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AN INTERNET TOOL TO NORMALIZE GRIEF*

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Abstract

This research evaluated the efficacy of a psycho-educational Internet self-help tool to educate and support recently (1–6 months) bereaved individuals. The goal of the website was to help users normalize their grief to enhance their adaptive adjustment. A randomized controlled trial evaluated the gains in social cognitive theory constructs and state anxiety. Compared to the control group ($N = 34$), treatment participants ($N = 33$) reported significant multivariate gains ($\eta^2 = .191$). Significant program effects were obtained on all three outcome measures: attitude ($\eta^2 = .177$), self-efficacy ($\eta^2 = .106$), and state anxiety ($\eta^2 = .083$). These findings suggest the potential efficacy of an Internet-based grief support tool to enhance adaptive adjustment of the bereaved.

INTRODUCTION

Grief typically interferes, at least briefly, with the bereaved person's social and occupational functioning (e.g., James & Friedman, 2003; Shuchter & Zisook, 1993; Stroebe, Schut, & Stroebe, 2007; Zisook & Shuchter, 2001). More than 60 years of research documents a variety of normal grief reactions by the bereaved (e.g., Lindemann, 1944; Prigerson & Jacobs, 2001; Stroebe et al., 2007). The most common response includes affective reactions, dominated by sadness but also other negative affects as anger and guilt as well as positive states and even the experience of relief and emancipation (Bonanno, Goorin, & Coifman, 2008; Wheaton, 1990). Many people also experience physical/somatic manifestations (e.g., insomnia, loss of

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appetite, headaches, and nausea), and cognitive reactions (e.g., rumination, inability to concentrate, a sense of the deceased's presence, and a tendency to try to rationalize or cognitively explain the death). Behavioral reactions may also occur, including crying, social withdrawal, increased substance use, accidents, changes in physical activity, and activities that provide a connection to the deceased (e.g., visiting the gravesite). Spiritual reactions may include a loss of faith and an existential search for meaning, increased focus on rituals, or changes in spiritual practice.

While the bereaved often adapt to their loss within the first 2 to 6 months, 10–15% of the bereaved experience significant adverse reactions (i.e., complicated grief), which includes symptoms similar to a major depressive episode or post traumatic stress disorder (Bonanno & Kaltman, 1999, 2001; Prigerson & Jacobs, 2001; Stroebe et al., 2007; Zisook & Shuchter, 2001). Moreover, bereavement can precipitate other health or behavioral problems (Marks, 2007). For instance, 70% of participants in a large grief study reported increased or new use of alcohol or drugs in the 6 months following a major loss (James & Friedman, 2003). On the macro scale, bereaved employees cost American businesses \$44.5 billion per year due to lost productivity, increased utilization of healthcare services, absenteeism, and accidents related to poor concentration (James & Friedman, 2003).

Taken together, this information suggests the potential benefit of effective resources to help bereaved individuals who are not suffering from complicated grief symptoms, return to healthy social and occupational functioning. This article summarizes research involving the development and evaluation of an Internet-based psycho-educational tool for recently bereaved individuals not suffering from complicated grief. The goals of the intervention were to normalize bereaved users' grief experience, and to assess their reaction to this Internet self-help approach.

GRIEF SUPPORT

Because grief is a multi-faceted experience impacted by numerous personal and environmental factors, self-help resources that are tailored to the context of the bereaved individual may be more successful (Bonanno, 1999; Martin & Doka, 2000; Rando, 1993). Typical resources for the bereaved include: counseling; support groups; text-based information (e.g., books, pamphlets, or websites); pharmacotherapy; or cognitive-behavioral, psychodynamic, psychoanalytical, or interpersonal therapies (Forte, Hill, Pazder, & Feudtner, 2004). A recent meta-analysis by Currier, Neimeyer, and Berman (2008) found that bereavement interventions had minimal effect at follow-up, but that interventions for complicated grievers had outcomes comparable to psycho-therapies for other difficulties. Some psycho-educational resources, however, may still have the potential to speed the return to normalcy of uncomplicated grievers. Approaches tested by research and potentially adaptable to an interactive (i.e., Internet) self-help format include: identification of personal grieving styles; attribution of personal meaning to loss; and identity reconstruction without the deceased.

