

I

Concepts and Theories

Chapter 1

Vulnerable Populations: Vulnerable People

Mary de Chesnay

OBJECTIVES

At the end of this chapter, the reader will be able to

1. Distinguish between vulnerability as an individual concept and vulnerable population.
2. Identify at least five populations at risk for health disparities.
3. Discuss how poverty influences vulnerability.

In this chapter, key concepts are introduced to provide a frame of reference for examining healthcare issues related to vulnerability and vulnerable populations. The concepts presented in Unit I, as a whole, form a theoretical perspective on caring for the vulnerable within a cultural context in which nurses consider not only ethnicity as a cultural factor, but also the culture of vulnerability. The goal is to provide culturally competent care.

VULNERABILITY

Vulnerability incorporates two aspects, and it is important to distinguish between them. One is the individual focus, in which individuals are viewed within a system context; the other is an aggregate view of what would be termed *vulnerable populations*. Much of the literature on vulnerability is targeted toward the aggregate view, and nurses certainly need to address the needs of groups. Nevertheless, nurses also treat individuals, and this

book is concerned with generating ideas about caring for both individuals and groups. It is critical for practitioners to keep in mind that groups are composed of individuals—we should not stereotype individuals in terms of their group characteristics. Yet, working with vulnerable populations is cost-effective because epidemiological patterns can be detected in groups and some standardized interventions can be developed that provide better quality health care to more people.

Vulnerability is a general concept meaning “susceptibility” and has a specific connotation in health care—“at risk for health problems.” According to Aday (2001), vulnerable populations are those at risk for poor physical, psychological, or social health. Any person can be at risk statistically by way of having potential for certain illnesses based on genetic predisposition (Scanlon & Lee, 2007). Anyone can also be vulnerable at any given point in time as a result of life circumstances or response to illness or events. However, the notion of a vulnerable population is a public health concept that refers to vulnerability by virtue of status; that is, some groups are at risk at any given point in time relative to other individuals or groups.

To be a member of a vulnerable population does not necessarily mean a person is vulnerable. In fact, many individuals within vulnerable populations would resist the notion that they are vulnerable, because they prefer to focus on their strengths rather than their weaknesses. These people might argue that vulnerable population is just another label that healthcare professionals use to promote a system of health care that they, the consumers of care, consider patronizing. It is important to distinguish between a state of vulnerability at any given point in time and a labeling process in which groups of people at risk for certain health conditions are further marginalized.

Some members of society who are not members of the culturally defined vulnerable populations described in this book might be vulnerable in certain contexts. For example, nurses who work in emergency rooms are vulnerable to violence. Hospital employees and visitors are vulnerable to infections. Teachers in preschool and daycare providers are vulnerable to a host of communicable diseases because of their daily contact with young children. Individuals who work with heavy machinery are at risk for certain injuries. Patients are vulnerable to their nurses, who literally hold their lives in their hands.

Other examples of vulnerable groups might include people who pick up hitchhikers, drivers who drink alcohol, people who travel on airplanes during flu season, college students who are cramming for exams, and people who become caught in natural disasters. There is an unfortunate tendency in our culture to judge some vulnerable people as being at fault for their own vulnerability and to blame those who place others at risk. For example, rape victims have been blamed for enticing their attackers. People who pick up hitchhikers might be looked upon as foolish, even though their intentions might have been kindness and consideration for those stranded by car trouble. Airline passengers who continually sneeze might anger their seatmates, who feel at risk for catching a

communicable disease. While it is logical to argue that we should be more cautious about personal protection in societies in which dangers exist in so many contexts, that concept is quite different from blaming the victim. In the final analysis, criminals and predators need to be held accountable for criminal behavior. Victims can be taught self-defense tactics, but they need to be reassured that the crime was not their fault simply because they were in the wrong place at the wrong time.

VULNERABLE POPULATIONS

Who are the vulnerable in terms of health care? Vulnerable populations are those with a greater-than-average risk of developing health problems (Aday, 2001; Sebastian, 1996) by virtue of their marginalized sociocultural status, their limited access to economic resources, or their personal characteristics such as age and gender. For example, members of ethnic minority groups have traditionally been marginalized even when they are highly educated and earning good salaries. Immigrants and the poor (including the working poor) have limited access to health care because of the way health insurance is obtained in the United States. Children, women, and the elderly are vulnerable to a host of healthcare problems—notably violence, but also specific health problems associated with development or aging. Developmental examples might include susceptibility to poor influenza outcomes for children and the elderly, psychological issues of puberty and menopause, osteoporosis and fractures among older women, and Alzheimer's disease.

Bezruchka (2000, 2001), in his provocative work, not only addressed the correlation between poverty and illness but also asserted that inequalities in wealth distribution are responsible for the state of health of the U.S. population. Bezruchka argued that the economic structure of a country is the single most powerful determinant of the health of its people. He noted that Japan, with its small gap between rich and poor, has a high percentage of smokers but a low percentage of mortality from smoking. Bezruchka advocated redistribution of wealth as a solution to health disparities.

