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Patient-Centered Perspectives on Radiation Therapy: Knowledge, Attitudes, and Barriers Among Cancer Patients in Merowe medical city , merowe , northern state , Sudan 2026

Patient Perspective Questionnair

Part 1. Personal and Medical Background Independent Variables

A. Sociodemographic variables :

1. Gender: Male / Female
2. . Age ..... years
3. Education Level: No formal education / Primary / Middle school / High school / University or higher
4. Residence: Rural / Urban / Suburban
5. Employment Status: Employed / Self-employed / Unemployed / Retired / Homemaker / Other
6. Monthly Income: Sufficient / Sufficient with difficulty / Insufficient

7. Marital Status: Married / Single / Divorced / Widowed

8. Health insurance / Support coverage : social (public) insurance / private insurance / no insurance .

B. Medical and clinical variables :

1. Cancer Type: Breast / Prostate / Head and Neck / Gastrointestinal / Cervical / Lung / Other

2. Disease Stage: Stage I / stage II / stage III / stage IV / Unknown

3. Time since diagnosis (duration) : less than 1 year / 1 to 3 years / more than 3 years .

4. Previous Treatment: Surgery / Chemotherapy / Hormonal therapy / None

5. Comorbidities (underling diseases) : Hypertension / diabetes / heart disease / respiratory disease / other /none .

Part 2 : Knowledge Dimension 12 items

(Please choose: Well Known / Heard of / Unknown)

1. Radiation therapy is used to kill cancer cells or shrink tumors.

2. I know the difference between external beam radiation and internal radiation therapy.

3. I know the common early side effects of radiotherapy, such as fatigue and skin irritation.

4. I know that some side effects may appear months or years after treatment.

5. I know that patients receiving external beam radiotherapy do not become radioactive or dangerous to others.

6. I know that attending radiotherapy sessions according to schedule is important for treatment effectiveness.

7. I know that radiotherapy machines are planned to target the tumor while reducing damage to nearby healthy tissues.

8. I know the skin-care instructions for the treated area.

9. I know the role of the treatment team, including the doctor, physicist, radiation therapist/technician, and nurse.

10. I know about radiation dermatitis and when to report skin changes.

11. I know the difference between radiotherapy treatment and diagnostic X-rays.

12. I know whether psychological support or patient education sessions are available in the center.

Part 3 : Attitude Dimension 10 items

(Please choose: Strongly Agree / Agree / Neutral / Disagree / Strongly Disagree)

1 . I believe radiation therapy is an important and beneficial treatment for my condition

2 . I am deeply worried about "radiation toxicity" and its effect on my healthy organs.

3 . I fully trust the expertise and decisions of the medical team in Merowe.

4 . I fear that radiation will negatively change my physical appearance or quality of life.

5 . I feel that the benefit of being cured far outweighs the risk of side effects.

6 . I feel anxious or intimidated by the large radiation machines and the treatment room.

7 . I am willing to follow all preventive advice from the doctors, even if it is difficult.

8 . Receiving detailed information before starting treatment helps reduce my anxiety.

9 . I feel embarrassed or shy about discussing my illness or treatment with others.

10 . Kind and humane treatment from the staff makes me more accepting of the sessions.

Part 4: Perceived Barriers (5-A Model)

(Please choose: Likert Scal :

severe problem (3) , Moderate problem (2), Minor problem (1) , No problem (0) .

Availability :

1. I faced difficulties with machine availability or getting an appointment time.

2. My treatment was delayed or interrupted because the required services were not consistently .

Accessibility:

1. The travel distance and transportation costs to Merowe are exhausting for me.

2. My general health condition makes it physically difficult for me to reach the treatment center .

Affordability:

1. The cost of treatment sessions or living away from home is a major financial burden.

2. I experienced a loss of income or had to stop working during the treatment period , affecting my ability to pay .

Accommodation:

1. Long waiting times inside the center create pressure on my daily life and commitments .

2. The organization of appointment schedules was difficult to follow or changes were not communicated clearly .

Acceptability :

1. My fear of radiation or lack of clear information regarding its effects made me hesitate to start treatment .

2. Social or family opinions and cultural factors influenced my acceptance and willingness to undergo the treatment .

Part 5 : The Patient Voice (Qualitative)

1. What was the biggest challenge you faced during your radiotherapy journey?

2. How did you feel about the way staff treated you regarding respect, privacy, and communication?

3. What changes would you suggest to improve radiotherapy services for future patients?