Bereaved individuals may have a distinct grieving style that is unique to their loss. Martin and Doka (2000) propose a continuum of grieving styles. Affective or "intuitive grieving" anchors one end and a cognitive-behavioral style called "instrumental grieving" anchors the other. Most individuals fall somewhere in the middle, requiring some emotive coping and some cognitive-behavioral strategies. Unfortunately, many bereaved individuals are unaware of their grieving style and think that the only "normal" grief reaction is the affective grieving style. Lacking an understanding of their personal style, some bereaved individuals or persons in their support system may feel they are grieving inappropriately, which may add to their anxiety as they struggle to cope with their loss.

A strategy that may enhance adaptive adjustment to bereavement is the attribution of personal growth due to the loss of a loved one. Research suggests that part of the cognitive processing of a death may involve an appraisal of how bereavement has resulted in some form of psychological value/gain for the bereaved (Davis & Nolen-Hoeksema, 2001). In their work, Davis and Nolen-Hoeksema (2001) found that the three most common themes to bring solace were a growth in character (e.g., “I have become stronger, more competent, more compassionate”), a new perspective (e.g., “I am more aware of life around me”), and an increased sense of connection and strengthening of relationships (e.g., “I realize how little time we have and how much we need to spend it showing our love for each other”). Thus, the ability to perceive benefits or personal growth stemming from the loss may facilitate positive adjustment during bereavement.

Research by Bauer and Bonanno (2001a, 2001b) suggests that adjusting to the loss of a loved one may also be enhanced by activities to help bereaved people understand their identity without the deceased. This includes a need to maintain a sense of continuity with the old self, the one that existed before the death of the loved one. A sense of continuity of self, from before the death to the present, helps bereaved people gain perspective about how much of their identity is still intact. This process helps the bereaved to more realistically construct a new life and self-image without the deceased (Bauer & Bonanno, 2001a, 2001b).

INTERNET-BASED SUPPORT

The Internet seems to be a platform to offer support and education to the bereaved. It now reaches 75% of American adults (PEW Internet & American Life Project, 2008). As familiarity and proficiency with computers have increased, web-based applications are increasing in popularity. The Internet is now used widely to provide information regarding health-related issues, and it is an effective medium for promoting behavior change (e.g., Fotheringham & Owen, 2000; Ritterband, Ardan, Thorndike, Magee, Saylor, Cox, et al., 2008; Strecher, McClure, Alexander, Chakraborty, Nair, Konkel, et al., 2008).

Many websites offer grief support and are hosted by non-profits (e.g., GriefNet URL: <http://www.griefnet.org>; the Compassionate Friends URL: <http://www.compassionatefriends.org/>; GriefLink URL: <http://www.grieflink.asn.au/>), national organizations (e.g., the National Hospice and Palliative Care Organization URL: <http://www.caringinfo.org/>; the Hospice Foundation of America URL: <http://www.hospicefoundation.org/>), and governmental agencies (e.g., National Cancer Institute URL: <http://www.cancer.gov>). They provide text-based information, message boards, online resources, and online support groups.

Research into grief interventions on the Internet, however, is limited. An e-mail-based cognitive-behavioral Internet intervention showed positive outcomes that reduced symptoms of complicated grief (Wagner, Knaevelsrud, & Maercker, 2006; Wagner & Maercker, 2007). We found no research on self-help interventions on the Internet aimed at uncomplicated grievers. The research described here is therefore an early attempt to develop a psycho-educational grief support tool on the Internet, by adapting techniques shown to be effective in previous research. These techniques include identification of grieving styles (Martin & Doka, 2000), attributions of personal meaning to loss (Davis & Nolen-Hoeksema, 2001), and the understanding of a new personal identity without the deceased (Bauer & Bonanno, 2001a, 2001b).

THE RESEARCH QUESTIONS

With grant funding from the National Institutes on Mental Health, the goal of this study was to develop a prototype of an Internet-based self-help bereavement intervention for individuals

who recently experienced the expected death of an older relative or loved one. This study addressed the following research questions:

1. Can exposure to the intervention help bereaved individuals normalize their grief?
2. To what extent will users' attitudes, self-efficacy and knowledge regarding their grief positively change as a result of intervention use?
3. How satisfied will users be with an Internet-based grief support intervention?

