

LESSON 2-2

DISASTER PSYCHIATRY

Lesson: Disaster psychiatry

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Intended Audience of Learners

A broad range of health professionals who may work with the older adult population.

Competencies

This lesson supports learning related to the following competencies, with regard to *psychosocial conditions and vulnerabilities present in a geriatric population exposed to disasters*.

Core Competencies and Subcompetencies from Walsh L, Subbarao I, Gebbie K, et al. Core competencies for disaster medicine and public health. *Disaster Med Public Health Prep.* 2012;6(1):44-52. doi: 10.1001/dmp.2012.4.

Core Competency 7.0 "Demonstrate knowledge of principles and practices for the clinical management of all ages and populations affected by disasters and public health emergencies, in accordance with professional scope of practice."

Subcompetency 7.1 "Discuss common physical and mental health consequences for all ages and populations affected by a disaster or public health emergency."

Core Competency 11.0 "Demonstrate knowledge of short- and long-term considerations for recovery of all ages, populations, and communities affected by a disaster or public health emergency."

Subcompetency 11.3 "Identify strategies for increasing the resilience of individuals and communities affected by a disaster or public health emergency."

Subcompetency 11.4 "Discuss the importance of monitoring the mental and physical health impacts of disasters and public health emergencies on responders and their families."

Learning Objectives

At the end of this lesson, the learner will be able to:

- 2-2.1 Describe the prevalence of common psychiatric conditions in older adults that can increase their vulnerability to adverse long-term psychosocial consequences following a disaster.
- 2-2.2 Discuss the unique psychosocial vulnerabilities among older adults that can interfere with or delay recovery from a disaster.
- 2-2.3 List the suicide risk factors among the elderly.
- 2-2.4 Develop a suicide safety plan with an older adult.
- 2-2.5 Recognize the role of social connectedness for older adults.

Estimated Time to Complete This Lesson

120 minutes

Content Outline

Module 2: Conditions present in the older adult population that impact their disaster preparedness, response, and recovery

Lesson 2-2: Disaster Psychiatry

- I. Psychosocial considerations and older adults
 - a. Preexisting psychiatric conditions can increase the risk for developing long-term adverse psychosocial consequences following a disaster, particularly among the elderly. Approximately 20% of people older than 55 will have a mental health concern during their lifetime, with the most common conditions being anxiety, depression, and cognitive impairment.¹
 - b. Depression: Depression is not a normal part of aging. Depression has been found in 3% of community elderly, but the prevalence is as high as 37% of elderly seen in primary care settings.² Although highly treatable, depressive disorders in the elderly are widely under-recognized and often go untreated. Risk factors for late-life depression include loss of a spouse, physical illness, less than high school education, impaired physical functioning, polypharmacy, and heavy alcohol consumption. Older women and Hispanics report more depression than do other groups.
 - c. Anxiety: Late-life anxiety is more likely to present in older adults as somatic complaints rather than psychiatric symptoms per se. Women report more anxiety than do men.³ Hispanics older than 50 are more likely than other ethnic groups to report anxiety.³ Many individuals with prior trauma exposures and frank post-traumatic stress disorder (PTSD) will experience worsening symptoms when exposed to another or similar event.