The prescription drug benefit for Medicare recipients highlights Bezruchka's observations about disparities in the United States. Senior citizens are among the most vulnerable in any society, including in the United States, where Medicare is an attempt to address some of their healthcare costs. However, while a philosophy of social justice might be valued by practitioners (Larkin, 2004), the implementation of social justice is usually balanced with cost. In the case of the Medicare prescription drug benefit, the cost is projected to exceed \$700 billion over the period from 2006 to 2015 (Gellad, Huskamp, Phillips, & Haas, 2006). The difficulties created by attempting to balance social justice with cost illustrate how difficult it is to implement Bezruchka's ideas in the United States.

CONCEPTS AND THEORIES

Aday (2001) published a framework for studying vulnerable populations that incorporated the World Health Organization's (1948) dimensions of health (physical, psychological, and social) into a model of relationships between individual and community on a variety of policy levels. In Aday's framework, which is still applicable, the variables of access, cost, and quality are critical for understanding the nature of health care for vulnerable populations. Access refers to the ability of people to find, obtain, and pay for health care. Costs can be either direct or indirect: Direct costs are the dollars spent by healthcare facilities to provide care, whereas indirect costs are losses resulting from decreased patient productivity (e.g., absenteeism from work). Quality refers to the relative inadequacy, adequacy, or superiority of services.

Other authors who have addressed the conceptual basis of vulnerable populations include Sebastian (1996; Sebastian et al., 2002), who focused on marginalization as a factor in resource allocation, and Flaskerud and Winslow (1998), who emphasized resource availability in the broad sense of socioeconomic and environmental resources. Karpati, Galea, Awerbuch, and Levins (2002) argued for an ecological approach to understanding how social context influences health outcomes. Lessick, Woodring, Naber, and Halstead (1992) described the concept of vulnerability in relationship to a person within a system context. Although the study applied the model to maternal-child nursing, the authors argued that the model is appropriate in any clinical setting.

Spiers (2000) argued that epidemiological views of vulnerability are insufficient to explain human experience and offered a new conceptualization based on perceptions that are both etic (externally defined by others) and emic (defined from the point of view of the person). Etic approaches are helpful in understanding the nature of risk in a quantifiable way. Emic approaches enable one to understand the whole of human experience and, in so doing, help people capitalize on their capacity for action.

HEALTH DISPARITIES

In 1998, President Bill Clinton made a commitment to reduce health disparities that disproportionately affect racial and ethnic minorities in the United States by the year 2010. The Department of Health and Human Services selected six areas to target: infant mortality, cancer screening and management, cardiovascular disease, diabetes, human immunodeficiency virus (HIV) infection and acquired immune deficiency syndrome (AIDS), and immunization (National Institutes of Health [NIH], n.d.). Subsequently, the NIH announced a strategic plan for 2002–2006 that committed funding for three major goals related to research, research infrastructure, and public information/community outreach (NIH, 2002). It is clear from the recent healthcare reform actions taken by President

Barack Obama that he intends to carry out the mission of improving health care for all. The *Healthy People* objectives are even more important today than when first envisioned.

When Flaskerud et al. (2002) reviewed 79 research reports published in *Nursing Research*, they concluded that although nurse researchers have systematically addressed health disparities, they have tended to ignore certain groups (e.g., indigenous peoples). They also inappropriately lump together as Hispanic, members of disparate groups with their own cultural identity (e.g., Puerto Ricans, Mexicans, Cubans, Dominicans).

Aday (2001) emphasized certain groups as vulnerable populations, and the 2010 priorities showcase obvious needs within these groups:

- *High-risk mothers and infants-of-concern.* This population reflects the currently high rates of teenage pregnancy and poor prenatal care, leading to birth-weight problems and infant mortality. Affected groups include very young women, African American women, and poorly educated women, all of whom are less likely than middle-class white women to receive adequate prenatal care due to limited access to services.
- *Chronically ill and disabled persons.* Individuals in this category not only experience higher death rates than comparable middle-class white women as a result of heart disease, cancer, and stroke, but are also subject to prevalent chronic conditions such as hypertension, arthritis, and asthma. The debilitating effects of such chronic diseases lead to lost income resulting from limitations in activities of daily living. African Americans, for example, are more likely to experience ill effects and to die from chronic diseases.
- *Persons living with HIV/AIDS.* In the past decade or so, advances in tracing and treating AIDS have resulted in declines in deaths and increases in the number of people living with HIV/AIDS. This increase is also due, in part, to changes in transmission patterns from largely male homosexual or bisexual contact to transmission through heterosexual contact and sharing needles among intravenous (IV) drug users.
- *Mentally ill and disabled persons.* The population with mental illness is usually defined broadly to include individuals with mild anxiety and depression. Prevalence rates are high with age-specific disorders, and severe emotional disorders seriously interfere with activities of daily living and interpersonal relationships.
- *Alcohol and other substance abusers.* The wide array of substances that are abused includes drugs, alcohol, cigarettes, and inhalants (such as glue). Intoxication results in chronic disease, accidents, and, in some cases, criminal activity. Young male adults in their late teens and early twenties are more likely to smoke, drink, and take drugs.
- *Persons exhibiting suicide- or homicide-prone behavior.* Rates of suicide and homicide differ by age, sex, and race, with elderly white and young Native American men being most likely to kill themselves and young African American, Native American, and Hispanic men being most likely to be killed by others.

