End-of-Life Dreams and Visions and Posttraumatic Growth: A Comparison Study

Kathryn Levy, MSW, AdvStat,1 Pei C. Grant, PhD,1 Rachel M. Depner, MSW, PhD(C),1,2, David J. Byrwa, MS,1,3 Debra L. Luczkiewicz, MD,1 and Christopher W. Kerr, MD, PhD1

Abstract

Background: End-of-life dreams and visions (ELDVs) can provide both meaning and comfort to individuals nearing death. While research has examined the prevalence and content of ELDVs, little is known on how dreaming at end of life may affect psychological processes.

Objective: This study aimed to explore differences in posttraumatic growth (PTG) between hospice patients who experience ELDVs and hospice patients who do not experience this phenomenon.

Design: This is a multimethod cross-sectional comparison study.

Settings/Subjects: 70 hospice patients (35 with ELDV experiences and 35 without ELDV experiences) were recruited after being admitted to a hospice inpatient unit.

Measurements: PTG was assessed using a modified version of the Posttraumatic Growth Inventory (PTGI). Demographic information, ELDV occurrence, and a brief description of ELDVs were also collected.

Results: Significant differences emerged between groups in terms of personal strength ( \( p = 0.012 \)), spiritual change ( \( p = 0.002 \)), and overall PTG ( \( p = 0.019 \)). Patients with ELDV experiences had higher scores on all subscales as well as overall PTG compared to nondreaming patients.

Conclusions: Dreams and visions at the end of life affect PTG of dying individuals in hospice care. Further research should be conducted between groups to examine the effects ELDVs may have on other psychological processes.

Keywords: dreams; end of life; end-of-life dreams and visions; end-of-life experiences; hospice; posttraumatic growth; visions

Introduction

End-of-life dreams and visions (ELDVs) are a psychological experience that can occur frequently during the dying process.1–3 Dreams, which occur while asleep, and visions, which occur while awake, may feature the comforting presence of deceased and living loved ones as well as unknown individuals and are described by dying patients as having high degrees of, vividness, recall, and reality.1–4 While ELDVs have been reported throughout the ages and across cultures,1,5 research in this area is still at its early stages. Most research has focused on the content, comfort, and meaning of ELDV experiences.1–4,6 Consistently, research has characterized ELDVs as separate and distinct from delirium, which can also occur at end of life.1–4

Findings from numerous patient- and family/caregiver-centered studies have demonstrated the positive value of ELDVs and their role in the dying process. ELDVs not only have been suggested to help patients prepare for death, build resolution, and find meaning at end of life,1,3,5–10 but also play a role in providing comfort during bereavement for loved ones left behind.11

In a study surveying hospice patients, ELDVs affirmed that dying is a multifaceted process, which can be obscured by the physical symptomology of dying.2,3 However, while an individual may be physically dying, they can also experience significant changes in the psychological, spiritual, and social dimensions of their life. The ability to overcome highly challenging, stressful, or traumatic events, such as acknowledging one’s mortality and terminality, with positive psychological change is termed posttraumatic growth (PTG).12

1Palliative Care Institute, Center for Hospice and Palliative Care, Cheektowaga, New York.
2Department of Counseling, School and Educational Psychology and 3School of Medicine, University at Buffalo, the State University of New York, Buffalo, New York.
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Within PTG, an individual may experience five distinct domains of growth. The first of these domains, Relating to Others, refers to the increased depth and meaning of the relationships the individual has with those around them. New Possibilities, the second domain, denotes the potential for individuals to recognize new opportunities for themselves after the experience of trauma. The third domain, Personal Strength, is the increase and greater understanding of one’s strength and resilience. Through the enhanced knowledge of personal psychological resources, individuals are not only able to make it through traumatic experiences but also feel more prepared to take on future events. In Spiritual Change, the fourth domain, individuals experience a deepening of their spiritual and existential connections. The final domain, Appreciation for Life, describes individuals after trauma as valuing life and events previously taken for granted in a new and positive way.

While it has been proposed that confronting mortality and the issues that accompany a serious illness facilitate growth,13,14 there have been limited studies on advanced illness or terminally ill patients.15 Other studies have demonstrated PTG being influenced on these studies, it appears that PTG in serious illness is influenced by a number of different factors such as social support, religious coping, or specific patient characteristics.14,16,17 One study of hepatobiliary carcinoma patients showed little to no change in overall PTG except in the participants’ ability to relate to others.15 Another study, also with a subset of hepatobiliary carcinoma patients, showed that PTG varied with cancer type. Other studies have demonstrated PTG being influenced by a number of different factors such as social support, religious coping, or specific patient characteristics.14,16,17 Based on these studies, it appears that PTG in serious illness is nuanced and warrants further attention. It has been suggested that ELDVs help alleviate the fear of dying and psychologically or spiritually help prepare a person to die,2,18,19 yet, the underlying mechanisms remain undefined.