- d. Cognitive impairment: Dementia prevalence increases with age, from 5.0% of those aged 71-79 years to 37.4% of those aged 90 and older.⁴
- e. Interaction between preexisting disorders and disaster exposure: Much debate exists as to whether older adults are more vulnerable or more resilient than younger people exposed to a disaster. In general, studies suggest that age is not the most important determinant of long-term sequelae. Rather, “dose” of trauma exposure and/or preexisting vulnerabilities are more important. The “dose” is determined by proximity to epicenter of greatest destruction, degree of exposure to life-threatening situations, duration of disruption of basic services/needs, and exposure to greater property damage. Disasters place additional stress on preexisting circumstances. Thus, individuals who already feel isolated and under-supported or are depressed or anxious may experience exacerbation of these symptoms after a disaster event. Small or localized disasters that are time limited have less of an impact. Those where the social disruption persists over time are more associated with increased risk for long-term consequences. Older adults may often be more socially isolated and experience difficulties with access and transportation to services and needed care. Certain losses, such as loss of a loved one, as a result of the disaster can also increase the risk for long-term symptoms. Psychiatric symptoms after a disaster can include sleeplessness, anxiety, sadness, or increase in substance use. In some individuals, these symptoms can develop into psychiatric disorders including substance use disorder, PTSD, major depressive disorder, and generalized anxiety disorder. Additional challenges may be encountered by older adults with cognitive impairment. Following a disaster, for example, an older adult may not recognize that electrical power outages occurred and thus may be at risk for consuming spoiled food. Cognitive impairment may also prevent the individual from being able to navigate complicated federal, state, and local relief efforts.
- f. Special psychological concerns of older adults
 - i. Losses: Losses are a part of normal aging. Elderly may lose a spouse, retire, experience a drop in income, have their social network reduced, etc. This increases their vulnerability to all life stressors, not only disasters. Losses associated with a disaster may be more than the person can cope with. This can be especially true if these losses hold psychological significance. For example, an older adult may have little difficulty coping with the loss of an expensive car, but may feel overwhelmed by the loss of photographs or mementos passed down for generations.

- ii. Sensory impairment: An older adult may not be able to hear or see well, and this can lead to anxiety in unfamiliar settings. They may not adjust well to moving to a facility, for example, or to a change in routine.
- iii. Fear of institutionalization: Many older adults fear loss of independence if limitations are discovered. Often over years they will hide their limitations from family, friends, and health care professionals. Following a disaster, some may deny or under-report needs as a result.
- iv. Isolation: This can contribute to an older adult failing to learn about available resources (especially if mass forms of communication such as radio and television are not available), or their applications for disaster relief services may be delayed. Further, older adults today generally have a lower educational level than the general population, particularly minority elderly. This can further impede information gathering.⁵
- v. Crime victimization: The elderly are often targets of scam artists even in the absence of a disaster, and in the instability following a disaster this risk increases.
- vi. Mental health stigma: Mental health stigma prevents the elderly from reporting mental health symptoms to any providers or family even when directly asked. Some will deny symptoms of psychological distress but will endorse physical symptoms. Healthcare providers should thus utilize terminology such as "education," "resources," and "sharing experiences," rather than referring to psychiatric diagnoses and treatments.

II. Suicide

- a. The elderly account for 13% of the US population but 18% of all suicide deaths. White men older than 85 have the highest rates of suicide (59 per 100,000 persons).
- b. The elderly are more likely to complete suicide but less likely to report suicidal ideation or attempted suicide. This is largely because they are more likely to choose lethal means. Firearms are the most common method used, followed by hanging.
- c. Risk factors: male gender, white race, depressive illness (with self-rated depression symptom severity as the strongest predictor of suicide), serious physical illness, and functional impairment, pain, previous

suicide attempt, stressful life events in the weeks to months before suicide.