- *Abusive families.* Children, the elderly, and spouses (overwhelmingly women) are likely targets of violence within the family. Although older children are more likely to be injured, young female children older than 3 years of age are consistently at risk for sexual abuse.
- *Homeless persons.* Because of ongoing problems in identifying this population, it is reasonably certain that the estimated prevalence rates at any given time are low and vary across the country. Generally, more young men are homeless, but all homeless individuals are likely to suffer from chronic diseases and are vulnerable to violence.
- *Immigrants/refugees.* Health care for immigrants, refugees, and temporary residents is complicated by the diversity of languages, health practices, food choices, culturally based definitions of health, and previous experiences with American bureaucracies.

Aday (2001) provided much statistical information for these vulnerable groups, but prevalence rates for specific conditions change periodically. Readers are referred to the website of the National Center for Health Statistics (www.cdc.gov/nchs) for updated information.

Trends in families over the last 5 decades (the lifetime of the baby boomers) show marked changes in the demographics of families, and these changes, in turn, affect health disparities. At present, more men and women are delaying marriage, with greater numbers of people choosing to live together first. Divorce rates are higher, with a concurrent increase in single-parent families. Out-of-wedlock births have increased, partially due to decreases in marital fertility. There is a sharp and sustained increase in maternal employment (Hofferth, 2003).

The most recent *Healthy People* report documents health disparities as a major issue both in the health of individuals and that of the healthcare system, in the sense that our structures are not addressing the needs of all citizens. While there is an emphasis on culturally competent care for all, our health professions fall far short of the goals we have set for the nation. Racial and ethnic disparities still exist and increase the cost of health care. When prevention programs are differentially applied, health status decreases and acuity levels rise—with a corresponding cost increase not only in monetary but also in human terms.

Complicating discussions about health disparities is the tendency of the literature to treat race and socioeconomic status (SES) separately. Because a disproportionate number of minorities are poor, it is hard to tell if race or income is more important. Dubay and LeBrun (2012) studied the two together and found that within each racial/ethnic group, a greater proportion of low- versus high-SES individuals was in poor health, and a lower proportion had healthy behaviors and access to care. Unsurprisingly, for either socioeconomic level, minorities had poorer health outcomes than whites.

The populations discussed in this chapter represent a small proportion of those who are vulnerable. Anyone can be considered vulnerable at a specific point in time, but when we discuss vulnerable populations we usually think of people who are members of at-risk groups for certain health disparities, whether short-term or long-term. Efforts have been made in each edition of this book to include authors who have expertise with a variety of vulnerable populations.

INSTITUTE OF MEDICINE STUDY

The U.S. Congress directed the Institute of Medicine (IOM) to study the extent of racial and ethnic differences in health care and to recommend interventions to eliminate health disparities (IOM, 2003). The IOM found consistent evidence of disparities across a wide range of health services and illnesses. Although these racial and ethnic disparities may occur within a wider historical context, they are unacceptable, as the IOM pointed out. It urged a general public acknowledgment of the problem and advocated specific cross-cultural training for health professionals. Other recommendations included specific legal, regulatory, and policy interventions that speak to fairness in access; increases in the number of minority health professionals; and better enforcement of civil rights laws. IOM recommendations with regard to data collection should serve to monitor progress toward the goal of eliminating health disparities based on different treatment for minorities.

Vulnerability to Specific Conditions or Diseases

A large portion of the research that has been done on specific conditions and diseases was generated from psychological data and predates much of the medical and nursing literature on disparities. Researchers on vulnerability to these specific conditions tend to take an individual approach, in that conditions or diseases are treated from the point of view of how a particular individual responds to life stressors and how that response can cause the condition to develop or continue.

Researchers have focused on conditions too numerous to report here, but a search quickly turned up references to alcohol consumption in women and vulnerability to sexual aggression (Testa, Livingston, & Collins, 2000); rape myths and vulnerability to sexual assault (Bohner, Danner, Siebler, & Stamson, 2002); self-esteem and unplanned pregnancy (Smith, Gerrard, & Gibbons, 1997); lung transplantation (Kurz, 2002); coronary angioplasty (Edell-Gustafsson & Hetta, 2001); adjustment to lower limb amputation (Behel, Rybarczyk, Elliott, Nicholas, & Nyenhuis, 2002); reaction to natural disasters (Phifer, 1990); reaction to combat stress (Aldwin, Levensen, & Spiro, 1994; Ruef, Litz, & Schlenger, 2000); homelessness (Morrell-Bellai, Goering, & Boydell, 2000; Shinn, Knickman, & Weitzman, 1991); mental retardation (Nettlebeck, Wison, Potter,

& Perry, 2000); anxiety (Calvo & Cano-Vindel, 1997; Strauman, 1992); and suicide (Schotte, Cools, & Payvar, 1990).

