Published in final edited form as:

Issues Ment Health Nurs. 2013 May ; 34(5): 300–308. doi:10.3109/01612840.2012.746410.

Clients' Perspectives of the Relationship of Vulnerability and Resilience in the Context of HIV Infection

Joseph P. De Santis, PhD, ARNP, ACRN [Associate Professor] and Diego A. DeLeon, MD [Lecturer]

University of Miami, School of Nursing & Health Studies

Abstract

Background—Clients with HIV infection have been described as both vulnerable and resilient. In addition, the conceptualization of clients with HIV infection has also evolved.

Purpose—The purpose of this study is to examine this relationship among a sample of people with HIV infection.

Method—Qualitative description was the design used in this study. Interviews of 15 participants with HIV infection were conducted and analyzed using content analysis.

Results—All participants provided descriptions of the relationship of vulnerability and resilience in the context of HIV infection. Three different themes emerged from the data that were termed *Simultaneity*, *Dichotomy*, and *Vacillation*. These themes were used to describe the relationship of vulnerability and resilience for the participants' perspectives.

Conclusions/Implications—Among people with HIV infection vulnerability and resilience are related concepts. In the context of HIV infection, the relationship of these concepts needs further work in order relate these concepts to physical and mental health of people living with HIV infection. The relationship of these concepts to physical and mental health may assist in making these concepts less abstract and more clinically useful.

Keywords

AIDS; HIV infection; Resilience; Vulnerability

Vulnerability and resilience are pertinent concepts that are often used in psychiatric/ mental health nursing. Vulnerable clients experience stress and anxiety that affects physiological, psychological and social functioning (Rogers, 1997). Despite confrontation with an adversarial event that threatens adaptation or development, resilient clients are able to surmount the adversity with positive outcomes (Masten, 2001).

Clients with HIV infection also experience vulnerability and resilience during their disease trajectory (De Santis, 2008). Vulnerability in the context of HIV infection is related to the physical and psychosocial aspects of this stigmatized illness (Aranda-Naranjo, 2004). Resilience in the context of HIV infection is related to overcoming the adversity of diagnosis and management of the physical and psychosocial aspects of HIV infection (Thompson, 2003). Because clients with HIV infection have been conceptualized as both vulnerable and resilience, this fact may indicate that some relationship exists between these

concepts. The exact nature of the relationship between vulnerability and resilience in the context of HIV infection is not known (De Santis, 2008).

HIV care and treatment has changed dramatically over the past 30 years, much like the conceptualization of clients with HIV infection. Care and treatment priorities for the first 15 years of the epidemic were focused on the terminal nature of HIV infection. Since few or any treatments were available at this time, emphasis was placed on terminal or palliative care of persons with HIV infection (Harding, Gwyther, & Powell, 2007).

In 1996 with the widespread availability and use of protease inhibitors, HIV-related morbidity and mortality dramatically decreased. By the year 2000, care of persons with HIV infection followed a chronic care model. Currently care of people with HIV is focused on management of the physical, psychological, and social issues involved in the chronic care management of HIV infection (Bravo, Edwards, Rollnick & Elwyn, 2010).

Conceptualization of clients as vulnerable or resilient began early in the HIV epidemic. Early studies conducted by researchers noted that a number of clients with HIV infection were exhibiting resilient behaviors despite the terminal nature of HIV infection (Thompson, 2003). As HIV evolved from a terminal to a chronic disease, additional research was conducted that noted the vulnerable or resilient nature of clients with HIV infection (Pivnick & Villegas, 2000; Poindexter & Shippy, 2008).

The Relationship of Concepts

Concepts, such as vulnerability and resilience, are the foundation of theory. Clarification and differentiation of concepts are important to the advancement of knowledge and the development of a discipline (Rodgers & Knafl, 2000). Concepts that may be clinically useful for nurses are often poorly defined and difficult to apply clinically. The relationship between concepts, such as vulnerability and resilience, is an important issue for nursing. The relationships between concepts allow the interrelationships and interconnectedness of the concepts to be known (Rodgers & Knafl, 2000). Because concepts are dynamic in nature, knowing the relationships between concepts uncovers the breadth of both concepts, clarifies relationships among the concepts under investigation and other related concepts, and exposes the dynamic disposition of these phenomena (Haase, Leidy, Coward, Britt & Penn, 2000).

Concepts cannot exist with the context in which they occur. In fact, concepts obtain their essence from their context. The study of concepts and the relationships among concepts is important to understand how people experiencing phenomena conceptualize themselves, their environment, and their context (Risjord, 2009).

In order to understand concepts, and their relationships, environments, and context, researchers often use descriptive, qualitative research methods to provide rich descriptions of the concept, and to explore relationships between concepts. Directions for further concept work, theory development, and research can also be identified (Risjord, 2009).

Because concepts are fluid and vague in nature (Risjord, 2009), it is often difficult to use and apply concepts clinically. The use of descriptive, qualitative research is necessary to advance nursing knowledge inductively so that frameworks can be formulated or adapted for clinical use, thereby advancing theory development and identifying areas for future research (Finfgeld-Connett, 2006).

