ONE SIMPLE QUESTION PREDICTS WELL-BEING IN RADIATION THERAPY: THE ROLE OF DESIRE FOR PSYCHOLOGICAL INTERVENTION AND PERCEIVED SOCIAL SUPPORT

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Abstract

Radiation therapy (RT) is a critical part of cancer treatment often accompanied by heightened anxiety, depression, and reduced life satisfaction. Although psycho-oncological (PO) interventions and social support can alleviate distress, it is unclear whether patients' desire for PO intervention reflects temporary or ongoing distress and whether all patients benefit from social support or only those seeking help. In this study we examined whether the desire for PO during the start of RT predicted anxiety, depression, and life satisfaction at the start and end of RT and whether perceived social support moderated these effects. One-hundred-and-forty-six patients completed questionnaires at three time-points (pre-treatment, first treatment, last treatment). Results showed that patients desiring PO intervention reported higher anxiety and depression at the start and end of RT. Higher perceived social support predicted lower depression and improved life satisfaction but only for patients expressing a desire for PO. Screening for psychological distress is standard in oncology but often limited by time and resources during RT. The current study findings suggest that a single, straightforward question at the start of RT could identify at-risk patients, enabling proactive intervention. Moreover, fostering perceptions of social support may help mitigate negative outcomes in the absence of professional intervention.

Keywords: Anxiety, depression, life satisfaction, psycho-oncological intervention, social support, radiation therapy.

1. Introduction and objectives

During cancer treatment, up to two-thirds of patients undergo radiation therapy (RT), which often leads to emotional distress, including anxiety, depression, and lower life satisfaction (Dilalla et al., 2020). Emotional challenges are significant, with up to 25% of patients discontinuing RT due to distress (Clover et al., 2011).

As distress levels fluctuate throughout RT (Hess & Chen, 2014), it remains unclear whether an initial desire for psycho-oncological (PO) intervention during RT reflects ongoing distress or temporary early-stage challenges. Moreover, perceived social support from family, friends, and healthcare professionals also plays a critical role in reducing distress. However, its effectiveness depends on how well it meets the patient's actual needs (Zee et al., 2020).

This study had two aims: (1) to examine whether patients' desire for PO is associated with greater distress and lower life satisfaction at the beginning and end of RT, and (2) to determine whether the relation between perceived social support and reduced distress and improved life satisfaction at the end of RT is stronger for patients desiring PO compared to those who do not.

2. Method

2.1. Materials and procedure

The study targeted cancer outpatients treated at the Department of Radiology, Assuta Medical Center, Ashdod, Israel, between January 2022 and September 2023. From 1,862 patients treated during this period, 223 were eligible and invited to participate, with 66 declining (29.6%), resulting in 146 participants

(58.7% recruitment rate). Of these, 32 withdrew by Time 2 or 3, leaving 114 participants who completed all three rounds of questionnaires (21.9% attrition).

Participants completed self-report questionnaires at three points: Time 1 (Pre-Treatment): The Hospital Anxiety and Depression Scale (HADS), Satisfaction with Life Scale (SWLS), and a question about interest in scheduling a psychologist session (yes/no). Time 2 (First Radiation Session): The Multidimensional Scale of Perceived Social Support (MSPSS). Time 3 (End of Treatment): HADS and SWLS. Demographic data included age, gender, education, and family status. Clinical data included tumor type and stage, surgery (yes/no), chemotherapy (yes/no), Karnofsky Performance Scale (KPS), number of radiation sessions, family cancer history, and comorbidities.

3. Results

Fifty percent of participants reported a desire for PO intervention. MANOVA showed a significant main effect for group (PO vs. non-PO), $F_{(4,95)} = 3.91$, $p = 0.006$, partial $\eta^2 = 0.141$. As expected, patients wanting PO intervention had higher anxiety and depression levels at T1. The second MANOVA showed a main effect for group, $F_{(3,76)} = 5.08$, $p = 0.003$, partial $\eta^2 = 0.167$, with similar results for anxiety and depression at T3.

Three hierarchical regressions examined whether the PO group and perceived social support predicted anxiety, depression, and life satisfaction at T3. The interaction between PO group and social support significantly influenced depression and life satisfaction at T3, after accounting for satisfaction T1 levels. Moderation analysis showed that PO group moderated the relationship between social support and depression ($b = -.19$, $p = .002$) and life satisfaction ($b = .38$, $p < 0.001$). For the PO group, social support was significantly associated with lower depression and higher life satisfaction, while no significant effects were found for the non-PO group.

4. Discussion and conclusions

The findings suggest that a simple written question at the start of RT can effectively identify patients at risk for anxiety and depression, potentially replacing more complex screening. Additionally, perceived social support was associated with lower depression and better life satisfaction, but only for patients wanting PO intervention. These patients may be more receptive to support and proactive in managing emotional well-being. However, perceived social support did not predict anxiety reduction, suggesting that anxiety requires more targeted interventions.

References

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