Psychosocial status and health outcomes in older adults living with human immunodeficiency virus

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PSYCHOSOCIAL STATUS AND HEALTH OUTCOMES IN OLDER ADULTS LIVING WITH HUMAN IMMUNODEFICIENCY VIRUS

by

AMANDA FERNANDEZ

A thesis submitted in partial fulfillment of the requirements for the Honors in the Major Program in Nursing in the College of Nursing and in The Burnett Honors College at the University of Central Florida Orlando, Florida

Summer Term 2012

Thesis Chair: Leslee A. D’Amato-Kubiet, MSN, ARNP
Abstract

**Purpose:** To recognize and raise awareness about the psychosocial status and health outcomes in older adults living with HIV.

**Method:** A literature search was conducted from the disciplines of nursing and medicine using the CINAHL, PubMed, and Medline databases. Inclusion criteria: articles exploring older adults who are HIV positive and factors related to depression, suicide and available healthcare resources. Exclusion criteria: articles including individuals under the age of 50 infected with HIV/AIDS and articles focused entirely on physiologic principles of HIV/AIDS.

**Results:** In older adults living with HIV/AIDS, the literature review disclosed a comprehensive gap between identifying this age group as ‘at risk’, lack of communication between health care providers and older adults concerning sexual activity and/or status, and recurring psychosocial components related to lack of resources and standards of care among older adults living with HIV/AIDS. An unbalanced amount of research has focused on the care and prevention of HIV/AIDS among young adult populations, while a limited amount of research is geared toward detection, prevention and interventions for HIV/AIDS in older adults. Findings suggest that HIV/AIDS is a syndrome of bias based on age and/or gender by health care providers. Solutions to this
epidemic must begin with an all inclusive plan that investigates the prevention, identification and intervention across the lifespan.

**Discussion:** As the country ages and the population of older adults increase, nurses will encounter an increasing number of older adults living with HIV/AIDS. In order to competently provide quality care to older adults with a positive HIV/AIDS status, further research is needed to bridge the gap of literature connecting psychosocial aspects of care and accompanying health outcomes.

**Keywords:** Older Adults, Human Immunodeficiency Virus (HIV), Depression, Barriers, Preventions
Dedications

To my parents, thank you for your unconditional love and support both in my academic and personal life; without you this would not be possible. For my mom, thank you for being a daily inspiration to be the best person I can be and to believe and trust in myself.

And to all of those that have influenced my educational experience.

I am gratefully indebted to each of you.
Acknowledgements

To my thesis chair, Mrs. Leslee A. D’Amato-Kubiet, you have been such an inspiration and mentor to me throughout this educational experience. You have forever changed my life. I thank you from the bottom of my heart for all you have given me, for it will surely make me not only a better nurse, but a better person. Thank you to my committee members Dr. Christopher Blackwell and Dr. Edward Fouty. Each of you have supported and helped me through this academic experience. This thesis would not have been possible without you.
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Introduction

The number of people living with Human Immunodeficiency Virus, (HIV)/Autoimmune Deficiency Syndrome, (AIDS) is estimated to be 40 million worldwide. It is estimated that 10% of the population living with HIV/AIDS is older than 50 years of age and of those individuals, 14% are over the age of 65. Older adults are less likely to recognize the need for HIV testing than other age groups; therefore the number of undiagnosed HIV infection in older adults in not fully realized (Lavkick, 1998).

Older adults are perceived as sexually inactive and not likely to engage in risk taking behaviors, such as engaging in illicit drug use or unprotected sexual activity. Health care providers often miss the connection between their reported symptoms and the clinical manifestations of HIV/AIDS (Lavkick, 1998). Early clinical manifestations of HIV are often mild and consistent with symptoms that are similar to influenza, such as swollen lymph nodes, night sweats, fatigue and diarrhea (Richman, 2000). After the diagnosis of HIV is confirmed in older adults, there is very little psychosocial support or assistance with physiologic demands of living with HIV available in the current health system (Groc, et al., 2010).