Significance of the Study

It is important to study the relationship of the concepts of vulnerability and resilience in the context of HIV infection related to the unique nature of HIV infection. An integrative review of the concepts of vulnerability and resilience conducted by De Santis (2008) noted that there is evidence in the literature to suggest that clients with HIV infection are both vulnerable and resilient in the course of HIV infection. The relationship of vulnerability and resilience in the context of HIV infection emerged as an unanswered question in the integrative literature review of these concepts (De Santis, 2008). Based on the integrative literature review and the fact that no studies to date could be located that explored the relationship of vulnerability and resilience among clients with HIV infection, a qualitative study was conducted to examine the relationship of vulnerability and resilience in order to fill the gap in the existing knowledge base regarding the relationship of vulnerability and resilience in the context of HIV infection.

Method

This study reports unpublished data from a qualitative study that examined vulnerability and resilience in a sample of adults with HIV infection ($n = 15$). The original study provided data that provided a theory of vulnerability (removed for peer review) and resilience in the context of HIV infection (removed for peer review), and yielded a large quantity of data. The findings in this study are a subset of the original study and report unpublished data that describe the participants' perceptions of the relationship of vulnerability and resilience in the context of HIV infection.

Design

Qualitative description was the research design used to guide this study. This design is a form of qualitative inquiry that is focused on providing a thorough summary of a phenomenon as reported by participants (Sandelowski, 2000). Qualitative description is one of the most commonly used qualitative designs in Nursing (Sandelowski, 2000; 2010) because it allows recording of client perspectives that provides researchers with a firsthand account of a particular experience or phenomenon (Neergaard et al., 2005), and is appropriate for studying issues involving health disparities among vulnerable populations (Sullivan-Bolyai, Bova & Harper, 2005).

Qualitative description provides a rich, straight-forward description of phenomena under investigation (Neergaard, Oleson, Andersen & Sondergaard, 2005) without requiring an abstraction of the data (Sandelowski, 2000). This allows the data to be presented in common terms which permits communication of the study's findings that are more easily understood by the reader (Sandelowski, 2000).

Qualitative description typically uses purposeful sampling technique to recruit participants for individual interviews or focus groups (Sandelowski, 2000). Data are analyzed using content analysis to examine the data for commonalities and differences (Neergaard et al., 2005).

Setting

The study was conducted at a large private university in the Southeastern United States. Participants were recruited from an adult infectious disease research clinical unit at the university. Data were collected in a private office at the university that was easily accessible to participants by public transportation.

Procedure

Flyers were posted in the adult infectious research clinical unit. The flyers contained information about inclusion criteria, basic study information, and a contact telephone number of the principal investigator (PI). Participants were instructed to call the PI for a telephone screening to ensure that they met inclusion criteria. Once inclusion criteria were met, an appointment was scheduled to conduct the interview. At the interview, participants were again provided with an explanation of the study, and a signed informed consent was obtained if the participant agreed to enroll in the study.

Data Collection

Data collection was accomplished by conducting individual interviews with 15 participants who were living with HIV infection. Data collection was structured by the use of an interview guide. The individual interviews were audio-recorded then transcribed verbatim. The duration of the interviews was one to 1.5 hours. Each participant was interviewed once. An interview guide was used to ensure uniformity among the questions. Sample interview questions included are included in Table 1.

In addition to the audio-recorded interviews, the first author wrote memos at the end of each interview using the process of “memo-ing” (Creswell, 2007). These memos provided a summary of the interview from the perspective of the researcher and it allowed the researcher to record tentative ideas and themes from each completed interview.

The study and the interview guide were conceptually-based on established definitions of vulnerability and resilience. Vulnerability is defined as “an experience that creates stress and anxiety which affects physiological, psychological, and social functioning” (Rogers, 1997, p. 65). Resilience is defined as “the process whereby people bounce back from adversity and go on with their lives” (Dyer & McGuinness, 1996). These definitions provided a conceptualization of vulnerability and resilience that guided the interview process.

Protection of Human Subjects

Approval to conduct the study was obtained from the university’s Institutional Review Board. Because all of the participants in this study were infected with HIV, protecting confidentiality was of paramount importance throughout the study. Participants were asked to complete a signed informed consent form as well as a separate signed informed consent form for audiotaping of the interview.

Other than the signature on the informed consent forms, names and contact phone numbers of participants were not collected. Participants were instructed at the start of the interview not to provide their name or any unique identifying information about them on the audiotape.

Informed consents and the transcribed interviews were stored separately to further protect confidentiality. Both the informed consents and the transcribed interviews were stored in a double-locked research office at the PI’s office. Only the PI and members of the research team had access to the consents or interviews.

To protect confidentiality during the interviews, the interviews were conducted with only the participant and the PI present. Interviews were conducted in a private, quiet office that was free from interruptions. This private office not only protected the privacy and confidentiality of the participants, but it provided a safe environment so that participants could freely discuss their experiences in living with HIV infection. It was hoped that by providing this private office, that clients would share their experiences more freely, especially in terms of

issues surrounding high risk sexual behaviors, substance abuse, and mental health issues that are often present in clients with HIV infection.