METHODS

The Internet Tool: Making Sense of Grief

Making Sense of Grief is a prototype browser-based Internet intervention designed for uncomplicated grievers who were bereaved within the last 1–6 months. It offers self-paced interactive tools to help users better understand their grief, and to find positive ways to cope with their loss.

Three intervention modules include interactive exercises supplemented by video testimonials, all of which are designed to normalize feelings of grief. The module *My Grieving Style* adapts the grief style assessment of Martin and Doka (2000) to help users identify their style of grief (i.e., instrumental, intuitive, some of each). It shows characteristics of each style and is supplemented by video testimonial stories; it encourages users to accept their style as being personally appropriate. *Who am I?* asks users to think about how their loss has affected their life. This module helps the bereaved individual work through an interactive identity-continuity exercise adapted from the work of Bauer and Bonanno (2001a, 2001b). Type-in responses and check lists help users compare their roles and personal qualities before and after the death. In the *How am I Doing?* module, users consider if anything has changed in a positive way since the death of their loved one. This module uses type-in responses and check lists to assist users with meaning reconstruction through the use of positive self-appraisals (Davis & Nolen-Hoeksema, 2001) to identify personal growth or constructive changes resulting from their bereavement. It is designed to help grievers recognize that, despite the feelings of loss, they can survive and perhaps even benefit from their grief experience. Two additional modules offer education and referral. *Grief Experience* contains a collection of text articles, written for 10th grade reading level, about grief related topics. It is divided into two sections, *Typical Reactions to Grief* and *Individual Factors Affecting Grief*. The last module, *Resources*, contains a list of websites and books of potential interest to bereaved individuals. For the research reported here, links in this module were inactive, to assure that our participants in the treatment group did not link out of the intervention.

Each module is designed to be reviewed on-screen, with options for printing hard copies for later reference. The browser-based format of the intervention allows for users to complete the modules in any order, and to return as often as desired.

Content for the *Making Sense of Grief* intervention was developed based on the research literature, information acquired from an online formative survey of 54 bereaved individuals, and input from expert consultants in the field of grief and bereavement. The intervention website has a total of 89 web pages, 28 video testimonials, 22 narrator video clips, and 7 voice-over clips.

Procedures

Subject Recruitment—After the protocol was approved by an Institutional Review Board, participants were recruited nationally via grief support websites, listservs, online message boards, Internet advertising, newsletters, e-mail announcements, e-newsletters, and newspaper

ads in three large metropolitan areas. The participants who wished to take part in the study accessed an online information page. If still interested, they were linked to an online screening survey to select qualified participants. A total of 282 respondents initially tried to qualify via the online screening instrument. They indicated that they heard about the study through classified advertisements (26.3%), e-mail (22.0%), newsletters (12.5%), word of mouth (10.2%), work (6.3%), online sources (4.0%), flyers (3.6%), and computer labs/centers (1.0%). A category of “other” (14.1%) included hospice/bereavement support groups or hospice websites. A total of 86 respondents met the criteria to participate via the initial recruitment and screening process.

Research Protocol

Primary screening: The screening instrument was designed to select qualified individuals to participate in the research study. The instrument included multiple choice items to sort for individuals who had experienced the expected, natural death of a parent or older relative in the last 1–6 months. Other items asked about gender and race/ethnicity, verified that potential subjects were 18 years of age or older, lived in the United States, had access to a computer with broadband capability for the next 3 months, and had an active e-mail account for the next 3 months.

Since individuals suffering from severe depression may be at risk for negative outcomes related to bereavement and may benefit from professional care, the screening instrument was also designed to eliminate potential participants with symptoms of depression. Four items with 5-point Likert scale responses asked about grief reactions occurring in the past month. These included: (a) “how likely were you to experience episodes of grief (i.e., reactions to the loss of your loved one)”; (b) “to what extent has grief interfered with your everyday thoughts”; (c) “how often have you felt down, depressed or hopeless”; and (d) “how often have you had little interest or pleasure in doing things?” Individuals who were ineligible based on the screening criteria were informed immediately after submitting the survey that they were not a good match for this study. The message to these individuals also offered a toll free telephone number to a national resource and referral service (National Suicide Prevention Lifeline) that is experienced in the area of crisis intervention for individuals who are bereaved.

