HÖGSKOLAN
I GÄVLE

AKADEMIN FÖR HÄLSA OCH ARBETSLIV
Avdelningen för hälso- och vårdvetenskap

The experiences of older HIV/AIDS patients

A descriptive literature review

19106100111 Lu Jiawen (Gavin)
19106100305 Yu Xinting (Talia)

2023

Student thesis, degree project, 15
credits Nursing
Degree Thesis in Nursing
Supervisor: Wang
Mengyu (Lily)
Examiner: Mikaela
Willmer

Abstract

Background: The number of older people living with HIV/AIDS is increasing year by year. With the ageing of society and advances in anti-HIV/AIDS treatment programmes, HIV/AIDS infection among older persons (over 45 years of age) is increasing at an unusual and unprecedented rate and is receiving increasing attention. However, as a new group emerging in recent years, patients themselves and their families lack of knowledge on how to care and treatment. Their experiences need to be pooled in order to provide better quality care.

Aim: The aim of the study was to describe the experiences of older AIDS/HIV patients.

Design: A descriptive literature review including studies with a qualitative approach.

Method: All of the article were searched from PubMed via Medline. There were ten articles selected to answer the aim of this review. Through reading the selected articles, authors compared their results, and summarized the experiences of older AIDS/HIV patients.

Results: Ten qualitative articles, which described the experiences of older AIDS/HIV patients, resulted in three categories: (1) Physical changes (2) Psychological changes (3) Social changes.

Conclusions: Older HIV/AIDS patients experience physical, psychological, and social changes. Their physical condition deteriorated, and they also felt negative emotions such as stigmatization, isolation, shame, and negative sadness from selective disclosure and expectation. They will also gain psychological growth and take steps to generate positive emotions. Although they will reduce their contact with others in the society, they will also improve the quality of life and promote the popularization of diseases. The findings of this literature review provide a initial understanding of the experiences of older patients with AIDS. It is necessary for nurses to provide physical,psychological and social education and guidance to older AIDS patients to improve their quality of life in a more comprehensive and comfortable way.

Key words: HIV/Acquired Immune Deficiency Syndrome, the older people,experiences.

摘要

背景：感染艾滋病毒/艾滋病的中老年人人数在逐年增加。随着社会的老龄化和抗艾滋病毒/艾滋病治疗方案的进步，中老年人（45岁以上）中的艾滋病毒/艾滋病感染情况正在以不寻常和前所未有的速度增加，并受到越来越多的关注。然而，作为近年来出现的一个新群体，患者自身及其家属缺乏如何护理和治疗的知识。他们的经验需要汇集起来，以提供更好的高质量的护理。

目的：描述中老年艾滋病患者的经历。

方法：本文是一篇描述性文献综述。两位作者选取了过去十年的有关 HIV/AIDS 患者的经历的质性研究文献。然后根据纳入排除标准筛选后，对这十篇文章进行了总结、归纳及异同点比较。

结果：通过对十篇文献的归纳分析，我们将结果总结为三个主题：（1）生理变化 （2）心理变化 （3）社会变化

结论：中老年艾滋病毒/艾滋病患者会经历了身体、心理和社会变化。他们的身体状况恶化，他们还感到负面情绪，如污名化、孤立、羞耻和选择性披露和期望的消极悲伤。他们还会获得心理成长，并采取措施产生积极的情绪。虽然他们会减少与社会上他人的接触，但也会提高生活质量，促进疾病的普及。本文献综述的发现提供了对中老年艾滋病患者的经历的初步理解。护士需要对中老年艾滋病患者提供身体、心理和社会教育和指导，以更全面、更舒适的方式提高老年艾滋病患者的生活质量。

关键词：HIV/AIDS，中老年患者，经验

Table of contents

1. Introduction

1.1 Background

The annual incidence of newly diagnosed HIV/AIDS cases is gradually increasing and has shown an upward trend since 2003.1(Kang & Hwang & Wong.2011). HIV/AIDS is a treatable chronic disease affecting a growing older population(Gustafson & McFarlane.2021). With the ageing of society and advances in anti-HIV/AIDS treatment programmes, HIV/AIDS infections among the older are increasing at an unusual and unprecedented rate and are receiving increasing attention(Lazarus & Folkman.1984; Wallace et al. 2017). Thanks to the success of combination antiretroviral therapy (cART), many people living with HIV/AIDS can expect to live longer, and the population of older people living with HIV/AIDS is growing(Wallace et al. 2017).For older people with HIV/AIDS, lack of support and understanding is a major source of stress. Nurses therefore play an important role in providing social support and understanding to patients in addition to treatment and care.

1.2 HIV/AIDS – definition

HIV is a virus that attacks the body's immune system. Acquired immune deficiency syndrome (AIDS) is caused by human immunodeficiency virus (HIV) (Kang & Hwang & Wong.2011). A potentially life-threatening chronic disease(Mugisha et al.2016) , which also affects an ageing population (Gustafson & McFarlane.2021). HIV is sexually transmitted. It can also be spread through contact with infected blood, illegal drug injections or sharing needles. It can also be passed from mother to child during pregnancy, childbirth or breastfeeding. Weight loss, unexplained dementia, mucosal candidiasis or opportunistic infections or malignancies defined by AIDS are symptoms of the possible presence of HIV infection (Scott & Goetz.2016). If HIV is not treated, it can cause AIDS (CDC). It interferes with your body's ability to fight infection and disease by damaging your immune system. There are usually three stages: acute HIV infection, that is, high levels of HIV in the blood, highly contagious; Chronic HIV

infection (asymptomatic HIV infection, or clinically latent HIV that is still active and has low reproductive levels); Acquired immune deficiency syndrome (AIDS) is a condition in which the immune system of AIDS patients is severely compromised, causing them to develop an increasing number of serious diseases(CDC). AIDS patients have a high viral load and are highly contagious. There is no cure for HIV/AIDS, but drugs can control the infection and stop the disease from progressing. HIV antiretroviral treatment has reduced the number of AIDS deaths worldwide.

1.3 Older people – definition

Older people is defined as those over 60 years of age in developing countries (WHO, 2021). With the aging of society, the elderly population is increasing, and the proportion of population is getting higher and higher. The age division of the elderly in different regions is closely influenced by their historical development. Some developed countries have different age thresholds, with a cut-off of 65 years. OPWH, often defined as people living with HIV > 50 years of age, is a growing population that has historically been overlooked by HIV interventions (Kirk & Goetz, 2009; Nachega et al., 2012). The study population was 45 years old and above. Participants 45 and older were considered elderly in this study.

1.4 Experience– definition

Experience means (the process of getting) knowledge or skill from doing, seeing, or feeling things.Experiences is an individual perception of a specific phenomenon, which affects the individual thinking and behavior (Giorgi, 1997). This is a subjective experiences, which is often associated with phenomenology to conduct qualitative research on participants (Giorgi, 1997).The experience in this study mainly refers to the personal experience of older patients with HIV/AIDS after diagnosis.