Sample

In order to participate in this study, participants were required to meet inclusion criteria. Inclusion criteria included: 1) age of at least 18 years of age; 2) a diagnosis of HIV infection or AIDS; and 3) the ability to read, write, and speak English.

The sample consisted of 15 adults with HIV infection, 8 females and 7 males. The participants ranged in age from 24 to 61 years. A complete demographic profile of the study's participants can be found in Table 2.

Analysis

Data were analyzed using content analysis (Graneheim & Lundman, 2004; Krippendorff, 1980). Sections of the transcripts that discussed the relationship of vulnerability and resilience were read and an exhaustive list was developed that described the relationship from the perspective of the participants. To focus the analysis, the broad research question (How would you describe the relationship of vulnerability and resilience for people with HIV infection?) was used to begin the analysis process. The list included words, sentences and paragraphs that were condensed into categories. These categories represented were not interpreted and represented latent content (Krippendorff, 1980).

Three broad categories emerged from the data. The researchers counted the number of times each theme was repeated. Quotes that best described the categories were chosen to illustrate the findings. Because the categories were mutually-exclusive, it was not possible for the researchers to show relationships between the three categories.

The three categories were then given abstract terms that interpreted the meaning of the participants' statements, which represented manifest content. This abstraction allowed the data to be presented in themes that are used to report the study's findings (Graneheim & Lundman, 2004; Krippendorff, 1980).

Trustworthiness

Much like quantitative research, qualitative research is concerned about reliability and validity of the study's findings. Although the terms 'reliability' and 'validity' are sometimes used in qualitative research, many qualitative researchers prefer the term 'trustworthiness' to describe the process of ensuring rigor in qualitative research (Graneheim & Lundman, 2004). Credibility, dependability, and transferability are methods of ensuring trustworthiness in qualitative research (Lincoln & Guba, 1985).

Credibility and transferability were two methods of ensuring trustworthiness that were used in this study. Credibility refers to the research focus and the congruence of the data and data interpretation (Lincoln & Guba, 1985). Two methods of ensuring credibility were used in this study: the use of representative quotations from the participants to verify interpretation, and the use of a second researcher to verify data interpretation. Participant quotes were used to substantiate findings. In addition, after data analysis was completed by the first author, the second author verified the findings.

Transferability is concerned with the degree to which the study's findings could be transferred to other groups of people experiencing the phenomenon (Lincoln & Guba, 1985). In this study, participants were recruited in an attempt to ensure that various characteristics,

contexts, and cultures were included. This in combination with rich descriptions provided by participants from their interviews was used to enhance transferability.

Results

All 15 participants were able to discuss the relationship of HIV infection. Participants provided three explanations of the relationship of vulnerability and resilience in the context of HIV infection: *Simultaneity*, *Dichotomy*, and *Vacillation*. In order to illustrate how participants conceptualized the relationship of vulnerability and resilience in the context of HIV infection, selected quotes from participants were used.

Simultaneity

The first theme, *Simultaneity*, describes how some participants viewed the simultaneous occurrence of vulnerability and resilience among people infected with HIV. Six of 15 participants described the simultaneous nature of vulnerability and resilience. According to the participants, persons with HIV infection are vulnerable and resilient continually throughout the period of time that they are living with HIV infection. A 56 year old Caribbean Black female with other chronic health issues in addition to HIV infection, described how people with HIV infection are vulnerable and resilient simultaneously:

Now I am going through a thing with my nervous system, ok? I got a very bad damage to my nervous system and 99% of the time I am in very bad pain. All the pain medications that they give me including epidurals don't work. Sometimes the pain is so bad I want to shoot myself, but guess what? I get up... I find a way to make it. I don't want to quit... I want to say no to drugs, alcohol, and unprotected sex. But I don't want to say no to keeping on moving. I have to keep going. I still move on. So I am vulnerable and I am resilient at the same time. My sugar goes down so low or it goes so high (and) my blood pressure does the same. Sometimes just don't want to do this. But I can't. I keep moving. I go in and take a shower. And I will say, "You know one thing? Let's go there." There is a conference going on here concerning HIV. Or somebody needs me. One of my friends could be sick. I am dying, but guess what? I will get up and go take care of it.

Another participant, a 55 year old African American female who is managing HIV and struggling with an addiction to crack cocaine, described her views of vulnerability and resilience:

Maybe one day I will be like, "Yeah, well, I think I want to do some drugs." But then, around about 6 o'clock in the evening I am like, "Why the heck am I doing this when I really don't want to do this?" But I am doing it, j just because of this other person, you know? And knowing that if I don't grab ahold of my life, this person is going to kill me. I am going to kill myself. Today I didn't do any drugs. The next day and the next day, but the third day I am back down again and just doing drugs again knowing the whole time that this ain't even me. But, at the same time, I am resilient. Because I can look at a person and I know where they sell drugs at. I know where the dope man is. I know how to get phone numbers. But I choose not to call them. I know that I have resilience when I can call one of my church members. I know I have a choice today and at any given time I can be both resilient and vulnerable. And I choose to focus on the resilience. I have that "bounce back" power. If I was on drugs I wouldn't be there for nobody. I am still here to help someone else that might hear my voice and let them know that they are not alone.

