions among women ($p < 0.001$), with a substantial rise in total mean score from 15.09±6.24 to 28.49±5.08 in post-test. This finding is also supported by **Diab et al., (2020)** who reported a significant variation was seen ($P<0.001$) between pre- and post-intervention of guided psychological sexual health guidelines modifying sexual behavior in women and modifying sexual dysfunction. Moreover, a study conducted **by Kaviani et al., (2014)** who studied the effect of education on sexual health of women with hypoactive sexual desire disorder in Motahari women's clinic, Shiraz, Iran and observed a significant change in sexual desire findings following the intervention between the two groups ($P<0.001$). This implies that educational interventions about sexual health were successful for women suffering from hypoactive sexual drive disorder.

From the researcher's perspective, women with hypoactive sexual dysfunction responded well to incentive motivation interventions about sexual health.

In the present study, During intervention, awareness of dysfunctional sexual beliefs was increased, as was information and understanding about good and wrong attitudes, resulting in an increase in sexual satisfaction. The study found a significant improvement in all sexual dysfunctional beliefs between the pre- and post-intervention periods ($p < 0.001$). These findings supported by a study conducted by **Mohammadzadeh et al., (2019)** entitled the effect of counseling on the sexual satisfaction level of women with sexual dysfunction using PLISSIT model focused on dysfunctional sexual beliefs and reported that the therapy strategy dramatically reduced dysfunctional sexual beliefs and enhanced sexual satisfaction in women.

Similar results were also obtained by **Abdolmanafi, et al., (2016)** who studied the determinants of women's sexual dissatisfaction and stated that Unhealthy sexual thoughts diminished sexual activity and sexual satisfaction by producing unconscious concepts and unpleasant sentiments. Also, with **Abdelhakm et al., (2018)** who reported that receiving accurate knowledge on the sexual retaliation cycle and how men and women show love differently boosted sexual talents while also correcting many incorrect beliefs among participants.

This study intended to address participants' dysfunctional sexual ideas and enhance their sexual happiness by offering accurate knowledge and incentive to explain right and wrong views, as well as inappropriate expectations about sex. The study found that the incentive motivation intervention significantly increased sexual satisfaction post-intervention compared to pre-intervention values ($p < 0.001$).

These results were corroborated by a study of **Masoumiet al., (2020)** at a study titled "The effect of counselling on the sexual satisfaction of women with hypoactive sexual desire referring to Hamadan health centers and said that the experimental group's sexual satisfaction increased considerably following the intervention ($p < 0.001$), showing the effectiveness of counseling in improving sexual pleasure among research participants. Moreover, a study reported by **Sabeti al., (2018)** pointed to the mean female sexual satisfaction score after intervention was greater than that of the control group, and the sexual satisfaction of women in the intervention group improved to 5.11 after the training, up from 4.36 before. This difference was statistically significant in the intervention group.

This finding may be relevant to the improvement in sexual function following incentive motivation intervention, which represents an increase in sexual satisfaction among women.

Concerning the relationship between sexual satisfaction and sociodemographic data of the studied women, the findings indicated a significant relationship between age of women, occupation and sexual satisfaction level post the intervention. This finding was assisted by **Bien al., (2020)** who studied female sexuality at reproductive age as an indicator of satisfaction with life-descriptive and pointed to women of reproductive age reported greater levels of life satisfaction, which was related to their age, education, and marital status. A correlation analysis found a significant association between age and life satisfaction score, with life satisfaction increasing with age ($r=0.24$; $p<0.0001$).

This study aimed to change women's sexual views in order to help them address dysfunctional notions and, ultimately, increase general satisfaction with sexual relationships by encouraging sexual affection in couples. The incentive motivation intervention in sexual motivation is a powerful explanatory technique for understanding the intricacies of sexual behavior, and it can help women improve their sexual performances. Given the negative impact of sexual disorders on marital life, education is suggested as one of the most essential ways for enhancing women's sexual health promotion. Assisting women in resolving issues caused by sexual disorders may raise their sexual satisfaction and hence their overall health. Given the foregoing, this aspect of women's health care should be given greater priority.

Conclusion

Based on the current study's findings, it can be inferred that there was a very statistically significant improvement of sexual function after the interventions than before. This supported the first study hypothesis. Also, the present study showed that there was a highly statistically significant improvement of all items related to sexual dysfunctional beliefs after the interventions compared to the pre-intervention responses ($p < 0.001$).This supported the second study hypothesis. Furthermore, the implementation of sexual incentive motivation intervention was effective and highly statistically significantly improved women sexual satisfaction relative to pre-intervention levels. Consequently, the study hypotheses are accepted.

Recommendations

- A training program about how to deal and manage various sexual problems, especially hypoactive sexual desire disorder by utilizing sexual incentive motivation model should be designed for nurses in outpatient clinics.
- Raising awareness of women's sexuality at outpatient clinics by distributing pamphlets and posters.
- A comparable study will be conducted with a large sample of rural women in various maternity settings to ensure that the results are applicable to all populations.
- **Future Recommendations:** When possible and safe, health care clinicians should include the woman's husband in the assessment and treatment of sexual health disorders.

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