EFFECTIVENESS OF NURSE-LED INTERVENTIONS ON DEPRESSION AMONG PATIENTS WITH CHRONIC DISEASES

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Abstract

Introduction: The degree to which this approach would be effective if incorporated into the overall health care management for those with depression and long-term physical health difficulties is to date unclear. The feasibility and acceptability of the nurse-led mental health promotion intervention is addressed by many studies. This review was conducted in order to evaluate the effectiveness of nurse-led interventions on the prevention of depression among patients with chronic diseases.

Methods: Eligible studies were not restricted by language to avoid language bias. We searched the following databases for eligible studies: MEDLINE (via PubMed) CINAHL PsycINFO, and Cochrane Library. Two of the reviewers independently screened the titles and abstracts to identify potentially relevant studies. Two reviewers then independently assessed their eligibility based on a full-text review. Disagreements between the reviewers were resolved by discussion to reach a consensus. Data were recorded using an Excel spreadsheet, and data extraction was performed by two reviewers independently. This was completed by two reviewers; where discussions between them did not lead to a consensus, a third assessor was involved.

Results: Several meta-analyses have been performed to determine the effects of self-care interventions on people with heart failure, revealing that self-care interventions are propitious to lower hospitalization and mortality rates and improve quality of life as well as heart failure knowledge. Interventions sought for review were different and included screening, education, referral, consultation, counselling, medicine administration, complementary therapy or any psychological intervention that could be instigated within the scope of a community nurse's role. Interventions sought for review were different and included screening, education, referral, consultation, counselling, medicine administration, complementary therapy or any psychological intervention that could be instigated within the scope of a community nurse's role.

Conclusions: Early detection, continuous monitoring, and support through nurse-led community service programs are essential to sustain the mental health of family caregivers. interventions for patients with chronic diseases that were led by nurses have proven effective in reducing depressive symptoms and physical symptoms, helping patients cope with physical impairments, and reducing emotional distress.

Keywords: Nurse, Intervention, Depression Psychological, Effectiveness.

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Introduction

Cognitive behavioral therapy (CBT), a psychosocial intervention, has been widely used to manage depression and coping among caregivers. As previously discussed, the effects of CBT on the depressive symptoms and coping strategies of caregivers are currently unclear, and little research has focused on nurse-led, individual-based cognitive behavioral interventions for community-living family caregivers [1].

Many studies have reported similar positive long-term effects of nurse-led interventions on depressive symptoms but they involved a nurse working in collaboration with an team [2, 3]. With the rapid increase in the number of seniors living in the community, depression is becoming a serious problem that, without intervention, will place extensive burdens on healthcare resources. Nurse-led interventions are another option, and these have received attention in several randomized controlled trials (RCTs), owing to their low cost and simplicity [4]. However, a systematic review of the effects of nurse-led interventions towards preventing mental health disorders after ICU discharge has not previously been conducted. Nurses, especially those in the ICU, have a greater impact on the patients because they are directly involved in patient care and spend a substantial amount of time with these patients [5].

Depression is a serious global social problem. According to the World Health Organization survey of the global burden of diseases, depression was ranked as the third most serious problem worldwide in 2004, and by 2030, depression is projected to become the leading burden of disease [6]. Effective and accessible treatment options for depression are greatly needed. Cognitive behavioral therapy (CBT) has consistently been shown to be effective for depression in a large database of clinical trials, and patients often prefer psychological treatment to pharmacotherapy [7]. Since then, awareness of CBT has gradually spread, not only among health care professionals but also the general public. The inclusion of CBT for mood disorders in the national health insurance scheme with pharmacotherapy has historically been much more common. However, patient access to CBT services is extremely limited owing to an insufficient number of CBT providers in the current health insurance system, which requires CBT to be conducted only by skilled psychiatrists [8]. In several countries, especially in the United Kingdom, nurses have played a significant role in disseminating CBT. Other studies have also demonstrated the efficacy of nurse-led CBT for a wide range of mental disorders Depression is commonly associated with long-term physical health conditions such as diabetes, ischemic heart disease, stroke and cancer with a several fold increase in prevalence where two or more of such conditions co-exist [8]. This results in worsened physical and psychological health outcomes and increased treatment cost. Collaborative care (CC) is based upon an integrated care model which has been applied in the context of long-term conditions. Limited evidence exists on which professionals are ideally placed to provide the case manager role. In the UK, evaluation of practice nurses supporting depressed patients following brief training in collaborative care methods showed promising results.