Dichotomy

The second theme to emerge from the data, *Dichotomy*, was used to describe the relationship of vulnerability and resilience in the context of HIV infection. Six of 15 participants described the relationship of vulnerability and resilience as diametrically-opposed, or opposite concepts. These six participants reported that clients with HIV infection could experience either vulnerability or resilience at any point in the disease process, but that a client with HIV infection could not be both vulnerable and resilient simultaneously. According to these six participants, clients with HIV infection are either vulnerable or resilient, dependent on the events, experiences, or stressors that clients with HIV are managing.

A 46 year old Hispanic male who contracted HIV through intravenous drug use, described the opposing nature of vulnerability and resilience among people with HIV infection:

I think that they (vulnerability and resilience) are opposites. I said before, maybe a few years ago I tried to live with the condition, but after that, I calmed down and thought about it. And I can say now that my mind has changed differently. Before I had feelings of vulnerability. As I learned more, that helped me right deal with the HIV and to feel resilience. Because you cannot take a negative like vulnerability and a positive, resilience, at the same time. Because if you are a person who is vulnerable, you are not going to go anywhere with these negative things, you know? You have to be positive or resilient in your mind. Do you want to live longer or do you want to die in a short time? With HIV you are either vulnerable or resilient—one or the other, but you can't have both at the same time.

Another participant, a 50 year old Hispanic female who has been living with HIV infection for 16 years, agreed that vulnerability and resilience can occur in people with HIV infection, but that they are opposing concepts:

You are either doing or not doing good. You are either vulnerable or resilient. Yes, you got to be this or that. Depression is isolating and stuff like that makes you vulnerable and makes you sick. People need to have more knowledge of how this affects their life. It's not just what is going on in your body, but your mind too. It's a domino effect. Everything affects a person who has HIV and AIDS. I take care of myself on a daily basis, which is something I never did before. This is what makes me resilient: talking about things that affect you and expressing yourself, getting together with a bunch of people like you helps.

Vacillation

Vacillation was the third theme that was used to describe the relationship of vulnerability and resilience in the context of HIV infection. Three participants described vulnerability and resilience much like a continuum. These three participants reported that clients with HIV infection are often vulnerable at certain points in the disease process, but then can become resilient. In addition, once participants become resilient, a physical or psychological health condition could cause them to become vulnerable. Over the course of the disease process, clients often vacillate between vulnerability and resilience, depending on what is occurring physically, psychologically, and socially in relation to HIV infection. One participant, a 53 year old Caribbean Black male, summarized his views on vulnerability and resilience as a continuum:

Because if you start, if stress gets to your mind, I don't even think the medications work for you because I (have) seen a lot of people who get vulnerable and they don't do good. After they become vulnerable the t-cells go down and they barely go up... But they can become resilient. It's the people who surround him that makes

him resilient. What works for one patient it doesn't work for another one. But the group of friends is very important, because otherwise that little gap that you have is an opportunity to become ill again. For me the vulnerability is stress caused for me as a patient living with HIV. It is very stressful. I find it very stressful but what makes me go more towards resilience is my friends. I see my friends (that also have HIV) and some of them are working! Some of them are going for these support groups or this type of research studies. They are working on it for new cures or new medications. I find that optimistic. I find that very helpful in moving us toward resilience.

Another participant, a 47 year old Caucasian female who has been living with HIV infection for 28 years, also agreed that the relationship of vulnerability and resilience was a continuum that clients moved between based on life events related to HIV infection:

When you first get the initial diagnosis that's when you are very, very vulnerable. Because as I said, it's like somebody just dropped a block on you. (Long pause). You go through so much hardships... You get defensive. ..Those little things that never bothered you before becomes big. Until when you get a grip on everything and get a good grip on life...and you get beyond that and work. And work toward getting your body in the right as best, I won't say THE best, but the best shape as you possibly can be with the virus. All the things you took for granted you are doing. It's a lovely thing. Cause you can't be vulnerable and resilient (at the same time). As I said, the vulnerability part is going to make you not adhere to your meds—basically not giving a damn. As you get over that and start to rise. You can take one little step at a time toward resilience. Then you start adhering to your meds, adhering to your doctor's advice. To me, when you really become resilient there is a never-ending quest for knowledge. That is what you are going to have to continually do every day. You are just going to have to deal with it; try to find a solution. Just listen and learn everything. And don't take nothing for granted.

Discussion

This study provided data on participants' perspectives of the relationship of vulnerability and resilience in the context of HIV infection. To our knowledge, this is the first study that explores the relationship of these concepts in the context of HIV infection from an emic approach. The emic approach is essential in understanding phenomena by providing a subjective description of these phenomena from these 'insider' accounts. The proximity to the experience provides the most accurate and meaningful description of phenomena by those closest to the experience (Headland, Pike & Harris, 1990).

