# Enhancement Program for Coping with Failed Assisted Reproductive Technology Trials

### Thesis

Submitted For Partial Fulfillment of the Requirements of Ph.D. Degree in Maternity and Neonatal Nursing

 $\mathcal{B}y$ 

Suzan Elsaid Mansour Naiem

M.SC Nursing Faculty of Nursing -Mansoura University

Faculty of Nursing
Ain Shams University
2012

# Enhancement Program for Coping with Failed Assisted Reproductive Technology Trials

### Thesis

Submitted For Partial Fulfillment of the Requirements of Ph.D. Degree in Maternity and Neonatal Nursing

## Supervised By

## Dr. Safaa Abd- El-Raouf Hashim

Professor of Maternity and Neonatal Nursing Faculty of Nursing Ain Shams University

#### Dr. Sahar Mossa Soliman

Assistant Professor of Maternity and Neonatal Nursing
Faculty of Nursing
Ain Shams University

Faculty of Nursing Ain Shams University 2012

#### ACKNOWLEDGMENT

First and foremost, I feel always indebted to

### ALLAH

# The most kind and most merciful

Dedication, caring, trust and integrity are not just works to me. I have experienced all of these in this work.

I wish to express, my appreciation to **Dr. Safaa Abd El-Raouf Hashim** professor of Maternity and Neonatal Nursing, faculty of Nursing, Ain Shams University. I am indebted to her meticulous supervision, and constructive criticism, her help and support helped my completion of this work.

A grateful appreciation to **Dr. Sahar Mossa Soliman**, assistant professor of Maternity and Neonatal Nursing, faculty of Nursing, Ain Shams University, words cannot describe how grateful I am for her supervision, tireless efforts of fruitful guidance, all are deeply and heartily appreciated.

Las but not least I would like to extend my thanks to all couples, whom have contributed to this thesis.

# LIST OF CONTENTS

Items Page I	Vo.
LIST OF Contents	.I
LIST OF ABBREVIATIONS	.II
LIST OF TABLES	III
LIST OF FIGURES	IV
LIST OF APPENDICES	.VI
ABSTRACT	•••
INTRODUCTION	.1
AIM OF THE STUDY	.6
REVIEW OF LITERATURE:	
Chapter I: Infertility	7
Chapter II: Assisted Reproductive Technology	<i>30</i>
Chapter III: Stress And Coping Strategy Regard Infertility	. 53
Chapter IV: Nursing Role and coping strategy Regard Infert Treatment	
SUBJECTS AND METHODS	82
RESULTS	96
DISCUSSION	123
CONCLUSION AND RECOMMENDATIONS	144
SUMMARY	146
REFERENCE	154
APPENDICES	•••
ARABIC SUMMARY	••••

# LIST OF ABBREVIATIONS

Abbreviation	Meaning			
AI	Artificial Insemination.			
ART	Assisted Reproductive Technology.			
DNB	Double Nut Bivalve.			
ET	Embryo Transfer.			
FSH	Follicle-Stimulating Hormone.			
GIFT	Gamete Intra-Fallopian Transfer.			
<b>GnRH</b>	Gonadotropin-Releasing Hormone.			
ICI	Intracervical Insemination.			
ICSI	Intracytoplasmic Sperm Injection.			
ITI	Intratubal Insemination.			
IUI	Intrauterine Insemination.			
IUTPI	Intrauterine Tuboperitoneal			
	Insemination.			
IVF	In Vitro Fertilization.			
MCQ	Multiple Choices.			
NICE	National Institute For Clinical Excellence.			
OHSS	Ovarian Hyper stimulation Syndrome.			
PCOS	Polycystic Ovarian Syndrome.			
PID	Pelvic Inflammatory Disease.			
PLISSIT				
	Suggestion, Therapy.			
PZD	Partial Zona Dissection.			
SPSS	Statistical Package Of Social Science.			
STDs	Sexually Transmitted Diseases.			
SUZI	Subzonal Insertion Of Sperm.			
TET	Tubal Embryo Transfer.			
WHO	World Health Organization.			
WOC	Ways Of Coping.			
ZIFT	Zygote Intrafallopian Transfer.			

# LIST OF TABLES

Table	Title	Page
No.		No.
(1-2)	Demographic characteristics of the study group.	98-
		100
(3)	Menstrual History of the Study Group.	101
(4)	Previous Gynecological History of the Study Group.	102
(5)	Previous ART trial of the study group	104
(6	Present Result of ART Trial	106
(7)	Husbands' Score Regards Coping & Stress Scale before and After Program.	108
(8)	Wives' Score Regards Coping & Stress Scale before and After Program.	110
(9)	Relation between husband's stressors & coping score before program.	112
(10)	Relation between wives stressors & coping score before program.	113
(11)	Relation between husband's stressors & coping score after program.	115
(12)	Relation between wives stressors & coping score after program.	116
(13)	Relation between years of marriage and pre - wives social stressors	117
(14)	Relation between age and Pre- Husband Meaning Coping	118
(15)	Relation between Husband Ages with Post Husband Avoidance	119
(16)	Relation between Husbands Educational Level with Post Husband Avoidance	120
(17)	Relationship between IVF outcome and total Husbands stressor level & coping.	121
(18)	Relationship between IVF outcome and total Wives stressor level & coping.	122

# LIST OF FIGURES Related TO Review OF Literatures

Figure No.	Title	Page No.
(1)	Anatomy of Female Reproductive	11
	System.	
(2)	Women's Age Vs Fertility.	12
(3)	Causes of Infertility.	17
(4)	Common Sites for Endometrial	21
	growth.	21
(5)	Egg Retrieval.	36
(6)	Embryo Transfer.	39
(7)	Assisted Hatching.	43
(8)	Intracytoplasmic Sperm Injection.	45
(9)	Intrauterine Insemination.	47
1		•

