National Military Family Bereavement Study

The Effect of Military Service Death on Family Members

Battlemind to Home Mental Health Summit

The Military Family Research Institute, Purdue University

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Disclosures

- The views expressed in this presentation are those of the author and do not necessarily reflect the official policy or position of the Department of Defense, Uniformed Services University, nor the U.S. Government.
- Dr. Cozza has no relevant financial relationships to disclose relating to the content of this activity.
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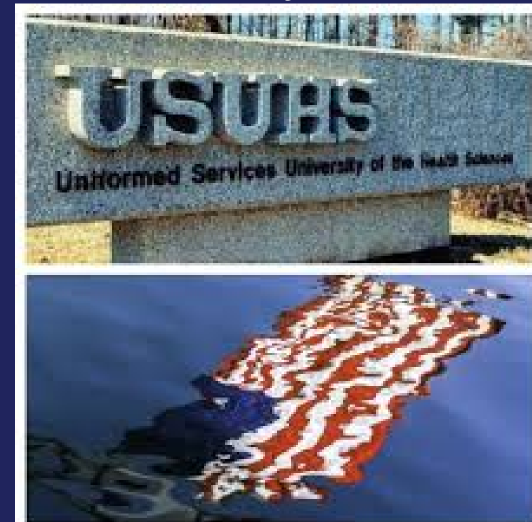
Learning Objectives

- Describe the differences between acute grief, integrated grief and complicated grief.
- Examine the major outcomes of participants in the National Military Family Bereavement Study.
- Identify adaptive and maladaptive coping strategies that impact impairment, distress and post-traumatic growth.
- Recognize strategies to better assist bereaved military family members within the community.



Military Deaths

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Sesame Workshop
"When Families Grieve"

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ACUTE GRIEF

Loss is an assault on attachment system

- Intense yearning, longing, sorrow, emotional pain, distressing somatic symptoms
- Feelings of disbelief, difficulty comprehending the reality
- Insistent distracting thoughts of the deceased, trouble focusing attention, forgetfulness
- Loss of sense of self, sense of purpose, feeling aimless, feelings of incompetence, loss of feelings of wellbeing
- Feeling disconnected from other people and ongoing life

Acute grief is usually time-limited

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Adaptation to Loss

- Yearning and sorrow are not gone, but reduced in intensity
- Acceptance of the reality of the death
- Finding ways to stay connected to the deceased
- Envisioning a future that allows joy and satisfaction
- Reopening ourselves to others