Secondary screening: Because the research team could not directly assess the veracity of the responses to the screening items, potential participants were then screened verbally on the telephone prior to full acceptance into the study. Potential participants who qualified with the online screening instrument received tentative acceptance. They were then e-mailed a message to telephone ProtoCall Services, Inc., a licensed telephone call center, where they were assessed for a level of mental health care needs, using a protocol approved by the American Association of Suicidology. The research protocol required that persons judged to be in urgent (within 24 hours) or emergent (immediate) need of care receive assistance per existing call center procedures. This included solution-focused supportive counseling and help identifying appropriate follow-up resources in their geographic area. Persons who were not in urgent or emergent need of care were qualified to participate in the study.

Procedures: Of the 86 people initially screened into the study, 1 person was dropped due to connectivity issues and 3 people were dropped due to probable fraudulent information. Of the total of 82 participants asked to contact ProtoCall Services, Inc., 7 did not call, and 6 were identified as fraudulent based on information they provided to ProtoCall (e.g., cause of death or time period differed from responses to screening survey). One additional subject was identified as being in need of solution-focused counseling, and was tactfully removed from the subject pool.

A total of 68 participants passed ProtoCall's phone screening, and were randomly assigned to either the treatment group (immediate intervention) or the control group (usual care). Participants in each group were e-mailed a link to the online informed consent form. One potential participant did not access the informed consent or respond to the e-mail and was dropped from the study. The remaining 67 participants accessed the consent, clicked the "I agree" icon at the bottom of the consent, and were then linked to the online pretest assessment (T1). After completing the T1, treatment participants were linked to the *Making Sense of Grief* intervention. Within two business days after viewing the intervention, treatment participants were sent an e-mail request and a link to complete the online posttest assessment (T2). The control participants were sent an e-mail request to complete the T2 assessment two business days after completing the pretest assessment.

All 67 participants, who agreed to the online consent, completed the T1 and T2 assessments. The average time between completion of the T1 and T2 assessments for the treatment group was 3.5 days, whereas the average completion time for the control group was 5 days. Once participants completed both assessments, they were mailed a check for \$120. All participants were given access to the *Making Sense of Grief* intervention for 1 month after the study ended. In addition, 2 weeks post-exposure to the intervention, ProtoCall contacted all treatment participants by telephone and conducted another level-of-care assessment to check for adverse reactions to exposure to the website. No follow-up care was recommended by ProtoCall.

Participants: As detailed in Table 1, a majority of the participants were Caucasian females grieving the loss of a parent. They averaged 47 years of age, most were employed, and over half of them had a college or graduate degree. No significant differences were obtained between the two conditions on the demographic variables. The amount of time treatment participants spent logged on to the intervention ranged from 5 minutes to 250 minutes, with an average time of 35.2 minutes ($SD = 43.0$). This data should be viewed with caution, however, because the actual time of use is unknown. Three individuals logged on a second time for an average of 27.5 minutes ($SD = 15.3$).

Measures

The goal of this cross-sectional study was to determine if the prototype web-site could help bereaved individuals normalize their grief, and to examine how users would respond to this self-help approach. Social Cognitive Theory (SCT; Bandura, 1977, 1986) suggests that an individual's attitude will shape self-efficacy, while stress and coping theory (Lazarus & Folkman, 1984) suggests that greater self-efficacy can contribute to improved coping ability, reduced distress, and improved social and occupational functioning. On the assumption that progress toward normalizing individual grief would be indicated by improved attitudes toward living life without the deceased and self-efficacy to cope with the passing of the deceased, we measured attitudes toward grief and coping and self-efficacy to cope with grief. If the intervention was successful, we hypothesized that improved attitudes and self-efficacy would be linked to reductions in personal anxiety about loss of the deceased.

