Understanding and addressing the informational needs of radiation therapists concerning the management of anxiety and depression in patients receiving radiation therapy treatment

LAVERGNE, Carrie, TAYLOR, Amy <http://orcid.org/0000-0002-7720-6651>, GILLIES, Carol and BARISIC, Vanessa

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Understanding and Addressing the Informational Needs of Radiation Therapists Concerning the Management of Anxiety and Depression in Patients Receiving Radiation Therapy Treatment

ABSTRACT

Background: Cancer Care Ontario has mandated that all health care professionals working within oncology centres in Ontario should routinely screen and address symptoms of anxiety and depression in cancer patients. This study aims to assess the informational needs of Radiation Therapists (RTs) concerning the discussion and management of anxiety and depression symptoms in patients receiving radiation therapy treatment. It will also attempt to determine whether RTs believe that reviewing patients' self-reported symptoms should be included as part of their routine patient assessment.

Methodology: A questionnaire was initially piloted at the host institution to six randomly chosen RTs and then sent via email to all Radiation Therapists practicing in Ontario, Canada (n= 921). The online questionnaire consisted of multiple choice questions and was divided into four themes: 1) RT comfort levels surrounding the topics of anxiety and depression, 2) management of anxiety and depression in cancer patients, 3) further education needed/requested in anxiety and depression symptom management and 4) the Edmonton Symptom Assessment System (ESAS). Data analyses included the calculation of means and two sample two-sided t-tests to examine the relationships between various demographics and responses.

Results: RTs feel more comfortable in the discussion of issues surrounding anxiety when compared to depression. The most common positive factor affecting RTs' comfort levels addressing emotional distress is previous experience with patients who have expressed these symptoms; whereas the most common adverse factor affecting comfort levels is the lack of education regarding emotional distress. Eighty-seven percent (87%) of RTs would like further education surrounding anxiety and depression symptom management. Seventy-eight percent (78%) of RTs agree that ESAS is an important tool for symptom management; however only sixteen percent (16%) actually use this tool in their clinical practice.

Conclusions: Although RTs within Ontario feel fairly comfortable addressing anxiety and depression symptoms, they have indicated that further education regarding these topics would be useful. Further research into seamlessly incorporating ESAS into RTs' daily practice should be considered.

Introduction:

A diagnosis of cancer causes some level of emotional distress in all people with some individuals experience major depression and anxiety symptoms [1,2,3] as a result of the diagnosis, treatment(s) and co-morbidities. It has been found that as many as thirty-five percent (35%) of cancer patients experience clinically significant distress [4]. A new standard of Accreditation Canada identifies the need for emotional distress to be addressed as a sixth vital sign (along with blood pressure, pain, heart rate, respiration and temperature) [5]. It is essential to detect signs and symptoms of anxiety and depression early on and therefore provide interventions and treatment to ensure the issues are not exacerbated [3,6,7]. Providing comprehensive education to patients for all aspects of the treatment continuum and side effects tends to reduce anxiety [8]. This knowledge may be extended to infer that appropriately managing anxiety and depression will in itself help to reduce the apprehension a patient may be experiencing.

Cancer Care Ontario (CCO) released its Ontario Cancer Plan for 2011-2015 which includes six strategic priorities and goals to achieve the vision of creating the best cancer system in the world. One of the strategic goals is to improve the patient experience along every step of the cancer patient journey [9]. Part of this strategy is the introduction of practice guidelines for symptom management to assist all health care professionals in monitoring and managing patients' symptoms throughout the cancer journey. This includes detailed symptom management guides and algorithms (care maps) for anxiety and depression, providing health care professionals with information regarding screening, assessment and psychosocial-supportive care for adult cancer patients who are experiencing depression and/or anxiety [2].

The CCO practice guidelines have made the recommendation that all health care providers should routinely screen for the presence of emotional distress including symptoms of anxiety and depression [2]. Furthermore, once screening indicates the presence of anxiety and/or depression symptoms, steps must be taken to ensure the patient is appropriately referred and managed with an individually tailored care plan. This referral can be to a physician, social worker and/or nurse or may include information about local support groups and/or relaxation techniques.