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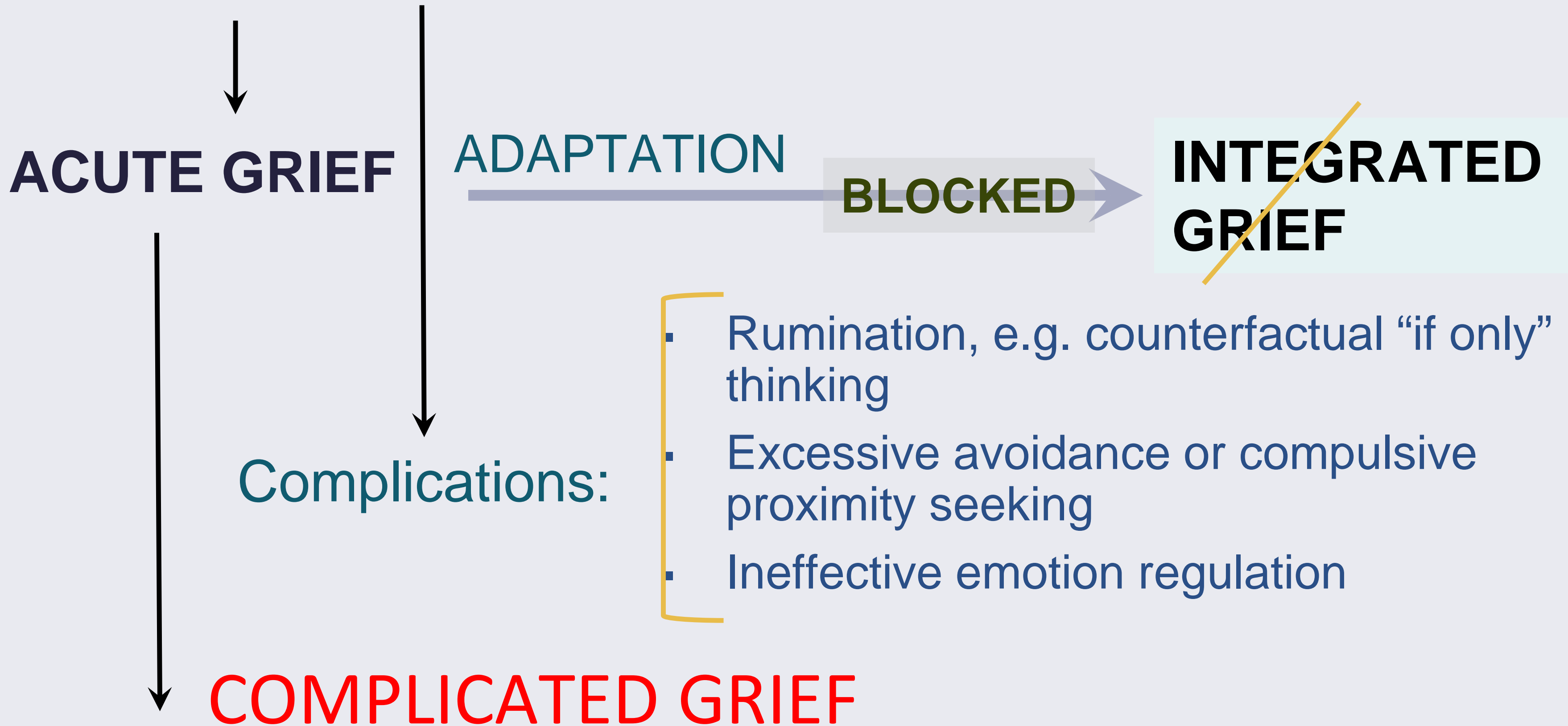
BEREAVEMENT



Persistence of acute grief symptoms

Complicating cognitive, emotional and behavioral symptoms

WHAT COMPLICATES GRIEF?

MALADAPTIVE, TROUBLING THOUGHTS ABOUT THE DEATH

Frequently entails second-guessing, “if only” thinking; catastrophic expectations for the future

DYSFUNCTIONAL BEHAVIORS

Excessive avoidance; escape from reality through proximity seeking, use of substances, negative health behavior

INEFFECTIVE EMOTION REGULATION

Excessive negative and insufficient positive emotions; excessive avoidance, physiological dysregulation (e.g. sleep, exercise)

Complicated Grief Outcomes

- Intensified feelings of guilt, anger and blame
- Reduced life satisfaction
- Feelings of social isolation
- Lack of meaningfulness
- Increased vulnerability to physical illnesses and clinical disorders (e.g., complicated grief (CG), depression, anxiety)
- CG associated with distress, impairment and lowers quality of life

Bereaved Military Family Risk

- Surviving military spouses, siblings and children are young
- Sudden and violent deaths (e.g. combat deaths, accidents, suicides or homicides)
- Other close kin, especially parents (young service members likely to leave behind parents)
- Higher levels of reported mental health difficulties in military spouses associated with deployment
- Delays in obtaining/uncertain information about the death
- Feelings of blame (if family members either blame military or themselves for allowing service member to enter military)

National Military Family Bereavement Study
www.militarysurvivorstudy.org

- During 10 years since 9/11/2001, approximately 16,000 U.S. service members died on active duty status
- Limited research on impact of death, especially combat deaths, of service member on military families
- Bereavement leads to increased vulnerability to physical illnesses and psychological conditions
  - Depression, anxiety, complicated grief
- No systematic studies about bereaved military families
- Potential elevated risk due to the sudden, violent deaths of young people