Attitudes—The assessment included 19 attitudinal items designed to assess content addressed in the intervention. They were presented as statements, and participants indicated their agreement with each item on a 6-point Likert scale with responses ranging from 1 ("Strongly Disagree") to 6 ("Strongly Agree"). Seven of the items addressed perspectives on personal grief (e.g., "I am quite troubled by my grief"; "I am at peace with my grief"; "I am coping well with my grief"); five items addressed personal styles of grieving (e.g., "People have very different styles of grieving"; "I know and understand my personal style of grieving"); and eight items addressed feelings of loss due to grief (e.g., "Because of the death of my loved one, I

feel a big part of me is missing”; “my life has changed a lot”; “I have become a much stronger person”) (Cronbach’s alpha = .86).

Self-Efficacy—To examine the SCT construct of self-efficacy, participants responded to three items asking “If you wanted to, how confident are you that you could ... cope with personal grief, use knowledge of personal style of grief to cope, and engage in positive behaviors to help coping” (Cronbach’s alpha = .90).

Anxiety—To assess anxiety, participants completed the 20-item State-Trait Anxiety Inventory (STAI; Spielberger, Gorsuch, & Lushene, 1970). The essential qualities evaluated by the STAI are feelings of apprehension, tension, nervousness, and worry. Scores on the STAI have been found to be sensitive indicators of changes in transitory anxiety experienced by clients and patients in counseling, psychotherapy, and behavior-modification programs (Cronbach’s alpha = .95).

User Satisfaction—Treatment group participants responded to four items rating their overall opinions of the *Making Sense of Grief* intervention, including usefulness for coping with grief, helpfulness to understand their own grief, satisfaction with the intervention, and would the user recommend the intervention to others. For each item, participants were asked to rate their opinions on a 7-point Likert scale, from 1 (“Not at All”) to 7 (“Extremely”).

Acceptability and Usability—On a 6-point Likert scale from 1 (“Strongly Disagree”) to 6 (“Strongly Agree”), treatment group participants rated a total of six intervention-specific statements adapted from web evaluation instruments (e.g., Chambers, Phil, Conner, Diver, & McGonigle, 2002; Vandelanotte, De Bourdeaudhuij, Sallis, Spittaels, & Brug, 2005). The statements included personal interest, usability, believability and value of video elements, and attractiveness of the interface design.

Qualitative Responses—Treatment group participants were asked to type into a text box any comments about the intervention, including opinions about how to improve it. Follow-up phone calls to the treatment group participants found no adverse effects due to intervention exposure. On the contrary, participants felt that the intervention helped them understand and better process their grief.

RESULTS

Intervention Effects

Pretest to Posttest Change—One of the goals of the evaluation was to examine the extent to which the treatment subjects ($N = 33$) showed gains compared to the control subjects ($N = 34$) on the targeted theoretical constructs. These constructs included: (a) attitude; (b) self-efficacy; and (c) state anxiety. Mean item ratings were used to create the three scale scores. Multivariate analysis of covariance (MANCOVA) comparing the two conditions was conducted on the posttest outcome measures with the pretest outcome measures included as covariates. An overall multivariate model was tested followed by three univariate models. The treatment participants were found to have large gains compared to the control participants, multivariate $F(3, 57) = 4.49, p = .007$, eta-square = .191, a large effect size. As can be seen in Table 2, the treatment group differed significantly from the control group on each of the posttest measures. The greatest gains were obtained for attitude/knowledge measure (eta-square = .177, large effect size), followed by self-efficacy (eta-square = .106, medium effect size), and state anxiety (eta-square = .083; medium effect size). Thus, significant and substantive effects were obtained on all three of the outcome measures providing support for the efficacy of the intervention.

User Satisfaction

On a 7-point Likert scale from 1 (“Not at All”) to 7 (“Extremely Positive”), users in the treatment group were satisfied with the intervention ($M = 5.18$, $SD = 1.47$) and would recommend it to others ($M = 5.62$, $SD = 1.52$). They found the intervention to be helpful for understanding their grief ($M = 5.15$, $SD = 1.54$) and useful for coping with it ($M = 4.85$, $SD = 1.35$).