1.5 The nurse’s role

Nurses are able to assess physical function and geriatric syndromes to further identify patients' needs to help access targeted resources to provide them with appropriate

symptom-specific care(Greene & Justice & Covinsky.2017;Thurn & Gustafson.2017). Nurses should pay more attention to patients' mental health in addition to their physical condition(Mugisha et al.2016). Older people living with HIV may lack family resources and support, increasing the risk of unsafe sexual contact(Kang & Hwang & Wong.2011). As nurses, they should be provided with psychological support and begin to focus on community and health service interventions that have a positive impact on physical and mental health in order to improve the overall quality of life(Mugisha et al.2016). Public education messages and intervention strategies on HIV prevention now focus more on young people(Scott & Goetz.2016). The older HIV/AIDS patients are a neglected group and nurses should apply knowledge from older population studies to people with HIV to better understand the complexities of their health status(Wallace et al.2017).

1.6 Nursing Theory

The meta-paradigm of Coping theory clearly involves nursing and people. This theory will be used as a theoretical reference framework for the proposed literature review. Coping theory is defined as the process of Coping with psychological stress through thinking (cognitive effort) and acting (action effort) (Lazarus & Folkman.1984). The theoretical concept is based on microscopic analysis and macroscopic analysis, feature-oriented and state-oriented methods(Krohne.2002). The nurse's involvement in the patient's stress-therapy process requires an assessment of each individual in the patient's narrow stress-therapy process. Specifically, the following six aspects should be identified :(1) stressors, (2) patients' interpretation of stress, (3) patients' response to stress, (4) patients' assessment of response, (5) patients' past use of effective response, (6) each person's psychological and social resources (Mika.2006). Based on these results, effective coping may be helped in a way that varies from patient to patient. Many character-driven approaches have established two concepts that are crucial to understanding cognitive responses to stress: vigilance, or a tendency to respond to stressful aspects encountered, and cognitive avoidance, which diverts attention from stress-related information. The corresponding methods for these concepts are suppression-sensitization, surveillance-passivation , or attention-exclusion (Krohne.2002). Stress is an individual response. To provide each patient with the help

they need, it is important to understand each patient's "stress-treatment process" attitude. To help in these areas is, so to speak, to help sick patients find themselves, so that they can be proud of being a dignified person and exercise their ability to live with the disease. A central goal (or reference value) for a particular population is central to understanding stress and coping processes (Mika.2006).

1.7 Problem description

With the improvement of the quality of life and the improvement of medical treatment, the number of AIDS patients and HIV carriers has gradually increased. At the same time, with the aging of society and the progress of anti-HIV treatment programs, older HIV /AIDS patients have become a group that cannot be ignored. In order to better provide care for older AIDS patients and HIV carriers, nurses must understand AIDS and HIV related knowledge, appropriate geriatric care measures, HIV/AIDS patients and their families for health education, reasonable care for each patient's needs and ideas, seeking common ground while reserving differences. At present, there are a lot of studies on HIV/AIDS patients and older patients, but the research and understanding of older AIDS patients is very little. The author believes that it is of great significance to study the daily life experience of older HIV/AIDS patients for the development of patients themselves and the nursing field.

1.8 Aim and research questions

The aim of the literature review was to describe the experiences of older AIDS/HIV patients.
What is the daily life experience of older AIDS/HIV patients?

2. Method

2.1 Design

A descriptive literature review will be used in this study (Polit & Beck, 2017).

2.2 Search strategy

The articles used in the study were searched through PubMed and Cinahl , with limitations: University of Gävle, 10 years, Full text and English. The search terms were used "hiv", "AIDS", "Experience" and "older people", searched in different combinations, the Boolean term AND will be used. The indexed search terms are obtained from Mesh. In the preliminary search, we briefly read the titles and abstracts of 183 articles, and selected 30 among of them which were considered to be potentially interesting and closely related to this descriptive literature review (see Table 1).

Table 1. Results of preliminary database searches.

Database + Date of search	Limits	Search terms	Number of hits	Potential articles (excluding doubles)
Medline through PubMed 2022-05-05	English，10 years，Full text	hiv(MeSH)	150772	
Medline through PubMed 2022-05-05	English，10 years，Full text	hiv(MeSH) AND older people	37	
Medline through Pubmed 2022-05-06	English，10 years，Full text	hiv(MeSH) AND older people AND Experience	7	2
Medline through	English，10	AIDS	98044	

Pubmed 2022-05-06	years，Full text			
Medline through Pubmed 2022-05-06	English，10 years，Full text	AIDS AND older people	4519	
Medline through Pubmed 2022-05-06	English，10 years，Full text	AIDS AND older people AND Experience	455	16
Cinahl 2022-05-09	English，10 years，Full text	hiv(MeSH)	1115557	
Cinahl 2022-05-09	English，10 years，Full text	hiv(MeSH) AND older people	943	
Cinahl 2022-05-09	English，10 years，Full text	hiv(MeSH) AND older people AND Experience	119	9
Cinahl 2022-05-09	English，10 years，Full text	AIDS	856429	
Cinahl 2022-05-09	English，10 years，Full text	AIDS AND older people	559	
Cinahl 2022-05-09	English，10 years，Full text	AIDS AND older people AND Experience	81	3
				Total:30

2.3 Selection criteria

The following is the selection criteria including inclusion criteria and exclusion criteria.

Inclusive criteria:

①Articles will be selected to answer the aim of the review, which is about the daily life experiences of older HIV/AIDS patients.

②Qualitative, quantitative and mixed-method research are belonging to the scope of selection, as long as the content of the article is sufficient to answer the research purpose.

Exclusion criteria:

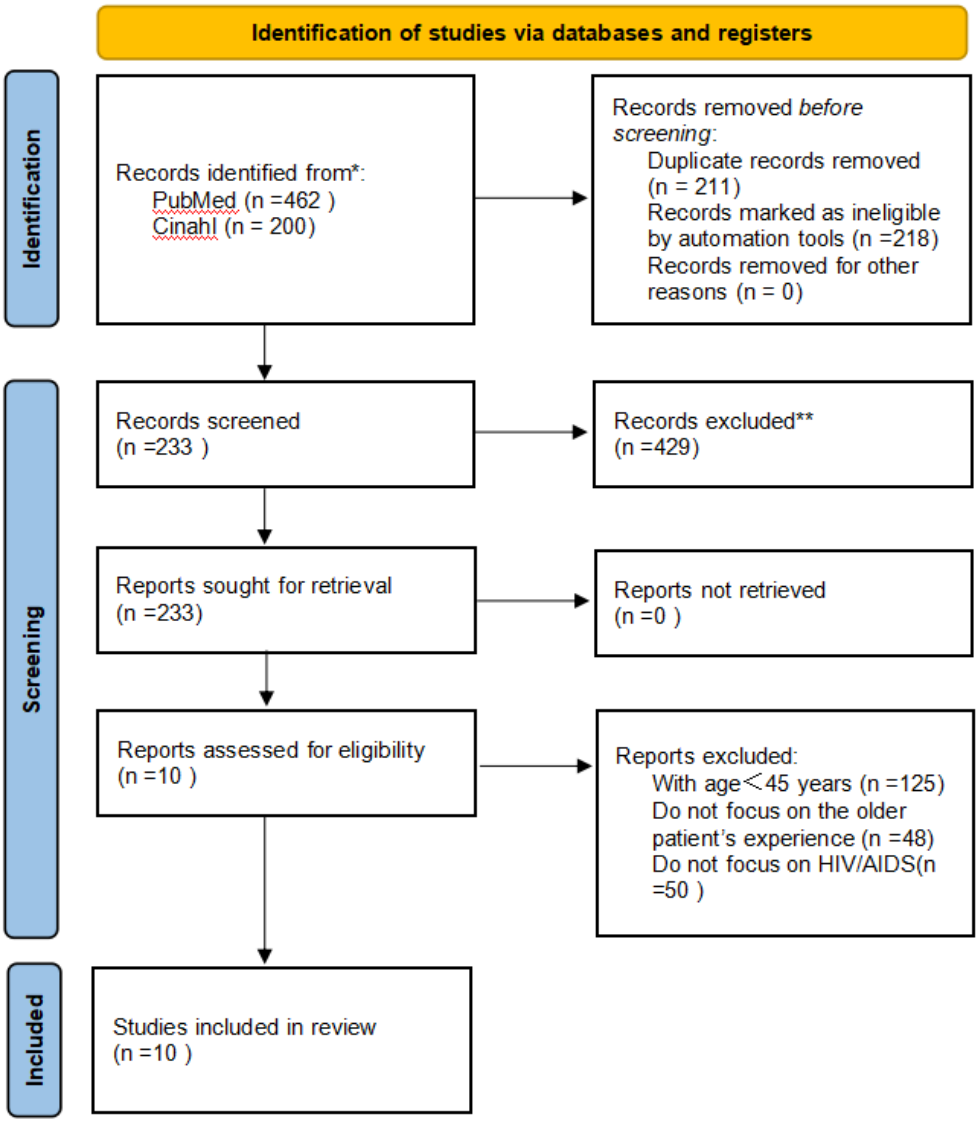
①Articles are literature reviews.

②The article does not mention the daily experiences of older HIV/AIDS patients.

2.4 Selection process and outcome of potential articles

Firstly, the author searched 462 articles from PubMed and 200 articles from the library of Gävle University according to keywords. Next, the author deleted 429 duplicate articles, and set automatic screening criteria as 10 years, etc. Through which 429 articles were deleted. After the initial screening, the remaining 233 articles could be used. In the second screening, the author did not find any literatures with reviews, so there were 333literatures left. Finally, the authors excluded 125,49 and 50 studies that included subjects < 45 years old, did not focus on the experience of older patients, and did not focus on HIV/AIDS patients, respectively. At last, the remaining qualified literatures were 10 that the author thought might be relevant to the purpose of this study. The overall process identified in the literature is shown in Figure 1.

Figure 1 search process for the protocol



2.5 Data analysis

The authors scanned roughly the titles and abstracts of 183 articles in PubMed and Cinahl, then excluded 153 articles to get 30 possible articles. Finally, read all the content of the 30 articles, and further select the final qualified articles according to the exclusion criteria and inclusion criteria. The selected articles are sorted by the first letter of the author's name and in alphabetical order (A-Z). The results of the paper will be carefully read and processed to answer the research objectives and research questions. Research results will be organized and written according to the categories in which they appear, and presented through their respective categories.

2.6 Ethical considerations

The article should follow professional ethics in all aspects, and all references cited should respect the author's original intention, and should not be taken out of context or deleted casually. There is no plagiarism in this article. The essay will be treated objectively, free from the subjective influence of the author. The results will be open and transparent and will not be changed according to the wishes of the authors.

3. Result

3.1 summary of included articles characteristics

A total of 10 articles were used in the results, all of which were descriptive designs using qualitative methods (D.Rosenfeld et al.,2018 ; M.Brennan-Ing et al.,2017 ; Araujo GM et al.,2018 ; Brandão BMGM et al.,2019 ; Sociology of Health & Illness published by John Wiley & Sons Ltd on behalf of Foundation for SHIL.2016 ; Charles Furlotte et al.,2012 ; M.J.Shen et al.,2018 ;Silva CM et al.,2020 ; Amy Allen et at.,2020;W.Miller ,2019). The 10 articles were published in five countries: Ukraine (n=1)(Amy Allen et at.,2020), Mexico (n=3)(Brandão BMGM et al.,2019 ; Silva CM et al.,2020 ;Araujo GM et al.,2017), the United Kingdom (n=2)(D.Rosenfeld et al.,2018 ; Sociology of Health & Illness published by John Wiley & Sons Ltd on behalf of Foundation for SHIL.2016), the United States (n=3)(M. Brennan-Ing et al.,2017 ; M.J.Shen et al.,2019 ; W.Miller ,2019), and Canada (n=1)(Charles Furlotte et al.,2012). All participants were HIV/AIDS patients or HIV carriers. Of the 318 participants, 124 were female and 194 were male. One more thing to note is that all of the participants were 45 or older.Meanwhile, of all the participants, 71 were from Mexico , 11 from Canada, 143 from the United Kingdom, 30 from Ukraine and 63 from the United States. The participant information in the detailed literature is shown in Table 5. Among them,

6 used semi-structured interview (Brandão BMGM et al.,2019 ; Silva CM et al.,2020 ; D.Rosenfeld et al.,2018 ; Araujo GM et al.,2017 ; M.J.Shen et al.,2019 ; W.Miller ,2019), 1 used personal interview (W.Miller ,2019), 3 used questionnaire survey (Brandão BMGM et al.,2019 ; M.Brennan-Ing et al.,2017 ; M.J.Shen et al.,2019), and 1 used mini-mental state examination (Araujo GM et al.,2017). In the selection of data analysis methods, 3 literatures choose the topic analysis method (Charles Furlotte et al.,2012 ; M.J.Shen et al.,2019 ; M.Brennan-Ing et al.,2017), 2 choose the qualitative data analysis method (Amy Allen et at.,2020 ; M.Brennan-Ing et al.,2017), 2 choose the interpretation method (D.Rosenfeld et al.,2018 ; Silva CM et al.,2020), 1 choose to construct the basic theory of the topic and use the symbolic interaction framework (Sociology of Health & Illness published by John Wiley & Sons Ltd on behalf of Foundation for SHIL.2016), 1 use the content analysis method (Araujo GM et al.,2017), and 1 choose the open coding system (W.Miller ,2019).

Table 5

Article	**Participants**		**Gender**	
	older patients with AIDS	Carers of older people with AIDS	Male	Female
Amy Allen et al., (2021) Ukraine	30	-	14	16
Brígida Maria Gonçalves de Melo Brandão. et al., (2019) Mexico	48	-	28	20
Charles Furlotte. et al., (2012) Canada	11	-	9	2
Cláudia	13	-	8	5

Mendes da Silva. et al., (2020) Mexico				
Dana Rosenfelda et al., (2018) UK	100	-	61	39
Department of Social Policy, London School of Economics and Political Science, UK	43	-	20	23
Graciela Machado de Araujo. et al., (2018) Mexico	10	-	3	7
Mark Brennan-Ing et al., (2017) USA	21	-	17	4
Megan Johnson Shen et al.,(2018) USA	32	-	22	10
Warren L. Miller Jr., (2019) USA	10	-	10	-

Sum total	318	0	192	126

After the above analysis, the results mainly included 3 themes and 6 sub-themes (see Table 6): (1) Physical changes; (2) Psychological changes; (3) Social changes.