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National Military Family Bereavement Study

www.militarysurvivorstudy.org

- Mixed methods (quantitative/qualitative)
  - archival data, surveys and interviews
- Subject inclusion: volunteer military bereaved family members since 9/11 (parents, siblings, spouses/partners, children)
- Longitudinal, repeated measures design over 3 years
- 2200 adults and 110 children participated
- 39 focus groups (parents, spouses, siblings, children)

NMFBS Study Team & Partners

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Community Partner Organizations
Alliance of Hope
American Association of Suicidology
American Gold Star Mothers
American Widow Project
Army Survivor Outreach Services
The Compassionate Friends
Gold Star Wives of America
Military Child Education Coalition
Military Families United
National Military Family Association
Suicide Awareness Voices of Education
Surviving Spouse Support Group
Snowball Express
Tragedy Assistance Program for Survivors
Travis Manion Foundation

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NMFBS Aims

Identify unique characteristics of military death and experiences of bereaved family member (parents, siblings, spouses, children)

Examine how psychological, physical and/or behavioral outcomes of the grieving process are influenced by:

- Pre-existing psychological and physical health
- Support or resources (family, community)
- Relationship quality
- Circumstances of death
- Genetic factors

Examples of Assessed Constructs

- Mental health
- Alcohol use
- Coping strategies
- Relationship with deceased
- Grief symptoms
- Post-traumatic growth
- Circumstances of the death
- Life events
- Cognitive failures
- Emotion regulation
- Social support
- Attachment styles
- Relationship with partner (spouses and parents)
- Religious faith
- Resilience
- Military identity
- Occupational functioning
- Family coping, functioning and parenting

Potential Biomarkers

- brain-derived neurotrophic factor (BDNF)
- p11
- serotonin transporter gene (5-HTT)
- OXTR
- MAO-A

Deceased Military Service Members (2001-2011)

TABLE I. Demographics of Deceased Service Members (n = 15,938)

	DSM With and Without Dependents (%)
DSM Age (Years)	Mean = 28.5; SD = 9.0; Range: 17–75
Gender	94.6 (Male)
Race	
White	77.0
African-American	15.0
American Indian/ Alaskan Native	1.3
Asian	1.6
Native Hawaiian or Other Pacific Islander	0.5
Other	4.6
Service Branch	
Army	55.7
Marine Corps	17.4
Navy	15.0
Air Force	11.9
Component	
Active Duty	81.0
National Guard	10.0
Reserve	9.0
Pay Grade	
E01–E04	50.8
E05–E09	37.3
O01–O09/W01–W05	11.8
Cause of Death	
Combat	31.5
Illness	14.8
Accident	34.0
Homicide	3.0
Suicide	14.5
Terrorist	0.3
Undetermined	1.9

Cozza et al. 2017

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Demographics of Bereaved Spouses 2001-2011

TABLE II. Demographics of Spouses With and Without Children

	Spouses Without Children	Spouses With Children	
	n = 4,233 (43.8%)	n = 5,434 (56.2%)	p Value[a]
Spouse Age (Years)	Mean = 36.0; SD = 10.3; Range = 19–80	Mean = 38.7; SD = 9.1; Range = 20–72	<0.001
Gender	92.7 (Female)	96.8 (Female)	<0.001
Service Branch			
Army	56.0	62.2	<0.001
Marine Corps	14.0	9.1	
Navy	15.3	15.3	
Air Force	14.7	13.4	
Component			
Active Duty	80.8	75.9	<0.001
National Guard	9.6	13.5	
Reserve	9.6	10.6	
Pay Grade			
E01–E04	35.1	22.9	<0.001
E05–E09	50.3	60.2	
O01–O09/W01–W05	14.6	16.9	
Cause of Death			
Combat	28.7	28.5	<0.001
Illness	18.2	23.9	
Accident	31.6	28.1	
Homicide	3.1	2.6	
Suicide	16.1	15.0	
Terrorist	0.3	0.3	
Undetermined	2.0	1.5	

[a]On the basis of χ^2 or analysis of variance tests.