Intervention Acceptability and Usability

On a 6-point Likert scale from 1 (“Strongly Disagree”) to 6 (“Strongly Agree”), users in the treatment group found the intervention to be interesting ($M = 4.88$, $SD = .91$), easy to use ($M = 5.21$, $SD = .81$), and attractive ($M = 5.00$, $SD = .82$), and they liked how the intervention guided them through the pages ($M = 5.21$, $SD = .84$). Many of them found the video segments in the intervention to be believable ($M = 5.03$, $SD = .87$) and to add to the intervention’s value ($M = 5.12$, $SD = .91$).

Qualitative Comments

The evaluation instrument provided users an opportunity to type-in comments to give feedback about the intervention. A total of 28 out of 33 treatment subjects offered comments, which were consistently positive. Common themes related to the value of the intervention included: learning about the different styles of grieving; identifying personal styles of grief; and watching the video testimonials. Suggestions for improvements included adding more information, text, and materials in the interactive modules and addressing more specific questions about how the loss of a loved one can affect everyday life.

DISCUSSION

This project successfully developed and evaluated a unique psycho-educational self-help Internet tool to provide knowledge and support for bereaved individuals who had experienced the recent expected natural death of a parent or older relative. The randomized evaluation resulted in significant positive effects with medium or large effect sizes. Those who viewed *Making Sense of Grief* reported it to be well designed, user-friendly, and helpful. These results are supported by qualitative comments typed-in by intervention users, and by the follow-up calls conducted after the evaluation. Taken together, the results suggest that this self-help intervention had a measurable positive impact on the participants, with no ill effects noted during follow-up interviews.

How a real world grief support tool on the web might best be offered to avoid potential negative effects on users remains to be seen. For instance, complicated grievers, such as were avoided in this research, might access the intervention material with uncertain consequences. Options to decrease the chances of negative outcomes for users might include a password protected website if the material was deemed potentially problematic by the provider (e.g., clinician, health care insurer), a warning message such as is provided on physical activity websites, or a symptoms checklist that might inform potential users whether the site was appropriate for their grief-symptoms. While the Internet may offer appealing options, how to actually provide grief support on the web deserves thoughtful consideration.

While the research presented here is promising, it has limitations. First, to demonstrate positive impact on bereavement, the evaluation would need to measure change over time, rather than the short interval between the baseline and immediate posttest. A longer follow-up assessment interval would provide more credibility to the observed intervention effects. Second, the measures included in the study also were limited by the short pre-post assessments. Much would be learned if future studies expanded the range of outcomes measured to include distress,

coping skills, positive and negative affect, and behavioral outcomes such as social and occupational functioning. Third, how effective this intervention would be on other types of grief (e.g., unexpected or traumatic death, or the death of a spouse or a child) is unknown. Fourth, the potential for this type of psycho-educational tool to support bereaved individuals is limited to those willing to seek help on the web. Nevertheless, this research does appear to show the positive potential of the Internet to assist bereaved individuals in normalizing their grief and enhancing adaptive adjustment to life without the deceased. Future research is needed to refine how to develop web resources to better support those who grieve.

