**Evaluation of a training program to assist care staff to better recognize
and manage depression among palliative care patients and their families**

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Abstract

This study was designed to evaluate the effectiveness of a training program to improve the knowledge, attitudes, and self-efficacy of palliative care staff and thus enable them to better detect and manage depression among palliative care patients and their families. Participants were 90 professional carers who completed a four-session training program. Knowledge, attitudes, self-efficacy, and barriers to working with depressed patients were assessed preintervention, post-intervention, and at a three-month follow-up. The results demonstrated that compared to the control group, the intervention group had improved in all of these areas. Improvements were maintained at the three-month follow-up in all areas except attitudes. The results of this study indicate the importance of training in managing depression among palliative care staff. Booster sessions may be needed to ensure that training program gains are maintained.

Among patients receiving palliative care, depression is a common psychological disorder that results in significant reductions in quality of life (1, 2). Despite evidence that approximately 25 percent of patients will suffer from clinically diagnosable depression while receiving palliative care for a terminal illness (3), research indicates that only half of these patients are recognized as depressed (4), and even fewer will receive evidencebased treatment (5, 6). The family members of patients also represent a group at high risk of psychiatric disorders such as depression (7); however, they too often do not receive the support they need from palliative care services (8, 9). The low detection and treatment rates of depression highlight the difficulties of recognizing and providing pathways to care in these settings and indicate that professional carers in palliative services require more training and knowledge to address the psychological needs of patients and their families (10).

Non-physician professional carers in palliative care services — such as nurses, nursing assistants, and other allied health professionals — play a pivotal role in identifying depression among those in their care and in initiating referral processes that lead to appropriate treatment and support (10). It is thus important to train care staff to recognize the differences between depressive symptoms (which are common in the palliative care setting) and clinical depression. Professional carers' high level of routine contact with patients and their family members positions them well to recognize depression and to interface with mental health care professionals. However, these carers require specific knowledge, skills, and instruments to detect depression. Although professional carers themselves advocate for special training in these areas (11, 12), few appear to receive such intervention (11, 13, 14).

Difficulties related to the recognition of depression and the provision of pathways to care and support for patients and their family members have been associated with a number of issues identified in the broader palliative care literature. For example, professional carers' underestimation of depressive symptoms in patients (15), failure to accurately register

emotional worries (16), and preference for medically oriented explanations for emotional issues (11) may compromise their ability to detect the signs and symptoms of depression. Nurses are reluctant to engage patients in discussions of emotional issues (17), fear adverse consequences should they inquire about emotional difficulties, and feel ill-equipped to discuss depression management (16, 18). Professional carers also assume that patients with psychological problems will inform them of their concerns without being asked (19), despite the perception of a stigma attached to depression (20) and low rates of spontaneous disclosure (21).

Carers' focus on physical care and overreliance on somatic symptoms to detect depression (for example, fatigue, loss of appetite, and sleep disturbances) — symptoms that can overlap with a patient's medical condition or result from side effects of medication — may further decrease their ability to recognize depression among patients (11). Validated screening tools for depression in these settings, although effective (22) and easy to use (23), appear to be underutilized (11); a lack of confidence in their use is cited as a major barrier (24). Difficulty in differentiating the adaptive and appropriate grief reactions that are common in these settings from clinical depression is another barrier to the detection of depression (25, 26) that can impede the provision of appropriate support (27). Indeed, professional carers may view depression as a typical or natural reaction to terminal illness and therefore consider it largely untreatable (13). Furthermore, they may not detect depression because the way it is expressed in the terminally ill can be different from the way it is expressed in other populations (5).

This brief summary demonstrates that there is a wide range of barriers to the effective detection and management of depression in palliative care settings. Currently, however, there is a paucity of evaluated training interventions for professional palliative care staff that could equip them with the skills to recognize and manage depression among their patients. Cepoiu

and colleagues (28) evaluated a training program that provided strategies to better detect and respond to depression, communication training, and information on making appropriate referrals with a sample of 12 palliative care nurses. Results indicated increased confidence in managing patient depression and making referrals post-training. Sharpe and colleagues (6) reported on nurses' increased confidence and increased tendency to elicit patients' concerns following an intervention combining communication training, treatment information, and problemsolving therapy for depression; however, these results were not quantitatively measured. Passik and colleagues (29) conducted a one-hour focused intervention for 18 oncology nurses to improve their use of a semi-structured interview to detect depression. Increases in nurses' awareness and accuracy in detecting depressive symptoms were reported. Following a three-day workshop in communication skills, Wilkinson and colleagues (30) reported increases in palliative care nurses' confidence in their communication skills, while Turner and colleagues (12) reported increases in nurses' confidence — following a self-directed, manualized intervention on supportive care — in discussing emotional issues with patients and responding to patient distress. However, the latter two interventions contained few depression-specific components.