To date, no studies have examined the association between ELDVs and PTG. Examining the relationship between ELDVs and PTG could provide insight into the mechanisms by which ELDVs help facilitate the transition from life to death for some hospice patients. The aim of this study is to explore differences in PTG between hospice patients experiencing ELDVs and those who did not. Choosing to forego curative treatment and enter hospice care/accept one’s death in itself can be a traumatic event, one from which PTG may occur. Based on existing literature of both ELDVs and PTG, it is hypothesized that patients experiencing ELDVs will report greater experiences of PTG compared to patients who have not experienced this phenomenon.

Methods

This is a multimethod cross-sectional study of hospice patients in an inpatient unit setting. This study was approved by the Social and Behavioral Research Institutional Review Board of a midsize northeastern university (FWA00008824) on September 3rd, 2016.

Participants

Participants were hospice patients in a hospice inpatient unit between October 2016 and January 2019. Inclusion criteria were the following: (1) enrolled in hospice, (2) admitted into the hospice inpatient unit at the time of the study, (3) older than the age of 18, (4) able to provide consent, and (5) had a Palliative Performance Scale score (PPS)20 of at least 30%. Patients were not eligible for this study if they had diagnoses affecting cognitive capacity, such as delirium, dementia, or brain metastases, or if there was a language barrier.

Measures

Demographics. Participants reported age, gender, race/ethnicity, marital status, religious affiliation, primary diagnosis, and presence of ELDV experiences. Reason for admission to the inpatient unit (either pain and symptom management or respite care), PPS, and additional relevant diagnosis information were collected from the electronic medical record system.

Confusion assessment method. The confusion assessment method (CAM) is a widely used and validated clinical tool to assess for delirium, including acute onset and fluctuating course of inattention, disorganized thinking, and altered levels of consciousness.21 This measure was administered before each daily survey and interview. Participants identified as impaired based on the CAM were not eligible to proceed with the survey and were not contacted for further involvement in the study.

Posttraumatic growth inventory. The outcome of PTG was measured using the Posttraumatic Growth Inventory (PTGI), a survey assessing the potential positive outcomes of individuals who have experienced a traumatic event.12 The standard survey includes 21 items on a six-point Likert scale measuring change since a traumatic event, where “0” is “I did not experience this change” and “5” is “I experienced this change to a very great degree.” These items measure the aforementioned five domains of PTG (relating to others, new possibilities, personal strength, spiritual change, and appreciation for life) as well as overall PTG.

Internal consistency of the PTGI is ρ = 0.90 with factor consistency ranging from 0.67 to 0.85. Additional psychometric testing has shown acceptable concurrent, discriminant, and construct validity. A study developing the Greek version of the PTGI tested with advanced cancer patients in palliative care found Cronbach’s alphas ranging from 0.66 to 0.87 and satisfactory construct validity.22

Based on clinical recommendation regarding the population being studied, and the limited prognosis associated with hospice enrollment, questions regarding the factor of New Possibilities were excluded in this study so as to not impart undue distress on participants. As this subscale was made up of five items, the measure used in this study consisted of 16 items that attributed to PTG with subscales ranging from 2 to 7 items. For the overall measure as well as for each of the subscales, scores are summed and then divided based on the respective number of items. As such, scores range from 0 to 5. For this particular study, the traumatic event patients were asked to consider was entering into hospice care (and in turn formally acknowledging their own mortality by no longer pursuing curative treatment).

Dream interview. A researcher with extensive ELDV training collected the dream interview with each patient. Participants were first asked if they had been experiencing dreams. If no dreams were experienced, the participant was
categorized as a nondreamer. If dreams were affirmed, the research team member would determine whether or not the experience should be categorized as an ELDV based on the known features of the phenomenon. Such features include themes and qualities identified from previous research, such as (1) dreams featuring deceased loved ones and/or pets (2) past meaningful or important experiences (3) vividness and realism of the dream and (4) meaning made from dream. All participants were asked about their past overall dream experiences (i.e., if they dreamed in the past or not) and if the amount of dream experiences changed since becoming sick. Participants who were identified as having ELDV experiences were also asked to give a brief description of their most recent dream or vision, which was audio recorded.