The purpose of this paper is to a) identify the psychosocial needs of older adults living with HIV/AIDS, b) evaluate factors that influence the health outcomes of older adults living with HIV/AIDS, and c) explore lifestyle modifications to promote optimal health outcomes in older adults living with HIV/AIDS.
Background

Recent advances in healthcare and drug therapy have drastically increased the number of people living with HIV/AIDS. Contrary to many popular beliefs that homosexual activity is the primary mode of HIV transmission, the most common route of HIV infection, globally, is heterosexual activity (Richmond, 2000). HIV is a retrovirus that carries genetic information to RNA rather than DNA and infects and destroys helper T cells of the immune system. HIV suppresses the immune response and allows otherwise opportunistic organisms to invade and weaken the body; thus, leading to the development of AIDS (Richmond, 2000). The typical routes of HIV transmission can occur through blood or blood products, intravenous drug use, sexual activity both heterosexual and homosexual, and maternal-child transmission before or during birth (Richmond, 2000). Often, the diagnosis of HIV in young adults leads to psychosocial comorbidities related to feelings or worry, depression, and isolation due to the social stigma associated with the origin of the disease; however, psychosocial symptoms in older adults have yet to be explored.

Problem

HIV-related psychosocial and physiologic variables impact the quality of life in all persons with HIV/AIDS. However, little is known about the impact of HIV-related psychosocial status and health outcomes in older adults because they are not included as a usual research population, and age in older adults is often excluded or ignored as a variable HIV risk (Emlet, 2007). In persons infected by HIV/AIDS, stigma or negative attitudes directed towards the individual by their peers was positively correlated with depression. It is also recognized that
HIV-infected older adults often experience profound depression that further compounds the stress due to poor finances from living on a fixed-income, lack of HIV-related information and support resources tailored to older adults, and HIV/AIDS-related stigma and discrimination from peers and family.

*Purpose*

The objective of this thesis is to provide a comprehensive review of the literature about older adults infected with HIV/AIDS and the impact living with the disease has on their health outcomes. This thesis will describe the psychosocial burden felt by older adults living with HIV/AIDS; evaluate methods older adults use to cope with their diagnosis and explore various lifestyle adjustments that would promote behavioral changes to prevent the use of negative coping mechanisms. Results of this thesis may encourage further studies and exploration into this subject. This thesis will also raise awareness about an overlooked population and establish the role of the nurse in providing care for these patients, as well as provide for enhancement of interdisciplinary care collaboration with other health care providers.

*Methods*

A synthesis of the current research related to psychosocial determinants of health outcomes and HIV/AIDS in older adults will be conducted. An interdisciplinary review of the research was performed from the databases of PubMED, Cumulative Index of Nursing and Allied Health (CINHAL), and Medline. Numerous search strategies were used to collect relevant studies for the synthesis (Figure 1).
Figure 1 Literature Search Strategy

Older adults, HIV
268

Older adults, HIV, Depression
29

Older adults, HIV, Barriers
12

Older adults, HIV, Psychosocial needs*, health
12

Older adults, HIV, Prevention
76
The inclusion criteria for the data used consisted of research focused on older adults who are HIV positive and factors related to depression, suicide, and available healthcare resources. Only peer reviewed articles and those written in English were utilized. Exclusion criteria included articles discussing individuals under the age of 50 infected with HIV/AIDS and articles focused entirely on the physiologic principles of HIV/AIDS. There has been a great deal of research on HIV/AIDS and psychosocial determinants of health outcomes, however, very few articles are specifically focused on the older adult age group. These studies were included in this synthesis; however, only the results pertaining to the criteria set forth by the synthesis were used for further investigation.

**Psychosocial Needs**

Common themes brought forth in the literature related to older adults living with HIV/AIDS include social isolation and lack of access to health care resources. Health care providers that are knowledgeable about older adults living with HIV/AIDS presents a barrier to addressing psychosocial and physiologic needs that can further complicate obtaining optimal health status. Many psychosocial needs associated with HIV/AIDS in older adults are difficult to explain due to the paucity of research in this area.

In a study performed in 2002 by Heckman, et al., 83 HIV infected individuals over the age of 50 were asked to complete lifestyle surveys that reported data on psychological symptomology, HIV-related life stressor burden, social support, barriers to health care and social services and sociodemographic characteristics. Analysis of the data revealed that HIV-infected older adults with greater levels of psychological symptoms also reported more HIV-related life
stressor burden, less support from friends, and reduced access to health care and social services due to AIDS-related stigma (Heckman et al., 2002).