Table 6 Themes and sub-themes of articles

Theme	Sub-theme
Physical changes	Health deterioration
Psychological changes	Negative psychological feelings
	Psychological growth feelings
Social changes	Reduced social activity
	Face life positively

3.2 Physical changes

After being diagnosed with HIV/AIDS, a person's life will change dramatically. Physiological changes manifest themselves primarily as a decline in health (Sociology of Health and Disease, published by John Wiley & Sons LTD on behalf of the SHIL Foundation. 2016; Amy Allen et at.,2020), patients have a significantly increased risk of contracting other diseases (Amy Allen et at.,2020), and rates of weight loss and physical decline greatly accelerate (Amy Allen et at.,2020; The Sociology of Health and Disease published by John Wiley & Sons LTD on behalf of the SHIL Foundation. 2016). HIV/AIDS is a disease that causes impaired and defective cellular immunity in humans, leading to a range of pathogenic infections and rare tumours. Because of the nature of HIV/AIDS, patients have a weakened immune system and are less able to fight the virus, making them particularly susceptible to other diseases (Charles Furlotte et al.,2012). This is considered by many patients to be a physically traumatic process, as patients require extensive hospitalization and are in a "state of ill health" with multiple infections, which seriously affects their work and the difficulty of resuming normal life (Amy Allen et at.,2020). The main cause of death in later HIV/AIHS patients is the outbreak of various complications.This is precisely because HIV destroys the human immune system, leading to the patient's own immunity decline and health deterioration.

3.3 Psychological changes

Through an in-depth exploration of these ten articles, we found that older AIDS patients are simultaneously affected by both negative emotions and positive personal growth. In general, the impact of AIDS on older AIDS patients is selective disclosure and anticipation of stigma, isolation, shame, as well as negative sadness. On the positive side, they will grow from such an experience. The positive emotions that they generate through their interactions can also counteract the negative emotions.

3.3.1 Negative psychological feelings

We found that AIDS can bring selective disclosure and expected stigmatisation to older patients and make them feel homeless (Amy Allen et al., 2021; Charles Furlotte. et al., 2012; Dana Rosenfelda et al., 2018). The older have experienced stigmatisation and other results related to those stigmas after being diagnosed with AIDS (Charles Furlotte. et al., 2012; Dana Rosenfelda et al., 2018). People always think that AIDS is caused by poor sexual habits, so they have their own views of older HIV patients, which makes the group stigmatized and helpless. Due to the course of HIV disease and their age factors, older AIDS patients are also affected by their status (Department of Social Policy, London School of Economics and Political Science). Ageing them will also be isolated by society because of shame (Megan Johnson Shen et al., 2018). The older group has particularity, AIDS group also has particularity, the combination of the two is more particularity. And older AIDS patients will feel double shame, and social rhetoric is often unfriendly. Retired people suffer from lower incomes and the cost of treating AIDS.They also expressed great concern about the challenges to the economic security consequences of career interruptions (Dana Rosenfelda et al., 2018). At the same time, we also found that older AIDS patients have depressed and sad emotions and negative self-cognition (Cláudia Mendes da Silva. et al., 2020; Mark Brennan-Ing et al., 2017). The older are less energetic, and they feel that they can bring happiness and have less energy, so they are more likely to self-deny and think about the problem, thus making them sad and depressed. They usually experience discrimination because of their old

age and AIDS (Charles Furlotte. et al., 2012; Megan Johnson Shen et al., 2018). The older of the same age have increased their cognition of AIDS, and are more likely to discriminate against the older AIDS patients. They feel that they are old and have a disorderly private life, which does not conform to the outlook on life and marriage and childbearing of the same age. Patients themselves are even more afraid of acquiring the disease and having a better understanding of the consequences of the disease.The lack of knowledge of AIDS and transmission among the older has increased their fears (Graciela Machado de Araujo. et al., 2018).

3.3.2 Psychological growth feelings

In our research, we found that for older AIDS patients, HIV diagnosis is the basis of personal growth, and their psychology will grow, which is positive (Amy Allen et al., 2021). From the beginning of disease diagnosis, including the development of AIDS at each stage, will bring them new experience and perception, they will gradually from resist denial to calmly accept, and even take the initiative to take measures to reduce its harm and impact, this is their inner growth process. By diverting attention from volunteering, participating in active activities, and contributing to AIDS drugs, participants have adopted strategies to maintain or improve their well-being about the uncertainty about the cumulative health consequences of HIV, AIDS drugs and "normal ageing" (Dana Rosenfelda et al., 2018). older AIDS patients can get psychological comfort by analysing chronic and more stigmatised diseases that contribute to the theoretical understanding of identity formation and maintenance, and obtaining the support of mental health professionals (Dana Rosenfelda et al., 2018; Department of Social Policy, London School of Economics and Political Science).More stigmatizing diseases give them a contrast, and they feel that older people are not so bad about AIDS. They can also affirm themselves by communicating with mental health professionals. At the same time, we also find that the positive emotions and feelings generated by social interactions with family and friends, positive life events, expecting something or doing something that can bring goals for their lives can usually offset the negative emotions of participants and the emotions caused by intertwined behavioural health problems (Mark Brennan-Ing et al., 2017). For older AIDS patients, depression can be

alleviated by valuable interpersonal relationships, and telephone intervention can also make them feel better (Mark Brennan-Ing et al., 2017). These things make them feel valuable, which will make them have a sense of expectation and satisfaction, and make them positive. And stigma also strengthens the use of spirituality (Warren L. Miller Jr., 2019).

3.4 Social changes

Many diagnosed older patients change in society in two ways: reduced social activity and face life positively (M.Brennan-Ing et al.,2017 ; Araujo GM et al.,2017 ; Brandão BMGM et al.,2019 ; M.J.Shen et al.,2019 ; Silva CM et al.,2020 ; Amy Allen et al.,2021 ; Sociology of Health & Illness published by John Wiley & Sons Ltd on behalf of Foundation for SHIL.2016 ;Charles Furlotte et al.,2012).