Vulnerability and resilience in the context of HIV infection are concepts that are important for mental health nurses and other healthcare professionals who provide care to clients with HIV infection. Psychiatric nurses and other health care providers need to be aware that clients with HIV infection are at an increased risk for mental health conditions such as depression, anxiety, and substance abuse that are often linked to stigma, marginalization, and poverty. These psychosocial aspects render HIV-infected clients at risk for other physical and psychological health conditions (Aranda-Naranjo, 2004).

Vulnerability has been linked to alterations in physical and psychological health that may result from discrimination, substance abuse, and decreased medication adherence (Ayers et al., 2006; Peretti-Watel et al., 2006; Van Servellen et al., 2002). Conversely, clients with HIV infection who are able to rise above the adversity created by the diagnosis may promote perceptions of resilience that allow clients to tolerate uncertainty, increase self-worth, form intimate relationships with others (Dyer et al., 2004; Thompson, 2003), gain knowledge of

illness, and to learn to manage the illness (Bletzer, 2007). Psychiatric nurses' knowledge of the relationship of these concepts in the context of HIV infection may assist clients in decreasing risk behaviors and barriers to care, while supporting and encouraging adaptation to life with a stigmatized, chronic illness.

Some participants in this study reported the simultaneous occurrence of vulnerability and resilience among clients with HIV infection. The participants believed that in the context of HIV infection, vulnerability and resilience were completely intertwined and inseparable. Clients with HIV infection, according to the participants, are continually vulnerable and resilient simultaneously throughout the disease process, perhaps related to the unique nature of HIV infection as a disease process. Many clients with HIV infection report that even in the presence of physical health, there are a number of psychosocial conditions such as HIV-related stigma, discrimination, and marginalization that occur (Earnshaw & Chaudoir, 2009) that impacts the mental, emotional, and physical health as well as quality of life (Logie & Gadalla, 2009). Although clients with HIV infection may be physically healthy and feeling resilient, actual and perceived stigma (as well as other HIV-related psychosocial issues) may contribute to perceptions of vulnerability. Therefore, these clients perceive themselves as vulnerable and resilient simultaneously.

The second description of the relationship of vulnerability and resilience notes the diametrically-opposed nature of these concepts. This description of the relationship of vulnerability and resilience is consistent with the conceptualization of vulnerability and resilience in the context of HIV infection documented in the literature (De Santis, 2008; Flowers et al., 2011). Upon receiving a diagnosis of HIV infection, psychological crisis and a sense of loss often results. As clients coped with and adjusted to their diagnosis, they learn to assimilate HIV into their lives, but often develop a sense of a damaged identity (Flowers et al., 2011). The participants in this study reported certain crisis points that equated with vulnerability that occurred across time. At some point, participants reported a sense of a 'new self' from having survived a difficult experience. This 'new self' and the resulting feelings of accomplishment of the incorporation of HIV into their lives, the participants reported feelings that equated to resilience. At diagnosis clients with HIV infection are often referred for mental health services. Psychiatric nurses and other healthcare providers need to be aware of the periods of vulnerability that may occur at diagnosis and other periods of crisis. Astute assessment and interventions may be necessary to decrease the negative effects of vulnerability and to help the client cope and adjust to the diagnosis.

The third description of the relationship of vulnerability and resilience in the context of HIV infection speaks to the chronic nature of HIV infection. By definition, a chronic illness is one that lasts for more than six months, and is characterized by exacerbations and remissions (Larsen & Lubkin, 2010). There are times during the course of HIV infection that clients may experience exacerbations of HIV-related and non-HIV-related illnesses in addition to psychosocial conditions related to HIV infection. Also there are certain periods of time when HIV infection is managed with antiretroviral therapy (ART) that clients are healthy and are experiencing the equivalent of remission. However, if HIV infection is not controlled, or if the client is not adherent to ART, uncontrolled HIV infection may result in exacerbation of physical and psychological illnesses (Kartikeyan, Bharmal, Tiwari & Bisen, 2007; Simoni et al., 2005). Clients who are adherent to ART and who are experiencing less physical and psychological illnesses of HIV infection may perceive resilience. On the contrary, those who are not adherent and are experiencing physical and psychological effects of uncontrolled HIV infection may perceive vulnerability. As clients vacillate between control of HIV infection and a lack of control, this is consistent with the conceptualization of vulnerability and resilience as a continuum. Psychiatric nurses need to be aware of the chronic nature of HIV infection, and how clients fluctuate between health and illness, which

can be equated with vulnerability and resilience. Nursing interventions can be directed toward health promotion and health maintenance behaviors to assist clients in managing their illness in order to promote overall health.