Although interventions trialled to date show promise for detecting and treating depression among patients in palliative settings, they have been limited by small sample sizes and a lack of comparison/control groups; they have also generally focused only on communication skills. Due to the myriad issues linked to detecting and supporting depressed patients and their family members in palliative settings, training programs would do well to provide comprehensive packages designed to increase professional carers' knowledge of depression as a disorder, increase their ability to recognize and support depressed patients, improve their attitudes toward working with depression, build their confidence in their skills and abilities, and reduce perceived barriers to this process. It is important that we spotlight

the problems associated with depression in this setting so that the emotional needs of patients and their families can be better addressed.

Through our study, in which we evaluated a controlled trial of a four-session training program for professional carers in palliative care settings, we sought to better understand, recognize, and provide support for depressed patients and their families. More specifically, the training program aimed to increase professional carers' knowledge of depression, improve their attitudes toward depression, increase their self-efficacy in working with depressed patients and their families, and reduce their perceived barriers to offering this care.

Method

Participants

The participants in this study were 90 palliative care staff (professional carers): 76 females and 14 males, ranging in age from 21 to 71 years (mean, 44.9; standard deviation, 10.7). Carers' experience working in a palliative care setting ranged between .08 and 30 years (mean, 8.0; standard deviation, 7.5). Participants were drawn from three palliative care services across the Australian state of Victoria. Professional carers at two of these sites — one regional (n=35) and one metropolitan (n=24) — acted as the intervention group and completed the four-session depression training program; professional carers at a third site (n=31) constituted the control group and did not receive training. The groups consisted of a mixture of nursing and allied health professionals (including occupational therapists, social workers, physiotherapists, counsellors, music therapists, and pastoral care workers). All participants completed program evaluation questionnaires at three time points.

Materials

Demographics

Background information was collected on the participants' gender, age, workplace, job title, years working in palliative care, and previous training in depression. In total, 73.3 percent (n=66) reported working in a hospital setting, 24.4 percent (n=22) worked in a community palliative care setting, and 2.2 percent (n=2) indicated that they worked across both hospital and community settings. In terms of job title, 56.7 percent (n=51) identified themselves as division I nurses (specialist trained nurses), 13.3 percent (n=12) as division II nurses (minimal training), and 30.0 percent (n=27) as allied health professionals.

In total, 38.9 percent (n=35) of participants reported having received previous training in depression. Of these, 51.6 percent (n=16) indicated that it had been part of a formal training course, 22.6 percent (n=7) had received the training at their current workplace, 25.8 percent (n=8) had received it in "other" ways, and four participants left this question blank. The remaining 59.9 percent (n=53) reported having received no previous depression training.

Knowledge of Depression

The questionnaire, entitled Understanding of Depression in Palliative Care Settings, consisted of 30 items designed to evaluate professional carers' knowledge of the signs and symptoms of depression, knowledge of the impacts of depression, and endorsement of myths associated with depression in palliative care patients. The questionnaire contained items such as: "Depression is associated with an increased difficulty in treating physical (medical) symptoms," and "Depression is a natural reaction to having a terminal illness." Questionnaire items were drawn from the Knowledge of Depression Scale (31), which has demonstrated good psychometric properties with aged care staff, or they were created by the researchers and were specifically relevant to the palliative care setting. These items were developed following a needs analysis conducted prior to the program development. Participants were asked to indicate their level of agreement with each of the statements on a four-point Likert

scale ranging from “strongly disagree” (1) to “strongly agree” (4). Ten items were negatively worded and reverse-scored. Total scores ranged from 30 to 120, with a higher score representing a higher level of knowledge of depression. A Cronbach’s alpha of $=.74$ indicated that the internal reliability for items in this scale was satisfactory.