According to several studies performed in 2001, older adults living with HIV/AIDS reported that current medical and healthcare support was not readily available to them. Currently there is not enough information and research available that primarily focuses on the interaction between aging and HIV disease. Studies have shown that there is a direct relationship that exists among social isolation and the depressed mental state in adults over the age of 50 living with HIV/AIDS. In a mixed method study conducted by Emlet in 2007, he studied the experiences of HIV-related stigma among 25 individuals living with HIV in the Pacific Northwest region. Results suggested there was a positive and significant correlation between depression and stigma. Qualitative results disclosed themes such as rejection, disclosure concerns, stereotyping, and protective silence. Health outcomes were improved when interventions were aimed at routinely assessing negative HIV stigma in older adults living with chronic HIV infection. Focusing efforts to reduce HIV-related stigma and loneliness may have lasting effects in reducing major depressive symptoms and improving perceived health (Groc, et al., 2010).

Based on the available research comparing social isolation between younger adults, less than 50 years old and older adults living with HIV/AIDS, results reveal that older adults tend to be considerably more socially isolated than their counter group (Schrimshaw & Siegel, 2003). Social isolation of older adults living with HIV/AIDS further exacerbates other perceived barriers including: the disclosure of HIV status, perceived public fear of HIV/AIDS, the ability to
care for oneself, being a burden to society and isolation from friends and family (Schrimshaw & Siegel, 2003).

Older adults living with HIV/AIDS that feel socially isolated may not be comfortable disclosing their HIV status to others, including close friends and family. Consequently, if friends and family of older adults living with HIV/AIDS are not aware of their disease status, they cannot provide the needed support, further enabling the perceived social isolation. Compared to younger adults living with HIV/AIDS, research reveals that older adults living with HIV/AIDS are less likely to disclose their HIV infection (Nokes, et al., 2000). In a study conducted by Schrimshaw and Siegel (2003), the principal reasons for nondisclosure are fear from the reaction the information would provoke, feeling unprepared and unsure of how to make the disclosure, or wishing to maintain privacy. Many participants in the study understood that by not disclosing their HIV-status they reduced the potential size of their support system. For many older adults living with HIV/AIDS in this study, the fear of rejection or further isolation outweighed the benefit of having that support.

Older adults that chose to disclose their HIV-status reported friends and family lacked accurate knowledge about the disease process and tended to be afraid of AIDS and casual transmission, or have negative attitudes towards HIV/AIDS. Older adults living with HIV/AIDS are likely to be subjected to the negative attitudes towards the disease primarily because their friends and family are of the same generation. Research suggests that older age has been associated with poorer knowledge about HIV/AIDS. This is likely to be associated with holding
irrational fears and negative stereotypes about HIV-infected individuals (Peruga & Celentano, 1993).

Older adults living with HIV/AIDS are likely to have smaller social networks either because of distance from family, death of friends or family, and/or lack of intimate relationships (Smith & Rapkin, 1996). Several older adults living with HIV/AIDS have lost their parents, in which they would have traditionally turned to in a state of crisis. Other older adults living with HIV/AIDS felt that asking their children for support would burden an already stressful living situation because of their children’s own lives and family. For some older adults living with HIV/AIDS asking for help challenged every personal belief they had about independence and self-reliance. Older adults living with HIV/AIDS can also be unwilling to seek support because it can require acknowledging their lack of dependence (Kadushin, 1999; Smith & Rapkin, 1996). As a result of such factors, older adults living with HIV/AIDS are at a further disadvantage for social support because they have less available people to aid in supporting them.

Behavioral Outcomes

Many older adults have adopted their own methods of coping with their disease status due to the lack of psychosocial support and health resources available to older adults living with HIV/AIDS. Unfortunately this has led to engaging in risky behavior, substance abuse and suicidal ideation.