- d. Social functioning and elderly suicide: Physical illness and other losses are common stressors seen in older adults who commit suicide. Elderly persons who commit suicide are more likely than other older adults to live alone. Cases of homicide-suicide are more associated with caregiver burden.
- e. Protective factors: positive social supports, spirituality, sense of responsibility to family, life satisfaction, positive problem-solving skills, positive therapeutic relationship, sense of connectedness, restricted access to lethal means.
- f. Suicides and disasters
 - i. Among the potential psychological consequences following a disaster, suicide is of great concern. Systematic reviews that have analyzed the literature on the impact of natural disasters on suicidal behavior have been inconclusive owing to various methodological limitations.⁶ Some studies have found suicide rates to be unaffected by natural disasters. A recent study found that when damage caused by natural disasters is extremely large, suicide rates tend to increase significantly and may remain elevated for years. When damage is less severe, suicide rates actually decrease. The investigators theorize that natural disasters enhance people's willingness to help others, which may serve as a protective factor against suicidal risk by increasing the level of social ties in the affected community. When the disaster is so large as to disrupt social networks, however, social isolation occurs and suicidal thinking and behavior are increased. Older adults are particularly vulnerable to this disruption.⁷
- g. Suicide Risk Assessment: Assessment of death wishes, suicidal thinking, intent, and planning, particularly among isolated older adults, should be part of the recovery work following disasters that significantly disrupt social networks. There is no single accepted or recommended method or instrument for assessing suicidality. The questions below provide one example. More information can be found at:
http://www.mentalhealth.va.gov/docs/suicide_risk_assessment_guide.doc
 - i. Are you feeling hopeless? Hopelessness is a strong predictor of suicide and a common symptom of depression. It is often

associated with other depressive symptoms including worthlessness and helplessness. In older adults, this can also be associated with anxiety, restlessness, and inner agitation that can lead to suicidal behavior.

- ii. Have you had thoughts of wanting to hurt yourself? Asking this question will not increase the likelihood of someone becoming suicidal. Most persons report relief when a clinician is concerned enough to try to understand the psychological pain and distress being experienced by a person who is having these thoughts.
- iii. When did you have these thoughts? Many people become suicidal in response to negative life events. Inquiring about the context of these thoughts can increase the clinician's understanding of precipitants and facilitate the development of a treatment plan. Understanding the types of events and situations that trigger suicidal thoughts can also help the clinician and the older adult develop a safety plan to avoid suicidal behavior when these thoughts occur.
- iv. How would you do it? If someone does report having suicidal thoughts, one should inquire as to the method, whether the individual has access to the means or if he or she has engaged in behaviors to obtain the means. This will provide an indication of the intent and amount of thought that has gone into the plan. Any thought or plan to commit suicide should be taken very seriously.
- v. Have you ever tried to hurt yourself? Most persons who have attempted suicide will use more lethal means on subsequent attempts. Approximately 8-10% of those who attempt once will eventually die by suicide.
- vi. What are your reasons for living? Identifying protective factors can facilitate the development of a safety plan and can also provide a more balanced and hopeful perspective for the individual. If someone is expressing suicidal thoughts or you are worried about their safety based on their behavior (i.e., they are actively trying to harm themselves or acting in a way in which they are putting themselves in danger), it is best to refer them to a mental health professional. When people experience suicidal thoughts they may require psychiatric hospitalization. In the event that these systems are disrupted

owing to a disaster, you should first and foremost make sure the person is safe. Make sure to remove any lethal means and never leave them alone. If possible, two people should be with the person at all times and this safe environment should be maintained until the proper mental health treatment can be accessed.

- h. Elements of a suicide safety plan: All health professionals can develop a suicide safety plan with a person and this typically involves simple questions and specific steps. While a suicide safety plan can really be developed for anyone, it should be individualized to the specific triggers and coping strategies for the older adult. Having the person put the plan into writing is a useful strategy. He or she can take the plan out for easy review.
 - i. Recognize warning signs: personal situations, thoughts, mood, behavior, etc, that help the person recognize that they may be reaching a suicidal crisis.
 - ii. Internal coping strategies: what the person can do on his or her own to feel better (go for a walk, listen to music, do a crossword puzzle, etc) and prevent the suicidal ideation from worsening.
 - iii. Utilize social support network: This can include people and social settings who can offer support and help the individual distract themselves from the suicidal thoughts and urges. These are not necessarily people to call for specific help but rather “distracters” from inner turmoil. For some elderly, this could include neighbors, mail carriers, grocery store clerks, Meals on Wheels, places of worship, Senior Center, etc. For older adults, following a disaster, this may be part of what is causing stress because they may not be able to get to a place that previously offered peace (because of transportation or social disruption). This plan enables the person to develop an alternative social network.
 - iv. Personal network: Family, friends, religious or spiritual providers, co-workers who the person is willing to contact specifically for help during a suicidal crisis. It is important to encourage the individual to let these people know they are part of the safety plan before a crisis so that they can be prepared when receiving such a call.

