

**Physical and Psychological Problems
among Patients with cancer
Receiving Chemotherapy**

Thesis

*Submitted for Partial Fulfillment of the Requirement Of
Master Degree in **Psychiatric Mental Health Nursing***

Sanaa Reda Kamal

(Bsc. Nursing)

**Faculty of Nursing
AinShams University
2017**

**Physical and Psychological Problems
among Patients with cancer
Receiving Chemotherapy**

Thesis

*Submitted for Partial Fulfillment of the Requirement Of
Master Degree in **Psychiatric Mental Health Nursing***

Supervisors

Dr. Zeinab Abdel Hamid Loutfi

Professor of Psychiatric- Mental Health Nursing
Faculty of Nursing- Ain Shams University

Dr. Tahany Ahmed ELSenousy

Professor of Medical surgical Nursing
Faculty of Nursing- Ain Shams University

**Faculty of Nursing
Ain Shams University**

2017

وَقَدْ كَفَرَ سَابِقًا

فَسَيَرَىٰ عَذَابَ اللَّهِ الَّذِي كَفَرَ لَئِنَّ اللَّهَ لَظَلِيمٌ
فَسَيَرَىٰ عَذَابَ اللَّهِ الَّذِي كَفَرَ لَئِنَّ اللَّهَ لَظَلِيمٌ



First and for most I feel always indebted to Allah,
The most kind and most merciful.

I wish to express my deepest thanks and sincere appreciation to Dr. Zeinab Abdel Hamid Loutfi, Professor of Psychiatric- Mental Health Nursing, Faculty of Nursing Ain Shams University for her great support and advice, her valuable remarks that gave me the confidence and encouragement to fulfill this work.

I also express my special gratitude and appreciation to Dr. Tahany ElSenousy, Professor of Medical surgical Nursing, Faculty of Nursing Ain Shams University for her contractive supervision, co-operation and direction that extended throughout this work.

I wish to convey my thanks to all patients who gave some time to fill up the forms of this study.

List of Content

<i>Subject</i>	<i>Page No.</i>
Introduction	1
Aim of the Study	4
Review of literature	5
I. Cancer	5
II. Chemotherapy	6
▪ Chemotherapeutic Strategies	9
▪ Chemotherapeutic Mechanism of Action	11
▪ Chemotherapeutic Efficacy	13
▪ Methods of Chemotherapy Administration	13
▪ Chemotherapeutic Side Effects	15
III. Physical Problems of Chemotherapy	15
IV. Psychological Problems of Chemotherapy	30
V. Contraindications for Chemotherapy	34
VI. Nursing management for Psychological Problems among Patients with cancer Receiving Chemotherapy	38
Subjects and Methods	53
Results	61
Discussion	87
Conclusion	105
Recommendations	106
Summary	107
References	118
Appendices	143
Arabic Summary	-

List of Tables

Table No.	Title	Page No.
Table (1)	Number and percentage distribution of the patients receiving chemotherapy according to their characteristic	62
Table (2)	Number and percentage distribution of the patients receiving chemotherapy according to their medical history	64
Table (3)	Number and percentage distribution of the patients receiving chemotherapy according to their circulatory problems	66
Table (4)	Number and percentage distribution of the patients receiving chemotherapy according to their gastrointestinal problems	67
Table (5)	Number and percentage distribution of the patients receiving chemotherapy according to their neurological problems	68
Table (6)	Number and percentage distribution of the patients receiving chemotherapy according to their urinary problems	69
Table (7)	Number and percentage distribution of the patients receiving chemotherapy according to their sexual problems	70

Table No.	Title	Page No.
Table (8)	Number and percentage distribution of the patients receiving chemotherapy according to their skin, hair and nails problems	71
Table (9)	Number and percentage distribution of the patients receiving chemotherapy according to their pain and mouth inflammation	72
Table (10)	Number and percentage distribution of the patients receiving chemotherapy according to their physical problems (circulatory, gastrointestinal, neurological, urinary, sexual, skin, hair and nails)	73
Table (11)	Number and percentage distribution of the patients receiving chemotherapy according to their level of depression	74
Table (12)	Number and percentage distribution of the patients receiving chemotherapy according to their level of anxiety	75
Table (13)	Relation between socio demographic characteristics of the patients receiving chemotherapy and their physical problems	76
Table (14)	Relation between medical history of the patients receiving chemotherapy and their physical problems	78

Table No.	Title	Page No.
Table (15)	Relation between socio demographic characteristics of the patients receiving chemotherapy and their depression level	79
Table (16)	Relation between medical history of the patients receiving chemotherapy and their depression level	81
Table (17)	Relation between socio demographic characteristics of the patients receiving chemotherapy and their anxiety level	82
Table (18)	Relation between medical history of the patients receiving chemotherapy and their anxiety level	84
Table (19)	Correlation between physical problems, anxiety and depression among patients receiving chemotherapy	85
Table (20)	Correlation between depression of patients receiving chemotherapy and their anxiety	86