Regardless of the exact relationship between vulnerability and resilience in the context of HIV infection, the results of this study have clinical implications for psychiatric nurses and other healthcare professionals providing care to people with HIV infection. Psychiatric nurses and other healthcare professionals must appreciate the influence that both vulnerability and resilience have on the physical and psychological health of clients with HIV infection by using the conceptual aspects of vulnerability and resilience clinically to assist clients in managing their illness. For example, vulnerability can be conceptually viewed as stress and anxiety experienced by clients that place them at risk for social, psychological, and physical health problems (Rogers, 1997). If clients are experiencing vulnerability, this may impact their ability to adhere to medication regimens, placing them at risk for worsening physical and mental health. By assisting clients in the identification of this risk, nursing interventions can be developed with clients to help reduce risk and to promote health. Clients experiencing vulnerability may need more intensive mental health services and support to help them decrease the impact of vulnerability on their health. Conceptually, resilience, on the other hand, can be viewed as surmounting, responding, and adapting to adversity (Dyer & McGuinness, 1996). Supporting clients in maximizing their strengths and decreasing their risks are essential components of managing the unpredictable nature of HIV infection. Perceptions of resilience could result in better adherence, increased quality of life, and less physical and psychological issues related to HIV infection. Resilience can be promoted by psychiatric nurses by providing positive reinforcement for health promotion behaviors.

Another important intervention for psychiatric nurses is assisting clients with HIV infection to access sources of social support. Some clients with HIV infection may not have functional sources of support. One source of social support that can be utilized by clients with HIV infection is peer social support that can be found in support groups for people with HIV infection. Referral of clients to these support groups may be useful, as peer social support is reported to enhance coping skills and improve psychosocial function among people with HIV infection (Peterson et al., 2012).

Lastly, it is essential that psychiatric nurses note the importance of client education. Clients with HIV infection who are knowledgeable about their illness not only report increased knowledge, but were more empowered and perceived more control (Hattem, Gallagher & Frankel, 2003). In addition, these clients were then able to effectively serve as peer educators to provide education to both people living with HIV infection, as well as healthcare providers regarding the challenges of living with HIV infection (Solomon, Guenter & Stinson, 2005).

This study has provided the foundation for future work on the relationship of these concepts among people living with HIV infection. In terms of future theoretical work, this study needs to be replicated to include a large sample size and to include groups of people with HIV infection that were under-represented in this study. For example, only one participant in this study contracted HIV infection from male-to-male sexual contact. Currently, the majority of people with HIV infection in the U.S. are men who have sex with men (MSM) (Centers for Disease Control and Prevention [CDC], 2011). MSM with HIV infection may have unique perspectives of vulnerability because of discrimination and marginalization related to sexual orientation that may be compounded by HIV infection (Dowshen, Binns & Garofalo, 2009; Wohl et al., 2010). Replication of this study with HIV-infected MSM would

result in a more complete description of the relationship of vulnerability and resilience in the context of HIV infection.

The results of this study also have implications for future empirical work. For example, an instrument could be developed to measure vulnerability and resilience in the context of HIV infection, as instruments to measure these concepts among people with HIV infection is lacking. Development and testing of this instrument would be necessary to ascertain if vulnerability and resilience can be measured, and if vulnerability and resilience could be linked to physical health, mental health, psychosocial support, and medication adherence among people with HIV infection.

Limitations

There are a few limitations of this study that must be disclosed. First, the participants were recruited from a university-based outpatient HIV clinical research unit. Participants at this unit may be enrolled in other HIV research studies or clinical trials. These participants may be “research experienced” and because of their participation in other HIV-related research studies, the results may have been influenced by their desires or intentions to enroll in the study.

Second, contextual demographic information such as family structure, living arrangements and housing issues, and social support systems were not collected. This information may have been used to provide some additional contextual information to this study.

Despite these two identified limitations, this study is important because it is the first study to explore the relationship of vulnerability and resilience in the context of HIV infection. The results make an important contribution to the knowledge base of HIV-related vulnerability and resilience.

Acknowledgments

Funding acknowledgement: This study was funded by the Beta Tau Chapter of Sigma Theta Tau International (J. De Santis, PI). This publication was made possible by the Center of Excellence for Health Disparities Research: EL CENTRO, National Institute on Minority Health and Health Disparities of the National Institutes of Health (P60 MD002266). Its contents are solely the responsibility of the authors and do not necessarily represent the official views of the National Institutes of Health.

References

- Aranda-Naranjo B. Quality of life in the HIV-positive patient: Implications and consequences. *Journal of the Association of Nurses in AIDS Care*. 2004; 15:205–275.
- Ayers JR, Paiva V, Franca I, Gravato N, Della Negra N, et al. Vulnerability, human rights, and comprehensive health care needs of young people with HIV/AIDS. *American Journal of Public Health*. 2006; 96:1001–1006. [PubMed: 16449593]
- Bletzer KV. Identity and resilience among persons with HIV: A rural African-American experience. *Qualitative Health Research*. 2007; 17(2):162–175. [PubMed: 17220388]
- Bravo P, Edward A, Rollnick S, Elwyn G. Tough decisions faced by people living with HIV: A literature review of psychosocial problems. *AIDS Reviews*. 2010; 12(2):76–88. [PubMed: 20571602]
- Centers for Disease Control and Prevention [CDC]. HIV in the United States. 2011 Division of HIV/AIDS Prevention.
- Creswell, JW. *Qualitative inquiry and research design: Choosing among five approaches*. Thousand Oaks, CA: Sage; 2007.
- De Santis J. Exploring the concepts of vulnerability and resilience in the context of HIV infection. *Research and Theory for Nursing Practice: An International Journal*. 2008; 22(4):273–287.