According to Vance and colleagues (2010), the combination of aging and HIV can create a variety of stressors that can weaken an older adults willingness to thrive and further debilitate an already compromised cognitive system. This can increase rates of depression, suicidal
ideation and suicide in the older adult population. Older adults living with HIV/AIDS can become clinically depressed making it more difficult to cope with their diagnosis of HIV/AIDS. These challenges can overwhelm their ability to make healthful decisions and increase their vulnerability to depression, suicidal ideation and suicide (Vance et al., 2007).

Depression is a term used to describe individuals that are frequently sad or miserable for short periods of time. However, there is a state of clinical depression that can last for several weeks or longer that affects an individual’s entire being. Based on the Beck Depression Inventory, 25% of older adults surveyed with HIV/AIDS, reported moderate or severe levels of depression (Heckman, et al., 2002). When depression is combined with the stigma of HIV/AIDS and the lack of support associated with managing long term outcomes of HIV/AIDS as a chronic disease, it can lead to increased thoughts of suicidal ideation and early mortality due to inadequate self care in the older adult (Vance, 2010). Depression can be worsened when combined with social isolation that results from the fear of rejection due to the stigma of HIV/AIDS. The fear of death and the inability to cope with a chronic, terminal, disease prevents many older adults from communicating their needs with their peers and healthcare providers.

In addition to suicidal ideation and suicide, for some older adults living with HIV/AIDS, their method of coping may be to self medicate. Unlike previous generations, according to Topolski and colleagues (2008), as the baby boomer generation ages they continue to abuse substances at a greater rate. This abuse has the potential to increase the chance for older adults to contract HIV/AIDS as well as other infections. Drug abuse can lead to poor decision making that can alter health outcomes (Vance, et al., 2007). Several studies evaluated the relationship
between older adults living with HIV/AIDS and the likelihood of them being involved with drug use in comparison to younger adults living with HIV/AIDS. Zanjani, Saboe, and Oslin (2007), compared age differences in rates of substance abuse in HIV-positive adults and found illicit drug use and major depression were among their most prevalent findings. They also found that older adults living with HIV/AIDS were more likely than younger adults living with HIV/AIDS to experience depression, drug and alcohol abuse and/or dependence. Several studies suggest that fatigue and tiredness are associated with chronic substance abuse which makes older adults susceptible to suicide and suicidal ideation (Julien, 1998; Kolodziej & Weiss, 2000). While substance abuse can negatively impact older adults living with or without HIV/AIDS, it plays a critical role in older adults living with HIV/AIDS because distress from abuse can lead to missed medical appointments and poorer drug adherence (Zanjani, et al., 2007).

This combination of drug use and loneliness has been linked to unprotected sex in older adults living with HIV/AIDS. In a survey conducted in New York City, 914 sexually active older adults living with HIV were asked about their risk reduction strategies. Of the participants, 34% reported recently having unprotected sex (Kott, 2011). When asked about the preferred methods of risk reduction, serosorting, (unprotected sex with another HIV-infected individual), ranked among the highest (Kott, 2011). In addition to purposeful unprotected sex, many older adults have a knowledge deficit about sexually transmitted disease through the use of condoms. Older adults arise from a generation when discussing sex was considered taboo. Preventative measures to avoid contracting sexually transmitted disease are still a foreign concept to the majority of older adults. Many older adults, especially women, believe condom use was to
prevent pregnancy and because older adult women are post menopausal their concern for pregnancy is obsolete (Falvo & Norman, 2004). Older adults also perceive themselves as less likely to contract the infection making them less likely to use condoms for prophylaxis.

**Lifestyle Modification**

Although alarming numbers of older adults in the United States infected with HIV/AIDS are predicted to be infected with HIV, there is very little data that examines the knowledge level of older adults regarding the disease (Falvo & Norman, 2004). Of the older adults that are aware of the disease and disease process, a large portion is misinformed, supporting the need for educational programs designed specifically for older adults (Falvo & Norman, 2004). Many older adults are unaware of various routes of transmission, creating an even greater need for intervention. In a study conducted by Rose (1996), results revealed subjects believed HIV could be contracted by holding hands, kissing and donating blood. Despite beliefs that older adults are not considered at risk for HIV/AIDS, they do engage in behaviors that could increase chance of infection. If educational programs were targeted for the older adult population in a manner that was age and subject sensitive, health promotion and prevention may be further enabled.