List of Figures

Figures No.	Title	Page No.
Figures (1)	Chonic diseases cancer types.	65

List of Abbreviation

BRM	Biologic response modifier
CIPN	Chemotherapy–induced peripheral neuropathy
EGFR	Epidermal growth factor receptor
G-CSF	Gene/blood cells trans fusion
GnRH	Gene/releasing hormon
PICC	Peripheral infusion central catheter
SIP	Sphingosine-1-phosphate

Abstract

Introduction: patients with cancer receiving chemotherapy experience groups of physical, psychological & social and functional role problems that have negative impact on their quality of life as the result of toxicity of chemotherapy. **This study aimed** to assess physical and psychological problems among patients with cancer receiving chemotherapy. **Subjects & Methods;** Descriptive correlational design was used in carrying out this study was conducted at National Cancer Institute Cairo University; the study sample consisted of 200 patients with cancer receiving chemotherapy. **Tools;** Interview questionnaire sheet for patients, medical history sheets, Peck Inventory, Teilor Inventory and observation checklist. **Results:** The majority of the patients with cancer receiving chemotherapy suffering from severe physical and psychological problems. **Conclusion:** Based on the study finding it was concluded that, there was positive correlation between physical problems among patients receiving chemotherapy and their depression with statistical significant difference. Also there was positive correlation between physical problems among patients receiving chemotherapy and their anxiety with statistical significant difference. **Recommendation:** It is recommended Health care organizations should develop inter- professional collaborative care models for the delivery of comprehensive care for patient with cancer receiving chemotherapy.

Key words: Chemotherapy, Physical Problems, Psychological Problems, Patients with Cancer

Introduction

Each year, over 1.6 million people in the U.S. alone will be diagnosed with some form of cancer. With advances in treatment, survival rates have risen to nearly 65%. While remission and survival are the ultimate goals of treatment, it has become clear that many cancer survivors (estimates range from 15% to 70%) treated with chemotherapy experience significant, long-lasting cognitive impairment (**Gupta, Markman, Rodeghier and Lis, 2012**).

Importantly, the use of drugs constitutes "systemic therapy" for cancer in that they are introduced into the blood stream and are therefore in principle able to address cancer at any anatomic location in the body. Systemic therapy is often used in conjunction with other modalities that constitute "local therapy" for cancer such as radiation therapy, surgery, and/or hyperthermia therapy (**Bacigalupo, Ballen, Rizzo, Giralt, Lazarus, Ho and Apperley, 2009**).

Many of the side effects of chemotherapy can be traced to damage to normal cells that divide rapidly and are thus sensitive to anti-mitotic drugs: cells in the bone marrow, digestive tract, and hair follicles. These results in

the most common side-effects of chemotherapy, mucositis and alopecia (hair loss). Because of the effect on immune cells, chemotherapy drugs often find use in a host of diseases that result from harmful over activity of the immune system against self. These include Rheumatoid arthritis, Systemic lupus erythematosus, Multiple sclerosis, Vasculitis, and many others (**Testori, Tosti, Martinoli, Spadola and Cataldo, 2010**).

Fatigue may be a consequence of the cancer or its treatment, and can last for months to years after treatment. One physiological cause of fatigue is anemia, which can be caused by chemotherapy, primary and metastatic disease and/or nutritional depletion. Anaerobic exercise has been found to be beneficial in reducing fatigue in people with solid tumours (**Banning, 2011**).

Anxiety and depression are somatic Concerns (e.g., fatigue, appetite changes, nausea or abdominal distress), some of which may be associated with the disease process or with treatment. If all patients in a given group are experiencing appetite or weight loss, then endorsing this item on a symptom checklist could lead to the over-diagnosis of distress (**Frojd, Lampic, Larsson and von Essen, 2009**).

The role of the nurse in the administration of chemotherapy is continuously developing. The importance of education and training for staff administering these treatments is widely recognized, as safety for both patient and staff is essential (Ness, Kokal, Fee-Schroeder, Novotny, Satele and Barton, 2013).

Significance of the Study:

It is important to carry out this study to help the nurse to identify the physical and psychological problems of the patients receiving chemotherapy, to be able to plan a comprehensive nursing care that meet their needs.

Aim of the Study

This study aims to:-

The aim of this study is to assess physical and psychological problems among patient with cancer receiving chemotherapy

Research Question:-

- What are the physical and psychological problems among patients with cancer receiving chemotherapy?