The degree to which this approach would be effective if incorporated into the overall health care management for those with depression and long-term physical health difficulties is to date unclear [9-11]. Conducting an analysis of current home care practice to determine how depression should be addressed, as well as, the identification of limiting factors that could influence effective use of the intervention. The outcome evaluation can examine the effect of the mental health promotion intervention on clinical outcomes among the target population. The feasibility and acceptability of the nurse-led mental health promotion intervention is addressed by many studies.

This review was conducted in order to evaluate the effectiveness of nurse-led interventions on the prevention of depression among patients with chronic diseases.

Methods

Eligible studies were not restricted by language to avoid language bias. We searched the following databases for eligible studies: MEDLINE (via PubMed) CINAHL PsycINFO, and Cochrane Library. Additionally, we searched for ongoing trials registered on the World Health Organization international clinical trials registry platform on September 2022. We also attempted to identify additional relevant studies by manually searching the reference lists of the studies that were returned by the search and articles citing such studies (found on Google Scholar). If sufficient information was unavailable, we contacted the authors of the study. Two of the reviewers independently screened the titles and abstracts to identify potentially relevant studies. Two reviewers then independently assessed their eligibility based on a full-text review. Disagreements between the reviewers were resolved by discussion to reach a consensus. Data were recorded using an Excel spreadsheet, and data extraction was performed by two reviewers independently. This was completed by two reviewers; where discussions between them

did not lead to a consensus, a third assessor was involved.

Results and discussion

Nurse-led interventions refer to interventions predominately conducted by nurses but do not preclude the presence or appropriate involvement of relevant personnel (e.g., other healthcare professionals). Current evidence has demonstrated the favorable effects of nurse-led interventions on the management of chronic diseases. Several meta-analyses have been performed to determine the effects of self-care interventions on people with heart failure, revealing that self-care interventions are propitious to lower hospitalization and mortality rates and improve quality of life as well as heart failure knowledge. There is still uncertainty, however, whether nurse-led heart failure self-care interventions are beneficial to ameliorate self-care behaviors and the associated factors, including self-efficacy, depression, and illness perceptions [9]. Working in close cooperation with attending physicians, these nurses can have an important role in the management of symptoms, assessment of depressive symptoms, and support and education about depression and its effects.

Interventions sought for review were different and included screening, education, referral, consultation, counselling, medicine administration, complementary therapy or any psychological intervention that could be instigated within the scope of a community nurse's role. The review topic was deliberately broad and the identified studies investigated many different nurse-led interventions.

In a follow-on study sought evidence of the longer term benefits by repeating Short-CARE on 64 subjects over 6-23 months. Of the three studies reporting randomization to intervention/control groups [12], none reported their randomization processes or whether selection bias was controlled for using allocation concealment. Notable group differences were reported as rates of marriage [13], and duration of weeks of home care service (longer in control group) and screening as a component of a more in-depth intervention, a minor component of four studies. In studies where screening alone was the focus, nurse judgements or usual admission assessments were compared with validated tools and in each case the tool was superior for detecting an actionable level of psychiatric symptoms. Patients receiving the nurse-implemented plan showed more improvement in their mean depression score over three months than the patients receiving usual care [14]. Benefits, however, were not generally sustained over the longer term: at follow up at 6-23 months an intention-to-treat analysis demonstrated that the mean depression scores of the intervention group as a whole deteriorated. There was a demonstrable benefit to the mental health of the older persons participating in the intervention study. The intervention group showed a reduction in their mean of depression trending towards significance. Similarly, the Model intervention was more effective for reducing psychiatric symptoms for older patients with a psychiatric diagnosis than usual. In addition, 11% of all subjects had undesirable moves to either a nursing home or to a board-and-care home, although no difference was detected between intervention and control [13]. Adherence to treatment was measured in all but two of the studies during face-to-face appointments or telephone follow-up contacts with nurse case managers. In all studies, patient progress determined how the intervention was continued. psychological support was used in every study reviewed [15]. Five studies did not report details of nurse training; three studies outline broad areas of training only briefly with no specific components; and reported training using written materials, tutorials and three months of supervised practice. Comprehensive information concerning nurse training was reported in five studies.