3.4.1 Reduced social activity

Due to the particularity and infectivity of HIV/AIDS, patients begin to gradually reduce their contact with people, limit their own or their family's family activities, become very submissive, afraid of bringing bad influence on their family or others (Araujo GM et al., 2017; Silva CM et al., 2020 ;). Patients' previous daily living habits were completely changed, and most patients reduced or even stopped leisure and production activities, which brought great changes to their social interactions (Araujo GM et al., 2017). At the same time, they almost uniformly hid their diagnosis after being diagnosed (Amy Allen et al.,2021 ; Silva CM et al.,2020 ; M.J.Shen et al.,2019 ; Araujo GM et al.,2017). Not only to relieve pressure on family members, but also to avoid being isolated and discriminated against by society and other neighbors (Amy Allen et al.,2021 ; Silva CM et al.,2020 ; M.J.Shen et al.,2019 ; Araujo GM et al.,2017). As a disease stigmatized and stigmatized by society, HIV/AIDS remains a harmful presence and patients diagnosed with HIV/AIDS are also considered a risk group (Brandão BMGM et al., 2019). The publicity and education of HIV/AIDS related knowledge are not in place in the society, resulting in a lack of professional education for the way of infection and treatment, which leads to the prejudice and discrimination of HIV/AIDS patients in the social

environment (Amy Allen et al.,2021 ; Araujo GM et al.,2017). Older people living with HIV/AIDS are particularly subject to speculation and discrimination on the basis of age, sexual orientation and disease, and the assumption that contact with them will lead to infection, leading to social isolation (Brandão BMGM et al., 2019; Shen Minjie et al., 2019; Silva CM et al., 2020; Allen et al., 2021). As a result, older people living with HIV/AIDS continually conceal their experiences for fear of disclosure and disclosure (Brandão BMGM et al., 2019; Shen Minjie et al., 2019; Silva CM et al., 2020; Amy Allen et al., 2021).

3.4.2 Face life positively

Society may have some negative influences on patients, but there is also a lot of social support. Another thing that changes after diagnosis is the patient's daily lifestyle (Amy Allen et at.,2020 ; M.Brennan-Ing et al.,2017 ; Araujo GM et al.,2018). In order to achieve a healthy lifestyle, they start to get away from their existing living conditions and improve their quality of life (Araujo GM et al.,2018 ; W.Miller ,2019 ; D.Rosenfeld et al.,2018). Refocus on relationships, family and friends (Amy Allen et at.,2020).Despite their declining health, patients actively receive and adhere to antiretroviral therapy(Silva CM et al.,2020 ; Sociology of Health and Disease, published by John Wiley & Sons LTD on behalf of the SHIL Foundation. 2016 ; Araujo GM et al., 2017), regularly attend HIV care, and endure the pain and suffering of their illness (Sociology of Health and Disease, published by John Wiley & Sons LTD on behalf of the SHIL Foundation. In 2016; Amy Allen et at.,2020; Araujo GM et al., 2017).
Due to the continuous expansion of older AIDS patients in recent years, the society has begun to pay attention to this special group of older patients, and the number of professional medical care institutions and clinics is also increasing (D.Rosenfeld et al., 2018; Amy Allen et al., 2021 ; M.Brennan-Ing et al.,2017 ; Charles Furlotte et al.,2012 ; Sociology of Health & Illness published by John Wiley & Sons Ltd on behalf of Foundation for SHIL.2016). They guarantee the treatment and life of older people living with HIV, support their continued access to antiretroviral therapy, and provide them with relevant professional knowledge and education (Araujo GM et al., 2017 ; Charles Furlotte et al.,2012 ; Sociology of Health & Illness published by John Wiley & Sons Ltd

on behalf of Foundation for SHIL.2016 ; Silva CM et al.,2020 ; Amy Allen et al., 2021). In addition, older AIDS patients with the same experience have established organizations and groups, which gives them a sense of belonging, they can share their experiences and experiences with team members, help each other, and get spiritual assistance (D.Rosenfeld et al., 2018 ; Silva CM et al.,2020 ; Sociology of Health & Illness published by John Wiley & Sons Ltd on behalf of Foundation for SHIL.2016). They actively receive diagnosis, notice and focus on the positive aspects of life, receive treatment and participate in various activities ((Araujo GM et al., 2017 ; Charles Furlotte et al.,2012 ; Sociology of Health & Illness published by John Wiley & Sons Ltd on behalf of Foundation for SHIL.2016 ; Silva CM et al.,2020 ; Amy Allen et al., 2021). In addition to their own active lives, they also wish to control infection in others (Sociology of Health and Disease published by John Wiley & Sons Ltd on behalf of the shil Foundation. 2016). They mainly demonstrate active involvement in prevention and care, publicize their experiences and needs, and encourage everyone to test for HIV (Sociology of Health and Disease published by John Wiley & Sons Ltd on behalf of the shil Foundation. 2016; D. Rosenfeld et al., 2018). In order to enhance their added value and contribute to society, they actively participate in voluntary activities (D. Rosenfeld et al., 2018). They are contributing to society in their own special way and giving back for their support.

It is also important to note that gay/bisexual men with HIV/AIDS receive far less social support than the rest of the HIV/AIDS population (M.J.Shen et al.,2019).

4. Discussion

4.1 Main results

This descriptive literature review article includes qualitative approaches with a primary focus on describing the experiences of older people with AIDS. The results are summarized in three categories: (1) Physical changes (2) Psychological changes (3) Social changes. older AIDS patients have poor physical condition, and their weight and immunity to other diseases decline. AIDS brings the negative effects of selective

disclosure and expected stigma, isolation, shame, negative sadness, and so on. However, the positive emotions they generate through their interaction can also offset the negative emotions, and they will also gain psychological growth from such experiences. Socially, these patients develop changes such as gradually decreasing contact with people and limiting family activities of themselves or their family. They are also kind enough from the society, they begin to improve the quality of life, and to promote the disease in the society, to make a positive contribution to the society.

4.2 Results discussion

4.2.1 Weakness in physical

Frailty is physiological vulnerability caused by a reduced ability to respond to stressors (Wallace et al.,2017). Jake Scott & Matthew Bidwell Goetz (2016) argued in their article that older HIV patients were weaker and had worse body mass index than ordinary older people due to viral replication and lower CD4+ count. This leads to a significant increase in their risk of related complications and a variety of non-AIDS defined malignancies, cardiovascular diseases, neurological diseases and other chronic diseases (Joseph O.Mugisha et al., 2016; Wallace et al.,2017; Marion Thurn & Deborah R.Gustafson .2017; Deborah R.Gustafson & Samy I.McFarlane.2021; Jake Scott & Mattew Bidwell Goetz.2016). Some studies have proposed another view, finding that the incidence of cognitive impairment and dysfunction in older patients with HIV is negatively correlated with their frailty compared to the majority of older or other chronic patients (Wallace et al.,2017). For example, Wallace et al.(2017) found that the incidence of HIV-related dementia in older patients was significantly reduced. According to Krohne's coping theory, the physical weakness of older HIV patients is caused by the constant stimulation of HIV as a stressor, which makes older HIV patients more prone to complications and infections (H.W.Krohne. 2002). As nurses, we should help older people with HIV improve their coping skills. Early detection and initiation of treatment is so important that early intervention is considered a valuable coping method (Meredith Greene, Amy c.Justice & Kenneth e. Covinsky. 2017). Nurses can teach patients themselves and their families how to judge and prevent infection and various complications, so that patients and their families can participate in the early intervention

of the disease, and reduce the incidence of infection and complications in older HIV patients through early intervention.

