

Life Program: Pilot Testing a Palliative Psychology Group Intervention

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Abstract

Background: Psychosocial interventions for palliative care populations, individuals with life-limiting illness, improve distress; however, less is known about these interventions among military Veterans.

Objectives: This quality improvement project evaluated a palliative psychology group intervention to reduce depression, anxiety, and stress among Veterans with advanced life-limiting illness.

Methods: Veterans receiving palliative care at a mid-Atlantic VA healthcare system were referred by a mental health provider. The group intervention was delivered face-to-face in six to eight weekly sessions, with groups of four to eight participants. The intervention (Life Program), was a hybrid of cognitive-behavioral therapy and acceptance and commitment therapy that targeted: personal values, mindfulness, and psychological flexibility. A single-arm pre-post-test design was used to assess depression, anxiety, and stress, and satisfaction with the intervention.

Results: Seventy-five percent (39/52) of all Veterans who were contacted expressed interest and agreed to participate. Seventeen of 39 enrolled Veterans completed all sessions. The mean age of participants who completed the program was 63.06 (standard deviation=8.47). Most participants were male (88%), Caucasian (58%), and had a cancer diagnosis (65%). Mean pre-post reductions in depression (18.82 vs. 13.20), anxiety (16.59 vs. 14.59), stress (19.18 vs. 13.88), and psychological inflexibility were observed. Mean differences in symptom severity were clinically meaningful. Barriers to feasibility included transportation issues and illness burden.

Conclusions: Veterans who completed all sessions of a palliative psychology group intervention had reductions in depression, anxiety, and stress. Estimates of the treatment effects may be inflated using completer data alone. Further research is needed to inform ways to improve program engagement and adherence and examine efficacy in Veterans with advanced life-limiting illness.

Keywords: group intervention; mental health; palliative psychology; quality improvement

Introduction

COGNITIVE-BEHAVIORAL THERAPY (CBT)¹ and acceptance-based therapies have been integrated to improve symptoms among aging and chronically ill populations.^{2,3} Combining these therapies may be particularly beneficial for individuals with advanced life-limiting illness receiving pal-

liative care. Specifically, such individuals are usually coping with circumstances outside their control, and yet they can still benefit from cognitive restructuring and pleasant event scheduling (core CBT skills). Indeed, integrating CBT and acceptance-based therapies has been reported to positively impact pain, depression, and quality of life.^{4,5} Despite promising results in the general population, integrated treatments

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Accepted May 30, 2018.

have not been delivered to Veterans receiving palliative care nor used in a group setting; group settings can serve as an efficient, economical, and efficacious treatment format.⁶

Veterans Affairs is the largest healthcare system in the United States purchasing or providing palliative services to over 69,000 Veterans annually (VA National Director of Hospice and Palliative Care Dr. Scott Shreve, August 18th, 2017, e-mail communication, unreferenced) across 153 medical centers.^{7,8} Life-limiting illness among Veterans is associated with significant anxiety and depression,⁹ pain,^{10,11} poor sleep,¹² and cognitive impairment. Yet, psychological treatments for this population are not well studied. The current quality improvement project piloted an integrated CBT and acceptance-based clinical intervention (Life Program [LP]) with Veterans referred for palliative care services. The intervention was designed to improve clinical care services within the Durham VA Healthcare System. In the sections that follow, we document the development and implementation of the LP and summarize patient outcomes with assessment measures typically utilized in clinical practice.

Methods

The Durham VA Institutional Review Board determined that the project met the standards for quality improvement as data from our project were collected as part of clinical care operations, and analyses performed were conducted for quality improvement purposes (described in VHA Handbook 1058.05).¹³

Participants and procedures

Between January (2016) and March (2017), 165 patients were referred for participation by a licensed clinical social worker, a member of the Durham VA palliative care consultation team. Eligible participants were those with a life-limiting illness (i.e., noncurable diagnosis), except if there was severe cognitive impairment that would preclude participation or untreated serious mental illness. Subsequent medical record review revealed that 94 patients were ineligible for the following reasons: deceased (51%), significant cognitive impairment (10%), untreated serious mental illness (2%), or lived more than two hours from the hospital (37%). Of 71 eligible participants, 19 did not have a working telephone number; 52 were subsequently contacted via telephone and offered participation. Of those offered participation, 39 expressed interest and were mailed invitation letters. Among 13 who declined participation, two reported coping well, two expressed poor functioning, and nine had transportation challenges, leaving 26 who initiated participation.