Depression

Many authors have focused on cognitive variables in an attempt to explain vulnerability to depression (Alloy & Clements, 1992; Alloy, Whitehouse, & Abramson, 2000; Hayes, Castonguay, & Goldfried, 1996; Ingram & Ritter, 2000). Others have explored gender differences (Bromberger & Mathews, 1996; Soares & Zitek, 2008; Whiffen, 1988). In a major analysis of the existing literature on depression, Hankin and Abramson (2001) explored the development of gender differences in depression. They noted that although both male and female rates of depression rise during middle adolescence, incidence in girls rises more sharply after age 13 or puberty. This model of general depression might account for gender differences based on developmentally specific stressors and implies possible treatment options.

Variables related to attitudes present a third area of focus in the literature (Brown, Hammen, Craske, & Wickens, 1995; Joiner, 1995; Zuroff, Blatt, Bondi, & Pilkonis, 1999). In a study of 75 college students, researchers found that a high level of “perfectionistic achievement attitudes,” as indicated on the Dysfunctional Attitude Scale, correlated with a specific stressor (e.g., poorer than expected performance on a college exam) to predict an increase in symptoms of depression (Brown et al., 1995).

Situational factors also produce vulnerability to depression. For example, the stress of providing care to patients with Alzheimer’s disease can produce or exacerbate symptoms of depression. In a study of family caregivers of Alzheimer’s patients, Neundorfer and colleagues (2006) found that caregivers with prior depressive symptoms were not necessarily more prone to depression than others, but rather that all subjects were more likely to experience depression when the dependency of the patient was high.

Despite the current trend to regulate depression via chemical means, promising evidence suggests that vulnerability to depression can be modified by emotion regulation instruction. Ehring and colleagues (2010) conducted an experiment in which they showed short films with sad content to people with depression as well as to a control group. According to the researchers, if subjects were vulnerable to depression, they would spontaneously use dysfunctional emotional regulation strategies, however they were able to use more functional techniques if instructed to do so.

Schizophrenia

Smoking has been observed to be a problem in individuals with schizophrenia, and there is some evidence that smokers have a more serious course of mental illness than nonsmokers. The theory proposed to explain this relationship is that schizophrenic patients smoke

as a way to self-medicate (Lohr & Flynn, 1992). In a twin study investigating lifetime prevalence of smoking and nicotine withdrawal, Lyons et al. (2002) found that the association between smoking and schizophrenia may be related to familial vulnerability to schizophrenia.

Other authors have examined the relationship between schizophrenia and personality. This relationship remains largely unexplored, but might provide a new direction in which to search for knowledge about vulnerability to schizophrenia. In their meta-analysis, Berenbaum and Fujita (1994) found a significant relationship between introversion and schizophrenia; they suggested that studies on this link might provide new knowledge about the covariation of schizophrenia with mood disorders, particularly depression. In a thoughtful analysis of the literature on the role of the family in schizophrenia, Wuerker (2000) presented evidence for the biological view, concluding that there is a unique vulnerability to stress in schizophrenic patients and that communication difficulties within families with schizophrenic members may be due to a shared genetic heritage.

Eating Disorders

Acknowledgment of food as a common focus for anxiety has become a way of life. Canadian researchers refer to “food insecurity” to describe the phenomenon of nutritional vulnerability resulting from food scarcity and insufficient access to food by welfare recipients and low-income people who do not qualify for welfare (McIntyre et al., 2003; Tarasuk, 2003). In the United States, eating disorders are often a result of body image problems, which are particularly prevalent in gay men and heterosexual women (Siever, 1994). In a prospective study of gender and behavioral vulnerabilities related to eating disorders, Leon, Fulkerson, Perry, and Early-Zaid (1995) found significant differences among girls in the variables of weight loss, dieting patterns, vomiting, and use of diet pills. They reported a method for predicting the occurrence of eating disorders based on performance scores on risk-factor status tests in early childhood.

HIV/AIDS

In a meta-analysis of 32 HIV/AIDS studies involving 15,440 participants, Gerrard, Gibbons, and Bushman (1996) found empirical evidence to support the commonly known motivational hypothesis. This hypothesis is derived from the Health Belief Model (Becker & Rosenstock, 1987). The authors found that perceived vulnerability was the major force behind prevention behavior in high-risk populations but cautioned that studies were not available for low-risk populations. They also discovered that risk behavior shapes perceptions of vulnerability—that is, people who engage in high-risk behavior tend to see themselves as more likely to contract HIV than those who engage in low-risk behavior.