4.2.2 Weakness in mental

With the diagnosis of HIV, the mental state of older HIV patients also changes. Wallace et al.(2017) mentioned that the older have more serious misunderstandings about HIV than the young. Therefore, after diagnosis, most older HIV patients will have a negative and pessimistic attitude, even denial and anger. And because of social isolation, stigma and fear of disclosure, older people with HIV are more likely to suffer from mental health problems and have a higher incidence of depression (Deborah R.Ustafson & Samy I.McFarlane.2021; Jake Scott & Mattew Bidwell Goetz.2016). However, some studies believe that after the diagnosis of HIV, some older HIV patients change their previous bad living habits, improve their quality of life, actively adhere to and accept treatment. Receive regular care (Meredith Greene, Amy c.Justice & Kenneth e. Covinsky. 2017).

According to Krohne's coping theory, the corresponding coping method of vigilance (responding to stress) is suppression-sensitization/surveillance-passivation (H.W.Krohne. 2002). Faced with the stress of HIV, older people with HIV need to respond promptly, rather than let it stimulate them all the time. As a nurse, I can help older patients with HIV accept diagnosis, popularize the correct knowledge about HIV, and change their wrong ideas. At the same time, we should actively help older patients with HIV to receive relevant treatment, relieve their fear of HIV, improve their mental health, and obtain better body quality.

4.2.3 Weakness in social

As a growing group in recent years, older HIV patients have received relatively little attention. Joseph O.Mugisha et al.(2016) and S.-C.Kang et al.(2011) mentioned that most older HIV patients live in poverty and have limited access to social and health care interventions and other support. Much of the support goes to young HIV patients and the rest of the older. Older people with HIV are also at increased risk of unsafe exposure due to lack of family and social support (S.-C.Kang et al.,2011). This situation is more

common in developing and underdeveloped countries. On the contrary, in developed countries, older people with HIV also receive help from social support and HIV related institutions and organizations. These older HIV patients are housed in long-term care facilities, where they receive better care and treatment, which also significantly reduces their risk of complications and infection (Meredith Greene, Amy c.Justice & Kenneth e. Covinsky. 2017).

Preventive measures should be adapted to the patient's health, needs and motivations, and family and social relationships should also be assessed to determine support needs (Marion Thurn & Deborah R.Gostafson.2017). Nurses should constantly assess older patients with HIV and adjust their nursing plan to meet their needs to help older patients with HIV cope with the stimulation of HIV.

4.2 Method discussion

This study is a descriptive literature review (Polit & Beck, 2017). All articles were searched from PubMed via Medline, are English only, and were published between 2012 and 2022. We select articles based on inclusion criteria, including inclusion criteria and exclusion criteria. This descriptive literature review uses thematic analysis (Polit & Beck, 2017). By comparing and summarizing these contents, categories and subcategories are identified and applied to this review. The ten articles used are qualitative studies with an advantage for discussing personal experiences.

All the articles cited in the qualitative review were from Medline PubMed database with high credibility. Five countries are mentioned, so the results of this article can be used globally. However, participants came from five different countries, with an uneven number of people from each country. Seventy-one were from Mexico, 11 from Canada, 143 from the United Kingdom, 30 from Ukraine and 63 from the United States. This demographic structure could lead to different cultural influences on the results. Ten articles used interviews with participants. This makes the content more detailed rather than abstract. But such interviews are not intuitive. For example, we can know that older people with HIV experience isolation and discrimination, but we cannot quantify the extent to which they feel it. So it's hard to imagine how they feel. All articles were sold in limited quantities between 2012 and 2022. Jake Scott & Mattew Bidwell Goetz. (2016) also found that the number of studies in this field was small, many of which

were published after 2000, and there were far more articles on geriatric medicine and HIV than geriatric HIV medicine, which may mean that our goal is a new subject that needs attention. More studies are needed to combine HIV and geriatric medicine, so as to further explore and study HIV in the older.

This literature review includes articles with qualitative methods that discuss the experience of older people with HIV at one time, rather than the overall experience of having the disease. This means that these experiences can be incomplete and static. As a result, it is difficult to provide detailed and accurate help to older HIV patients and their family members. Second, all older HIV patients were treated as a single group and were not differentiated according to gender. But in fact, older men and women with HIV have different experiences and ways of coping with HIV. These are the limitations mentioned in this qualitative review.

4.3 Clinical implication for nursing

Clinically, nurses play an important role as a bridge between older AIDS patients and hospitals. AIDS patients receive more attention, yet the experiences of older AIDS patients are easily overlooked. Therefore, this study suggests that nurses should pay more attention to older AIDS patients and flexibly apply Krohne stress coping theory to this process. Nursing interventions are mainly reflected in disease prevention and psychological treatment. It is well known that older AIDS patients have low immunity and are more at risk of contracting other diseases. As a nurse, they can do some knowledge of the immune system, teach them how to protect themselves, reduce the risk of contracting other diseases, and how to deal with a certain disease. To some extent, this can improve the survival rate and comfort level of older AIDS patients. For this group of patients, the psychological trauma is also a huge source of injury. Nurses should provide them with psychological support, listen to their voices appropriately, give them a enlightenment and advice, try to help them have a positive and optimistic psychological situation, to avoid their condition in the mentality of deterioration. Nurses can also help them set up local communication groups of older AIDS patients, helping them to make them more relaxed by communicating with other peers or organizing activities. These measures all help patients cope with stress better.

4.4 Suggestion for further research

In future studies, researchers can track the dynamic experience of older AIDS patients after diagnosis, including the denial period, elimination period, acceptance period and other stages. At each stage of the change process, nurses can provide more detailed and effective care support to patients according to their different needs. In addition, researchers also need to pay attention to a problem, the older AIDS patients this group is also divided into young AIDS patients getting old and just been diagnosed with AIDS in the older age. There are some differences in the experiences and psychological processes. There are also ethnicity and gender differences among older AIDS patients, which can also affect the care that needs to be provided. These are all things to be deeply observed and studied. In the large group of older AIDS patients, many different small groups can be subdivided to provide specific care support. More importantly, older AIDS is an immune disease that reduces the quality of life of progression. Therefore, we should also focus on palliative care for this group to bring them as good a survival experience as possible.

5. Conclusion

Older HIV/AIDS patients experience physical, psychological, and social changes. Their physical condition deteriorated, and they also felt negative emotions such as stigmatization, isolation, shame, and negative sadness from selective disclosure and expectation. They will also gain psychological growth and take steps to generate positive emotions. Although they will reduce their contact with others in the society, they will also improve the quality of life and promote the popularization of diseases. The findings of this literature review provide a initial understanding of the experiences of older patients with AIDS. It is necessary for nurses to provide physical, psychological and social education and guidance to older AIDS patients to improve their quality of life in a more comprehensive and comfortable way.

References

Articles included in the result is marked with an *

1. *Allen A, Zaviryukha I, Kiriazova T, Shenoi S, Rozanova J. (2021).The Lived Experience of a Newly Diagnosed Older Person With HIV in Ukraine. Qual Health Res. 2021 Oct;31(12):2290-2303. doi: 10.1177/10497323211026914. Epub 2021 Aug 20. PMID: 34414837; PMCID: PMC8930274.

