



A Study of Sexual Dysfunction in a Sample of Medicated and Non Medicated Egyptian Female Patients with Schizophrenia

Thesis

*Submitted for Partial Fulfillment of the MD Degree In
Psychiatry*

Presented by

Phoebe Fayez Ghobrial

*M.Sc. in neuropsychiatry
Faculty of Medicine - Ain Shams University*

Supervised by

Prof. Ahmed Saad Ali

*Professor of Neuropsychiatry
Faculty of Medicine- Ain Shams University*

Prof. Gihan Medhat El Nahas

*Professor of Neuropsychiatry
Faculty of Medicine- Ain Shams University*

Prof. Mona Mahmoud El Sheikh

*Professor of Neuropsychiatry
Faculty of Medicine- Ain Shams University*

Dr. Mahmoud Mamdouh El Habiby

*Assistant Professor of Neuropsychiatry
Faculty of Medicine- Ain Shams University*

Dr. Hussein Ahmed Elkholy

*Lecturer in Neuropsychiatry
Faculty of Medicine- Ain Shams University*

*Faculty of Medicine
Ain Shams University*

2018

Acknowledgement

*First, I thank **God** for granting me the power to proceed and accomplish this work,*

*I would like to express my deepest gratitude, thanks and gratefulness to **Prof. Ahmad Saad**, Professor of Neurology and Psychiatry, Ain Shams University, for his enthusiastic support, continuous encouragement, kind supervision and valuable criticism.*

*I am very grateful to **Prof. Jihan El Nahhas**, Professor of Neurology and Psychiatry, Ain Shams University, for her kind supervision, support, indispensable suggestion, and great help through out of course of my thesis. She offered me valuable scientific advices, and great assistance. It would be impossible to count all the ways that she has helped me to complete this work,*

*I am profoundly grateful to **Prof. Mona El Sheikh**, Professor of Neurology and Psychiatry, Ain Shams University for her guidance, support and valuable criticism of the thesis.*

*My sincere thanks to **Ass. Prof. Mahmoud el Habiby**, Assistant professor of Neurology and Psychiatry, Ain Shams University, for his kind and meticulous supervision, support, help, valuable guidance all through the work,*

*My sincere thanks and deep appreciation goes to **Dr. Hussein El Kholi**, Lecturer of psychiatry, Ain Shams University for his sincere advice, kind cooperation and endless patience in all the steps of this work,*

*✍ **Phoebe Fayez Ghobrial Roufai***

Dedication

*Words can never express my sincere thanks to **My Family and My Loving Husband** for their generous emotional support and continuous encouragement, which brought the best out of me. I owe them all every achievement throughout my life.*

*I would like to express my everlasting gratitude to all **My Professors, Colleagues and Friends**, so many of them influenced, encouraged and inspired me throughout the years. I wish them the best of all.*

*I would like also to thank the **Patients** who agreed willingly to be part of my study and without them; I would not have been able to accomplish this work.*

List of Contents

Title	Page No.
List of Abbreviations	5
List of Tables	6
List of Figures	8
Introduction	1
Hypothesis	13
Aim of the Work.....	14
Review of Literature	
▪ Normal Female Sexuality.....	15
▪ Female Sexual Disorder.....	38
▪ Female Sexuality and Schizophrenia	63
Subjects and Method	82
Results	93
Discussion	124
Strengths & Limitations.....	136
Conclusion.....	138
Recommendations	140
Summary	142
References	148
Arabic Summary	—

List of Abbreviations

Abb.	Full term
BSSC-W	The Brief Sexual Symptom Checklist for Women
DHEA	Dehydroepiandrosterone
DSM-5.....	Diagnostic and Statistical Manual
FOD	Female orgasmic disorder
FSFI.....	Female Sexual Function Index
FSH.....	Follicle-stimulating hormone
HSDD.....	Hypoactive sexual desire disorder
IUD	Intra uterine device
LH.....	Luteinizing hormone
NGF	Nerve Growth Factor
NO.....	Nitric oxide
PANSS.....	Positive and Negative Symptoms Scale
PDE V	Phosphodiesterase type V
PGAD.....	Persistent genital arousal disorder
QOL	Quality of life
SCID-I	Structured Clinical Interview for DSM-IV-TR Axis I Disorders
SCS-W.....	Sexual Complaints Screener for Women
SHBG.....	Sex hormone binding globin
SSRIs	Serotonin re-uptake inhibitors
TRH	Thyroid releasing hormone
TSH.....	Thyroid stimulating hormone
UI.....	Urinary incontinence
VIP	vasoactive intestinal polypeptide
WHO	World Health Organization