- De Santis JP, Barroso S. Living in silence: A grounded theory study of vulnerability in the context of HIV infection. *Issues in Mental Health Nursing*. 2011; 32:345–354. [PubMed: 21692572]
- De Santis JP, Florom-Smith A, Vermeesch A, Barroso S, DeLeon DA. Motivation, management and mastery: A theory of resilience in the context of HIV infection. *Journal of the American Psychiatric Nurses' Association*. 2013; 19(1):36–46. [PubMed: 23392433]
- Dowshen N, Binns HJ, Garofalo R. Experiences of HIV-related stigma among young men who have sex with men. *AIDS Patient Care and STDs*. 2009; 23(5):371–376. [PubMed: 19320600]
- Dyer JG, McGuinness TM. Resilience: Analysis of the concept. *Archives of Psychiatric Nursing*. 1996; 10(5):276–282. [PubMed: 8897710]
- Dyer JG, Patsdaughter CA, McGuinness TM, O'Connor CA, De Santis JP. Retrospective resilience: The power of the patient-provider alliance in disenfranchised persons with HIV/AIDS. *Journal of Multicultural Nursing & Health*. 2004; 10(1):57–65.
- Earnshaw VA, Chandoir SR. From conceptualizing to measuring HIV stigma: A review of HIV stigma mechanisms measures. *AIDS & Behavior*. 2009; 13:1160–1177. [PubMed: 19636699]
- Finfeld-Connett D. Qualitative concept development: Implications for nursing research and knowledge. *Nursing Forum*. 2006; 41(3):103–112. [PubMed: 16879145]
- Flowers P, Davis MM, Larkin M, Church S, Marriott C. Understanding the impact of HIV diagnosis amongst gay men in Scotland: An interpretive phenomenological analysis. *Psychology and Health*. 2011; 26(10):1378–1391. [PubMed: 22010635]
- Graneheim UH, Lundman B. Qualitative content analysis in nursing research: Concepts, procedures, and measures to ensure trustworthiness. *Nurse Education Today*. 2004; 24:105–112. [PubMed: 14769454]
- Haase, JE.; Leidy, NK.; Coward, DD.; Britt, T.; Penn, PE. Simultaneous concept analysis: A strategy for developing multiple interrelated concepts. In: Rodgers, BL.; Knafl, KA., editors. *Concept Development in Nursing: Foundations, Techniques and Applications*. 2nd ed.. Philadelphia, PA: W.B. Saunders; 2000. p. 209-229.
- Harding R, Gwyther L, Powell FM. Treating HIV/AIDS patients until the end of life. *Journal of Acquired Immune Deficiency Syndromes*. 2007; 44(3):364–370. [PubMed: 17327759]
- Hatem D, Gallagher D, Frankel R. Challenges and opportunities for patients with HIV who educate health professionals. *Teaching & Learning in Medicine*. 2003; 15:98–105. [PubMed: 12708067]
- Headland, T.; Pike, K.; Harris, M., editors. *Emic and etics: The insider/outsider debate*. New Jersey: Sage; 1990.
- Kartikeyan, S.; Bharmal, RN.; Tiwari, RP.; Bisen, PS. *HIV and AIDS: Elements and Priorities*. Netherlands: Springer; 2007.
- Krippendorff, K. *Content Analysis: An Introduction to its Methodology*. London, England: Sage Publications Ltd; 1980.
- Larsen, PD.; Lubkin, IM. *Chronic Illness: Impact and Intervention*. 7th ed.. Burlington, MA: Jones & Bartlett Learning; 2010.
- Lincoln, YS.; Guba, EG. *Naturalistic Inquiry*. Newbury Park, NJ: Sage Publications, Inc; 1985.
- Logie C, Gadalla TM. Meta-analysis of health and demographic correlates of stigma towards people living with HIV. *AIDS Care*. 2009; 21(6):742–753. [PubMed: 19806490]
- Masten AS. Ordinary magic: Resilience processes in development. *American Psychologist*. 2001; 56:227–238. [PubMed: 11315249]
- Neergaard MA, Olesen F, Andersen RS, Sondergaard J. Qualitative description- The poor cousin of health research? *BMC Medical Research Methodology*. 2005; 9(52)
- Peterson JL, Rintamaki LS, Brashers DE, Goldsmith DJ, Neidig JL. The forms and functions of peer social support for people living with HIV. *Journal of the Association of Nurses in AIDS Care*. 2012; 23(4):294–305. [PubMed: 22079673]
- Pivnick A, Villegas N. Resilience and risk: Childhood and uncertainty in the AIDS epidemic. *Culture, Medicine & Psychiatry*. 2000; 24(1):101–136.
- Poindexter C, Shippy RA. Networks of older New Yorkers with HIV: Fragility, resilience, and transformation. *AIDS Patient Care and STDs*. 2008; 22(9):723–733. [PubMed: 18754703]

