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Original article

Is it possible to improve communication around radiotherapy delivery: A randomized study to assess the efficacy of team training?

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ABSTRACT

Background and purpose: The aim of this study was to assess the efficacy of a 38-h communication skills training program designed for multidisciplinary radiotherapy teams.

Materials and methods: Four radiotherapy teams were randomly assigned to a training program or to a waiting list. Assessments were scheduled at baseline (T1) and then after the training was completed or four months later (T2), respectively. Communication around radiotherapy delivery was assessed based on audio recordings of the first and last radiotherapy sessions in order to assess team members' communication skills and the expression of concerns by breast cancer patients (analyzed with content analysis software LaComm).

Results: 198 radiotherapy sessions were recorded. During the first radiotherapy sessions, members of the trained teams exhibited more assessment skills ($p = 0.048$), provided more setting information ($p < 0.001$), and used more social words ($p = 0.019$) compared to the members of the untrained teams. During the last radiotherapy session, members of the trained teams used more assessment skills ($p = 0.004$) and patients interacting with members of the trained teams expressed more sadness words ($p = 0.023$).

Conclusion: Training of multidisciplinary teams has the potential to transfer skills that affect the short exchanges that take place around radiotherapy delivery.

Over the last few decades, several randomized controlled trials have assessed the efficacy of communication skills training programs [1]. These communication skills training programs mainly focused on training individuals, and evaluated dyadic exchanges in the context of two-person interviews [1–4]. Interestingly, specific care contexts, such as radiotherapy delivery, have rarely been studied.

Communication around radiotherapy delivery is challenging for several reasons. First, radiotherapy is a highly technical treatment; second, treatment delivery is invisible; and third, side-effects often have a delayed onset or can fluctuate throughout treatment [5]. As a result, patients often express numerous concerns regarding radiotherapy treatment and its side effects [6–10]. Furthermore, many patients experience feelings of anxiety at the start of their treatment [6,11]. Communication in the radiotherapy context involves the transmission of complex information, and regular assessment of the patients' physical state and of his or her information and supportive needs. Indeed, studies have shown that patients are mainly dissatisfied due to a perceived lack of information [12–14].

Communication exchanges with patients in radiotherapy have been found to primarily occur near the treatment machine [15] or when patients move from the waiting area to the treatment room [16]. These exchanges are often short and they occur in uncomfortable contexts. In addition, radiotherapy treatments involve various professionals who need to be aware of their different roles and are not consistently matched with the same patients over

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many weeks of treatment. Therefore, continuity of care for patients requires that information transmission occurs between professional colleagues. Optimal communication regarding radiotherapy delivery requires that radiotherapy team members possess a repertoire of skills that allow them to communicate with both patients and their colleagues. However, it is important to note that healthcare professionals involved with radiotherapy treatment typically deal with a heavy workload and have many time constraints, and this may prevent them from providing high quality psychosocial care [16]. Therefore, professionals need to be trained to master the skills needed to balance both the physical and emotional needs of a patient during treatments, and this training is seldom provided [17].

To our knowledge, only two communication skills training programs have focused on this particular care context [18,19]. In the first study, the training of radiation oncologists resulted in an increase in patients' participation in the initial radiation oncology consultations [18]. Second, in previously published results of the present study, completion of the training program allowed the team members to transfer their learned communication skills within the context of radiotherapy planning appointments and patients' satisfaction with their care was improved [19].

It was hypothesized that the learning and transfer of communication skills that are relevant in clinical practice would be promoted by a team training. Positive team attitudes from colleagues toward the skills could also further optimize the transfer [20]. In the present study, the first and last sessions were chosen for assessing the transfer of communication skills since these sessions are often highly technical and very short, similar to all of the sessions of treatment. However, the first and last sessions represent significant encounters for the patient. For example, at the first session of treatment, patients often experience fears regarding their treatment [9,21], clinically relevant anxiety [6,11], they express numerous treatment-related information needs [7], and it is often their first contact with the machine that will deliver their treatment. During the first session, team members have an opportunity to create a relationship with the patient, to transmit information about what will happen and how, and to evaluate the patient's emotional state. In contrast, the last session of treatment represents a final opportunity for patients to have daily contact with the medical team. Patients may express mixed feelings that reflect relief as a result of their treatment being completed, anxiety due to uncertainty about the future and long-term side effects, or they present depressive affects [6,7].