List of Tables

Table No.	Title	Page No.
Table (1):	Mechanisms by which antipsychotics may cause sexual dysfunction	74
Table (2):	Comparison between Demographic data of the different groups in the study.	95
Table (3):	Comparison of Lab investigations between the different groups in the study.	98
Table (4):	Comparison of results of Hormonal assessment between the different groups under study.....	99
Table (5):	FSFI total score between different groups under study.....	101
Table (6):	Comparison FSFI score between the different groups under study.	102
Table (7):	Comparison Quality of life scores between the different groups under study.	103
Table (8):	Correlation between the duration of illness and FSFI.....	104
Table (9):	Correlation between severity of negative and positive symptoms and sexual dysfunction in the whole sample of patients.	105
Table (10):	Correlation between severity of schizophrenia negative and positive symptoms and FSFI scores in the group 1.....	106
Table (11):	Correlation between severity of schizophrenia negative and positive symptoms and FSFI scores in group 2.....	108
Table (12):	Correlation between severity of schizophrenia negative and positive symptoms and FSFI scores in group 3.....	109
Table (13):	Correlation between QOL score and FSFI scores in the whole sample.....	110
Table (14):	Correlation between sexual dysfunction and Quality of life in whole patients group.	110

List of Tables Cont...

Table No.	Title	Page No.
Table (15):	Correlation between QOL score and FSFI scores in group 1.	111
Table (16):	Correlation between QOL score and FSFI scores in group 2.	111
Table (17):	Correlation between QOL score and FSFI scores in group 3.	112
Table (18):	Correlation between QOL score and FSFI scores in controls.	113
Table (19):	Correlation between hormonal level and FSFI scores in the whole patients group.....	114
Table (20):	Correlation between hormonal level and FSFI scores in group 1.....	115
Table (21):	Correlation between hormonal level and FSFI scores in group 2.....	117
Table (22):	Correlation between hormonal level and FSFI scores in group 3.....	118
Table (23):	Correlation between hormonal level and FSFI scores in controls.....	119
Table (24):	Correlation between severity of schizophrenia positive and negative symptoms and QOL scores in the whole patients group.	120
Table (25):	Correlation between severity of schizophrenia positive and negative symptoms and QOL scores in group 1.	121
Table (26):	Correlation between severity of schizophrenia positive and negative symptoms and QOL scores in group 2.	122
Table (27):	Correlation between severity of schizophrenia positive and negative symptoms and QOL scores in group 3.	123

List of Figures

Fig. No.	Title	Page No.
Figure (1):	Masters and Johnson model.....	18
Figure (2):	Helen Kaplan model.....	18
Figure (3):	Basson circular model.....	21
Figure (4):	Anatomical region involved in sexual behavior.	26
Figure (5):	Excitatory and inhibitory systems of female sexuality	27
Figure (6):	Etiology of female sexual dysfunction.....	40
Figure (7):	Age of onset of schizophrenia among the patients group.....	96
Figure (8):	Duration of illness among the patients group.....	97
Figure (9):	Percentage of different types of schizophrenia among the patient group.....	97

INTRODUCTION

Sexual functioning involves a complex interaction among anatomical, physiological, sociocultural, psychological factors, relationships with others, and developmental experiences throughout life **(American Psychiatric Association, 2013)**.

Female sexual dysfunction is a complex interplay of biological factors which incorporate multiple medical disorders such as (Diabetes Mellitus, Coronary artery diseases, Heart diseases, Inflammatory diseases, Thyroid problems, Neurological conditions, Spinal cord injuries, hormonal causes (menopause and hormonal imbalance) **(Burri et al., 2009)**, psychological factors (depression and anxiety) **(Khajehei et al., 2012)**, drug and alcohol misuse **(Wylie et al., 2002)** and Obstetrics and gynecological factors such as (Mode of delivery, Number of childbirths and Breastfeeding) **(East et al., 2012)**. Those factors can have a significant negative effect on female sexual health and quality of life **(Kingsberg and Woodard, 2015)**.

