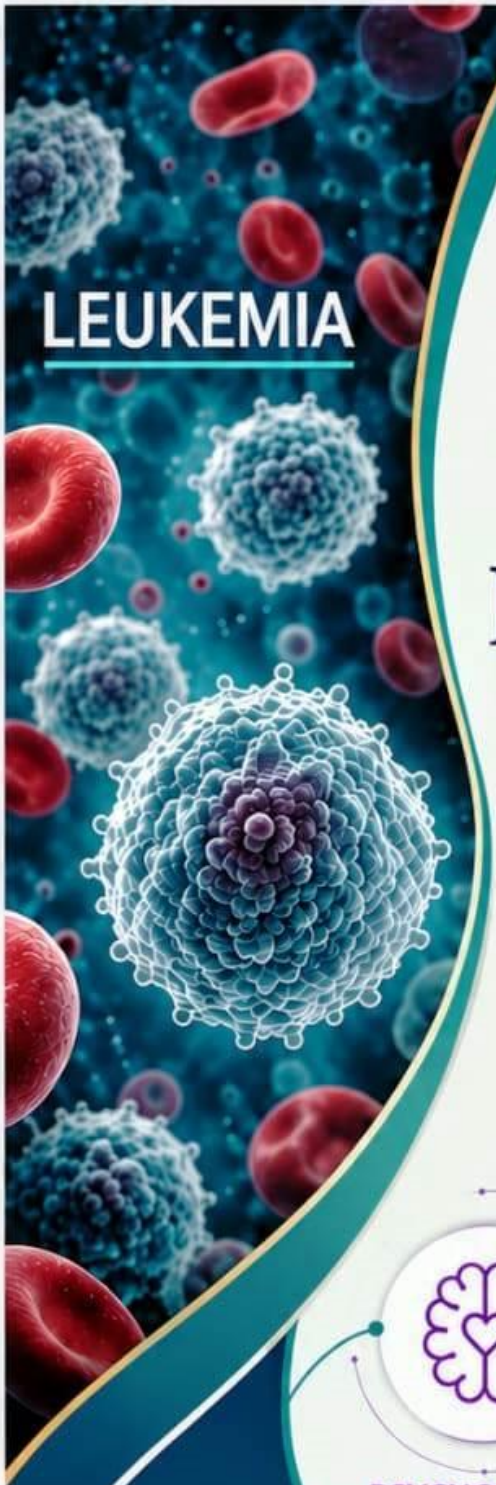


The Psychological and Economic Impact on Leukemia Patients and Their Companions

at Dongola Oncology Center



PSYCHOLOGICAL IMPACT

ECONOMIC IMPACT

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CHAPTER ONE: INTRODUCTION

Background:

Leukemia is a group of blood cancers that begin in the bone marrow and affect the production of healthy blood cells. Receiving care for leukemia can be challenging for patients and their because the disease may require specialized investigations, repeated hospital visits, ongoing treatment, and continuous follow-up.

This study focuses on patients with leukemia and their at Dongola Oncology Center in Dongola, Sudan The center provides care for people living with leukemia, and the experience of receiving this care may affect both patients and the family members or other who support them throughout the illness and treatment process.

The economic impact may include the costs of medical care, medicines, investigations, transportation to and from the center, accommodation, food, and time away from work. These expenses can place pressure on patients and their households, while may also lose income or face additional costs when accompanying the patient.

Understanding these psychological and economic challenges among leukemia patients and their at Dongola Oncology Center is important for providing holistic healthcare. Nursing care should consider not only needs, family circumstances, and financial difficulties. Assessing these experiences may help identify areas where psychological support, health education, social assistance, and appropriate referral services are needed.

Problem Statement :

This study is guided by Betty Neuman’s Systems Model combined with Lazarus and Folkman’s Psychological Stress and Coping Theory.

Neuman’s model conceptualizes the individual/client system as surrounded by a normal line of defense against environmental stressors (intra -personal, inter -personal, and extra-personal).

In this study:

Extra-Personal Stressors: Geographical distance, financial strain, travel logistics, and lodging availability.

Inter-Personal Stressors: Separation from family support networks and disruption of domestic roles.

Holistic Nursing Imperative: Nursing care should address the physical, psychological, social, and economic needs of leukemia patients and their Companions.

Identifying Support Needs: Exploring the experiences of patients and Companions at Dongola Oncology Center may help identify psychological stress, financial difficulties, and barriers to continuing care.

Optimizing Support: Understanding direct and indirect costs, including transport, accommodation, food, and lost income, may help guide appropriate social and financial support.

Guiding Healthcare Planning: The findings may inform nurses and healthcare providers about support services needed by leukemia patients and their Companions in Dongola Oncology Center .

Justification :

- Patient care: The study may help nurses recognize common psychological concerns and practical difficulties reported by patients.
- Service planning: Information about travel, accommodation, and treatment-related expenditure may inform discussions about patient support services.

- Continuity of care: Identifying reported barriers to attending appointments may help services consider ways to improve access and follow-up.
- Academic contribution: The study will provide locally collected evidence on a population whose experiences may not be represented in broader cancer research.
- Future research: Findings may identify questions for larger studies or intervention evaluations.

General Objective :

To assess the psychological and economic impact of receiving healthcare among leukemia patients and their Companions at Dongola Oncology Center.