- v. Professional network: This is the list of providers and agencies that the person is willing to contact during a time of crisis and can include primary care providers, mental health clinician, case worker, local emergency room, home health agency, etc. The plan should also include the National Suicide Prevention Lifeline Number 1-800-273-TALK.
 - vi. Reducing the potential for use of lethal means: This includes identifying the method the person is likely to choose and putting barriers in place to make access more difficult.
- III. Protective factors: Help the person identify and list his or her reasons for wanting to live.
- IV. Stages of psychological interventions following a disaster are covered elsewhere in the curriculum. This section will only address considerations that are unique for older adults.
- a. Prevention and Preparation: Providers can work with local authorities to establish services for frail elderly, those with cognitive disorders, and those with special needs (such as oxygen, dialysis, etc). Many seniors will not leave their homes if they cannot take their pets with them. Contingency planning should include making arrangements for any pets. Providers should also familiarize themselves with disaster plans in place in hospitals and institutions where they work and ensure that addressing the mental health needs of older adults is included.
 - b. Impact Phase
 - i. Normal psychological reaction: Very few people demonstrate serious psychopathology in the immediate aftermath of a disaster. Panic has been reported in only 10% and is usually related to an individual being trapped. Many people, however, display varying normal reactions that can be categorized in 4 areas:
 - A. Emotional: Examples can include numbness/shock, fear, helplessness, hopelessness, guilt, anger/irritability, anhedonia.
 - B. Cognitive: Examples can include impaired memory, intrusive thoughts, denial, impaired decision-making, and reduced self-esteem. Older adults, particularly those with sensory impairment, may appear confused and be mistaken for having dementia.

- C. Physical: Older adults can report vague somatic symptoms such as headaches, insomnia, digestive problems, reduced energy, and poor appetite.
- D. Social: Some will initially cope through avoidance or withdrawal.
- ii. Interventions at this time are to facilitate rescue and the provision of basic needs: food, water, shelter, and medication. It is common for access to medications to be delayed in the early aftermath of a disaster. Further, locating missing family members (for seniors this could include a pet) can cause significant distress. For older adults, interventions may also include helping them to make contact with family who are located distantly, as many elderly individuals are concerned that a family member, typically a child or sibling, may be concerned about their safety. Further, older adults may need immediate access to medications for chronic medical conditions. This may create a great deal of anxiety, which can be resolved quickly by addressing this need.
- c. Recoil phase: After the immediate crisis of a disaster, individuals impacted enter the recoil phase where individuals begin to adjust to what has occurred and can experience a wide range of fluctuating emotions. It is important to understand that older adults may experience a range of reactions that may be complex. During this phase, survivors begin to recognize that the immediate threat is reduced and stress is lessened. The older adult may need a longer period of time to enter into this phase than a younger person. Conversely, the older adult may be quite resilient and may have prior experience in recovery from a disaster and as such can serve as a tremendous resource for the community. The normal disaster responses noted above under the Impact Phase typically resolve within the first month after the disaster and the individual begins to move forward. Psychological interventions in this phase are typically of 2 types: 1) continuing to engage in problem-solving to address basic needs and obtain needed resources, as well as connect the senior with services and psychosocial supports; and 2) after the first month, screening for mental health consequences, such as clinical or major depression, anxiety, and PTSD. An additional consideration in older adults is to screen for a change in alcohol or prescription drug consumption, as some may use alcohol or other drugs to cope. Lastly, one should also be on the alert for possible financial abuse of older adults. Individuals who screen positive for significant psychological

