

A nursing intervention that reduces symptom burden during chemotherapy

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SUMMARY

The aim of this dissertation was to develop and evaluate a nursing intervention that reduces symptom burden during chemotherapy. We developed an intervention that uses motivational interviewing to support self-efficacy and to improve symptom self-management. In a quasi-experimental study in adult patients treated with chemotherapy, the intervention significantly reduced overall symptom distress and symptom severity at all three time points in the study (three, six and twelve weeks after the start of the treatment).

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INTRODUCTION

Treatment with chemotherapy is associated with multiple symptoms causing distress, affecting the patients' quality of life and sometimes interfering with the patients' treatment plan. Given the (largely) ambulatory setting of chemotherapy, self-management support makes an indispensable part of cancer care. Patient education and written information materials have been the cornerstone of self-management support during chemotherapy for many years. However, self-management remains generally poor, with patients waiting to self-manage their symptoms until they become persistent or severe and with poorer self-management in patients with higher number of symptoms.^{1,2}

In the spirit of the MRC framework for developing and evaluating complex interventions to improve health, we developed and evaluated a nursing intervention aimed at supporting patients to adequately deal with symptoms at home and ultimately at reducing chemotherapy-related symptom burden.³

RESEARCH

We prepared for the intervention development by conducting a systematic review and a qualitative study.

The systematic review studied the characteristics and the effectiveness of complex nursing interventions aimed at reducing symptom burden in adult patients treated with chemotherapy.⁴ We included eleven randomised controlled trials. Interventions were heterogeneous with regards to content as well as intervention dose. Patient education at the start of the treatment and regular symptom assessment with further coaching throughout treatment were core components of the majority of the interventions. Overall, results were inconsistent with some failing to show any significant effect and others reducing aspects of symptom burden by 10-88%. Unfortunately, the description of the interventions was generally meagre, and most studies did not evaluate or report on intermediate outcomes, making it difficult to understand their effect mechanism.

Next, we performed a qualitative study to unfold how adult patients with cancer deal with chemotherapy-related symptoms.⁵ In-depth interviews showed that patient's symptom experience and symptom-management style are very individual, depending on the patient's personal context, illness perception, coping style as well as aspects related to professional care (e.g., professionals' attitude towards symptoms and symptom support). Also, the patients' personal symptom-

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KEY MESSAGES FOR CLINICAL PRACTICE

- 1 The results of this dissertation endorse the shift from traditional patient education to a more collaborative approach.**
- 2 Self-management support targeting patient self-efficacy and outcome expectations reduces symptom distress and severity.**
- 3 This requires training of nurses (and other healthcare professionals) as well as adapted patient information tools.**

management style is largely influenced by their perceived sense of control. Some patients' overall sense of fatalism in getting symptom relief was a compelling finding of the study. Two conclusions were drawn: 1) In order to provide self-management support, exploration of the patient's personal perspective, motivators and barriers is indispensable, and 2) efforts to improve patients' self-management should be targeted at enhancing perceptions of control.

Using the evidence from the systematic review and qualitative study, we systematically developed a nursing intervention using the intervention mapping approach. The process included a needs assessment, the formulation of proximal program objectives, the selection of evidence- and theory-informed methods and strategies, the production of the program components and the planning for implementation and evaluation. We made use of evidence, theory and expertise at all stages. A multidisciplinary panel of health care professionals and a panel of patients and family caregivers were actively involved throughout the development stages. Our so-called CHEMO-SUPPORT intervention used motivational interviewing (MI) and targeted four performance objectives: 1) preventing side effects, 2) monitoring side effects, 3) reporting and discussing side effects and 4) managing/relieving side effects. MI is a goal-directed counselling style for eliciting behavioural change, holding to the principle that motivation is elicited from the patient and not imposed from outside. When it comes to eliciting behavioural change and improving patient outcomes, theory and evidence support this collaborative model of traditional patient education with the expert providing advice. The main principles of MI are exploring ambivalence, reflective listening, reinforcing positive behaviour and rolling with resistance. The process includes establishing relationships; setting an agenda; assessing importance, confidence, and readiness. Additionally, we reoriented the patient information tools to better support

the determinants of symptom self-management, namely self-efficacy and outcome expectations. One hundred two patients participated in the review of the information tools, providing rich descriptions of symptoms and self-care advice, as well as quotes. The final intervention had four components: 1) in-person coaching at the start of treatment, 2) telephone counselling while at home, a few days later, 3) written patient information, and 4) online/on-call access to nursing support. Additional coaching was to be provided in the case of (a risk for) poor symptom self-management. An intervention manual was developed, and six oncology nurses were trained to provide the intervention in the context of a quasi-experimental study.

Finally, we evaluated our intervention using a mixed-methods approach. We performed a quasi-experimental study using a sequential design to study the effect of the CHEMO-SUPPORT intervention in adult patients with cancer starting their first chemotherapy treatment.⁶ A control group (n=71) received usual care and an intervention group (n=72) received usual care and the CHEMO-SUPPORT intervention. The primary outcome, overall symptom distress and other symptom-related outcomes were self-reported at the start of the treatment (baseline) and at three, six and twelve weeks. Self-efficacy, outcome expectations and symptom self-management, the intermediate outcomes of the intervention, were measured at one time point. The CHEMO-SUPPORT intervention produced significantly less worsening of overall symptom distress and overall symptom severity during twelve weeks of follow-up ($p < 0.05$). Self-efficacy and outcome expectations regarding symptom self-management (measured at six weeks) were significantly higher in the intervention group than in the control group. Self-management was better in the intervention group but this wasn't statistically significant. The positive effects of the study highlight the importance of providing goal-directed self-management

support using MI for reducing chemotherapy-related symptom distress.

In addition, we conducted a qualitative study to explore the patient experience of the intervention.⁷ All 71 patients who had received the CHEMO-SUPPORT intervention completed a questionnaire. Semi-structured interviews were held with nine patients to get a deeper understanding of the patient experience. Nurses' caring support, combined with their competent care, gave patients a sense of reassurance, and at the same time made them feel (better) able to deal with their symptoms. The informational brochure that was developed in collaboration with patients, was highly appreciated as their 'companion' at home, offering support and expert advice. The importance ascribed to the intervention varied according to the individual symptom experience and coping mechanisms of the patients and to their experience with usual care and symptom-management support. The study shows that the skilled companionship of the oncology nurses as well as supportive information materials were vital to improve patient self-efficacy in dealing with side effects during chemotherapy.

CONCLUSIONS

Using evidence, theory and expertise from patients and professionals, we were able to develop a (nursing) intervention

that successfully reduced symptom distress and symptom severity during chemotherapy.

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