Specific Objectives :

1. To describe the socio-demographic and clinical characteristics of leukemia patients and their Companions at Dongola Oncology Center.

II. To assess the level of psychological distress, including anxiety and depression, among leukemia patients and their Companions.

III. To identify the direct and indirect expenses associated with receiving healthcare, including medical costs, transportation, accommodation, food, and lost income.

IV. To explore the relationship between psychological distress and relevant socio-economic factors among patients and Companions.

V. To identify coping strategies and support systems used by leukemia patients and their Companions during care at Dongola Oncology Center.

CHAPTER TWO: LITERATURE REVIEW

1. Yucel et al. (2021)

This review examined the psychological, health-related, and economic burden experienced by family members of patients with leukemia and other hematological malignancies. It included 71 publications and found that companions may experience psychological distress, sleep disturbances, reduced quality of life, and financial difficulties. The study emphasized the need for psychological and social support for family companions

2. Parker et al. (2022)

This systematic review assessed the financial burden experienced by patients with hematological malignancies. It included 20 studies and found that 15%–59% of patients reported financial difficulties. These included expenses related to medications, medical appointments, and transportation. Financial burden was associated with poorer quality of life in some patients .

3. Witte et al. (2022)

This systematic review examined the economic impact of cancer diagnosis on patients and their families. It included 18 studies and found that patients and their families experienced additional costs related to treatment, transportation, food, and loss of income. The study highlighted the importance of reducing the economic burden of cancer .

4. Financial Toxicity in Hematological Malignancies (2022)

This systematic review included 55 studies examining financial difficulties among patients with hematological malignancies. The findings showed that patients experienced financial challenges related to food, transportation, loss of work

productivity, and depletion of savings. Lower income, unemployment, and rural residence were identified as common risk factors.

CHAPTER THREE: METHODOLOGY

1. Study Design

A quantitative, descriptive cross-sectional, facility-based study will be conducted. Data will be collected once from each participant during the approved study period. This design is suitable for describing reported experiences and exploring associations, but it cannot establish temporal order or causation.

2. Study Area

The study will be conducted at [Dongola Oncology Center], Northern State, Sudan. The final proposal should describe the selected facility, services provided, and why it is an appropriate site for recruiting eligible patients.

3. Study Population

The target population will be adult patients with a confirmed diagnosis of leukemia who usually live outside Dongola and attend the selected facility for leukemia-related care during the data-collection period. The accessible population will consist of eligible patients who attend the facility during recruitment and are approached by the research team.

4. Sample Size

The total study population consists of 100 leukemia patients receiving healthcare at the Oncology Center in Dongola. The sample size was calculated using Yamane's formula with a 5% margin of error.

Sample size formula:

N=\frac{N}{1+N(e)^2}

Where: -n = Required sample size.

-N = Total study population (100 patients).

-e = Margin of error (0.05).

Calculation:

N=\frac{100}{1+100(0.05)^2}

N=\frac{100}{1.25}=80

Therefore, the proposed sample size for this study is 80 leukemia patients.

5. Sampling Technique

Eligible participants will be recruited from the Oncology Center in Dongola after obtaining the necessary ethical approval and administrative permission.

The objectives and procedures of the study will be explained to each eligible patient, and informed consent will be obtained before data collection begins.

Participation will be voluntary, and the confidentiality of all collected information will be maintained throughout the study. Patients who meet the inclusion criteria and agree to participate will be recruited until the required sample size of 80 patients is reached.

6. Data Collection

Data will be collected using a structured interviewer-administered questionnaire. The draft tool in Appendix I is intended for adaptation and review; it should be assessed by the supervisor and relevant clinical or research experts before use.

7. Study Variables

Independent Variables: Treatment costs, travel expenses, accommodation costs, loss of income, and family and social support.

Outcome Variables: Psychological effects, including anxiety, depression, sleep disturbances, and loneliness; and economic effects, including loss of income, financial difficulties, treatment costs, and travel expenses.

Background Variables: Age, sex, marital status, educational level, place of residence, duration of treatment, and participant status (patient or caregiver).

8. Data Analysis

Data will be checked, coded, and entered into a suitable statistical package such as SPSS or an equivalent program. Descriptive statistics will summarize participant characteristics and study variables. Categorical variables will be presented as frequencies and percentages; continuous variables will be summarized using means and standard deviations when distributions are approximately symmetric, or medians and interquartile ranges when skewed.

9. Ethical Considerations

Administrative approval will be obtained from the university, relevant health authorities, and Dongola Oncology Center before data collection. Informed consent will be obtained from all participants, and participation will be voluntary. Participants will have the right to withdraw from the study at any time without affecting their medical care. Confidentiality and privacy will be maintained, and no personal identifying information will be collected. All data will be used for academic research purposes only. Data collection will begin after obtaining the required ethical and administrative approvals.

CHAPTER four : work plan and budget

Time table :

The schedule below is illustrative and should be adjusted to the academic calendar and the timing of ethics approval.

Activity	Month 1	Month 2	Month 3
Proposal review and supervisor approval	✓		
Ethics and facility permissions	✓	✓	
Questionnaire review and pilot		✓	
Data collection		✓	✓
Data entry and analysis			✓
Report writing and submission			✓

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