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Cozza et al. 2017

Bereaved Military Children 2001-2011

12%
10%
8%
6%
4%
2%
0%

0 to 5
6 to 10
11 to 15
16 to 18
19 to 21
Age Categories

Combat-related
Illness
Accident
Self-inflicted
Other deaths

FIGURE 1. Percentage of children by age (years) and cause of death of SMs.

TABLE III. Children and Causes of Death

	Number of Children (%)	Mean Child Age (Years)
Combat	3,342 (26.4)	7.9
Illness	3,400 (26.9)	14.5
Accident	3,485 (27.6)	9.3
Homicide	314 (2.5)	8.6
Suicide	1,896 (15.0)	9.4
Terrorist	34 (0.3)	8.7
Undetermined	170 (1.3)	8.8
Total	12,641	10.3

Cozza et al. 2017

Sudden and Violent Deaths

- Include suicides, accidents, homicides, disasters and war-related deaths
- Unique characteristics (e.g. surreal, inability to say goodbye, traumatic death, media coverage, injustice)
- Anticipated vs. unanticipated
- Heightened risk for CG, MDD and PTSD
- Risk factors
  - Blame/guilt, magnitude of loss, threatened life, other associated losses, uncertainty of outcome
- Protective factors
  - Meaning, self-efficacy/self esteem

Demographics of NMFBS Participants

- N = 2204 adult participants
- Mean age 47 years (SD 13.3 years)
- 80% female
- Predominantly white (91%) and non-Hispanic (93%)
- Participant relationship to deceased
  - 54% parents
  - 23% spouses/partners
  - 19% sibling
  - 3% adult children
- Cause of death
  - 46% combat related
  - 18% accidents
  - 15% suicides
  - 8% cause unknown to participant
  - 7% illness
  - 7% homicide/terrorism
- Mean time since death 4.9 years (20% within 2 years)

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Measuring Complicated Grief

- Inventory of Complicated Grief (ICG)
  - 19 item measure validated in civilian samples
  - Reliable measurement various levels of grief and circumstances of bereavement
  - Not used in U.S. military family survivor samples
- Five factor cluster in civilian CG sample (Simon et al., 2011)
  - Yearning and preoccupation with the deceased
  - Anger and bitterness
  - Shock and disbelief
  - Estrangement from others
  - Hallucinations of deceased

ICG Performance in Bereaved Military Families

(Fisher et al., 2017)

- The 5-factor CFA model showed good fit to the military family sample (RMSEA = 0.052 (90% CI: 0.036-0.067), CFI=0.950 and TLI=0.934)
- Examined invariance of 5-factor structure (i.e. loadings and thresholds) between military family sample and clinical research sample
  - Concluded strength of association between each item and each factor can be considered equivalent in both samples

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DSM-5 Persistent Complex Bereavement Disorder

- Included in DSM-5 Section 3/Conditions for Further Study
  - Criterion A requires the death of a loved one that occurred more than one year previously
  - Criterion B requires 1 of 4 symptoms related to yearning, longing and sorrow
  - Criterion C requires 6 or 12 symptoms related to reactive distress to the death or social/identity disruption
  - Criterion D/E requires distress or impairment outside of sociocultural norms
- present for at least 12 months; not better accounted for by MDD, GAD or PTSD

Performance of DSM-5 Persistent Complex Bereavement Disorder Criteria in a Community Sample of Bereaved Military Family Members. Cozza, et al. 2016

- Examined accuracy of criteria for DSM-5 PCBD in identifying putative cases of clinically impairing grief and in excluding nonclinical cases. Criteria sets for prolonged grief disorder and complicated grief also assessed.
- Identification of putative clinical cases:
  - DSM-5 PCBD: 53%
  - prolonged grief disorder: 59%
  - complicated grief: > 90%
- All criteria sets accurately excluded virtually all nonclinical grief cases and accurately excluded depression in the absence of clinical grief.