In radiation therapy, the Radiation Therapists (RTs) professional role includes symptom assessment and management on a daily basis as they see patients anywhere from one treatment to upwards of forty treatments. In a study by Halkett et al., RTs indicated that they feel uncomfortable screening for and managing the symptoms of anxiety and depression [10]. In order to fulfil the requirements of the CCO practice guidelines, it is imperative that RTs are routinely screening for symptoms of emotional distress: anxiety and depression. In addition to symptom screening, RTs are required by CCO to facilitate discussion with patients, provide referrals to supportive care professionals and provide appropriate supportive care interventions such as education about anxiety/depression and methods of coping with these symptoms.

There is limited research surrounding how RTs address and manage the symptoms of anxiety and depression in cancer patients. A study conducted amongst RTs in Ontario, Canada [11], examined RTs' abilities to communicate with patients during emotional interactions, specifically anxiety. It was found that RTs are effective at communicating with emotional patients; however this ability is significantly affected by personal and organizational factors, notably experience and time. The above mentioned study is a published conference abstract; therefore additional details are currently unavailable to draw upon.

Another important aspect of symptom management in Ontario, Canada is the Edmonton Symptom Assessment System (ESAS). In accordance with the CCO guidelines, patients are asked to fill out the self-reporting ESAS questionnaire weekly prior to seeing their Radiation

Oncologist [9]. This questionnaire includes questions on anxiety, depression and well-being. This patient-reported information is typically utilized by the Radiation Oncologist and Radiation Oncology Nurses, however is not always utilized by the RTs. It has been found that ESAS is a simple but valid tool for assessing anxiety and depression in patients [1,12].

Purpose:

The primary aims of this study are to assess the educational and/or supportive informational needs of RTs, regarding their ability to facilitate discussion and address anxiety and depression symptoms in patients treated with radiation therapy; and to determine what affects and impacts their ability to have these discussions.

The secondary aims are to determine whether RTs are currently using the patients' weekly ESAS scores in their patient assessment and if they believe these patient-reported symptom scores should be included in the RTs' patient assessment.

Methodology and Materials:

Nine hundred and twenty one (921) RTs were invited by email to participate in this study.

Ethical Considerations:

This study was approved by the Institutional Research Ethics Board. A letter of introduction to the study was included with the questionnaire indicating that completing the questionnaire was voluntary and anonymous with no personal identifiers. Participants were informed that by completing the questionnaire they were consenting to participate in the study. Participants could withdraw at any time without consequences and were not obligated to answer all questions.

Research Tool:

A questionnaire was chosen as the research method using the website SurveyMonkey. A copy of the questionnaire is included as Appendix A. The questionnaire was initially piloted in the primary author's department to test its reliability and validity. Six RTs were chosen to pilot the questionnaire using a stratified random sampling method to ensure the characteristics of the whole population were accounted for, as well as to guarantee adequate representation from the various departments within the radiation therapy department. The questionnaire was emailed to the six respondents. No changes were made to the questionnaire in between the pilot and full research study. Participants were given a four week time frame to complete the questionnaire.

Questionnaire Dissemination:

An email was sent to all radiation therapy managers at each of the fourteen cancer centres in Ontario. The managers were asked to forward the email to all practicing RTs at their centre. After seven days and twenty-one days, reminder emails were sent to the managers with the request to forward on to their RTs, encouraging individuals to complete the questionnaire if it had not yet been done. Email was selected as the communication method due to the large geographical area of the study population and limited timeframe available to collect responses.