Screening for HIV/AIDS in older adults has been limited or omitted for several reasons. Research suggests that in comparison to mass media and friends, health care providers ranked lowest for providing HIV/AIDS related screening information. This finding is consistent with the idea that older adults feel uncomfortable discussing sexual activity and practices with healthcare providers. Recent surveys reported that less than 40% of older men and women had discussed sex with the healthcare provider (Tangredi, et al., 2008). The discomfort healthcare
providers feel engaging in conversations with older adults about sexual activity commonly results in the omission of sexual histories and HIV risk assessment (Tangredi, et al., 2008). When screening for at risk behaviors in older adults, the health care provider needs to consider not only the use of illicit drugs and the sharing of intravenous needles, but also sexual practices and methods used to prevent disease.

The CDC has brought forth new recommendations for older adults, suggesting that HIV tests should be more standard. HIV testing as a comprehensive screening will increase identification of older adults with HIV infection (Tangredi, et al., 2008). The new CDC recommendation can provide an opportunity for healthcare providers to discuss sexual health and positively affect the health outcomes of older adults. However, methodology of this may be flawed. If the CDC recommends HIV screening as more of a comprehensive procedure, without placing great emphasis on the right to refuse and providing only fine print about patient rights’, the deceptive nature of this testing might bring forth further ethical dilemmas. Personal privacy and/or cultural issues could be breeched. In addition, if insurance companies were to be privy to this type of information it could pose an even greater risk for overall care of the patient and negatively influence health outcomes.
**Synthesis of Literature**

**Discussion**

The purpose of this review of literature was to examine the psychosocial status and health outcomes among older adults living with HIV/AIDS. Throughout the research several common themes emerged including psychosocial status, barriers to care, and implications for care and prevention in the future among older adults living with HIV/AIDS. Psychosocial components that dominated research were depression, suicidal ideation, social isolation, and stigma. Research has identified of those components, increased depression and the use of illicit substances were of primary concern among older adults living with HIV/AIDS (Zanjani, Saboe, & Oslin, 2007).

Research also identified barriers to care that included but were not limited to, lack of communication with health care providers, lack of resources and information concerning HIV/AIDS for older adults and the presumption by health care providers that older adults were not an “at risk” demographic. Several studies suggest that health care providers’ omission of sexual assessment along with patients’ discomfort discussing sexual activity with their health care provider were among the many barriers to identification of HIV/AIDS in older adults.

Recently there has been a shift in research to move toward education, prevention and management of care for older adults living with HIV/AIDS. Research articles that have investigated these principles have found that typically older adults do not perceive themselves find them to be an at risk population, have limited or predetermined knowledge about the
disease. Research suggests that if health care providers would encourage education for older adults concerning HIV/AIDS, knowledge about contraction and management would flourish, further enabling quality care among older adults living with HIV/AIDS (Falvo & Norman, 2004). Research suggests that primary prevention must be a priority strategy given to research in order to develop and evaluate programs for older adults to prevent HIV infection (Maes & Louis, 2003). National measures are also being set forth by the CDC to initiate a focus on earlier detection of HIV/AIDS by making screening more routine than voluntary (Tangredi et al., 2008).

Limitations

Various limitations were noted in this integrated review of literature. Include was bias related to subjective data by participants who contributed in surveys. The subjective nature of the surveys only examined psychosocial components that included depression, stigma, and thoughts of suicide. These studies in older adults did not distinguish HIV/AIDS from other comorbid conditions to account for these cofounding elements. Other limitations included generalized analysis and not evaluating cohorts within the age groups, such as comparing men versus women, stages of diagnosis, and sexual orientation. Another limitation was that findings were not compared to other age groups and were focused exclusively on older adults.