Findings

- Most participants doing well
- Prevalence of CG, depression and anxiety – high in comparison to other epidemiological studies (Middleton et al., 1996; Raphael & Minkov, 1999)
- Same factor structure of ICG despite differences in the experiences and demographic characteristics between samples
  - Five-factor conceptualization of CG generalizable
- High comorbidity of disorders
- Grief outcomes reduced with time since death
- Female and youth adds risk
- Parental relationship to deceased adds risk
- Cause of death contribution

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Coping Strategies Associated with Impairment

Increased impairment

Behavioral disengagement

"... giving up trying to deal with it."
"... giving up the attempt to cope."

Planning

"... trying to come up with strategy of what to do."
"... thinking hard about what steps to take."

Self-blame

"... criticizing myself."
"... blaming myself for things that happened."

Decreased impairment

Active coping

"… doing something about the situation."
"… taking action to make situation better."

Use of Emotional support

"… getting emotional support from others."
"… getting comfort and understanding from someone."

Acceptance

"… accepting the reality of the fact that it happened."
"… learning to live with it."

Post Traumatic Growth Inventory

- I changed my priorities about what is important in life
- I developed new interests
- I have a better understanding of spiritual matters
- I established a new path for my life
- I know better that I can handle difficulties
- I am better able to accept the way things work out
- I discovered that I am stronger than I thought I was

Coping Strategies Associated with PTG

Increased PTG

Active coping

Positive reframing

“…trying to see it in a different light.”

“… looking for something good in what happened.”

Use of instrumental support

“… getting help from other people.”

“…trying to get advice from other people about what to do.”

Religious coping

“… trying to find comfort in religion or spiritual beliefs.”

“…been praying or meditating.”

Decreased PTG

Venting

“…saying things to let my unpleasant feelings out.”

“… expressing my negative feelings.”

Self-blame

Coping and Grief Outcomes

Adaptive Coping Processes

- Active coping
- Positive reframing
- Use of emotional support
- Use of instrumental support
- Acceptance
- Religious coping

Maladaptive Coping Processes

- Behavioral disengagement
- Planning
- Self-blame
- Venting

Comments from NMFBS Participants

- “My life will never be the same. There is such emptiness in my heart that can't be filled, he was a joy and a blessing in our life. I encouraged him to join the military, and I will never forgive myself.”
- “My son took his own life. I’m angry with him. I’m angry with the military. I’m angry at everyone. I no longer fly the American flag. I feel utterly alone.”
- “I have come to realize he was doing what he wanted to do at the time of his death - it was the path he chose. Over time his death has taught me to be grateful and more appreciative of my family, friends, and my life.”
- “I just want to say how much I appreciate what you are all doing in helping families of deceased service members. I was not prepared at all for my brother's death, and I hope and pray that my participation helps others in the coping process.”

Clinical Implications

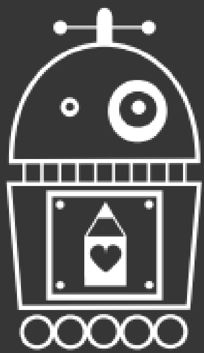
- Opportunities to target adaptive/maladaptive coping
- Support behavioral changes
  - instrumental and emotional support
  - behavioral activation strategies
  - re-channel “planning” into goal oriented activities
- Utilize cognitive strategies
  - promote positive reframing
  - encourage acceptance
  - minimize self-blame
- “Time Heals All Wounds”
  - maybe more important is what you do with time
  - may be mediated by coping