Attitudes toward Depressed Patients

The Views of Depression in Palliative Care Settings Scale was composed of 21 items devised to assess professional carers’ attitudes toward working with depressed palliative care patients, including their attitude toward providing support to patients (and patients’ family members) to improve their psychological well-being. Items in this scale included: “Carers are in a good position to detect signs and symptoms of depression in their patients,” “Emotional care is as important as physical care,” and “There is little a carer can do to support family members of patients.” This scale was constructed from a modified version of the Depression Attitude Questionnaire (32) and items from a pool of attitude-based questions created using the needs analysis described earlier. Participants indicated their level of agreement with each item using a five-point Likert scale, which ranged from “strongly disagree” (1) to “strongly agree” (5). Seven negatively worded items were reversescored, with scores ranging from 21 to 84. A higher score represented a more positive attitude toward working with depressed patients. A Cronbach’s alpha of $=.82$ indicated that there was good internal reliability for items in this scale.

Self-Efficacy in Working with Depressed Patients

The 16-item questionnaire Self-efficacy in Detecting and Managing Depression in Palliative Care Settings evaluated professional carers’ level of self-efficacy (confidence, perceived level of competence) in relation to their knowledge and ability to detect depression, and also to their ability to communicate with depressed palliative care recipients. All items

were modified to be appropriate for a palliative care setting from a scale originally developed to assess the self-efficacy of care staff in working with depression in the aged care sector (33). Items included: “In monitoring signs of depression among patients to see if things improve or become worse, I feel...”; and “In responding to depression-related or ‘desire to die’ statements, I feel...” This questionnaire was scored using a four-point Likert scale ranging from “not at all confident” (1) to “very confident” (4). Higher scores on this questionnaire indicated a greater level of self-efficacy, with scores ranging from 16 to 64. A Cronbach’s alpha of $\alpha = .95$ indicated excellent internal reliability for items in this scale.

Barriers to Working with Depressed Patients

Barriers to Detecting and Managing Depression in Palliative Care Settings is a 12-item scale drawn from a pool of items created by the researchers and based on barriers identified in the literature review and the needs analysis. Items contained in this scale include: “I have not received enough training in depression to recognize whether a patient is depressed or not,” and “It is difficult to detect/monitor depression because patients often mask their depressive symptoms.” A four-point Likert scale ranging from “strongly disagree” (1) to “strongly agree” (4) was used, with possible total scores ranging from 12 to 48. Higher scores indicated more perceived barriers to the detection and management of depression in palliative care patients. A Cronbach’s alpha of $\alpha = .81$ indicated good internal reliability for items in this scale.

Procedure

Approval to conduct this study was obtained from the university ethics committee and the research ethics committees of each of the three participating palliative care services. Professional carers from each of these services were invited to participate in the depression training program through advertisements placed on staff noticeboards in their workplace.

Program attendance was scheduled during work hours, and the palliative care services were provided with paid staff release to cover staffing costs. The training program consisted of four 90- minute sessions delivered over four consecutive weeks. Each session was offered several times per week at the intervention sites in order to maximize attendance. The main topics of the sessions were: understanding depression, detecting depression, responding to depression, and focusing on patients' family members. The program was designed to improve professional carers' knowledge of depression, as well as to enhance their skills and self-efficacy in detecting and monitoring depressive symptoms in palliative care patients and providing support to patients and their family members. Furthermore, the program was designed to improve professional carers' communication skills, specifically in responding to patients' depression-related and desire-to-die expressions. The program was developed from a depression training program for the aged care sector (33, 34) and adapted to address palliative care needs identified through both an extensive literature review and the needs analysis outlined earlier. For a description of the program development, please refer to Hallford and colleagues (35).

Sessions were designed to be interactive and discussion-based, with participants invited to share their experiences of working with (suspected) depressed patients. Case studies and work sheets were used in each session, and between-session tasks were assigned following the first three sessions to reinforce learning. A two-question depression screener and a depression-monitoring checklist were introduced into the program, and participants were instructed in the use of these instruments.