- Peretti-Watel P, Spire B, Schlitz MA, Bouhnik AD, Heard I, Lert E, et al. Vulnerability, unsafe sex, and non-adherence to HAART: Evidence from a large sample of HIV/AIDS outpatients. *Social Science & Medicine*. 2006; 62(10):2420–2433. [PubMed: 16289743]
- Risjord M. Rethinking concept analysis. *Journal of Advanced Nursing*. 2009; 65(3):684–691. [PubMed: 19222666]
- Rodgers, BL.; Knafl, KA. Introduction to concept development in nursing. In: Rodgers, BL.; Knafl, KA., editors. *Concept Development in Nursing: Foundations Techniques and Applications*. 2nd ed.. Philadelphia, PA: W.B. Saunders; 2000. p. 1-6.
- Rogers AC. Vulnerability, health and healthcare. *Journal of Advanced Nursing*. 1997; 26:65–72. [PubMed: 9231279]
- Sandelowski M. Whatever happened to qualitative description? *Research in Nursing & Health*. 2000; 23:334–340. [PubMed: 10940958]
- Sandelowski M. What's in a name? Qualitative description revisited. *Research in Nursing & Health*. 2010; 33:77–84. [PubMed: 20014004]
- Simoni JM, Kurth AE, Pearson CR, Pantalone DW, Merrill JO, Frick PA. Self-report measure of antiretroviral adherence: A review with recommendations for HIV research and clinical management. *AIDS and Behavior*. 2005; 10:227–245. [PubMed: 16783535]
- Solomon R, Guenter D, Stinson D. People with HIV as educators of health professionals. *AIDS Patient Care and STDs*. 2005; 19(12):840–847. [PubMed: 16375616]
- Sullivan-Bolyal S, Bova C, Harper D. Developing and refining interventions in persons with health disparities. *Nursing Outlook*. 2005; 53:127–133. [PubMed: 15988449]
- Thompson B. Lazarus phenomena: An exploratory study in gay men living with HIV. *Social Work in Health Care*. 2003; 37(1):87–114. [PubMed: 12921407]
- Van Servellen G, Chang B, Lombardi E. Acculturation, socioeconomic vulnerability, and quality of life in Spanish-speaking and bilingual Latino HIV-infected men and women. *Western Journal of Nursing Research*. 2002; 24(3):246–263. [PubMed: 11911378]
- Wohl AR, Galvan FH, Myers HF, Garland W, George S, Witt M, Lee ML. Do social support, stress, disclosure and stigma influence retention in HIV care for Latino and African American men who have sex with men and women? *AIDS & Behavior*. 2010; 15:1098–1110. [PubMed: 20963630]

Summary

Clients with HIV infection have been conceptualized as both a vulnerable and resilient population. Because of this conceptualization, some relationship between vulnerability and resilience in the context of HIV infection must exist. This study has provided data that begins to explore this relationship. More theoretical and empirical work is necessary to advance the study of these concepts among persons with HIV infection.

Table 1**Sample Interview Questions**

Researchers have found that people with HIV are often experience vulnerability and resilience.

- 1 For people with HIV infection, when does vulnerability occur? When does resilience occur?
 - 2 Based on your life experiences, how would you describe the relationship of vulnerability and resilience for people with HIV infection?
-

Table 2**Demographics (*N* = 15)**

Variable	Number
Age (Range = 24–61)	
20–29	1
30–39	1
40–49	3
50–59	9
>60	1
Sex	
Female	8
Male	7
Race/Ethnicity	
Black	6
Hispanic	8
White	1
Years of Education (Range = 6–13.5 years)	
Less than high school diploma	5
High school diploma or equivalent	4
Some college	6
Employment Status	
Employed	2
Unemployed	6
Disabled	7
HIV Transmission Risk Factor	
High risk heterosexual contact	11
Intravenous drug use	2
Male-to-male sexual contact	1
Unknown	1
Number of Years since HIV Diagnosis (Range = 2–28 years)	
0 to 9 years	6
10- to 20 years	8
More than 20 years	1
Most Recent CD4+ (t-cell) Count ^a	
Below 200 cells/mm ³	5
Above 200 cells/mm ³	9
Unknown	1
Most Recent HIV RNA (Viral load) ^a	
Undetectable	8
Detectable	5
Unknown	2
Diagnosis of AIDS	

Variable	Number
Yes	5
No	5
Unknown	5
Currently Receiving ART	
Yes	14
No	1
Diagnosed Illnesses in Addition ^b	
None	5
Diabetes	4
Bipolar disorder	3
Hypertension	2
Asthma	1
Arthritis	1
Anxiety disorder	1
Chronic fatigue syndrome	1
Depression	1
Hepatitis C	1
Meniere's disease	1

^aLaboratory values within the last 3 months

^bSome participants reported more than one additional illness