Summary

- Affected family members include both military dependents (spouses and children) and non-dependents (parents and siblings)
- Majority of bereaved are doing well, but some are not
- Age, gender, relationship, cause of death and time since death can play a factor
- Understand the differences between normative and complicated grief reactions
- Refer to appropriate grief support services (e.g. TAPS, VA survivor program, Army SoS, GSW, GSM) or clinical services
- Support adaptive coping and identify/target maladaptive coping
- Develop programs that can provide support to those that are not close to available resources

Stepping Forward in Grief

- CDMRP Funded Selective Prevention Trial
- RCT Design – ***GriefSteps*** vs. ***WellnessSteps***
- Virtual access (e.g. APP/web-based)
- Coach-assisted
- Collaborative study with Dr. Katherine Shear, Columbia University
- Modification of *Complicated Grief Therapy (Shear, et al.)*
  - Evidence based intervention for CG
  - Proven effective in multiple clinical trials
  - Supports normative/adaptive processes
  - Targets/reduces complicating factors to grief adaptation



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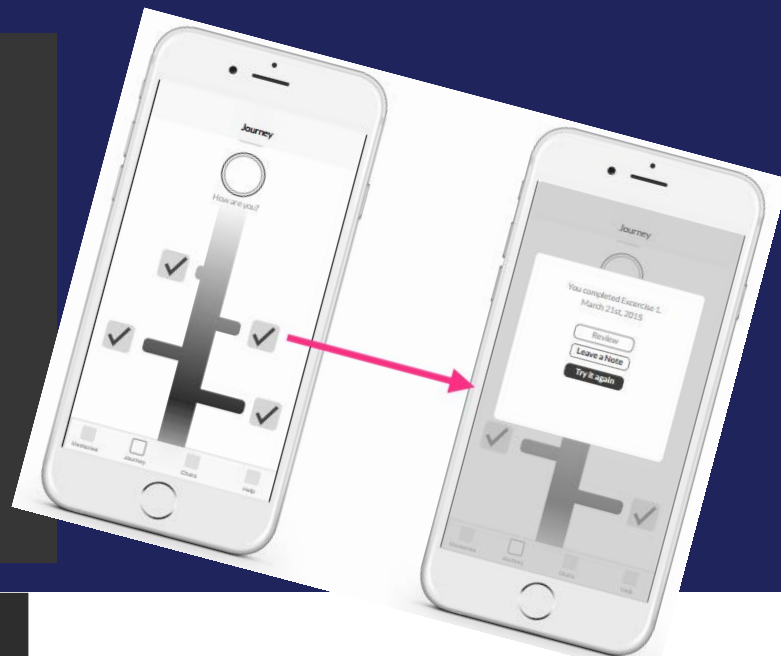
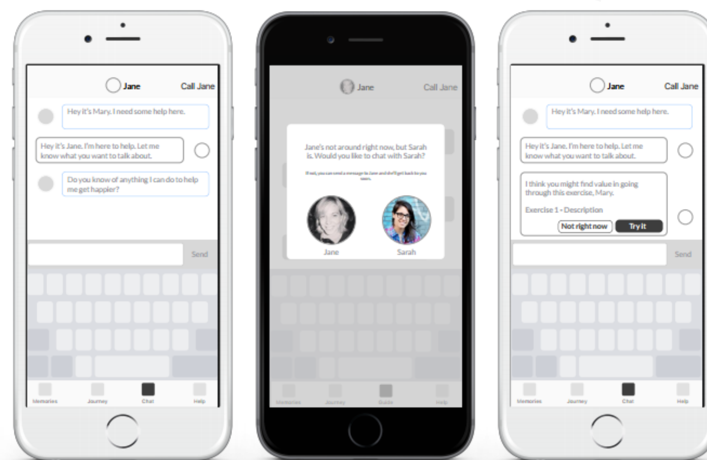


Chat

The bereaved could chat with their guide from the app.

- Allow the bereaved choose who they want to talk to if the guide is not available.
- Allow the bereaved start exercises that have been recommended by a guide from the chat window.



Thank you

Comments/Questions

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