Questionnaire Content:

Demographic information included gender, age, years of employment as an RT and position within the cancer centre. Using a five-point Likert scale ranging from '1- strongly disagree' to '5-strongly agree', questions were asked regarding the participants' comfort level relating to recognizing signs and symptoms, discussing and making recommendations and referrals relating to anxiety and depression. Factors affecting participants' comfort level dealing with emotional distress were asked in an open ended question format. Additional questions using a five-point Likert scale of '1-never' to '5-always' asked participants about the type of referrals and education provided to patients for anxiety and depression. Participants were also asked if they would benefit from further education surrounding the topics of anxiety and depression and if so, in which format(s) and surrounding which areas. Lastly, participants were asked whether they routinely checked patients' ESAS scores and if they believed it should be included in a RT's duties.

A Likert scale was selected because it is a simple, universal method of collecting data where respondents can indicate the degree to which they agree or disagree with a statement that often measures beliefs, attitudes and opinions. Results can subsequently be summarized into rating categories.

Statistical Analysis:

Means were calculated for the questions using the 5-point Likert scale. Responses were analyzed with all answers individually and then grouped together to include scores of 1-2 ('strongly disagree' and 'disagree' or 'never' and 'rarely'); 3 ('neutral' or 'sometimes') and 4-5 ('agree' and 'strongly agree' or 'often' and 'always'). For some questions, two sample two-sided t-tests were performed to compare the means; therefore evaluating the relationships between various demographics and responses to similar questions. Two sample F-tests for variance was computed to determine whether the responses were equal or unequal variances Results deemed significant refers to findings that are statistically significant at the ninety-five percent (95%) confidence level.

Results

One hundred and ninety-six (n=196) responses were received which represents a response rate of twenty-one percent (21%). A summary of the demographics of this study population is summarized in Table 1.

The relationship between RTs' comfort levels and RTs' years of experience was examined using a two sample two-tailed t-test. There was no statistically significant difference (all P values > 0.05) with the exception of the question asking if RTs are comfortable making referrals to a supportive care professional for a patient's anxiety. RTs with more experience (greater than 10 years) felt more comfortable making referrals for these patients than RTs with less than 10 years of experience ($P = 0.031$). Further, two sample two-tailed t-tests were calculated to examine whether there was a difference between RTs' comfort levels when discussing anxiety versus depression. It was found that there was a statistically significant difference in comfort levels indicating RTs felt more comfortable discussing anxiety with patients than depression. The recognition of signs and symptoms, asking about a patient's symptoms and making recommendations for coping strategies all had statistically significant differences when comparing anxiety and depression (all P values < 0.05); with means as shown in Table 2. There was no statistically significant difference in making referrals for these symptoms ($P > 0.05$).

The responses from RTs regarding the positive and adverse factors that affect their comfort level when dealing with patients who have expressed anxiety and/or depression are shown in Figure 1. Previous experience with patients who have expressed anxiety and/or depression symptoms was the most common factor that positively affected the RTs' comfort level when dealing with these symptoms. Lack of education surrounding anxiety and/or depression negatively contributed to eighty-four percent (84%) of RTs' comfort level when managing patients' reported symptoms of anxiety and depression. The management options given to patients regarding their anxiety and/or depression symptoms is shown in Figure 2. The most prevalent response to this question indicates that the majority of RTs referred patients to a social worker (70%).

Figure 3 illustrates the frequency that RTs provide education about specific topics related to the management of depression and anxiety. Analysis of the differences between the education provided to patients expressing depression or anxiety using a two sample two-sided t-test indicated no statistically significant differences (all *P* values > 0.05) between the two symptoms. One exception was found to be statistically significant (*P* =0.047); less frequent education was provided regarding how common emotional distress is in cancer patients (mean = 3.3), compared with how common anxiety is in cancer patients (mean = 3.5).

Eighty-seven percent (87%) of RTs would like further education regarding the management of anxiety and depression symptoms. The preferred format for this further education was indicated by forty-five percent (45%) of respondents to be in the form of education rounds. Table 3 demonstrates the areas in which approximately fifty percent (50%) or more of RTs would like further education, organized in order from most common to least common responses.

Three final questions were asked with respect to ESAS. As seen in Figure 4, seventy-eight percent (78%) of RTs agree that being aware of a patient's ESAS scores for anxiety and depression would assist in better symptom management; however only sixteen percent (16%) of RTs check patients' ESAS scores weekly. Sixty four percent (64%) of RTs believe that patients' reported ESAS scores should be included in the RTs' weekly chart checks.