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References

- Bandura A. Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review* 1977;84:191–215. [PubMed: 847061]
- Bandura, A. *Social foundations of thought and action: A social cognitive theory*. Englewood Cliffs, NJ: Prentice Hall; 1986.
- Bauer J, Bonanno GA. I can, I do, I am: The narrative differentiation of self-efficacy and other self-evaluations while adapting to bereavement. *Journal of Research in Personality* 2001a;35:434–448.
- Bauer J, Bonanno GA. Continuity and discontinuity: Bridging one's past and present in stories of conjugal bereavement. *Narrative Inquiry* 2001b;11:1–36.
- Bonanno, GA. Factors associated with the effective accommodation to loss. In: Figley, C., editor. *The traumatology of grieving*. Washington, DC: Taylor & Francis; 1999. p. 37-52.
- Bonanno, GA.; Goorin, L.; Coifman, KG. Sadness and grief. In: Lewis, M.; Haviland-Jones, JM.; Barrett, LF., editors. *Handbook of emotions*. Vol. 3. New York: Guilford Press; 2008. p. 797-806.
- Bonanno GA, Kaltman S. Toward an integrative perspective on bereavement. *Psychological Bulletin* 1999;125:760–776. [PubMed: 10589301]
- Bonanno GA, Kaltman S. The varieties of grief experience. *Clinical Psychology Review* 2001;20:1–30.
- Chambers M, Phil D, Conner S, Diver M, McGonigle M. Usability of multimedia technology to help caregivers prepare for a crisis. *Telemedicine Journal and e-Health* 2002;8(3):343–347. [PubMed: 12419028]
- Currier JM, Neimeyer RA, Berman JS. The effectiveness of psychotherapeutic interventions for the bereaved: A comprehensive quantitative review. *Psychological Bulletin* 2008;134(5):648–661. [PubMed: 18729566]
- Davis CG, Nolen-Hoeksema S. Loss and meaning: How do people make sense of loss? *American Behavioral Scientist* 2001;44:726–741.
- Forte, AL.; Hill, M.; Pazder, R.; Feudtner, C. Bereavement care interventions: A systematic review. *BMC Palliative Care*. 2004. Retrieved July 10, 2008, from: <http://www.biomedcentral.com/1472-684X/3/3>
- Fotheringham MJ, Owen N. Interactive health communication in preventive medicine. *American Journal of Preventive Medicine* 2000;19(2):111–120. [PubMed: 10913901]
- James, JW.; Friedman, R. *Grief index: The hidden annual costs of grief in America's workplace*. Washington, DC: Grief Recovery Institute Educational Foundation; 2003. Retrieved February 3, 2004 from: <http://www.grief.net>
- Lazarus, R.; Folkman, S. *Stress, appraisal and coping*. New York: Springer; 1984.
- Lindemann E. Symptomatology and management of acute grief. *American Journal of Psychiatry* 1944;101:1141–1148.
- Marks NF. Death of parents and adult psychological and physical well-being. *Journal of Family Issues* 2007;28(12):1611–1638. [PubMed: 19212446]

- Martin, T.; Doka, KJ. Men don't cry, women do: Transcending gender stereotypes of grief. Philadelphia, PA: Brunner Mazel; 2000.
- Pew Internet & American Life Project. Demographics of internet users. 2008 Feb 15. Retrieved July 10, 2008, from: http://www.pewinternet.org/trends/User_Demo_2.15.08.htm
- Prigerson, H.; Jacobs, S. Traumatic grief as a distinct disorder: A rationale, consensus criteria, and a preliminary empirical test. In: Stroebe, M.; Hansson, RO.; Stroebe, W.; Schut, H., editors. Handbook of bereavement research: Consequences, coping and care. Washington, DC: American Psychological Association; 2001. p. 613-645.
- Rando, T. Treatment of complicated mourning. Champaign, IL: Research Press; 1993.
- Ritterband LM, Ardalan K, Thorndike FP, Magee JC, Saylor DK, Cox DJ, et al. Real world use of an Internet intervention for pediatric encopresis. *Journal of Medical Internet Research* 2008;10(2):e16.10.2196/jmir.1081 [PubMed: 18653440]
- Shuchter, SR.; Zisook, S. The course of normal grief. In: Stroebe, MS.; Stroebe, W.; Hansson, RO., editors. Handbook of bereavement: Theory, research and intervention. Cambridge, England: Cambridge University Press; 1993. p. 23-43.
- Spielberger, CD.; Gorsuch, RL.; Lushene, RE. Manual for the state-trait anxiety inventory. Palo Alto, CA: Consulting Psychologists Press; 1970.
- Strecher VJ, McClure JB, Alexander GL, Chakraborty B, Nair VN, Konkel JM, et al. Web-based smoking cessation programs: Results of a randomized trial. *American Journal of Preventive Medicine* 2008;34(5):373-381. [PubMed: 18407003]
- Stroebe M, Schut H, Stroebe W. Health outcomes of bereavement. *Lancet* 2007;370:1960-1973. [PubMed: 18068517]
- Vandelandotte C, De Bourdeaudhuij I, Sallis JF, Spittaels H, Brug J. Efficacy of sequential or simultaneous interactive computer-tailored interventions for increasing physical activity and decreasing fat intake. *Annals of Behavioral Medicine* 2005;29(2):138-146. [PubMed: 15823787]
- Wagner B, Knaevelsrud C, Maercker A. Internet-based cognitive-behavioral therapy for complicated grief: A randomized controlled trial. *Death Studies* 2006;30:429-453. [PubMed: 16610157]
- Wagner B, Maercker A. A 1.5-year follow-up of an Internet-based intervention for complicated grief. *Journal of Traumatic Stress* 2007;20(4):625-629. [PubMed: 17721955]
- Wheaton B. Life transitions, role histories, and mental health. *American Sociological Review* 1990;55:209-223.
- Zisook S, Shuchter SR. Treatment of the depressions of bereavement. *American Behavioral Scientist* 2001;44(5):782-797.