All intervention group participants completed questionnaires prior to the program, immediately after the final session, and again at three-month follow-up. Control group participants completed the questionnaires at three corresponding time points for comparison purposes.

Results

Data were analyzed using the SPSS 17.0 for Windows statistical package. Prior to analyses, missing data were replaced using mean substitution. All assumptions of univariate and multivariate normality were met. Statistical power was found to be $>.80$ in all analyses. Previous Training in Depression and Experience Working in Palliative Care Bivariate correlation analyses using Pearson's r were conducted at pre-training to examine any associations between previous training in depression and the four dependent variables: knowledge of depression, attitudes toward depression, self-efficacy when working with depression, and perceived barriers to care when working with depression. Small-to-moderate associations were found between previous training in depression and participants' attitudes toward depression ($r=.23$, $p < .05$), reported self-efficacy ($r=.42$, $p < .001$), and perceived barriers to care ($r=-.32$, $p < .01$). No association was found between previous training in depression and reported knowledge of depression ($r=.05$, $p > .05$).

Bivariate correlation analyses were again conducted to examine the association between years of experience in palliative care and the four dependent variables at pre-training. A small but significant correlation was found between participants' years of experience working in palliative care and self-efficacy ($r=.23$, $p < .01$). No other significant associations were found.

Main Analyses

To examine differences between pre-training and post-training time points across conditions, a 2 (time: pre-training, post-training) $\times$ 3 (condition: metropolitan experimental, regional experimental, control) multivariate analysis of variance (MANOVA) was conducted on the four dependent variables. A significant multivariate main effect for time was found ($F [4, 84]=37.14$, $p < .001$, $\eta^2 = .64$). No multivariate main effect was found for condition ($F [8,$

170]=1.78, $p > .05$, $\eta^2 = .08$). A significant interaction between time and condition was found ($F [8, 170]=7.96$, $p < .001$, $\eta^2 = 0.27$). Planned univariate tests (see Table 1) indicated that in the metropolitan experimental condition there were statistically significant increases between pre- and post-training in participants' knowledge, attitudes, and self-efficacy. Furthermore, a significant decrease in perceived barriers was found. A similar pattern was observed for the regional experimental condition, where statistically significant increases were also found between pre- and post-training in participants' knowledge, attitudes, and self-efficacy; and there was a significant decrease in perceived barriers (see Table 1). In the control condition, no significant changes were found between pre- and post-training in participants' knowledge, attitudes, self-efficacy, or perceived barriers. Table 1 presents the means (standard deviations) F values and effect sizes for scores on the four dependent variables at pre-training, post-training, and three-month follow-up.

Participant attrition at the three-month follow-up was high across conditions due to factors such as staff turnover and low response rate. At the three-month follow-up, measures were completed by 12 participants in the metropolitan condition, 25 in the regional condition, and 25 in the control condition (total $n=62$). A 2 (time: pre-training, three month follow-up) $\times$ 3 (condition: metropolitan experimental, regional experimental, control) MANOVA was conducted to examine differences between pre-training and three-month follow-up time points across conditions on the four dependent variables. There was a significant multivariate main effect for time ($F [4, 56]=18.02$, $p < .001$, $\eta^2 = .56$). No multivariate main effect was found for condition ($F [8, 114]=1.78$, $p > .05$, $\eta^2 = .11$). A significant interaction between time and condition was found ($F [8, 114]=4.61$, $p < .001$, $\eta^2 = .25$).

Planned univariate tests indicated that in the metropolitan experimental condition there existed statistically significant increases between pretraining and three-month follow-up in participants' knowledge and self-efficacy, while a significant decrease in perceived

barriers was found. No significant differences between pre-training and three-month follow-up were found for attitudes. A similar pattern was found in the regional experimental condition, where statistically significant increases between pre-training and three-month follow-up emerged in participants' knowledge and self-efficacy, while perceived barriers decreased significantly. No significant differences between pre-training and three-month follow-up were found in attitudes. In the control condition, no significant changes were found between pretraining and three-month follow-up in participants' knowledge, attitudes, self-efficacy, or perceived barriers.