Intervention: LP

The LP integrates cognitive behavioral skills (e.g., cognitive restructuring, pleasant events scheduling), mindfulness, and acceptance-based approaches to enhance participant adaptation to progressing disease, while enhancing quality living. Unlike traditional psychosocial interventions that focus treatment on a primary disorder/medical diagnosis, the LP is appropriate and designed for palliative care populations with varying disease type and severity. Moreover, the LP also includes discussion of psychological stressors and existential concerns unique to Veteran populations living with advanced disease such as reflections of combat post-traumatic stress symptoms being re-

triggered with a life-threatening diagnosis, military culture of seeking help, and societal and self-stigma of mental illness.

A postdoctoral fellow and doctoral interns in clinical psychology delivered the group intervention. The fellow had formal training in CBT in addition to acceptance and commitment therapy (ACT).¹⁴ The fellow served as the primary interventionist for all groups with four of the five groups delivered by a new doctoral intern, as co-facilitator. The fellow and each intern received training and weekly supervision in delivering the treatment.

Format and session content. Five cohorts participated in the intervention (delivered as face-to-face group sessions) sequentially between January (2016) and March (2017). The first two cohorts completed eight 60-minute weekly sessions. Thereafter, cohorts completed six 90-minute weekly sessions. The number of weekly sessions was reduced to accommodate symptom burden and transportation difficulties. Group size at the start of group ranged between four to eight participants. Session content was guided by a treatment manual based on existing CBT and ACT protocols for health, and chronic symptoms (e.g., Better Living with Illness,¹⁵ and Adjusting to Chronic Condition with Education, Support, and Skills¹⁶). The intervention targeted personal values, mindfulness, and psychological flexibility by introduction to goal-setting, evaluating maladaptive thoughts and behaviors, problem solving, and pacing. For a summary of session content see Table 1.

Measures

Self-administered paper surveys were collected at the start of the first session and end of the last session. A medical chart review was completed to access demographic characteristics, medical and psychological diagnoses as defined by the international classification of diseases, ninth revision, clinical modification.¹⁷ Measures, administered to all eligible participants, included the Depression, Anxiety, and Stress Scales (DASS-21),¹⁸ the Acceptance and Action Questionnaire-II assessing psychological flexibility,¹⁹ the Self-Compassion Scale Short Form,²⁰ and the Toronto Mindfulness Scale.²¹ Each of these measures have been widely used and well validated in clinical samples.

Participants also reported their level of agreement and satisfaction with items addressing psychological care provided,

TABLE 1. SESSION CONTENT OF GROUP

<i>Session</i>	<i>Content</i>
1	Introductions, treatment rationale, and group orientation.
2	Introduction to mindfulness and clarification of personal values in the context of living with life-threatening disease. Goal setting.
3 and 4	Managing, reframing, and defusing from maladaptive cognitions that cause emotional distress.
5	Practicing relaxation and self-compassion. Pursuing enjoyable activities in service of values while pacing behavior.
6	Review of intervention and relapse prevention discussion.

experience with group facilitators, time, and delivery format of the intervention. Ratings ranged from 1 (strongly agree or completely satisfied) to 5 (strongly disagree or completely dissatisfied). Treatment feedback and satisfaction items were developed by the first author.

Results

Among the 52 Veterans who were contacted during the recruitment of the five cohorts, 13 Veterans declined to participate. Most Veterans (84.6%; 11/13) who declined to participate expressed interest but were too ill with competing medical appointments or had limited access to transportation. More than half of the recruited participants who were unable to participate inquired about additional delivery options (e.g., telehealth) in receiving services. However, additional delivery options were unavailable at that time.

Of the 39 Veterans who did agree to participate, 17 participants completed 100% of the sessions. The remaining 21 participants completed the first two sessions and subsequently dropped out due to transportation difficulties (14.3%), symptom burden (57.1%), lack of interest in the program (14.3%), or could not be reached (14.3%). One participant, missed the last two sessions due to worsening health. Compared to completers, noncompleters were all male, older (Mage = 68.05, standard deviation [SD] = 8.74), with a larger majority having an advanced cancer diagnosis at stage III or IV (86.4%) and were managing between 3 and 4 chronic health conditions (54.6%).

Participant characteristics

Demographic characteristics, disease type, and chronic health conditions of participants who consented to participate and who completed all sessions are listed in Table 2. Among the completer sample, the mean age was 63.06 (SD = 8.47). They were mostly male (88.2%), Caucasian (58.8%), and had an advanced cancer diagnosis at stage III or IV (64.71%). Prostate cancer was the most common cancer type (36.4%), followed by lung cancer (18.2%). Noncancer patients had end-stage renal disease, advanced neurological or autoimmune disorders. Per chart review, of participants who completed all sessions, 23.5% had post-traumatic stress disorder, 47.1% had major depressive disorder, 5.9% had an anxiety disorder, and 23.5% had mixed symptoms of anxiety and depression. Additionally, most Veterans (82.4%) were also managing between two to four comorbidities (e.g., diabetes, hypertension, coronary artery disease, chronic obstructive pulmonary disease).