Table 1

Demographic Information for *Making Sense of Grief* Participants

Variable	All cases (n = 67)			Treatment (n = 33)			Control (n = 34)		
	M	SD	%	M	SD	%	M	SD	%
Age (in years)	46.5	11.9		45.8	12.4		47.2	11.4	
Gender									
Male			13.4			9.1			17.6
Female			86.6			90.9			82.4
Ethnicity									
Hispanic or Latino			4.5			3.0			5.9
Not Hispanic or Latino			95.5			97.0			94.1
Race									
African American			20.9			15.2			26.5
Asian American			1.5			3.0			
Caucasian			73.1			81.8			64.7
Hispanic or Latino			3.0						5.9
Mixed race			1.5						2.9
Employment Status									
Full time			50.7			51.5			50.0
Part time			23.9			21.2			26.5
Unemployed			25.4			27.3			23.5
Education									
Some high school			3.0			3.0			2.9
High school graduate			10.4			9.1			11.8
Some college			32.8			24.2			41.2
College graduate			20.9			24.2			17.6
Graduate/professional			29.9			36.4			23.5
Trade school			3.0			3.0			2.9
Annual family income									
Less than \$20,000			10.8			9.7			11.8
\$20,000–39,999			24.6			29.0			20.6

Variable	All cases (n = 67)			Treatment (n = 33)			Control (n = 34)		
	M	SD	%	M	SD	%	M	SD	%
\$40,000–59,999			24.6			19.4			29.4
\$60,000–79,999			20.0			22.6			17.6
More than \$80,000			20.0			19.4			20.6
Relationship to loved one who passed away									
My parent			62.7			72.7			52.9
My parent-in-law			9.0			6.1			11.8
My grandparent			19.4			21.2			17.6
My sibling			4.5						8.8
My aunt/uncle			4.5						8.8
Length of time since death of loved one (in months)									
1 month			3.0			3.0			2.9
2 months			14.9			9.1			20.6
3 months			19.4			27.3			11.8
4 months			14.9			18.2			11.8
5 months			25.4			21.2			29.4
6 months			17.9			18.2			17.6
7–12 months			4.5			3.0			5.9
Typical computer use per week (in days)									
Rarely			3.0			6.1			
1 day			1.5						2.9
2 days			1.5						2.9
3 days			6.0			9.1			2.9
4 days			1.5			3.0			
5 days			14.9			9.1			20.6
6 days			7.5			9.1			5.9
7 days			64.2			63.6			64.7
Typical Internet use per week (in days)									
Rarely			3.0			6.1			
1 day			1.5						2.9
2 days			4.5			3.0			5.9

Variable	All cases (n = 67)			Treatment (n = 33)			Control (n = 34)		
	M	SD	%	M	SD	%	M	SD	%
3 days			4.5			6.1			2.9
4 days			3.0			6.1			
5 days			20.9			12.1			29.4
6 days			7.5			9.1			5.9
7 days			55.2			57.6			52.9

Table 2
Pre-Post Descriptive Statistics and ANCOVA Results for the Three Outcome Measures

Outcome measure and condition	Pretest		Posttest		Condition effect			
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>Adj. M</i>	<i>F</i>	<i>p</i>	η^2
Attitude						12.72	.001	.177
Treatment	4.09	0.86	4.40	0.81	4.51			
Control	4.27	0.89	4.17	0.84	4.11			
Self-efficacy						6.98	.011	.106
Treatment	3.88	1.41	4.36	1.25	4.47			
Control	3.74	1.19	3.94	1.28	3.86			
State anxiety						5.37	.024	.083
Treatment	2.23	0.69	2.96	0.55	3.09			
Control	2.15	0.55	2.13	0.64	2.86			