Procedure

Purposive sampling was utilized when collecting data for this study to obtain both dreaming and nondreaming patients. Patients were recruited from the inpatient unit based on clinician referral and review of electronic medical records and daily inpatient unit reports. Individuals meeting criteria were given the opportunity to participate whether they reported ELDVs or not. Potential participants were contacted for their decision to participate or not, and their survey/interview responses had no impact on their current care or enrollment status in the hospice program. Informed consent was obtained by the researcher.

After signing the consent form, participants completed the demographic measures, CAM, PTGI, and the brief dream interview with the researcher. Participants who endorsed dreams during their initial survey were considered dreaming patients throughout their data collection, while patients identified as nondreaming during their initial visit were treated as such throughout data collection. Upon completion of the first visit, the researcher obtained demographic information through the electronic medical record system. Each day following the initial study visit, verbal consent was re-obtained, and participants were asked to complete the CAM, PTGI, and dream interview. Patients were surveyed/interviewed daily until (1) the patient was no longer interested in participating, (2) the patient was discharged from the inpatient unit, (3) the patient was no longer cognitively able to continue with the study, or (4) death. No additional benefits or compensation were provided for participating in the study.

Data analysis

An a priori power analysis was conducted for this study using G*Power 3.1.9.2 to determine acceptable sample size. Using a one-sided alpha and an independent samples t-test, where α = 0.05, 1 - β = 0.95, and t = 1.668, and an estimated effect size of 0.8, it was determined that sample group sizes of 35 participants each were needed. The estimated effect size, which is considered large by statistical standards, was chosen based on the readily observed features of PTG in dreaming patients within the inpatient unit. Data collection feasibility within the dying population was also a consideration.

Data were analyzed using SPSS Version 25. Upon beginning the analysis, it was noted that the number of surveys completed by each patient varied greatly due to differences in length of stay and ability to participate. Based on paired samples t-tests of overall PTG and all subscales at first and last data collections of patients who were able to complete at least two study visits, no significant changes to PTG occurred over time in either study group (p-values ranged from 0.197 to 1). As to not discard data from patients who completed multiple study visits, each patient’s scores were averaged into one case score. Frequencies and descriptive statistics were obtained for demographic information of the sample as a whole before comparing demographics of ELDV and non-ELDV groups. Differences between these two groups in terms of demographics were determined by independent sample t-tests.

Normality testing of PTG was conducted before additional analyses using Shapiro–Wilk normality procedures. Independent samples t-tests were used to determine differences between groups in terms of overall PTG and the additional four factors used for this study.

Results

Demographics

A total of 70 hospice patients were recruited for this study. The majority of participants identified as female (68.6%), white/Caucasian (94.3%), Christian/Catholic (88.6%), with an average age of 74.94 (SD = 13.34). Most respondents were widowed (38.6%), had a primary diagnosis of cancer (57.1%), and had been admitted to the inpatient unit for symptom management (51.4%). For complete demographic information of the sample, see Table 1.

Of the 70 participants recruited and surveyed, 35 had experienced at least one ELDV, while the other 35 had not experienced this phenomenon, which is reflective of the purposive sampling efforts. No study participants who were identified as nondreamers at initial study visit reported having ELDV experiences at any subsequent study visit. Patients who had experienced ELDVs were significantly younger than the nondreaming group by approximately seven years (p = 0.015). It was also significantly more common for dreaming patients to be admitted to the inpatient unit for pain and symptom management (vs. respite care) compared to nondreaming patients (p = 0.004). No significant differences were identified between groups on any other demographic measure. Complete demographic information by group is included in Table 1.

Posttraumatic growth

Shapiro–Wilk tests supported the assumption of normal distribution for the PTG outcome measure, with p-values ranging from 0.088 to 0.197. Independent t-tests between ELDV and non-ELDV revealed significant findings. There were significant differences between groups on the factors of personal strength (p = 0.012) and spiritual change (p = 0.002), as well as overall PTG (p = 0.019). For both the factors and overall PTG, dreaming patients reported significantly higher scores than nondreaming patients. No significant differences were found between groups in terms of relating to others or appreciation for life. See Table 2 for additional information.

Discussion

ELDVs have been suggested to be clinically relevant and can play an important psychological role in the trajectory toward death. However, research has not yet explored the mechanism by which ELDVs may impact the subjective experience of dying. This is the first study to evaluate the
potential relationship between ELDVs and the psychological process of PTG at end of life.