Psychological outcomes

Overall, pre-post mean scores of depression, anxiety, and stress improved (Table 3). Specifically, per recommended cutoffs in symptom severity for DASS-21¹⁸ scores, mean differences from pre- to post-treatment were clinically meaningful. Baseline depression severity changed from moderate to mild at post-treatment, baseline anxiety severity changed from severe to moderate at post-treatment, and baseline stress severity changed from moderate to normal at post-treatment. Psychological inflexibility (defined as the inability to act in accordance with personal values because of maladaptive ruminative thinking and avoidance of uncomfortable emotions¹⁴) was reduced. Scores in self-compassion

TABLE 2. PATIENT CHARACTERISTICS THAT COMPLETED AND CONSENTED TO THE LIFE PROGRAM

Characteristic	Life program completers, n = 17	Participants who consented, N = 39
Age, mean (SD)	63.06 (8.47)	65.87 (8.87)
Age, n (%)		
50–64	11 (64.71)	21 (53.84)
65–95	6 (35.29)	18 (46.15)
Gender, n (%)		
Male	15 (88.24)	37 (94.87)
Female	2 (11.76)	2 (5.13)
Race, n (%)		
White	10 (58.82)	22 (56.41)
Black	7 (41.18)	17 (43.59)
Marital status, n (%)		
Married	8 (47.06)	20 (51.28)
Significant other	4 (23.53)	5 (12.82)
Single	5 (29.41)	14 (35.90)
Service era, n (%)		
Vietnam	14 (82.35)	31 (79.49)
Gulf War	3 (17.65)	4 (10.26)
Korea		4 (10.26)
Branch of service, n (%)		
Air force	3 (17.65)	7 (17.95)
Army	11 (64.71)	20 (51.28)
Coast guard	1 (5.88)	2 (5.13)
Marine corps	2 (11.76)	6 (15.38)
Navy		4 (10.26)
Medical diagnosis, n (%)		
Cancer	11 (64.71)	30 (76.92)
Noncancer	6 (35.29)	9 (23.08)
Mental health diagnosis		
Post-traumatic stress disorder	4 (23.53)	6 (15.38)
Major depression	8 (47.06)	13 (33.33)
Anxiety disorder	1 (5.88)	5 (12.82)
Mixed distress	4 (23.53)	10 (25.64)
No diagnosis		5 (12.82)
Mild cognitive impairment	2 (11.76)	4 (10.26)
Chronic conditions		
1 condition	0 (0)	3 (7.7)
2 conditions	7 (41.18)	11 (28.21)
3–4 conditions	7 (41.18)	19 (48.72)
5 or more conditions	3 (17.65)	6 (15.38)

SD, standard deviation.

and mindfulness also improved. Of the outcomes assessed, depression and stress exhibited medium within-subject effects (Cohen's d^{22} effect size 0.54–0.57) for a paired sample t -test.

Participant feedback and satisfaction. Participants in the initial cohorts desired longer treatment duration, with fewer sessions; thus, session length was increased from 60 to 90-minutes, while sessions were shortened from eight to six. These changes led to increased retention rates from 25% (2/8, first group) to 62.5% (5/8, latter group). The total mean satisfaction rating was 4.44 out of 5 indicating high satisfaction (Table 4).

TABLE 3. LIFE PROGRAM OUTCOMES

	<i>Pre-intervention</i>		<i>Post-intervention</i>		<i>Cohen's d</i>	<i>95% CI</i>	
	<i>(N=17)</i>		<i>(N=17)</i>			<i>Lower bound</i>	<i>Upper bound</i>
	<i>Mean</i>	<i>SD</i>	<i>Mean</i>	<i>SD</i>			
DASS-21							
Depression	18.82		13.20		0.54*	-0.15	1.21
Anxiety	16.59		14.59		0.23	-0.45	0.90
Stress	19.18		13.88		0.57*	-0.13	1.24
AAQ-II (inflexibility)	24.47		21.82		0.23	-0.45	0.89
Self-compassion	3.01		3.29		0.45	-0.24	1.12
Mindfulness-curiosity ^a	17.37		18.20		0.16	-0.56	0.87
Mindfulness-decentering ^a	19.40		19.93		0.10	-0.62	0.81

Cohen's *d*: small effect=0.20; medium effect=0.50; large effect=0.80.

^aDenotes data only available for 15 participants.

