BACKGROUND

In 2016, it was estimated that approximately 1,685,210 new cases of cancer would be diagnosed in the United States that year, and that 595,690 people would die from the disease (National Cancer Institute, 2018). The diagnosis of cancer can greatly affect the quality of life of patients and their families, and patients often experience varying levels of anxiety and distress throughout the diagnostic and treatment process (National Cancer Institute, 2018). Anxiety is defined as fear, dread, and uneasiness caused by stress, which can be caused by both the diagnosis and treatment of cancer (Andersen & Tewfik, 1985). Patient education has been shown to reduce anxiety in a wide range of patients, including those diagnosed with cancer (McPherson, Higginson, & Hearm, 2001).

Radiation Therapy

Radiation therapy is a common treatment for cancer, and approximately half of patients diagnosed with cancer will receive radiation therapy sometime during their treatment course (Institute, 2018). Radiation therapy often causes anxiety for patients and their families, and the need for patient education in radiation oncology is high. However, Radiation therapy is an area where patient education information is not comprehensive, and standardized education tools do not exist at this time (M Marquess et al., 2017).

Interprofessional Team

Interprofessional collaborative practice is an essential part of the radiation therapy treatment process for each patient, and the radiation oncology team works together with patients, families, and other healthcare providers in treatment planning, administering and patient education towards quality care.

Virtual Reality for Patient Education

Pilot studies have started to assess virtual reality as a patient education tool in providing information regarding radiation therapy procedures. Jimenez et al (2018) completed an assessment of current patient education sessions utilizing virtual reality and found that positive impacts have been demonstrated when utilized as a patient education tool (Jimenez et al., 2018). The pilot study for prostate patients from Marquess et al (2017) suggests that patient education utilizing virtual reality can increase comprehension and decrease anxiety (M Marquess et al., 2017). Tuality/OHSU Cancer Center was the first in the nation to implement a patient education module utilizing virtual education in the treatment process, with positive feedback from patients.

METHODS

Quantitative: Is patient anxiety reduced, and is patient knowledge increased, as a result of radiation therapist-led education sessions utilizing virtual reality? A pre/post survey of the virtual education module.

Mixed Methods: How does patient anxiety and patient knowledge, related to radiation treatment, change as the radiation therapy treatment progresses? A survey at beginning and end of treatment will be compared between the departments for the secondary analysis with virtual and non-virtual.

RESEARCH DESIGN

The primary aim of this research is to assess the methods and effectiveness the current model of patient education from a patient perspective. This assessment will include patient education utilizing virtual reality. The secondary aim of this study is to explore the source of the education from the individuals in the radiation oncology interprofessional team, and the patient perception and experiences. The research will take place at Oregon Health & Science University and Tuality/OHSU Cancer Center. Three separate studies will be conducted through a single IRB approved research design utilizing a single survey instrument. Data will be collected from patients undergoing radiation therapy treatment (with some exclusions), by a single survey comprised of Likert-scale questions related to 1) anxiety and 2) knowledge, and open ended questions directed at the 3) source of the education, 4) specific perceptions, types of education and patient needs. Individual patient interviews will be conducted as needed.

REFERENCES


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