- distress or alcohol consumption or other substance use should be referred to the nearest mental health providers associated with relief efforts.
- d. Recovery phase: During this phase, returning to familiar routines is important. Older adults who can do so and reestablish social networks typically will have the best prognoses. For older adults who are displaced, and in either temporary housing situations or have to move to new housing, the social disruptions are much more significant. The healthcare provider may be the only source of stability and continuity with the past that the older person has. It is imperative that the clinician understand this role. Health care systems need to be operational in affected communities as soon as possible. Older adults may benefit from more frequent appointments until a routine is reestablished.
- V. Social connectedness and seniors: For older adults, a sense of connection with others is vital. This includes emotional support (sharing experiences, problems, and having others empathically listen), informational support (such as advice and guidance), and instrumental support (such as assistance with activities of daily living, transportation, housekeeping, etc).
- a. Adequate perceived social support is associated with reduced risk of mental and physical illness and mortality.
 - b. Adults older than 65 are more likely than younger persons to report “never” or “rarely” receiving the support they needed.³ A larger number of minority elderly, particularly Hispanics, report receiving inadequate support.³ This may be in part due to language isolation.
 - c. Having a social network is associated with better medical outcomes and less depression, and at least one study found a lower risk of Alzheimer’s disease.⁸
 - d. Literature on social support suggests that perceived support is associated with increased survival and recovery from stressful life events, including disasters.

Suggested Learner Activities for Use in and Beyond the Classroom

1. Work in groups of 4 to develop a suicide safety plan for the gentleman in this clinical scenario. Try to identify factors that are protective and could be pointed out to him as reasons for not acting on suicidal ideas. Also, use the information provided to help him come up with alternatives to acting on suicidal thoughts. Mr. F is a 92-year-old, Catholic, retired, wealthy business owner. He lives in an assisted-living community in Miami but continues to drive. He has a girlfriend and they enjoy going out to dinner, dancing, socializing with friends, and volunteering at his church. Every Wednesday, he also volunteers at his facility as a bartender for the community’s weekly happy hour social gathering. His community is severely disrupted following a hurricane, and all the residents had to live in the lobby of the building for more than 1 week

- owing to loss of electricity and running water. He slept on the floor, ate cold sandwiches, and was unable to travel outside his complex. This reminded him of growing up in poverty, life circumstances of which he is very ashamed. He is having thoughts of suicide and is thinking of taking an overdose of pills.
2. Work in groups of 2, identify the 2 most frequently encountered natural disasters in your community and develop a preparedness checklist specific for the seniors in your community. Discuss and compare your checklist with others to develop an overall checklist that is specific for older adults in your community.
 3. Alice is an 85-year-old, retired, divorced African American female who lives alone. She worked for many years as a nurse and did not retire until 10 years ago. After retirement, she continued to be very active in her community including church and her family. She has 5 children and 16 grandchildren. Over the last 5 years she has had worsening physical issues and has been unable to get around as much as she used to. Her children have noticed she has been more confused and extremely anxious, often to the point where she is unable to participate in activities she once enjoyed such as walking or volunteering. On the phone with her daughter one night, she comments, "I wish this would just end, what's the point anymore." Her daughter reaches out to the on-call staff for her primary care physician and asks for assistance.
 - What can be done at his point to ensure her safety that night? What are the options?
 - What would be the steps and components of a safety plan for this woman?
 - What strengths/resources does she have?