Schizophrenia is a severe and chronic mental illness, associated with high prevalence as (1%) of the population suffers from this condition. Symptoms of schizophrenia typically emerge during adolescence or early adulthood. They are usually classified as either positive, negative or cognitive symptoms **(Patel et al., 2014)**.

Diagnosis of schizophrenia according to DSM-5: two (or more) of the following present for one month period. At least one of these must be present (1) (2) or (3):

1. Delusions
2. Hallucinations
3. Disorganized speech
4. Grossly disorganized or catatonic behavior
5. Negative symptoms

These symptoms are accompanied by disturbance in the level of function and Continuous signs of the disturbance persist for at least 6 months. This 6-month period must include at least 1 month of symptoms (or less if successfully treated) that meet Criterion of active-phase symptoms

For those suffering from severe mental illnesses such as schizophrenia, sexual functioning has received little attention in both clinical care and research (**Kelly and Conley, 2004**), this is partly because for years it was assumed that these patients had diminished sexual activity (**Bobes et al., 2003**).

The reasons for sexual dysfunction in Schizophrenia are complex. Sexual dysfunction may arise from the side effects of psychotropic medications (e.g., sedation and hyperprolactinemia) (**Baggaley et al., 2008**) poor physical health and the effects of the illness itself (**Heiman, 2002**). Moreover, sexual dysfunction has multiple negative

consequences on those patients, such as low quality of life (QOL) and self-esteem, poor interpersonal relationships and treatment adherence (**Kokoszka et al., 2010**).

On the other hand, gender effect is important to be taken into account in studies investigating sexuality in schizophrenic patients (**Fujii et al., 2010**). There is only limited research addressing specifically the sexuality in women with psychosis. This lack of literature is likely to foster stigmatization of women with psychosis. Indeed clinicians may adopt a stance considering that this possible lack of sexual drive is not worth an intervention, due to the widespread deficit reported (**Huguelet et al., 2015**).

The majority of schizophrenics experience progressive deterioration in their social and sociosexual functioning. This deterioration often starts before the first psychotic episode and would be one of the negative symptoms of schizophrenia or the positive symptoms in the acute phase of the disease which may be presented as (hallucinations of sexual nature, erotomaniac delusions, delusions related to sexual identity and hypersexuality) (**Fortier et al., 2000**).

Patients with schizophrenia may feel uncomfortable raising the subject because of cultural barriers or due to mistrust of clinicians who may be reluctant to discuss sexual concerns with patients because of the fear that bringing up sexual issues might exacerbate symptoms of schizophrenia or

slow the recovery process. In addition, some clinicians may view sexual complaints as relatively minor when addressing symptoms associated with severe mental illness (**Dossenbach et al., 2005**).

HYPOTHESIS

There is an association between the sexual dysfunctions and schizophrenia in female patients whether due to medications or due to the disease itself or other demographic and clinical factor.

AIM OF THE WORK

- 1- To compare a group of females with Schizophrenia to healthy female control group regarding frequency and type of sexual dysfunction.
- 2- To investigate if there is a significant relation between schizophrenia and sexual dysfunctions.
- 3- To compare between females with schizophrenia on medication and their counterparts who are neuroleptic naive or off medications for at least 3-6 months regarding sexual dysfunctions, to detect the effect of psychotropics on sexual dysfunction in schizophrenic patients.
- 4- To compare the effect of the type of medications on sexual dysfunction in affected patients.
- 5- To highlight the factors associated with difference of sexual dysfunctions in female patients with schizophrenia in comparison to control group, if present.

Chapter 1

NORMAL FEMALE SEXUALITY

Leading characteristics of women's sexuality

Satisfying sexual life is essential for the wellbeing and quality of life for all people especially women (**Biddle et al., 2009**).

Women's sexuality is multifactorial, with biological, psychosexual, and context-related factors involved (**Dennerstein et al., 2006**). The latter include couple dynamics, family, sociocultural issues and developmental factors, including sexual abuse. Sexuality in women also involves multisystem, a physiologic response requires the integrity of the hormonal, vascular, nervous, muscular, and immune systems (**Basson et al., 2004**).

The exact mechanisms underpinning the development of healthy sexuality, are not yet understood but it is proven that it cannot be merely sexual. Since the development of sexual identity is related to several factors including: (**Zeuthen and Gammelgaard, 2010**).

- 1- Biological sex (male or female)
- 2- Gender identity (psychological sense of being male or female)