Due to the difficulties of blinding participants, therapists and other associated health professionals in psychological interventions. Quality adjusted life years based upon the EQ5D were estimated and no significant cost differences were identified between the nurse intervention and usual care. Bootstrap analysis indicated limited probability (63%) that the nurse intervention was less costly and more effective than usual care [16]. Few studies did not disclose the duration but specified the training names: multimodal intervention and problem-solving therapy training. In three studies, the intervention arm was led by a single undiscipline provider, only a nurse. All these studies compared the nurse-led with the GP-led intervention. Of which, two were exclusively between nurse and GP. In five studies, the nurse worked collaboratively with GP and another provider, for example, psychiatrist [17].

Several potential explanations exist for the decrease in depressive symptoms after the cognitive behavioral intervention. Thus, mental health nursing services, such as the cognitive behavioral intervention reported in this article, are an important source of support for the family caregivers of PWD. Therefore, further investigation is necessary to determine the long-

term effect of this intervention. The intensity of the cognitive behavioral intervention provided in this study may be inadequate to eradicate depression. Instead, the intervention should occur regularly to effectively alleviate the depressive symptoms of caregivers over the long term and be subject to longer follow-up to further confirm the effect. Moreover, the effect of the intervention may be subject to participant trust in nurses, learning capacity, and adherence to the intervention as well as the nurses' communication skills. Future studies should set goals for caregivers and nurses in each session to maintain the quality of the intervention. The intervention may be helpful in training family caregivers to develop active coping strategies that reduce their depressive symptoms [1]. Although few studies indicated that the nurse-led arm was not superior to the comparator, the outcome demonstrated significant improvement [18, 19]. Shifting and sharing mental health-care delivery to the nurses requires the involvement of several independent and interdependent components; accordingly, this intervention can be considered as a complex intervention.

The involvement of single-provider or collaboration can distinguish whether an intervention is shifted or shared, respectively. Studies included have a high degree of heterogeneity, including various intervention durations and outcome measurements. The diversity of research designs in terms of number of subgroups, conditions of intervention or control, and means of delivery used in these studies may be largely responsible form findings inconsistencies [20]. Participants in the intervention group may have developed coping skills for problem solving and stress reduction. The strategies of cognitive reappraisal used in the intervention group helped caregivers consider the benefits and rewards of caregiving, which may have enhanced their perceptions of the meaning of caregiving and self-worth. Although the group differences in depressive symptoms were significant, confirming the effectiveness of this cognitive behavioral intervention, depressive symptom scores dropped steeply with time. Finally, depressive symptoms in the control group also decreased significantly with time, although not as significantly as in the intervention group. Overall, the findings suggest that the nurse-led mental health promotion intervention is a promising model that has the potential for moving the field toward greater dissemination of evidence-based depression care into real-world practice settings. The research built capacity in depression care and fostered collaborative partnerships across the mental healthcare delivery system that further enhanced the sustainability of the intervention. A final limitation is that it is impossible to assess the specific contributions of each of the various elements of this complex nurse-led intervention. In future studies, it would be important to examine whether one or more of the components of the intervention are responsible for the effects or whether all components of the intervention are necessary ingredients. In the literature, interventions for patients with chronic diseases that were led by nurses have proven effective in reducing depressive symptoms and physical symptoms, helping patients cope with physical impairments, and reducing emotional distress.

Conclusions

Several potential explanations exist for the decrease in depressive symptoms after the cognitive behavioral intervention. Thus, mental health nursing services, such as the cognitive behavioral intervention reported in this article, are an important source of support for the family caregivers of PWD. The intensity of the cognitive behavioral intervention provided in this study may be inadequate to eradicate depression. Instead, the intervention should occur regularly to effectively alleviate the depressive symptoms of caregivers over the long term and be subject to longer follow-ups to further confirm the effect. The intervention may be helpful in training family caregivers to develop active coping strategies that reduce their depressive symptoms. Early detection, continuous monitoring, and support through nurse-led community service programs are essential to sustain the mental health of family caregivers. To support these results, future research on nurse-led cognitive behavioral interventions should recruit larger samples and/or adopt strategies to minimize dropouts, attempt to maintain treatment fidelity and caregiver adherence, lengthen the time frame because the effect of this intervention may be evident over a longer term, confirm the effect of this intervention on active and passive coping, and

study the mechanisms that reduce depressive symptoms in caregivers.

Conflict of interests

The authors declared no conflict of interests.

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