Short Communication

Effectiveness of a brief psycho-oncology training program for general nurses: a preliminary study

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Abstract
Many nurses are not confident in management of psychological distress in cancer patients. We developed a brief psycho-oncology training program for general nurses, and explored the usefulness of the program preliminary. Seventy-two nurses in 17 designated cancer hospitals received a 4-h program comprising an e-learning lecture on assessment and management of normal psychological responses to cancer and an onsite workshop, including a role-play exercise and group work. Primary outcomes were changes in self-reported confidence, knowledge and attitudes toward caring for patients with normal psychological response between pre-training and post-training. All outcomes, excepting several aspects of attitude, were significantly improved after training (P < 0.05). Intervention acceptability was good as no participants dropped out and all participants considered the program useful in clinical practice. Further consideration is required to clarify whether the cancer care provided by nurses who received psycho-oncology training is effective to ameliorate psychological distress in cancer patients.

Key words: psycho-oncology, communication, education (public health professional), neoplasms, palliative care

Introduction
Cancer patients at every stage throughout their treatment have various psychological distress. Psychological distress is associated with suffering, low quality of life, poor adherence to anti-cancer treatment and distress on family members (1–3). Therefore, medical staff should assess psychological distress and provide care for them continuously and regularly during their cancer trajectory. The Cancer Control Act in Japan requires national and local governments to take measures to raise the number of medical staff who provide palliative care including palliating psychological distress for patients with cancer.

All nurses caring for cancer patients play a key role in assessment and management of psychological distress. The National Institute for Health and Care Excellence (NICE) suggests that nurses have to appropriately assess psychological problems in cancer patients and make an effort to avoid causing psychological harm (4). In addition, they are expected to communicate compassionately with those affected by cancer, to establish a supportive relationship and to provide information about emotional special support services when the psychological burden is severe and complicated.

Actually nurses can play important roles in psychological and informational support for patients receiving cancer diagnosis from physicians (5). However, recent studies have shown that many nurses still perceive difficulty in communicating with cancer patients with psychological distress, and lack sufficient confidence of assessment and management in their clinical routine practice (6,7).

We previously developed a 16-h psycho-oncology training program aimed at enhancing oncology nurses (certified nurse specialist (CNS) and certified nurse (CN) associated with oncology) abilities to assess and manage common psychological problems in cancer patients. The program consisted of four components to deal with four common psychological problems in cancer patients: normal psychological response to cancer, clinically significant distress, suicidal thoughts and delirium. The results of a randomized controlled trial indicated that the program improved oncology nurses’
We developed a new psycho-oncology training program for general nurses to gain the appropriate confidence, knowledge and attitudes toward normal reactions of cancer patients.

Methods

Procedures

We conducted an open-label, uncontrolled trial between October 2013 and March 2015 in Aichi prefecture, Japan. Participants received a 4-h program composed of an e-learning lecture on assessment and management of psychological problem and an onsite workshop including a role-play exercise and group work. The main outcomes were changes in between pre-intervention and post-intervention self-reported confidence, knowledge and attitudes toward normal reactions of cancer patients.

Participants

Eligibility criteria for participants were (1) licensed as a registered nurse in Japan and (2) working with cancer patients among 23 designated cancer hospitals in Aichi prefecture. The exclusion criteria included having a CNS or CN license as defined by the Japanese Nursing Association. Nurses were recruited by sending letters to those hospitals.

We did not obtain approval by the Institutional Review Board because the subjects of this study were medical staff and there was minimal risk to participants. Written consent was obtained from each participant after a thorough explanation of the purpose and minimal risk to participants. Written consent was obtained from each participant after a thorough explanation of the purpose and methods of the study, and which was carried out according to the provisions of the Declaration of Helsinki.

Interventions

We developed a new psycho-oncology training program for general nurses based on the previously developed program for oncology nurses described in detail elsewhere (8). Two major modifications were made to extract the content adequately for general nurses, and to improve program feasibility.

Regarding the contents, we focused on the normal psychological response to cancer, in accordance with expected roles for general nurses in each scale. The scores for the Confidence Scale ranged from 0 to 30, with higher scores indicating higher confidence. In the Knowledge Scale, participants were asked true-or-false questions that assessed knowledge of normal reaction in cancer patients. The possible score ranged from 0 to 5, with higher scores indicating greater knowledge.

We received facilitation training from psychiatrists specialized in psycho-oncology for 4 h using manualized materials which were developed based on the experience of the previous study (8).

As a result, the new program consists of two main components. The first one is an e-learning lecture on assessment and management of normal psychological distress. The second is an onsite training which includes a review of e-learning lecture (2.5 min), a role-play exercise (120 min), group work to discuss the management of vignette cases (30 min), and a debriefing and Q & A (35 min). The role-play exercise was centered on communication skills training for this program in the assumption of typically clinical settings. The role-play exercises were conducted with small groups of three participants and led by a facilitator. Group work and debriefing were carried out with six participants and two facilitators. Whole program was provided using manualized materials to control the quality of the intervention.