Participant Attrition Analysis

Participants were dichotomously coded according to whether or not they completed measures at the three-month follow-up. A Chi-squared test for independence (with Yates continuity correction) indicated that a significantly higher proportion of participants who completed measures at the three-month follow-up had received previous training in depression (48.4 percent) compared with those who did not complete three-month follow-up measures (16.7 percent) ($\chi^2 [1, N=88]= 6.09, p <0.05, \phi=0.29$). A one-way MANOVA was then conducted to examine differences between these groups at pre-training on age, experience in palliative care, knowledge, attitudes, self-efficacy, and perceived barriers to care. A significant multivariate effect was found ($F [6, 83]=2.66, p <0.05, \eta^2 =0.17$), indicating that there were differences between participants who completed measures at the three-month follow-up and those who did not. Univariate tests indicated that participants who completed measures at the three-month follow-up were significantly older than those who did not, and that participants who completed measures at the three-month follow-up had a significantly lower level of perceived barriers than those who did not. No other significant differences were found.

Discussion

The documented high prevalence of depression in palliative care settings (3) and the concomitant low detection rates (4) highlight the need to provide non-physician palliative care professionals with specialized training to improve recognition and management of depression (10-12).

Specialized training has the potential to address some of the barriers to effective depression detection in such settings by, for example, increasing professional carers' knowledge of depression, suggesting approaches to effective communication on issues associated with depression, and improving carers' attitudes and low self-efficacy in relation to working with depressed individuals (16, 17). The current study represents one of a limited number of studies designed to evaluate a depression-specific training program for palliative care professionals (for a review of evaluated interventions, see Hallford and colleagues [35]). It aimed to evaluate the outcomes of a four-session training package with respect to changing professional palliative care staff's knowledge, attitudes, self-efficacy, and perceived barriers to recognizing and supporting depressed patients and their families.

Findings revealed that significant changes occurred in the predicted directions immediately following delivery of the training program to the intervention groups; no significant differences were revealed among control group participants on any variable, regardless of time point. That is, palliative care professionals' knowledge of depression, attitudes toward working with depression, and self-efficacy in care provision for depressed individuals and their family members increased as a result of their participation in the training program. Furthermore, perceived barriers to care provision for such patients decreased as a result of program participation. Results indicated that these changes, with the exception of a

small decrease in positive attitudes toward depression, were maintained at the three-month follow-up.

These findings attest to the long-term positive impact of the training program evaluated in this study. Although participants' positive attitudes decreased from post-training levels, they remained above pre-training levels. This suggests that more sustained attitude change may require a more substantial/lengthy or attitude-targeting intervention than was afforded by the four-session program evaluated here. A similar pattern of changes was found across both the regional and metropolitan settings, indicating that the intervention setting did not influence program outcomes. Correlational analyses indicated that (previous) depression training was associated with more positive attitudes toward depression and fewer perceived barriers to care. Furthermore, both (previous) depression training and number of years' experience working in a palliative care environment were associated with higher reported self-efficacy for palliative care staff. This suggests that continued or ongoing training in this area may benefit palliative care professionals, potentially resulting in more positive attitudes, improved self-efficacy, and fewer barriers to care.

Due to their high level of daily interaction with palliative care patients, non-physician professional carers, such as nurses and other allied health professionals, are ideally situated to detect depression and improve pathways to care. The outcomes of the program indicated significant improvements in participants' ability to differentiate depression from grief reactions, determine whether a patient's symptoms are indicative of depression or due to alternative causes (for example, the patient's medical condition), and decrease their tendency to use somatic symptoms of depression that overlap with patients' medical conditions instead of behavioural, cognitive, and mood-related markers to identify depression in this setting. There is a widely held view of depression as a typical or natural reaction to having a terminal

diagnosis (13); the training program aimed to dispel such misconceptions by prompting professional carers to be more attentive and responsive to depressive symptoms.

Program participants were trained in the use of two depression-screening tools that have been validated in the palliative care setting (24). Another barrier to depression detection addressed in the program was the difficulty that palliative care professionals have in responding appropriately to patients' emotional concerns (17); training in communicating with depressed patients was incorporated into the evaluated program, and the results indicated that this had increased participant self-efficacy.

A limitation of the current study was the high attrition rate of participants in the intervention groups between the post-training and threemonth follow-up time points; this decreased our power for making statistical comparisons and may have contributed to the non-significant difference noted in participants' attitudes between these time points.