Discussion:

One of the most powerful comments received in this questionnaire summarized a major motivation for completing the study. The respondent stated "It's [anxiety and depression] almost a taboo subject and I have observed therapists who ignore signs and symptoms of anxiety/depression because they are uncomfortable dealing with it." This study provides insight into RTs' comfort levels when discussing anxiety and depression with patients.

RTs' Comfort Levels:

RTs were asked to indicate their comfort levels in addressing various areas regarding anxiety and depression in cancer patients. No statistically significant differences were found surrounding the relationship of an RT's years of experience and comfort level when addressing anxiety and depression symptoms, but with one exception. It was observed that more experienced therapists felt more comfortable making referrals to manage a patient's anxiety. This lack of causal relationship between experience and comfort level was an unexpected finding because eighty percent (80%) of RTs implied that previous experience with patients who have expressed anxiety and/or depression symptoms positively affects one's comfort level. This result differs from a study by Maamoun et al., (2009) examining RTs' opinions about addressing patients' supportive care needs in which it was found that increased experience did correlate to an increased comfort level in addressing these needs [13].

A statistically significant difference was found when comparing the responses for anxiety versus depression. RTs feel more comfortable discussing issues related to anxiety than those related to depression. This could possibly be attributed to the fact that anxiety is more commonly experienced by patients undergoing cancer treatment than depression [14-16]. Furthermore, RTs only see patients during their course of radiation therapy. A study examining psychological changes pre and post treatment found that cancer patients had increased anxiety before and during treatment, whereas depression increased post-treatment [17].

Management of Anxiety and Depression in Cancer Patients

The Cancer Care Ontario practice guidelines for the symptoms of anxiety and depression state the importance of facilitating appropriate referrals and supportive care interventions for patients experiencing these symptoms. This study found that the only referral that is consistently being made is to a social worker. This is an important referral to be made as social workers have a vital role in the management of these symptoms [18,19]; however there are also many other resources available to patients that could be beneficial, and include relaxation techniques, support groups, and physician and/or oncology nurse referrals [2,19], which were not commonly suggested by respondents. It may be that RTs are unaware of or unfamiliar with other resources that are available, and therefore are not suggesting them to patients. A study by Tuinman et al. (2008) examined screening and referral patterns for emotional distress in cancer patients. These authors emphasized the importance that referrals to other professionals be based on the issues causing the emotional distress. For example, if the issue causing the distress is surrounding one's emotional state then a referral to a social worker or psychologist is appropriate; however if the issue is surrounding one's weight and the inability to eat, then a referral to a dietician would be more beneficial [20].

The CCO guidelines encourage education to be provided to patients, including the topics highlighted in Figure 3. Providing information about the benefits of support groups and other informal supports available, and reassuring patients about how common it is to experience these symptoms during the cancer journey are a few of these topics. The only statistically significant difference found comparing the responses for anxiety and depression was that respondents provide less frequent education surrounding the management of symptoms contributing to depression, than symptoms contributing to anxiety. This may be due to an increased familiarity and comfort level with the topic of anxiety and less experience and therefore decreased comfort level surrounding depression. Educating patients is an effective and successful intervention for anxiety and depression [18], however ensuring RTs have the knowledge, skills and judgement to perform this education is crucial.

Further Education in Anxiety and Depression Symptom Management:

There was an overwhelmingly strong response from participants identifying the need for further education regarding symptom management for anxiety and depression. This corresponds to the question asking what factors cause RTs to feel less comfortable when dealing with patients who have expressed anxiety and/or depression symptoms. Eighty-four percent (84%) of respondents agree that a lack of education regarding emotional distress is the leading factor contributing to RTs' comfort levels. The majority of the respondents wanted additional education on all topics listed in Table 3, including making recommendations on managing anxiety and depression and how and when to discuss these symptoms with patients. Less than half of the respondents wanted additional information on making referrals to a supportive care professional. There were several comments made by respondents that being updated regularly on these topics would benefit their clinical practice regardless of their years of experience. Providing education about the CCO anxiety and depression care maps could help RTs in the screening, assessment and management of these diseases, as not having defined pathways may result in issues being missed or potentially ignored [21].