2. *Araujo GM, Leite MT, Hildebrandt LM, Oliveski CC, Beuter M. (2018).Self-care of older people after diagnosis of acquired immunodeficiency syndrome. Rev Bras Enferm [Internet]. 2018;71(suppl 2):793-800. [Thematic Issue: Health of the older] DOI: http://dx.doi.org/10.1590/0034-7167-2017-0248

3. *Brandão BMGM, Angelim RCM, Marques SC, Oliveira DC , Oliveira RC, Abrão FMS. (2019).Social representations of the older about HIV/AIDS. Rev Bras Enferm. 2019;72(5):1349-55. doi: http://dx.doi.org/10.1590/0034-7167-2018-0296

4. CDC:https://www.cdc.gov/hiv/basics/whatishiv.html

5. *Freeman E.(2017). Neither 'foolish' nor 'finished': identity control among older adults with HIV in rural Malawi. Sociol Health Illn. 2017 Jun;39(5):711-725. doi: 10.1111/1467-9566.12531. Epub 2016 Dec 24. PMID: 28012191; PMCID: PMC6850051.

6. *Furlotte C, Schwartz K, Koornstra JJ, Naster R.(2012). 'Got a room for me?' Housing experiences of older adults living with HIV/AIDS in Ottawa. Can J Aging. 2012 Mar;31(1):37-48. doi: 10.1017/S0714980811000584. Epub 2012 Feb 17. PMID: 22340361.

7. Giorgi, A.(1997) The theory, practice, and evaluation of the phenomenological method as a qualitative research procedure. Journal of Phenomenological Psychology, 28(2),235–260. doi:10.1163/156916297x00103

8. Greene M, Justice AC, Covinsky KE. (2017).Assessment of geriatric syndromes and physical function in people living with HIV. Virulence. 2017;8(5):586-598.

9. Gustafson DR, McFarlane SI. (2021).Obesity, Vascular Disease and Frailty in Aging Women with HIV. Adv Geriatr Med Res. 2021;3(3):e210014.

10.Kang SC, Hwang SJ, Wong WW. (2011).Characteristics of human immunodeficiency virus infections among the older in Taiwan: a nationwide study. J Chin Med Assoc. 2011 May;74(5):215-9.

11.Kirk, J. B., & Goetz, M. B. (2009). Human immunodeficiency virus in an aging population, a complication of success. Journal of the American Geriatrics Society, 57(11), 2129– 2138. https://doi.org/10.1111/j.1532-5415.2009.02494.x

12.Krohne HW. Johannes Gutenberg-Universität Mainz Germany. (2002).Stress and Coping Theories.2002.

13.Lazarus RS, Folkman S.(1984). The concept of coping. Stress, Appraisal, and Coping. New York: Springer; 1984. p. 117-39.

14.*Mark Brennan-Ing, Liz Seidel, Louise Geddes, Ryann Freeman, Elizabeth Figueroa, Richard Havlik & Stephen E. Karpiak .(2017) .Adapting a telephone support intervention to address depression in older adults with HIV, Journal of HIV/AIDS & Social Services, 16:4, 335-350, DOI: 10.1080/15381501.2017.1318103

15.*Megan Johnson Shen, Ryann Freeman, Stephen Karpiak, Mark Brennan-Ing, Liz Seidel & Eugenia L. Siegler. (2019) .The Intersectionality of Stigmas among Key Populations of Older Adults Affected by HIV: a Thematic Analysis, Clinical Gerontologist, 42:2, 137-149, DOI: 10.1080/07317115.2018.1456500

16.Mika Chaen.(2006). "'Theories on Needs' and 'Stress-Coping Theory' in Nursing."Journal of the Japanese Society of Intensive Care Medicine13 (4): 431.

17. Mugisha JO, Schatz EJ, Randell M, Kuteesa M, Kowal P, Negin J, Seeley J. (2016).Chronic disease, risk factors and disability in adults aged 50 and above living with and without HIV: findings from the Wellbeing of Older People Study in Uganda. Glob Health Action. 2016 May 24.

18. *Rosenfeld D, Catalan J, Ridge D.(2018). HIV and Later Life (HALL) Team. Strategies for improving mental health and wellbeing used by older people living with HIV: a qualitative investigation. AIDS Care. 2018 Jun;30(sup2):102-107. doi: 10.1080/09540121.2018.1468016. Epub 2018 May 30. PMID: 29848063.

19. *Silva CM, Santos AAP, Souza EMS, Alves RS, Reis RK. Social representations of individuals over 50 years old living with HIV. Rev Bras Enferm. 2020;73(Suppl 3):e20190332. doi: http://dx.doi.org/10.1590/0034-7167-2019-0332

20. Scott J, Goetz MB. (2016).Human Immunodeficiency Virus/Acquired Immunodeficiency Syndrome in Older Adults. Clin Geriatr Med. 2016 Aug;32(3):571-83.

21. Thurn M, Gustafson DR.(2017). Faces of Frailty in Aging with HIV Infection. Curr HIV/AIDS Rep. 2017;14(1):31-37.

22. Wallace LM, Ferrara M, Brothers TD.()2017.Lower Frailty Is Associated with Successful Cognitive Aging Among Older Adults with HIV. AIDS Res Hum Retroviruses. 2017;33(2):157-163.

23. *Warren L. Miller Jr. (2020) Experiences of Stigma and Spirituality of Older Black Men Living with HIV, Journal of Social Service Research, 46:3, 427-438, DOI: 10.1080/01488376.2019.1582451

24. World Health Organization (WHO) (2021, Oct 04). Retrieved from https://www.who.int/zh/news-room/fact-sheets/detail/ageing-and-health

APPENDIX 1

Table 2. Overview of selected articles

Authors + Year of publication+ Country	**Title**	**Design （possible approach)**	**Partcipants**	**Data collection Method(s)**	**Data analysis method(s)**	**code**
Amy Allen, Irina Zaviryukha, Tetiana Kiriazova, Sheela Shenoi, and Julia Rozanova Year of publication:2021 Country: Ukraine	The Lived Experience of a Newly Diagnosed Older Person With HIV in Ukraine	A qualitative approach	Sample method: purposive sample Number:30 Age: over 50 Gender: Male:46.5% Female:53.5% Inclusion criteria: Age at 50 years and older, he was diagnosed with HIV within the past 6 months, and was treated at the Kiev AIDS Center	Participants' HIV diagnosis, response and attitudes to the diagnosis, knowledge of HIV, health and treatment history, risk behavior, disclosure of HIV status or intention to disclose, and attitudes towards the future were the main concerns of the interview questions. After informed consent, 30 to 60 minutes were interviewed at a private site in the	1. The way the data is encoded 2. Organizational qualitative data analysis was performed using the MaxQDA software	**A**

				clinic.		
Brígida Maria Gonçalves de Melo Brandão. Rebeca Coelho de Moura Angelim. Sergio Corrêa Marques. Denize Cristina de Oliveira. Regina Célia de Oliveira. Fátima Maria da Silva Abrão. Year of pubication:2019 Country:Mexico	Social representations of the older about HIV/AIDS	A explorative design/ A descriptive design/ A qualitative approach.	Number:48 Age:51-72 years old Gender:male(n=28) female(n=20) Area:in two Specialized Care Services (SAE - Serviços de Assistência Especializada) in HIV/AIDS located in public hospitals in the Metropolitan Area of Recife, Pernambuco State.	Sociodemographic & Clinical questionnaire & Semi-structured interview Length of interview:24 minutes The interviews had the audio recorded, with the consent of the participants, with later corpus transcription and preparation for analysis.	Descending Hierarchical Classification	**B**
Charles Furlotte. Karen Schwartz. Jay J. Koornstra. Richard Naster. Year of publication:2012 Country:Canada	'Got a room for me?' Housing Experiences of Older Adults Living with HIV/AIDS in Ottawa	A explorative desigh/ A qualitative approach	Number:11 Age:52-67 years old Gender:male(n=9) female(n=2) Area:from Ottawa	In-people interviews Length of interviews:not mentioned Interviews were digitally audio-recorded.	Thematic analysis	**C**