Findings of this study showed that patients experiencing ELDVs had significantly higher overall PTG scores compared with their nondreaming counterparts. This was also true for the Personal Strength and Spiritual Change domains. After undergoing a trauma, people can develop new understandings of themselves, the world they live in, and their outlook on life. ELDVs are noted to serve as an effective platform to address existential concerns as well as lessen distress while creating meaning and comfort at end of life. ELDVs are psychological and spiritual experiences that may provide meaning and comfort to the dreamer. In considering ELDVs as a psychological resource for the dying individual, it makes sense that accessing this resource can provide a coping method while potentiating personal strength during the dying process.

The majority of participants in this study were identified as Christian/Catholic. Research has shown that those with religious and spiritual beliefs can be helpful in recovering from traumatic life events, with religious framework providing aid for positive psychological growth (cite). As such, these individuals may already have a sense of openness

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Group</th>
<th>Total sample</th>
<th>Dreaming</th>
<th>Nondreaming</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total sample</td>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td></td>
</tr>
<tr>
<td>Age (average in years)</td>
<td>74.94</td>
<td>13.34</td>
<td>71.11</td>
<td>78.77</td>
<td>0.015*</td>
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<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>22</td>
<td>51.4%</td>
<td>9</td>
<td>13</td>
<td>0.310</td>
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<tr>
<td>Female</td>
<td>48</td>
<td>68.6%</td>
<td>26</td>
<td>22</td>
<td></td>
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<tr>
<td>Race/ethnicity</td>
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<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>White/Caucasian</td>
<td>66</td>
<td>94.3%</td>
<td>32</td>
<td>34</td>
<td>0.262</td>
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<td>Black/African American</td>
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<tr>
<td>Hispanic/Latino</td>
<td>1</td>
<td>1.4%</td>
<td>1</td>
<td>0</td>
<td></td>
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<tr>
<td>Marital status</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Widowed</td>
<td>27</td>
<td>38.6%</td>
<td>15</td>
<td>12</td>
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<td>Married</td>
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<td>25.7%</td>
<td>6</td>
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<td>Divorced</td>
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<td>17.1%</td>
<td>6</td>
<td>6</td>
<td></td>
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<tr>
<td>Single</td>
<td>9</td>
<td>12.9%</td>
<td>5</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>4</td>
<td>5.7%</td>
<td>3</td>
<td>1</td>
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<tr>
<td>Religion</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Christian/Catholic</td>
<td>62</td>
<td>88.6%</td>
<td>33</td>
<td>29</td>
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<tr>
<td>Not religious</td>
<td>6</td>
<td>8.6%</td>
<td>1</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Spiritual</td>
<td>2</td>
<td>2.9%</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Primary diagnosis</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Cancer</td>
<td>40</td>
<td>57.1%</td>
<td>22</td>
<td>18</td>
<td>0.070</td>
</tr>
<tr>
<td>Chronic obstructive pulmonary disease</td>
<td>14</td>
<td>20.0%</td>
<td>5</td>
<td>9</td>
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<tr>
<td>Congestive heart failure</td>
<td>9</td>
<td>12.9%</td>
<td>3</td>
<td>6</td>
<td></td>
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<tr>
<td>Other</td>
<td>7</td>
<td>10.0%</td>
<td>5</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Reason for inpatient unit admission</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Symptom management</td>
<td>36</td>
<td>51.4%</td>
<td>24</td>
<td>12</td>
<td>0.004*</td>
</tr>
<tr>
<td>Respite</td>
<td>34</td>
<td>48.6%</td>
<td>11</td>
<td>23</td>
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</table>

*p < 0.05.

Table 2. Mean Scale Score Differences in Posttraumatic Growth by Group

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Dreaming (n=35)</th>
<th>Nondreaming (n=35)</th>
<th>p</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relating to others</td>
<td>3.36</td>
<td>3.06</td>
<td>0.275</td>
<td>-0.246 to 0.851</td>
</tr>
<tr>
<td>Personal strength</td>
<td>3.09</td>
<td>2.25</td>
<td>0.012*</td>
<td>0.190–1.484</td>
</tr>
<tr>
<td>Spiritual change</td>
<td>2.84</td>
<td>1.54</td>
<td>0.002*</td>
<td>0.495–2.122</td>
</tr>
<tr>
<td>Appreciation for life</td>
<td>2.92</td>
<td>2.52</td>
<td>0.267</td>
<td>-0.312 to 1.110</td>
</tr>
<tr>
<td>Overall posttraumatic growth</td>
<td>3.05</td>
<td>2.37</td>
<td>0.019*</td>
<td>0.117–1.248</td>
</tr>
</tbody>
</table>

*p < 0.05.
in spiritual matters in comparison to populations who identify as nonpracticing or nonreligious. Previous research on ELDVs has shown a religious/spiritual component, as a subset of recorded dream experiences include religious figures and discussions of the afterlife. Based on the backgrounds of the current study’s participants and the inherent connection between ELDVs and spirituality, it is possible that dreams and visions may reaffirm and strengthen an individual’s faith based on the meaning they ascribe to their experience.