Evidence that high-risk men tend to relapse into unsafe sex behaviors is provided in a longitudinal study of results of an intervention in which researchers were able to successfully predict relapse behavior (Kelly, St. Lawrence, & Brasfield, 1991). In a gender study on emotional distress predictors, Van Servellen, Aguirre, Sarna, and Brecht (2002) found that although all subjects had scores indicating clinical anxiety levels, HIV-infected women had more symptoms and poorer functioning than HIV-infected men.

In a study that used a vulnerable populations framework, Flaskerud and Lee (2001) considered the role that resource availability plays in the health status of informal female caregivers of people with HIV/AIDS ($n = 36$) and age-related dementias ($n = 40$). Not surprisingly, the caregivers experienced high levels of both physical and mental health problems. However, the use of the vulnerable populations framework explained the finding that the resource variables of income and minority ethnicity made the greatest contribution to understanding health status. In terms of the risk variables, anger was more common in caregivers for HIV-infected patients and was significantly related to depressive mood, which was also common among these caregivers.

Gender differences among HIV-infected people can exacerbate their response to the disease. Murray et al. (2009) interviewed Zambian women infected with HIV about their reasons for taking or not taking antiretroviral drugs. The key informants revealed fears of abandonment by their husbands, a decision to stop the medications when they felt better, choosing instead to die, and fear of having to take medications for the rest of their lives. These women are vulnerable not only to the disease but also to their family's reaction; the barriers to taking medication that could save their lives may be overshadowed by these risks, making them even more vulnerable.

Substance Abuse

In a study of 288 undergraduates, Wild, Hinson, Cunningham, and Bacchiochi (2001) examined the inconsistencies between a person's perceived risk of alcohol-related harm and motivation to reduce that risk. These researchers found a general tendency for people to view themselves as less vulnerable than their peers regardless of their risk status; notably, however, the at-risk group rated themselves more likely to experience harm than the not-at-risk group. The authors concluded that motivational approaches to reducing risk should emphasize not only why people drink but also why they should reduce alcohol consumption. Additional support for the motivational hypothesis—that perceived vulnerability influences prevention behavior—extends to marijuana use (Simons & Carey, 2002) and to early onset of substance abuse among African American children (Wills, Gibbons, Gerrard, & Brody, 2000).

Finally, in a study of family history of psychopathology in families of the offspring of alcoholics, researchers demonstrated that male college student offspring of these families are a heterogeneous group and that the patterns of heterogeneity are related to

familial types in relation to vulnerability to alcoholism. Three different family types were identified:

- Low levels of family pathology with moderate levels of alcoholism
- High levels of family antisocial personality and violence with moderate levels of family drug abuse and depression
- High levels of familial depression, mania, anxiety disorder, and alcoholism with moderate levels of familial drug abuse (Finn et al., 1997)

Students and Faculty as Vulnerable Populations

The April 2007 shootings at Virginia Tech highlighted the fact that college students in the United States face a relatively new kind of threat, much as the Columbine tragedy did for high school students. Alienated young people who stalk and kill their classmates, for whatever reasons, seem logical to them, and represent a new type of terrorist. Yet, the literature has not documented either the experience of these alienated students, nor have we found effective ways of treating and preventing violent behavior among them.

Some attempts have been made to document types of violence toward students. The American College Health Association (ACHA) has published a white paper on the topic (Carr, 2007). This paper largely focuses on the most frequent types of student-directed violence, such as sexual assault, hazing, suicide, celebratory violence, and racial/gender/sexual orientation–based violence. While spree killings are mentioned, not much attention can be given until more is known about these killers.

Some attention has been given to the relationship between alcohol use and violence. Marcus and Swett (2003) studied precursors to violence among 451 college students at two sites and used the Violence Risk Assessment tool to establish the relationship of patterns related to gender, peer pressure, and alcohol use. Nicholson and colleagues (1998) examined the influence of alcohol use in both sexual and nonsexual violence.

A British study on responding to students' mental health needs illustrates how the previously discussed categories of mental illnesses can be exacerbated in the vulnerable population of college students with mental illnesses. Using surveys and focus groups, Stanley and Manthorpe (2001) assessed college students with mental illnesses and identified many issues related to the problems of providing care to students. The authors noted that high rates of suicide and need for antidepressant medication strained the National Health Service's resources and that colleges varied widely in their ability to provide effective interventions.

In an Australian study, the researchers found a significantly high level of food insecurity among college students. Food insecurity was measured by a "yes" response to a survey question about running out of food and not being able to buy more (Hughes,

Serebryanikova, Donaldson, & Leveritt, 2011). Implications are not only related to student retention, progression, and success but also to long-term health effects.

DalPezzo and Jett (2010) identified nursing faculty as a vulnerable population. They noted student incivility, horizontal violence, and abuse of power by administrators as examples of the pressures faced by faculty.

While these studies document some issues related to campus violence, they do not go far enough to explain and prevent the types of spree killings students have experienced during the last decade. The threat of copycat attacks has engendered continuing fears among students, parents, and teachers alike. More research is needed on personal characteristics of these young killers, potential interventions, and prevention strategies.