Assessments

Self-reported confidence and knowledge were assessed using the Confidence Scale and the Knowledge Scale, a self-administered scale developed by previous research. These scales were examined for substantial reliability (8). We used one of the four subscales (Normal response) relevant to general nurses in each scale. The scores for the Confidence Scale ranged from 0 to 30, with higher scores indicating higher confidence. In the Knowledge Scale, participants were asked true-or-false questions that assessed knowledge of normal reaction in cancer patients. The possible score ranged from 0 to 5, with higher scores indicating greater knowledge.

Attitudes Toward Caring for Patients Feeling Meaninglessness (ATCPF-M) is a self-rating questionnaire to specifically quantify nurses’ self-reported practice and attitudes toward caring for terminally ill cancer patients who are experiencing feelings of meaningless.

This scale assesses three dimensions of nurses’ attitudes: Positive Appraisal, Willingness to Help and Helplessness (9). This instrument validity and reliability was confirmed (10).

Intervention acceptability was assessed, using an investigator-derived questionnaire, in terms of the participants’ perceived usefulness of the entire program and role-play exercises, as well as the level of distress caused by the role-play exercises.

Participants’ background information including sex, age, education and years since qualified was also obtained using an investigator-derived questionnaire.
The intervention effectiveness was examined by conducting paired \( t \)-tests for the main outcomes. We used multiple imputation for missing values. In addition, we calculated an effect size (Cohen’s \( d \)) on each outcome to compare with the previous study. Statistical analysis was performed using IBM SPSS software, version 20.0, for Mac OS (SPSS Inc., 2011). All tests were two-sided and the significance level of \( P \) values was set at 0.05.

**Results**

Seventy-two nurses in 17 designated cancer hospitals that played central roles in cancer care gave consent to participate in our research. All participants received and completed the intervention and pre- and post-assessments. Table 1 shows the participants’ demographic characteristics.

Table 2 shows the change of total outcome scores. The score of the Confidence Scale was significantly improved after intervention. The Knowledge Scale and the subscale ‘Positive Appraisal’ of the ATCPFM were also significantly improved in post-intervention. There were no significant differences in other subscales (Helplessness, Willingness to Help) of ATCPFM. The effect sizes (Cohen’s \( d \)) observed in the present study were comparable to those found previously (0.21 (Willingness to Help) and 0.09 (Helplessness)) of ATCPFM. The effect sizes (Cohen’s \( d \)) observed in the present study were comparable to those found previously (0.86 (Confidence Scale), 0.50 (Knowledge Scale), 0.70 (Positive Appraisal), 0.21 (Willingness to Help) and 0.09 (Helplessness)) (8).

All participants regarded the overall program as useful, and 94% [95% confidential interval (CI), 89–99%] indicated that they would recommend the program to their colleagues. Participants considered the each session useful (role play: 99% [95% CI, 93–100%], group work: 97% [95% CI, 93–100%], e-learning lecture: 80% [95% CI, 59–80%]). Among them, 39% [95% CI, 27–50%] of participants expressed that they perceived some level of distress associated with the role-play, and 6% [95% CI, 2.6–11%] reported that it had triggered distress from past painful experiences with patients.

**Discussion**

The results of this study indicated that the new brief psycho-oncology training program for general nurses was effective in enhancing nurses’ confidence, knowledge and attitude associated with caring cancer patients with normal psychological response to cancer. In addition, process measures clearly indicated that this program was useful for participants.

Since the number of cancer patients are increasing, opportunity to have psycho-oncology training is needed even for general nurses. The effect sizes obtained in this study were mostly comparable with those found in the previous randomized controlled trial we conducted with oncology nurses (8). It is noteworthy that this effectiveness was achieved regardless of the new aspects adopted to improve feasibility: internet-based learning, shortening the onsite training, and using Clinical Psychology masters’ students as facilitators. We consider these aspects can be applied to any other psycho-oncology programs than this program.

Some limitations of this study need to be considered. First, we used an open-label, uncontrolled trial design. Randomized controlled trials were needed to obtain robust findings. Second, this research did not include patient-reported outcomes. It is not clear whether the improvement of the Confidence Scale, the Knowledge Scale and ATCPFM actually contribute to ameliorate the patient’s psychological distress. Third, long-term effectiveness was not warranted. Fourth, the results were obtained among participants with average 14 years of experience. The results may not be generalized to nurses with less experience. In addition, this program focused on the communication and care for patients’ normal psychological response to cancer. Further consideration is needed to investigate whether adequate training programs help general nurses to support patients with clinical psychological problem such as depression.

Nurses play a key role in providing care for cancer patients with psychological distress. A brief psycho-oncology training program can improve nurses’ confidence, knowledge and attitude regarding psychological care for such patients. Further research is required to determine whether the cancer care provided by nurses who received psycho-oncology training is effective to ameliorate the psychological distress in cancer patients.

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**Conflict of interest statement**

None declared.
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