Therefore, the aim of the present study was to assess the impact of a 38-h communication skills training program on the transfer of learned skills in radiotherapy sessions using a randomized controlled study design. In particular, communication that occurred during the first and last radiotherapy sessions was assessed. It was hypothesized that the training program would lead to an increase in the transmission of treatment-related and setting information at the first treatment session. Then, at the last session, the professionals in the trained teams would potentially use directive and checking questions more frequently to verify each patient's information needs [7]. In both sessions, it was anticipated that the professionals in the trained teams would use more open-assessment and support skills and would be more receptive to patients' expression of concerns than the members of the untrained teams.

Materials and methods

Study design and assessment procedures

Four multidisciplinary radiotherapy teams were randomly allocated prior to the first assessment time to either a 38-h training program (training group) or a waiting-list (waiting-list group). To be included, team members needed to be able to speak French and needed to be willing to participate in the training program and its assessment procedures. Among the 217 recruited members, a total of 96 team members took part in the training program: 68% ($n = 65$) of these subjects were members of the teams allocated to the training group and 32% ($n = 31$) were members of the teams that were allocated to the waiting-list group. All team members agreed to participate in the assessment procedure. Assessments for the training group were scheduled following randomization (T1) and again after the training program (T2). Assessments for the waiting-list group were scheduled at T1 and 4 months after T1 (T2) (Fig. 1). Two different cohorts of breast cancer patients were recruited at the four months interval: one cohort participated in the T1 assessment and one cohort participated in the T2 assessment. Audio recordings were made for the first and last radiotherapy sessions for each patient in both cohorts. These recordings were started upon the arrival of the patients in the radiotherapy unit and ended when the patients left the unit.

Communication skills training program

The 38-h communication skills training program included two modules: a patient-oriented communication skills training module and a subsequent team-resource-oriented communication skills training module. Sessions were scheduled over a 4-month period, which allowed team members to practice their newly acquired skills and were organized into small groups (5–9 participants). Training was learner-centered, skills-focused, and practice-oriented. It included cognitive, behavioral, and modeling components [22,23].

The 16-h patient-oriented communication skills training module included five sessions. The first 4-h session included the entire radiotherapy team and focused on presenting information regarding patients' distress during radiotherapy and conducting practical exercises involving communication in oncology. The other four 3-h sessions were organized into small mono-disciplinary groups and were designed to improve the team members' abilities to communicate with patients according to their own professional roles.

The 22-h team-resource-oriented communication skills training module included seven sessions. The six 3-h sessions were organized in small interdisciplinary groups, including at least one team member from each discipline, and included 1-h of information summarizing different forms of collaboration, and 17-h of role-playing exercises. These sessions were designed to improve each team member's ability to communicate with both patients and colleagues. At the end of the training program, the entire radiotherapy team took part in a 4-h session which provided a summary of the previous sessions, it assessed the participants' satisfaction, and it facilitated a discussion about the training program. A more detailed description of this training program has previously been published [17].

Radiotherapy sessions

The transfer of acquired communication skills was assessed in the first and last radiotherapy sessions of cancer patients undergoing radiotherapy for breast cancer. To participate in this study, the following criteria had to be met: being able to speak French, being at least 18 years old, diagnosed for the first time with non-metastatic breast cancer, receiving a first radiotherapy treatment, and being free of cognitive impairment. There were two different cohorts of patients that were recruited, one at T1 and one at T2. The patients in both cohorts provided written informed consent, they completed a demographics questionnaire before their radiotherapy planning session, and they completed a Hospital Anxiety

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