The program evaluated here represents a significant improvement over previously evaluated training programs, many of which have focused solely on improving professional carers' communication skills. The study also had a larger sample size and a control group for comparison purposes. Taken collectively, the findings indicate that the four-session depression training program for palliative care professionals had a significant and positive effect on increasing carers' knowledge, attitudes, and self-efficacy, and it lowered their perception of barriers to detecting and managing depression in their patients compared to no intervention. Changes in knowledge, self-efficacy, and perceived barriers were maintained over time. Given previous indications that issues relating to carer knowledge, self-efficacy, and perceived barriers can impede the recognition and subsequent management of depressed patients in palliative care settings (16, 17), implementation of this program for all non-medical professionals working with patients and their families within the palliative care

sector may facilitate detection and improve pathways to care for depressed patients. And, in light of the time and other resource costs involved in delivering the program, it is important that we explore strategies to reduce the number of sessions — or to offer the program fully or partially online. It is also important that we consider evaluations of other aspects of quality of care in the palliative care setting. Determining the extent to which such a program actually improves the detection, referral, and treatment of depression is the next step in this research process.

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Table 1.

Means, standard deviations and effect sizes on scores of knowledge, attitudes, self-efficacy and perceived barriers at pre-training, post-training and three month follow-up.

	Pre-training	Post-training	Effect sizes pre-training to post-training	Three month follow-up	Effect sizes pre-training to three month follow-up
Intervention – metro					
<i>Knowledge</i>	89.86 (5.41) ^a	99.51 (7.88) ^b	$\eta^2 = 0.73$	96.26 (8.09) ^b	$\eta^2 = 0.70$
<i>Attitudes</i>	89.20 (5.75) ^a	93.37 (7.21) ^c	$\eta^2 = 0.33$	90.88 (7.36) ^{n.s.}	$\eta^2 = 0.09$
<i>Self-efficacy</i>	39.98 (8.67) ^a	51.29 (4.03) ^b	$\eta^2 = 0.75$	51.58 (8.87) ^c	$\eta^2 = 0.66$
<i>Perceived barriers</i>	34.04 (4.03) ^a	26.60 (6.46) ^b	$\eta^2 = 0.71$	27.76 (4.62) ^b	$\eta^2 = 0.79$
Intervention – regional					
<i>Knowledge</i>	89.86 (5.41) ^a	95.70 (8.22) ^b	$\eta^2 = 0.64$	92.35 (8.96) ^c	$\eta^2 = 0.38$
<i>Attitudes</i>	87.41 (7.71) ^a	92.56 (7.84) ^b	$\eta^2 = 0.46$	88.56 (9.40) ^{n.s.}	$\eta^2 = 0.03$
<i>Self-efficacy</i>	45.02 (8.24) ^a	53.72 (6.87) ^b	$\eta^2 = 0.55$	51.64 (8.77) ^b	$\eta^2 = 0.43$
<i>Perceived barriers</i>	31.68 (4.50) ^a	25.25 (4.91) ^b	$\eta^2 = 0.61$	24.88 (5.07) ^b	$\eta^2 = 0.51$
Control					
<i>Knowledge</i>	92.30 (6.40) ^{n.s.}	92.54 (6.70) ^{n.s.}	$\eta^2 = 0.00$	90.25 (7.36) ^{n.s.}	$\eta^2 = 0.09$
<i>Attitudes</i>	92.25 (7.75) ^{n.s.}	90.93 (6.70) ^{n.s.}	$\eta^2 = 0.06$	92.64 (7.60) ^{n.s.}	$\eta^2 = 0.04$
<i>Self-efficacy</i>	46.41 (8.86) ^{n.s.}	46.15 (9.54) ^{n.s.}	$\eta^2 = 0.00$	47.80 (8.77) ^{n.s.}	$\eta^2 = 0.01$
<i>Perceived barriers</i>	30.09 (5.31) ^{n.s.}	31.24 (6.50) ^{n.s.}	$\eta^2 = 0.06$	28.82 (5.90) ^{n.s.}	$\eta^2 = 0.03$

^{a-b} difference between the means at $p < 0.001$

^{a-c} difference between the means at $p < 0.01$

^{n.s.} difference between means is non-significant