Readings and Resources for the Learner

- Required Resources:
 - Psychological first aid: field operations guide -2nd edition. National Child Traumatic Stress Network website.
<http://www.nctsn.org/content/psychological-first-aid>. Published July 2006. Accessed January 14, 2015.
 - Stanley B, Brown GK. *Safety Plan Treatment Manual to Reduce Suicide Risk: Veteran Version*. US Department of Veterans Affairs.
http://www.mentalhealth.va.gov/docs/va_safety_planning_manual.pdf. Published August 20, 2008. Accessed July 21, 2014.
- Supplemental Resources

- Norris FH, Murrell SA. Prior experience as a moderator of disaster impact on anxiety symptoms in older adults. *Am J Community Psychol*. 1988;16(5):665-683.
- Phifer JF, Norris FH. Psychological symptoms in older adults following natural disaster: nature, timing, duration, and course. *J Gerontol*. 1989;44(6):S207-S212.
- Sakauye KM, Streim JE, Kennedy GJ, et al. AAGP position statement: disaster preparedness for older Americans: critical issues for the preservation of mental health. *Am J Geriatr Psychiatry*. 2009;17(11):916-924.doi: 10.1097/JGP.0b013e3181b4bf20.

Learner Assessment Strategies

1. Ask learners to respond to the following questions:
 - a. What are common psychiatric conditions in older adults that can increase their vulnerability to adverse long-term psychosocial consequences in a disaster?
 - b. What are the unique psychosocial vulnerabilities among older adults that can interfere with or delay recovery from a disaster?
2. The exercise above to develop a suicide safety plan can also be used to assess the skill of assessing suicidality and developing a safety plan. This should be appropriate for all health professionals. Immediately following a disaster, seniors may not have immediate access to specialty mental health providers or facilities. Nonclinicians and non-mental-health professionals may be called upon to assure the older adult's safety until appropriate mental health care can be obtained.
3. Have the learners complete a list of examples of social connectedness in the life of an older adult they know (a friend, co-worker, family member, neighbor, etc). They should be able to generate a list of at least 10 examples and should include people, activities, and settings. Ask the learners to list a few ways to enhance social connectedness before a disaster.

Readings and Resources for the Educators

- Required Resources
 - *The State of Mental Health and Aging in America. Issue Brief #1: What Do the Data Tell Us?* National Association of Chronic Disease Directors, Centers for Disease Control and Prevention.

- http://www.cdc.gov/aging/pdf/mental_health.pdf. Published 2008. Accessed January 14, 2015.
- Psychological first aid: field operations guide -2nd edition. National Child Traumatic Stress Network website.
<http://www.nctsn.org/content/psychological-first-aid>. Published July 2006. Accessed January 14, 2015.
 - Norris FH, Murrell SA. Prior experience as a moderator of disaster impact on anxiety symptoms in older adults. *Am J Community Psychol*. 1988;16(5):665-683.
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 - Stanley B, Brown GK. *Safety Plan Treatment Manual to Reduce Suicide Risk: Veteran Version*. US Department of Veterans Affairs.
http://www.mentalhealth.va.gov/docs/va_safety_planning_manual.pdf.
Published August 20, 2008. Accessed July 21, 2014.
 - Toner JA, Mierswa TM, Hower JL. *Geriatric Mental Health Disaster and Emergency Preparedness*. New York, NY: Springer Publishing Company; 2010. (Part I chapters 1 and 2, Part IV and V)
- Supplemental Resources
 - Aldrich N, Benson WF. Peer reviewed: disaster preparedness and the chronic disease needs of vulnerable older adults. *Prev Chronic Dis*. 2008;5(1):A27. (target audience: physicians)
 - Armenian HK, Morikawa M, Melkonian AK, et al. Loss as a determinant of PTSD in a cohort of adult survivors of the 1988 earthquake in Armenia: implications for policy. *Acta Psychiatr Scand*. 2000;102(1):58-64. (target audiences: physicians, health care executives, public health)