The most common format of choice for further education identified by respondents was in the form of education rounds. This choice of format would allow for an interactive and effective information sessions which might include various professionals presenting their areas of expertise.

Edmonton Symptom Assessment System

Although the majority of respondents believe that knowing patients' Edmonton Symptom Assessment System (ESAS) scores for anxiety and depression would assist them in better symptom management discussions, less than one in six respondents regularly check patients' ESAS scores. Almost two thirds of respondents stated they believe that the ESAS scores should be included in the RTs' weekly chart checks. There were many respondent comments regarding the topic of ESAS; several respondents stated that ESAS scores are currently not easily accessible to RTs in their department. Other respondents stated that including patients' reported ESAS scores in their weekly chart checks would be valuable information; however they require a more accessible interface between the computer system that houses the ESAS scores and the computer system that is used for radiation therapy treatment delivery. Unfortunately it appears that the ESAS scores are currently not easily accessible to RTs. Since many respondents believe that including this symptom analysis is important in the RTs' daily clinical practice, and has been found in other studies to be reliable in screening for anxiety and depression [1,12], this should be an area for future study to improve the ability of RTs to easily access and use ESAS information.

Limitations

Limitations of this study may be attributed to the structure of this questionnaire. Sending a questionnaire via email to all managers is not as personal as submitting a questionnaire via email by the study investigator. There is also the potential for an email to be missed due to the volume of emails received by all recipients. The low response rate of 21% is a limiting factor in this study, as the results are limited to an 88% confidence level. Therefore the results of this study cannot be generalized to the entire study population. Secondly, in order to ensure respondent anonymity, the demographic questions did not ask at which cancer centre the respondent was employed. If this demographic had been known, it could have assisted in having a better understanding of whether there was a true representation across Ontario. Furthermore, knowing these demographics could have allowed the results to be compared between various cancer centres.

A third limitation of the study is the inclusion of a five-point Likert scale for rating responses that included a "neutral" or "sometimes" option to the multiple choice questions and resulted in some responses being difficult to analyze. Future studies using a questionnaire with a 4-point Likert scale format that excludes the “neutral” or “sometimes” option would be more advantageous.

Conclusions:

With the knowledge that cancer causes some level of emotional distress in everyone [1], it is crucial to ensure that all health care professionals are comfortable with screening for, addressing and managing these symptoms. This aligns with CCO’s anxiety and depression practice guidelines designed for use by all health care professionals. Although many RTs feel relatively comfortable addressing anxiety and depression with patients, the majority of respondents do feel they would benefit from further education in this area. RTs were more comfortable addressing the symptoms of anxiety than depression and all suggested topics for additional education were rated as being important. It was felt that this information would be best relayed in an education information session format. The majority of RTs surveyed indicated that ESAS is a valuable tool for assessing and addressing symptom management of anxiety and depression; however it is rarely incorporated into current practice. Accessibility was listed as one of the main reasons for the lack of incorporation into RTs’ current practice. In many oncology departments, two computer information systems exist, and these two systems do not communicate with one another. The computer information system that houses the radiation therapy delivery system is often different than the computer information system that houses the ESAS scores. Methods to more easily incorporate this valuable information into RTs’ current practice should be examined during future research.

Providing additional education and facilitating easier access to patients’ ESAS scores will ideally assist in increasing RTs’ comfort levels with respect to addressing the symptoms of anxiety and depression with their cancer patients, and therefore increase routine screening and timely management for these symptoms. Improving the comfort level of RTs will aid in eliminating the taboo surrounding emotional distress. These improvements will better align to meet CCO's practice guidelines and help reach the goal of improving the patient experience along every step of the cancer patient journey.

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