**p*<0.05.

DASS-21, Depression Anxiety Stress Scales; AAQ-II, Acceptance and Action Questionnaire-II; CI, confidence interval.

Discussion

Palliative mental health interventions commonly target meaning,²³ dignity,²⁴ and life review.²⁵ In recent years, however, clinical innovations for civilian populations have inspired integrated treatments to address a wider array of psychological symptoms. The primary goal of this quality improvement project was to examine the feasibility of a palliative mental health group intervention for Veterans with advanced life-threatening illness. A secondary goal was to assess whether participation in the group would improve symptoms of stress, depression, and anxiety. To our knowledge, this is the first group intervention specifically designed for Veterans followed by palliative care. Overall, this quality improvement study suggests that the LP, a hybrid CBT-ACT group intervention, is a potentially viable and therapeutically beneficial modality for use with Veterans with life-limiting illness. Among the 17 Veterans who participated and completed this group treatment, improvements in depression, anxiety, and stress were observed. Moreover, feedback from Veteran completers indicated that they found the program acceptable and satisfactory.

While piloting the LP intervention shows promise, barriers to implementation and feasibility were attributable to person-level (e.g., declining health, having no transportation) and program-level (e.g., lack of modality options such as telehealth) factors.

Facilitators to implementation and feasibility included high Veteran interest in participation and positive Veteran reception to peer support in the group setting. Given that one in three palliative care patients experience clinically significant symptoms of depression and anxiety,²⁶ addressing the psychosocial needs of Veterans followed by palliative care is paramount. Clinical projects that investigate new psychosocial treatments for Veterans with life-limiting illness are needed for several reasons: (1) Veterans with medical complexity and advanced life-threatening disease are a rapidly growing demographic group, (2) prevalence of anxiety, depression, and distress in this population is high, and (3) Veterans' needs in psychological and spiritual domains greatly impact overall quality of life.²⁷ Overall, results from this pilot study suggest that the LP is feasible and may potentially merit empirical evaluation (e.g., large-scale efficacy trial) as a treatment for anxiety, depression, and stress in Veterans with life-limiting illness.

Challenges and limitations

To attend group, travel distances and rural living presented as pervasive limiting factors in nearly 40% of Veterans we initially recruited. Future interventions may require piloting flexible delivery formats (e.g., telephone-based counseling, tele-health, smart phone applications) to improve treatment engagement and adherence. One example of a flexible delivery format may be integrating home-based palliative care programming²⁸ into VA home-based primary care services. Future research should address how to best identify psychological distress in patients with life-threatening illness, to inform optimal targeting of palliative mental health interventions.

Limitations of this work include lack of a control condition and modest sample size that may limit interpretations. Additionally, the reported effect sizes were calculated using completer data alone thus inflating the estimate of the treatment effect. As such, the LP may appear more beneficial than it is, lending support that future work in conducting a trial (vs. pilot) is needed to expand preliminary findings while also using intention-to-treat versus per-protocol analysis to obviate major biases in treatment effects. The first author was aware of all participants taking part in the intervention, and therefore assessments were not blinded. Also, receipt of other mental health

TABLE 4. LIFE PROGRAM KEY SATISFACTION ITEMS

<i>Feedback and satisfaction questionnaire item</i>	<i>Item mean</i>	<i>% Gave a score of 4 or 5</i>
Before I started the program, my overall well-being was where I wanted it to be.	2.17	0
At the end of the program, my overall well-being has improved.	3.75	81
I am satisfied with the quality of my group experience.	4.44	100
After completing the program, I am more likely to seek psychology services in the future.	4.38	100

Items are on a 1 ("Strongly Disagree") to 5 ("Strongly Agree") scale.

interventions was unrestricted, and as such clinical improvement may be attributable to receipt of additional care in the VA.

Conclusions

In summary, results from this quality improvement project provide initial support for the use of a palliative psychology group intervention for Veterans in treating psychologically distressing symptoms. Findings from this pilot study suggest positive outcomes in reducing anxiety, depression, and stress for those who completed all treatment sessions as planned. The program will benefit from further adaptations to improve engagement and adherence to meet the unique needs of this Veteran population.

Acknowledgments

Support was provided by the Department of Veterans Affairs, Center of Innovation for Health Services Research in Primary Care (CIN 13-410) at the Durham VA Health Care System. Dr. H.B.B. was also partially supported by Senior Career Scientist award from the Department of Veterans Affairs, Health Services Research and Development (08-039). The contents represent the views of the authors and do not necessarily represent the views of the U.S. Department of Veterans Affairs or the United States Government.

Author Disclosure Statement

No competing financial interests exist.

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