CONCLUSION

A growing body of literature has focused on the concept of vulnerability as a key factor of concern to practitioners who work with clients with many different kinds of presenting problems. Vulnerability may be explored on two levels, in that vulnerability is both an individual concept and a group concept. In public health, the group concept is dominant, and intervention is directed toward aggregates. Other practitioners and researchers focus on individual vulnerabilities to specific conditions or diseases. When working with clients from vulnerable populations, it is critical to understand that they might not view themselves as vulnerable and may actually resent labels that imply they are not autonomous.

REFERENCES

- Aday, L. (2001). *At risk in America*. San Francisco, CA: Jossey-Bass.
- Aldwin, C., Levensen, M., & Spiro, A. (1994). Vulnerability and resilience to combat exposure: Can stress have lifelong effects? *Psychology and Aging, 9*, 34–44.
- Alloy, L., & Clements, C. (1992). Illusion of control invulnerability to negative affect and depressive symptoms after laboratory and natural stressors. *Journal of Abnormal Psychology, 101*, 234–245.
- Alloy, L., Whitehouse, W., & Abramson, J. (2000). The Temple-Wisconsin cognitive vulnerability to depression project: Lifetime history of axis I psychopathology in individuals at high and low cognitive risk for depression. *Journal of Abnormal Psychology, 109*, 403–418.
- Becker, M., & Rosenstock, I. (1987). Comparing social learning theory and the health belief model. In W. B. Ward (Ed.), *Advances in health education and promotion* (Vol. 2, pp. 245–249). Greenwich, CT: JAI Press.
- Behel, J., Rybarczyk, B., Elliott, T., Nicholas, J., & Nyenhuis, D. (2002). The role of perceived vulnerability in adjustment to lower extremity amputation: A preliminary investigation. *Rehabilitation Psychology, 47*(1), 92–105.
- Berenbaum, H., & Fujita, F. (1994). Schizophrenia and personality: Exploring the boundaries and connections between vulnerability and outcome. *Journal of Abnormal Psychology, 103*, 148–158.

- Bezruchka, S. (2000). Culture and medicine: Is globalization dangerous to our health? *Western Journal of Medicine*, 172, 332–334.
- Bezruchka, S. (2001). Societal hierarchy and the health olympics. *Canadian Medical Association Journal*, 164, 1701–1703.
- Bohner, G., Danner, U., Siebler, F., & Stamson, G. (2002). Rape myth acceptance and judgments of vulnerability to sexual assault: An Internet experiment. *Experimental Psychology*, 49, 257–269.
- Bromberger, J., & Mathews, K. (1996). A “feminine” model of vulnerability to depressive symptoms: A longitudinal investigation of middle-aged women. *Journal of Personality and Social Psychology*, 70, 591–598.
- Brown, G., Hammen, C., Craske, M., & Wickens, T. (1995). Dimensions of dysfunctional attitudes as vulnerabilities to depressive symptoms. *Journal of Abnormal Psychology*, 104, 431–435.
- Calvo, M., & Cano-Vindel, A. (1997). The nature of trait anxiety: Cognitive and biological vulnerability. *European Psychologist*, 2, 301–312.
- Carr, J. (2007). Campus violence white paper. *Journal of American College Health*, 55(5), 304–319.
- DalPezzo, N., & Jett, K. (2010). Nursing faculty: A vulnerable population. *Journal of Nursing Education*, 49(3), 132–136.
- Dubay, L., & LeBrun, L. (2012). Health, behavior, and health care disparities: Disentangling the effects of income and race in the United States. *International Journal of Health Services*, 42(4), 607–625.
- Edell-Gustafsson, U., & Hetta, J. (2001). Fragmented sleep and tiredness in males and females one year after percutaneous transluminal coronary angioplasty (PTCA). *Journal of Advanced Nursing*, 34(2), 203–211.
- Ehring, J., Tuschen-Caffier, B., Schulke, J., Fischer, S., & Gross, J. (2010). Emotion regulation and vulnerability to depression: Spontaneous versus instructed suppression and reappraisal. *Emotion*, 10(4), 563–572.
- Finn, P., Sharkansky, E., Viken, R., West, T., Sandy, J., & Bufferd, G. (1997). Heterogeneity in the families of sons of alcoholics: The impact of familial vulnerability type on offspring characteristics. *Journal of Abnormal Psychology*, 106, 26–36.
- Flaskerud, J., & Lee, P. (2001). Vulnerability to health problems in female informal caregivers of persons with HIV/AIDS and age-related dementias. *Journal of Advanced Nursing*, 33(1), 60–68.
- Flaskerud, J., Lesser, J., Dixon, E., Anderson, N., Conde, F., Kim, S., ... Koniak-Griffin, D. (2002). Health disparities among vulnerable populations: Evolution of knowledge over five decades in *Nursing Research* publications. *Nursing Research*, 51(2), 74–85.
- Flaskerud, J., & Winslow, B. (1998). Conceptualizing vulnerable populations in health-related research. *Nursing Research*, 47(2), 69–78.
- Gellad, W., Huskamp, H., Phillips, K., & Haas, J. (2006). How the new Medicare drug benefit could affect vulnerable populations. *Health Affairs*, 25(1), 248–255.
- Gerrard, M., Gibbons, F., & Bushman, B. (1996). Relation between perceived vulnerability to HIV and precautionary sexual behavior. *Psychological Bulletin*, 119, 390–409.
- Hankin, B., & Abramson, L. (2001). Development of gender differences in depression: An elaborated cognitive vulnerability-transactional stress theory. *Psychological Bulletin*, 127, 773–796.