# List OF Figures Related TO Results

Figure No.	Title	Page No.
(10)	Previous trials of ART.	105
(11)	Type of ART Method.	105
(12)	Present Result of ART Trial.	107

# **LIST OF APPENDICES**

Appendix No.	Title			
(I)	Protocol			
(II)	Structured Interviewing Questionnaire.			
(III)	Coping Strategy Stress Scale.			
(IV)	Ways	of	Coping	(WOC)
	Question	naire.		
(V)	Follow up Card.			
(VI)	PLISSIT Model for Counseling.			
(VII)	Program	•		

#### Abstract

The present study aimed to develop an enhancement program for coping with Failed Assisted Reproductive Technology Trials. The study was an experimental one, it was conducted at IVF center of Ain Shams Maternity Hospital in Ain Shams University. The total sample represented all couples undergoing IVF trial collected in a period of six month (110 couple). Five tools of data collection were used included: Structured Interviewing Questionnaire, Coping Strategy Stress Scale, Ways of Coping (WOC) Questionnaire, Follow up Card and PLISSIT Model for Counseling. The main **results** of the study showed that wives have more (personal, social and marital) stressful experiences than husbands. While they both frequently use a combination of strategies to cope, study showed different coping behaviors to deal with their infertility (meaningbased coping & passive avoidance coping strategy), Husbands scores were significantly lower than before counseling with regard to passive avoidance strategy with t= 2.29, and wives scores were significantly higher than before with regard to meaning-based strategy with t=4.28. So this study recommended investigating factors influencing the efficacious use of coping strategies as well as compare gender differences in reactions to infertility with other stressful health situations.

Key Words: Infertility, ART.

### **INTRODUCTION**

Infertility is defined as the inability of a couple to achieve conception after 12 months of unprotected coitus of average frequency (*Eskondari and Cadieux*, 2003). When a couple is diagnosed with infertility, they commonly experience a variety of stressors. These stressors include, but are not limited to, disruptions in a couple's personal life and relationships with others, changes in the quality of a couple's emotional and sexual relationship, and alterations in a couple's relationships with co-workers, family and friends. Further, infertility challenges the infertile couples' life expectations (*Peterson et al.*, 2007).

Assisted Reproductive Technology (ART) is a general term referring to methods used to achieve pregnancy by artificial or partially artificial means. ARTs are different from other medical procedures because they do not extend or improve life, they create life. It is expensive, invasive, and involves some risk to women. These include risks of the medical and surgical procedures to retrieve oocytes, including ovarian hyper stimulation syndrome. There are also concerns about short- and long-term outcomes for the offspring, As a result, couples engage in a variety of coping strategies in an attempt to regain control over their lives and

rebalance the disruptions they have experienced in their personal, marital and social relationship (*Schieve et al*, 2002).

In-Vitro Fertilization (IVF) is a demanding and stressful treatment for patients, requiring daily hormone injections, ultrasound scans, semen analysis and invasive procedures, such as oocyte retrieval (*Macklon & Fauser*, 2004). Furthermore, IVF is usually the final treatment option for infertile couples, and failure will probably mean their remaining childless. It is therefore not surprising that both women and men demonstrate elevated levels of anxiety during IVF treatment, especially at oocyte retrieval and pregnancy testing (*De Klerk et al.*, 2008). In women who do not achieve pregnancy via IVF, an increased prevalence of subclinical anxiety and depression has been reported (*Verhaak et al.*, 2005).

Receiving a diagnosis of infertility or failed ART is a significant life crisis (*Alesi*, 2005). Feelings of grief and loss are very common as couples come to terms with the fact that they are not able to conceive. Infertility may result in a decrease in quality of life and an increase in marital discord and sexual dysfunction. The burden of infertility is physical, psychological, emotional and financial. Other coping

strategies to cope with the reality of prolonged childlessness are Denial coping strategies (*Van den Akker*, 2005).

Coping, in its most traditional definition, is a way of controlling and regulating stress (*Lazarus and Folkman*, 1984). For men and women experiencing infertility, coping can play an important role in managing heightened demands unexpectedly placed upon them. For most men and women, infertility is a life-changing experience that often carries unexpected stressors and potential stigmatization (*Nichols and Pace-Nichols*, 2000).

As men and women find themselves in an unfamiliar situation, they find many ways to cope with infertility., (*Lazarus and Folkman*, 1984) listed four types of coping strategies: active-avoidance strategies (e.g. avoiding pregnant women or children), active-confronting strategies (e.g. showing feelings, ask others for advice), passive-avoidance strategies (e.g. hoping for a miracle) and meaning-based strategies (e.g. growing as a person in a good way; finding other goals in life) (for a detailed list of all questions for each coping strategy (*Verhaak and Hammer Burns*, 2006).

Nurse are often the first health care provider to encounter couples with treatment period, Fertility clinic nurse often need to advise and support couples in their coping with infertility- and treatment-related stress. It is therefore important to gain insight into the mechanisms which influence the patients' coping response (*Schmidt*, et al, 2004).

#### Significance of the Problem:

Infertility is a stressful life event and depressive symptoms are normal responses to the life crisis of the infertile couple. It has been estimated that 15% of the couples world wide experience infertility (*Williams and Zappert*, 2006).

Assisted Reproductive Technology is a demanding and stressful situation; it's usually the final treatment for infertile couple and its failure mean to them that they will remain childless.

This process could be followed by depression As a result, couples engage in a variety of coping strategies in an attempt to regain control over their lives and rebalance the

disruptions they have experienced in their personal, marital and social relationships

Psychosocial support throughout the treatment plan especially for failed trial could have great benefit couple and ultimately greater success in achieving a pregnancy.