Implications

Nurses provide a holistic approach to the care of patients. Whether patients are young, old, acute or chronically ill, nurses have a professional obligation to provide comprehensive care. Nursing can encompass psychosocial, prevention, identification, intervention and avocation for
HIV/AIDS patients of all ages. Further efforts and research must be made to gain a better understanding of physiological, psychological and sociological factors that can assist nurses to develop useful and adequate interventions for older adults living with HIV/AIDS (Goodroad, 2003). Further research is needed to develop a more inclusive screening tool to identify older adults with HIV/AIDS, utilization of public resources for older adults to cope with a diagnosis of HIV/AIDS, and a focus of efforts on primary prevention are all solid nursing recommendations. In addition to improvements in screening, efforts should be made to focus on psycho educational programs targeting older adult living with HIV/AIDS. These programs would have to start on the grassroots level with public health nurses really being the forefront for this movement. Surveys would need to be implemented specifically geared toward the older adult living with HIV/AIDS to assess their knowledge of the disease, disease process, and routes of transmission to obtain a general baseline. After results were yielded from this survey you could build various appropriate programs based on limitation and knowledge deficit findings.

Summary

This review of literature holistically examined older adults living with HIV/AIDS and included assessment of psychosocial components, behavioral outcomes, barriers to care, and further implications to facilitate future research in areas such as HIV/AIDS education and prevention in older adults. If nurses become more involved in patient advocacy in regards to their HIV positive older adult patients, this would enable them to address issues such as depression and isolation and alleviate barriers to care by providing information and prevention interventions.
The literature synthesis may provide insight into education, prevention and detection in an overlooked population. It is expected that this literature review will be helpful in future research ventures.
### Appendix