- Hayes, A., Castonguay, L., & Goldfried, M. (1996). Effectiveness of targeting the vulnerability factors of depression in cognitive therapy. *Journal of Consulting and Clinical Psychology, 64*, 623–627.
- Hofferth, S. (2003). The American family: Changes and challenges for the 21st century. In H. Wallace, G. Green, & K. Jaros (Eds.), *Health and welfare for families in the 21st century* (pp. 71–79). Sudbury, MA: Jones and Bartlett.
- Hughes, R., Serebryanikova, I., Donaldson, K., & Leveritt, M. (2011). Student food insecurity: The skeleton in the university closet. *Nutrition and Dietetics, 68*, 27–32.
- Ingram, R., & Ritter, J. (2000). Vulnerability to depression: Cognitive reactivity and parental bonding in high-risk individuals. *Journal of Abnormal Psychology, 109*, 588–596.
- Institute of Medicine (IOM), National Academy of Sciences. (2003). Unequal treatment: Confronting racial and ethnic disparities in health care. Retrieved from www.nap.edu
- Joiner, T. (1995). The price of soliciting and receiving negative feedback: Self-verification theory as a vulnerability to depression. *Journal of Abnormal Psychology, 104*, 364–372.
- Karpati, A., Galea, S., Awerbuch, T., & Levins, R. (2002). Variability and vulnerability at the ecological level: Implications for understanding the social determinants of health. *American Journal of Public Health, 92*, 1768–1773.
- Kelly, J., St. Lawrence, J., & Brasfield, T. (1991). Predictors of vulnerability to AIDS risk behavior relapse. *Journal of Consulting and Clinical Psychology, 59*(1), 163–166.
- Kurz, J. M. (2002). Vulnerability of well spouses involved in lung transplantation. *Journal of Family Nursing, 8*, 353–370.
- Larkin, H. (2004). Justice implications of a proposed Medicare prescription drug benefit. *Social Work, 49*(3), 406–414.
- Leon, G., Fulkerson, J., Perry, C., & Early-Zaid, M. (1995). Prospective analysis of personality and behavioral vulnerabilities and gender influences in the later development of disordered eating. *Journal of Abnormal Psychology, 104*(1), 140–149.
- Lessick, M., Woodring, B., Naber, S., & Halstead, L. (1992). Vulnerability: A conceptual model. *Perinatal and Neonatal Nursing, 6*, 1–14.
- Lohr, J., & Flynn, K. (1992). Smoking and schizophrenia. *Schizophrenia Research, 8*, 93–102.
- Lyons, M., Bar, J., Kremen, W., Toomey, R., Eisen, S., Goldberg, J., & Tsuang, M. (2002). Nicotine and familial vulnerability to schizophrenia: A discordant twin study. *Journal of Abnormal Psychology, 111*, 687–693.
- Marcus, R., & Swett, B. (2003). Multiple precursor scenarios: Predicting and reducing campus violence. *Journal of Interpersonal Violence, 18*(5), 553–571.
- McIntyre, L., Glanville, N., Raine, K., Dayle, J., Anderson, B., & Battaglia, N. (2003). Do low-income lone mothers compromise their nutrition to feed their children? *Canadian Medical Association Journal, 168*(6), 686–691.
- Morrell-Bellai, T., Goering, P., & Boydell, K. (2000). Becoming and remaining homeless: Qualitative investigation. *Issues in Mental Health Nursing, 21*, 581–604.
- Murray, L., Semrau, K., McCurley, E., Thea, D., Scott, N., Mwiya, M., ... Bolton, P. (2009). Barriers to acceptance and adherence of antiretroviral therapy in urban Zambian women: A qualitative study. *AIDS Care, 21*(1), 78–86.