While ELDV patients scored higher on relating to others and appreciation for life than patients who did not experience ELDVs, statistical significance was not reached. The authors attribute this to all participants being enrolled into a hospice program that provides a large support system aimed at increasing appreciation for life. Due to the services provided, growth in both these factors for all participants makes clinical sense.

Clinical implications
End of life is commonly marked by the physical and cognitive changes that an individual experiences throughout the decline. However, a terminal trajectory does not negate one’s capacity for psychological change to occur. Individuals at end of life continue to evolve through their experiences, such as ELDVs, which can provide great comfort, meaning, connectivity, and even growth. It is essential for clinicians to validate and utilize these important aspects of the end-of-life journey when appropriate.

The incidence, content, and potential for comfort of ELDVs have been all been demonstrated and validated. This article moves beyond preliminary aspects of identification of ELDVs to explore the underlying mechanisms by which ELDVs function. The current authors argue that ELDVs may impact a dying person’s ability to engage in the meaning making process so that they can integrate the potentially traumatic reality of confronting their personal mortality into their global sense of meaning. This ability is essential to maintaining an integrated sense of self and personhood, a valuable task throughout the lifespan.

These results continue to challenge our notion of the dying process as mere physical decline or loss of functionality. Instead, these findings further lend support that the dying can also exhibit a remarkable capacity for growth and adaptation. There are many ways that the dying can achieve growth, and this study highlights that ELDVs can play a role in process. In addition, these results help further define the importance of validating ELDVs within a clinical and caregiving framework. These experiences help maintain a connection to meaning at end of life and help to affirm rather than deny life. Moving forward, it is essential that providers who work within the end-of-life context establish competencies addressing and validating ELDVs to promote psychological and spiritual health for the dying.

Limitations
There are limitations to this study that should be considered. The sample used in this study identified predominantly as white/Caucasian and of the Christian faith. While this is an appropriate representation of patients within this specific hospice program, it is not generalizable to all populations. The PTGI is a valid and reliable measure, but the English version has not been psychometrically validated with the dying population. Furthermore, this study used a modified version of the PTGI by excluding items that were part of the New Possibilities factor. Psychometrics on the PTGI without this factor has not been studied, and therefore, the reliability and validity of the measure in this study must be taken into consideration.

Moreover, there were significant differences between groups in terms of age and reason for admission into the inpatient unit, which have not been accounted for. To an extent, there is an inherent selection bias when approaching patients for this study. Although multiple attempts were often made at recruitment, potential participants were not approached for the study if they were asleep, with visitors, or receiving treatments. This could potentially play a role in the demographics and differences between groups. Of additional concern is the sample size, which is relatively small. Future studies of a similar nature should aim for a larger sample in order for a more normal distribution to be obtained.

Conclusion
This research contributes to the understanding of ELDVs, the role they play in psychological and spiritual health for hospice patients, as well as how ELDVs may facilitate positive psychological growth. While ELDVs are a psychological process themselves, they have the potential to affect other processes for individuals nearing end of life. It is critical that both ELDVs and PTG are considered as part of the end-of-life experience by clinicians to provide the most comprehensive care of the whole individual. As ELDVs continue to become more normalized, information regarding psychological benefits of the phenomenon will continue to emerge. Future research should continue to explore how the presence of ELDVs may affect other psychological aspects of the human experience to provide the greatest levels of care and comfort to the dying.

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Data Availability and Sharing
In accordance with the State University of NY at Buffalo Social and Behavioral Research Institutional Review Board approval of this project, all data, including audio recordings and transcripts, are to be kept secure, private, and not to be shared.

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Author Disclosure Statement

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References


Address correspondence to:
Kathryn Levy, MSW, AdvStat
Palliative Care Institute
Center for Hospice and Palliative Care
225 Como Park Boulevard
Cheektowaga, NY 14227

E-mail: klevy@palliativecare.org