- Barusch AS. Disaster, vulnerability, and older adults: toward a social work response. *J Gerontol/Soc Work*. 2011;54(4):347-350. (target audience: social work)
- Bleich A, Gelkopf M, Melamed Y, Solomon Z. Emotional impact of exposure to terrorism among young-old and old-old Israeli citizens. *Am J Geriatr Psychiatry*. 2005;13(8):705-712. (target audience: physicians, social work, certified counselors)
- Burnett J, Dyer CB, Pickins S. Rapid needs assessment for older adults in disasters. *Generations*. 2008;31(4):10-15. (target audience: EMS/paramedics, physicians, nursing, social work)
- Evans J. Mapping the vulnerability of older persons to disasters. *Int J Older People Nurs*. 2010; 5(1):63-70. (target audience: nursing)
- Pekovic V, Seff L, Rothman MB. Planning for and responding to special needs of elders in natural disasters. *Generations*. 2008;31(4):37-41. (target audience: social work, health care executives, public health)
- Perry RW, Lindell MK. Aged citizens in the warning phase of disasters: re-examining the evidence. *Int J Aging Hum Dev*. 1997;44(4):257-267. (target audience: physicians, social work)
- Solomon Z, Ginzburg K. War trauma and the aged. In: Lomranz J, ed. *Handbook of Aging and Mental Health*. New York, NY: Springer; 1998:135-152. (target audience: physicians, nursing, social work)
- Aging simulation - sensitizing people to the process of aging. Texas A&M AgriLife Extension website.
http://fcs.tamu.edu/families/aging/aging_simulation/. Published 2007. Accessed July 22, 2014. (target audience: occupational therapy and physical therapy).

Sources Cited in Preparing Outline and Activities Above

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http://www.aagponline.org/prof/facts_mh.asp.2008. Accessed April 22, 2015.

2. Lebowitz BD. Diagnosis and treatment of depression in late-life: an overview of the NIH consensus statement. *Am J Geriatr Psychiatry*.1996;4:S1,S3-S6.
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5. Aging in the United States: past, present and future. National Institute on Aging. Census.gov website. <http://www.census.gov/population/international/files/97agewc.pdf>. Accessed April 22, 2015.
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Additional Resources Utilized

1. Adams V, Kaufman SR, van Hattum T, Moody S. Aging disaster: mortality, vulnerability, and long-term recovery among Katrina survivors. *Medical Anthropology: Cross Cultural Studies in Health and Illness*. 2011;30(3):247-270. (target audience: social work, physicians)
2. Aldrich N, Benson WF. Peer reviewed: disaster preparedness and the chronic disease needs of vulnerable older adults. *Prev Chronic Dis*. 2008;5(1):A27. (target audience: physicians)
3. Armenian HK, Morikawa M, Melkonian AK, et al. Loss as a determinant of PTSD in a cohort of adult survivors of the 1988 earthquake in Armenia: implications for policy. *ActaPsychiatr Scand*. 2000;102(1):58-64. (target audience: physicians, nursing, social work)
4. Ardalan A, Mazaheri M, Mowafi H, VanRooyen M, Teimoori F, Abbasi R. Impact of the 26 December 2003 Bam Earthquake on activities of daily living and instrumental activities of daily living of older people. *Prehosp Disaster Med*. 2011;26(02):99-108. (target audience: occupational therapy, physical therapy)

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7. Barusch AS. Disaster, vulnerability, and older adults: toward a social work response. *J GerontolSoc Work.* 2011;54(4):347-350. (target audience: social work)
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10. Bleich A, Gelkopf M, Melamed Y, Solomon Z. Emotional impact of exposure to terrorism among young-old and old-old Israeli citizens. *Am J Geriatr Psychiatry.* 2005;13(8):705-712. (target audience: certified counselors, social work)
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14. Bolin R, Klenow DL. Response of the elderly to disaster: an age-stratified analysis. *Int J Aging Hum Dev.* 1982;16(4)283-296. (target audience: social work)
15. Bowie SL. Post disaster crisis intervention with older adults in public housing communities. *Crisis Intervention and Time-Limited Treatment.* 2003;6 (3):171-184. (target audience: social work)
16. Brockie L. Psychosocial and communication variables involved in mediating the individual experience of older adults following a severe weather event. *eJournalist: A Peer Reviewed Media Journal.* 2013;13(1):53-68. (target audience: social work)
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