- National Institutes of Health. (n.d.). Addressing health disparities: The NIH program of action. Retrieved December 4, 2003, from <http://healthdisparities.nih.gov/whatare.html>
- National Institutes of Health. (2002). *Strategic research plan and budget to reduce and ultimately eliminate health disparities*. Washington, DC: US Department of Health and Human Services.
- Nettlebeck, T., Wilson, C., Potter, R., & Perry, C. (2000). The influence of interpersonal competence on personal vulnerability of persons with mental retardation. *Journal of Interpersonal Violence, 15*(1), 46–62.
- Neundorfer, M., McLendon, M., Smyth, K., Strauss, M., & McCallum, T. (2006). Does depression prior to caregiving increase vulnerability to depressive symptoms among caregivers of persons with Alzheimer's disease? *Aging and Mental Health, 10*(6), 606–615.
- Nicholson, M., Maney, D., Blair, K., Wamboldt, P., Mahoney, B., & Yuan, J. (1998). Trends in alcohol-related campus violence: Implications for prevention. *Journal of Alcohol and Drug Education, 43*(3), 34–52.
- Phifer, J. (1990). Psychological distress and somatic symptoms after natural disaster: Differential vulnerability among older adults. *Psychology and Aging, 5*, 412–420.
- Ruef, A., Litz, B., & Schlenger, W. (2000). Hispanic ethnicity and risk for combat-related posttraumatic stress disorder. *Cultural Diversity and Ethnic Minority Psychology, 6*(3), 235–251.
- Scanlon, A., & Lee, G. (2007). The use of the term vulnerability in acute care: Why does it differ and what does it mean? *Australian Journal of Advanced Nursing, 24*(3), 54–59.
- Schotte, D., Cools, J., & Payvar, S. (1990). Problem-solving deficits in suicidal patients: Trait vulnerability or state phenomenon? *Journal of Consulting and Clinical Psychology, 58*, 562–564.
- Sebastian, J. (1996). Vulnerability and vulnerable populations. In M. Stanhope & J. Lancaster (Eds.), *Community health nursing: Promoting health of individuals, aggregates and communities* (4th ed., pp. 403–417). St. Louis, MO: Mosby.
- Sebastian, J., Bolla, C. D., Aretakis, D., Jones, K. J., Schenk, C., & Napolitano, M. (2002). Vulnerability and selected vulnerable populations. In M. Stanhope & J. Lancaster (Eds.), *Foundations of community health nursing* (pp. 349–364). St. Louis, MO: Mosby.
- Shinn, M., Knickman, J., & Weitzman, B. (1991). Social relationships and vulnerability to becoming homeless among poor families. *American Psychologist, 46*, 1180–1187.
- Siever, M. (1994). Sexual orientation and gender as factors in socioculturally acquired vulnerability to body dissatisfaction and eating disorders. *Journal of Consulting and Clinical Psychology, 62*(2), 252–260.
- Simons, J., & Carey, K. (2002). Risk and vulnerability for marijuana use: Problems and the role of affect dysregulation. *Psychology of Addictive Behaviors, 16*(1), 72–75.
- Smith, G., Gerrard, M., & Gibbons, F. (1997). Self-esteem and the relation between risk behavior and perceptions of vulnerability to unplanned pregnancy in college women. *Health Psychology, 16*(2), 137–146.
- Soares, C. N., & Zitek, B. (2008). Reproductive hormone sensitivity and risk for depression across the female life cycle: A continuum for vulnerability? *Journal of Psychiatry and Neuroscience, 33*(4), 331–343.
- Spiers, J. (2000). New perspectives on vulnerability using etic and emic approaches. *Journal of Advanced Nursing, 31*(3), 715–721.

- Stanley, N., & Manthorpe, J. (2001). Responding to students' mental health needs: Impermeable systems and diverse users. *Journal of Mental Health, 10*, 41–52.
- Strauman, T. (1992). Self-guides, autobiographical memory, and anxiety and dysphoria: Toward a cognitive model of vulnerability to emotional distress. *Journal of Abnormal Psychology, 101*, 87–95.
- Tarasuk, V. (2003). Low income, welfare and nutritional vulnerability. *Canadian Medical Association Journal, 168*, 709–710.
- Testa, M., Livingston, J., & Collins, R. (2000). The role of women's alcohol consumption in evaluation of vulnerability to sexual aggression. *Experimental and Clinical Psychopharmacology, 8*(2), 185–191.
- Van Servellen, G., Aguirre, M., Sarna, L., & Brecht, M. (2002). Differential predictors of emotional distress in HIV-infected men and women. *Western Journal of Nursing Research, 24*(1), 49–72.
- Whiffen, V. (1988). Vulnerability to post-partum depression: A prospective multivariate study. *Journal of Abnormal Psychology, 97*, 467–474.
- Wild, T. C., Hinson, R., Cunningham, J., & Bacchioni, J. (2001). Perceived vulnerability to alcohol-related harm in young adults: Independent effects of risky alcohol use and drinking motives. *Experimental and Clinical Psychopharmacology, 9*(1), 1064–1297.
- Wills, T. A., Gibbons, F., Gerrard, M., & Brody, G. (2000). Protection and vulnerability processes relevant for early onset of substance use: A test among African American children. *Health Psychology, 19*(3), 253–263.
- World Health Organization. (1948). Constitution. Geneva, Switzerland.
- Wuerker, A. (2000). The family and schizophrenia. *Issues in Mental Health Nursing, 21*, 127–141.
- Zuroff, D., Blatt, S., Bondi, C., & Pilkonis, P. (1999). Vulnerability to depression: Reexamining state dependence and relative stability. *Journal of Abnormal Psychology, 108*, 76–89.