<table>
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<th>Articles</th>
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<th>Intervention Details</th>
<th>Outcome Measures</th>
<th>Results (or Key Findings)</th>
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<tr>
<td>Emlet, C. A. (2007). Experiences of Stigma in Older Adults Living with HIV/AIDS: A Mixed-Methods Analysis. <em>AIDS Patient Care and STDs</em>, 21(10), 740-740-752. doi: 10.1089/apc.2007.0010</td>
<td>25 older adults with HIV/AIDS from the Pacific Northwest</td>
<td>Mixed method</td>
<td>Older adults living with HIV were interviewed to capture lived experiences of these individuals in regard to HIV-related stigma</td>
<td>Measure HIV-related stigma</td>
<td>It was found that stigma was positively correlated with depression and 11 themes came forth that corresponded to stigma instrument.</td>
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<td>Falvo, N. and S. Norman (2004). “Never too old to learn: the impact of an HIV/AIDS education program on older adults’ knowledge.” <em>Clinical Gerontologist</em> 27(1/2): 103-117.</td>
<td>Self selected volunteers 60 years of age with cognitive ability</td>
<td>Quantitative</td>
<td>Participants filled out questionnaires regarding age, knowledge about AIDS and sex inventory</td>
<td>To examine changes in older adults’ knowledge after education and then to reassess again in 3 months to evaluate retention of information</td>
<td>Results yielded from this study indicate that after education, despite age, participants were able to improve their scores and knowledge of HIV/AIDS related information.</td>
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<td>Kott, A. (2011). &quot;Drug Use and Loneliness Are Linked to Unprotected Sex in Older Adults with HIV.&quot; Perspectives on Sexual &amp; Reproductive Health 43(1): 69-69.</td>
<td>914 HIV-positive sexual active participants ages 50 and older in New York City</td>
<td>Quantitative</td>
<td>Participants were asked to fill out surveys about gender based sexual behaviors in the past 90 days</td>
<td>To explore sexual and at risk behaviors among older adults</td>
<td>Results reveal that of the participants 50% were sexually active in the past 90 days, of these 34% reported unprotected sex (anal or vaginal), and 45% reported using drugs.</td>
</tr>
<tr>
<td>Heckman, T. G., A. Kochman, et al. (1999). &quot;Depressive Symptomatology, Daily Stressors, and Ways of Coping among Middle-Age and Older Adults Living with HIV Disease.&quot; Journal of Mental Health and Aging 5(4): 311-322.</td>
<td>113 midlife &amp; older adults living with HIV/AIDS in New York City &amp; Milwaukee, WI</td>
<td>Quantitative</td>
<td>Participants were asked to complete surveys to assess depression, stressors, &amp; look at the relationship between the stressors and their way of coping.</td>
<td>To explore coping ability of older adults and if psychological distress changes their coping responses.</td>
<td>Research found that of the participants, 29% were moderately or severely depressed and that economic status, stigma, and lack of age appropriate resource furthered depressive symptoms.</td>
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<tr>
<td>Heckman, T. G. T., B. D. B. Heckman, et al. (2002). &quot;Psychological symptoms among persons 50 years of age and older who have been diagnosed with HIV disease in the United States.&quot; Journal of Mental Health and Aging 8(3-4): 247-262.</td>
<td>83 HIV-positive adults over the age of 50</td>
<td>Quantitative</td>
<td>Participants were asked to complete self-report surveys about psychological symptomology to health care</td>
<td>To compare depressive symptomology to health care</td>
<td>Multiple regression analysis reported that HIV-infected older adults who had more psychological symptoms reported more HIV-related burden, less support from friends, and less</td>
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<tr>
<td>Study</td>
<td>Participants</td>
<td>Study Design</td>
<td>Data Collection</td>
<td>Study Objective</td>
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<td>Lovejoy, T. I., T. G. Heckman, et al. (2008). &quot;Patterns and Correlates of Sexual Activity and Condom Use Behavior in Persons 50-Plus Years of Age Living with HIV/AIDS.&quot; AIDS and Behavior 12(6): 943-943-956</td>
<td>290 HIV-positive adults over the age of 50</td>
<td>Mixed method</td>
<td>Participants filled out computerized questionnaires</td>
<td>To explore rates of sexual activity and condom use of participants over 3 months</td>
<td>Of the 290 participants in the analytic sample, 62% were not sexually active in the past three months. Of the participants that were sexually active, 26% used condoms regularly and 7% used condoms irregularly but only had sex with only HIV positive sexual partners.</td>
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<td>Maes, C. A. and M. Louis (2003). &quot;Knowledge of AIDS, perceived risk of AIDS, and at-risk sexual behaviors among older adults.&quot; Journal of the American Academy of Nurse Practitioners 15(11): 509-516.</td>
<td>166 adults over the age of 50</td>
<td>Descriptive Correlation Design</td>
<td>Participants were asked to complete a survey to evaluate knowledge of HIV, the survey was developed from the health belief model</td>
<td>To explore older adults’ knowledge about the disease, contraction, and at risk behaviors.</td>
<td>Results reveal participants were knowledgeable about HIV transmission. Research indicates that participants were aware of the seriousness of AIDS however, they did not believe that they were vulnerable to this disease.</td>
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<td>Schrimshaw, E. W. and K. Siegel (2003). &quot;Perceived barriers to social support from family and friends among older adults with HIV/AIDS.&quot; <em>Journal of Health Psychology</em> 8(6): 738-752.</td>
<td>63 older adults over the age of 50 living with HIV/AIDS</td>
<td>Qualitative</td>
<td>Participants were asked to describe the type of barriers they experienced living with HIV/AIDS</td>
<td>To explore the barriers to achieving emotional and realistic social support</td>
<td>Results indicate that many did not feel they received adequate emotional and/or realistic support. Research also identified several barriers to achieving such support including public fear, privacy, self reliance, burden to society, and lack of a support system.</td>
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<td>Zanjani, F., K. Saboe, et al. (2007). &quot;Age difference in rates of mental health/substance abuse and behavioral care in HIV-positive adults.&quot; <em>AIDS Patient Care &amp; STDs</em> 21(5): 347-355.</td>
<td>109 adults age 21-88 that were HIV-positive from the University of Pennsylvania Center for AIDS Research</td>
<td>Cross sectional</td>
<td>Participants completed a 3-hour inclusive behavioral/psychosocial interview</td>
<td>The explore age differences in proportion of mental health/substance abuse and treatment among HIV-positive adults</td>
<td>Results revealed that more than 50% presented with considerable mental health and substance abuse symptoms. Major depression and use of illicit drugs seemed to be the most common themes.</td>
</tr>
</tbody>
</table>


Kott, A. (2011). Drug use and loneliness are linked to unprotected sex in older adults with HIV. *Perspectives on Sexual & Reproductive Health, 43*(1), 69-69. doi: 10.1363/4306911