Cláudia Mendes da Silva. Amuzza Aylla Pereira dos Santos. Elizabeth Moura Soares de Souza. Regina de Souza Alves. Renata Karina Reis. Year of pubication:2020 Country:Mexico	Social representations of individuals over 50 years old living with HIV	A qualitative approach.	Number:13 Age:50 years old or older Gender:male(n=8) female(n=5) Area:in a specialized public service health care unit for patients living with Stis / HIV / AIDS, in the city of Maceió	Semi-structured interviews Length of interview :30 minutes The interviews were tape recorded and transcribed verbatim.	Dialectical interpretation method analysis	**D**
Dana Rosenfelda , Jose Catalanb , Damien Ridgec and On behalf of the HIV and Later Life (HALL) Team Year of publication:2018 Country:UK	Strategies for improving mental health and wellbeing used by older people living with HIV: a qualitative investigation	A qualitative approach	Sample method: purposive sample Number:100 Age:50‑87 Gender: Male:61 Female:39 Inclusion criteria:Members of the three largest oplwh groups in the UK - white men who have sex with men, or gay men; African black	1. Semi-structured interviews lasting 90‑120 min were taken. 2. Participants were asked to describe their typical days, personal and medical history, social relationships, social support, and HIV-infected	1. interpretivist approach （Broom & Willis, 2007）	**E**

			heterosexual men and women; And white heterosexual men and women, who treat a large number of oplwh in London through HIV organizations, two HIV clinics and a mental health clinic. Exclusion criteria: Oplwh diagnosed less than 12 months or with high mental health burden at the time of study	life and aging. 3. Ensure anonymity, identify participants' gender, sexual orientation, and ethnicity, age by decade, and status for a recent or long-term diagnosis.		
Department of Social Policy, London School of Economics and Political Science, London, UK	Neither ‘foolish’ nor ‘fifinished’: identity control among older adults with HIV in rural Malawi Emily Freeman	A qualitative approach	Sample method: purposive sample Number:43 Age:50-90 Gender: Male:20 Female:23 Inclusion criteria:43 older people in rural southern Malawi	1. The citations in the paper are from HIV infected participants, as well as pseudonyms and approximate ages. 2. All participants who knew about HIV infection through MLSFH testing	1. Use the basic theory of constructivism 2. Use a symbolic interaction framework	**F**

Γ

				discussed their infection in our conversation.		
Graciela Machado de Araujo. Marinês Tambara Leite. Leila Mariza Hildebrandt. Cinthia Cristina Oliveski. Margrid Beuter. Year of pubication:2018 Country:Mexico	Self-care of older people after the diagnosis of acquired immunodefi ciency syndrome	A explorative design/ A descriptive design/ A qualitative approach.	Number:10 Age:60 years old or older Gender:male(n=3) female(n=7) Area:from the HIV/ AIDS Testing Center and from the Catholic reli-gion	Mini-Mental State Examination (MMSE) & Semi-structured interviews Length of interview: not mentioned The interviews were audiotaped and transcribed	Content analysis	**G**
Mark Brennan-Ing, Liz Seidel, Louise Geddes, Ryann Freeman, Elizabeth Figueroa, Richard Havlik & Stephen E. Karpiak Year of publication:2017 Country:USA	Adapting a telephone support intervention to address depression in older adults with HIV	A qualitative approach	Sample method: purposive sample Number:21 Age:45 and older Gender: Male:80% Female:20% Inclusion criteria: Self-reported hiv seropositive serostatus, aged 45 years and older Exclusion criteria: Mental health	1.Patient information was obtained by using the demographic and health questionnaire sheets, the Patient Health Questionnaire-9 (PHQ-9), the PHQ-9 (Krenke and Spitzer, 2002), and the Center for	1.pre-and post-test design analysis 1. repeated measures analysis of variance 2. Topic induction approach 3. using the Atlas / ti qualitative analysis software (Muhr, 1997)	**H**

V

			treatment for depression (including medication) or study participation informs current mental health provider, degree of drug or alcohol abuse excluding participation (when decided as assessed by project clinical staff), telephone or reliable telephone call, primary care provider (PCP) that project staff can contact, and positive depression screening on Patient Health Questionnaire-9 (PHQ-9; Krenke and Spitzer, 2002)	epidemiological depression scale (CES-D). 1. Potential participants were recruited by AIDS service organizations (ASOs) in a large northeastern city, both personally and through Spanish and English leaflets. 2. Drodropouts were compared with patients who completed demographic and health characteristics (age, gender, race / ethnicity, education, education, sexual orientation, marital status, time after HIV diagnosis) and depressive		

V

				symptoms (CES-D and PHQ-9 scores) in order to examine potential bias due to study attrition。		
Megan Johnson Shen, Ryann Freeman, Stephen Karpiak, Mark Brennan-Ing, Liz Seidel & Eugenia L. Siegler Year of pubication:2018 Country:USA	The Intersectionality of Stigmas among Key Populations of Older Adults Affected by HIV: a Thematic Analysis	A qualitative approach	Number:32 Age:50-79years old Gender:male(n=22) female(n=10) Area:from New York Presbyterian Hospital/Weill Cornell Medicine's Center for Special Studies (CSS) HIV clinic	Semi-structured interviews & Demographic questionnaire Length of interview:each focus group lasted 2 hours. The interviews were audiotaped and transcribed.	Thematic analysis	**I**
Warren L. Miller Jr. Year of publication:2019 Country:USA	Experiences of Stigma and Spirituality of Older Black Men Living with HIV	A qualitative approach	Sample method: purposive sample Number:10 Age:50‑68 Gender: Male:10 Female:0 Inclusion criteria: Age 50 and older;	1. A total of 10 semi-structured, in-depth individual interviews were conducted and were digitally recorded between January 2018 and	1. Moustakas (1994) improved van Kaam method 2. An open encoding system is adopted	**J**

V

			self-identified as Black or African American; HIV infection; treatment over the past 12 months; men having sex with men; speaking and reading English; without any serious mental and / or cognitive challenges; identifying the stigma and psychiatric use of HIV.	March 2018 2. Any experiences defining spirituality, use of spirituality when infected with HIV, and effects of HIV stigma on spiritual use were the subject of interview tips and question explored 3. Interviews were conducted at the study site (i. e. AIDS Services). 4. Data collection included semi-structured, personal, in-depth interviews with questions drawn from the literature on HIV stigma. 5. One interview and one contact was conducted for each participant consisting of		

V

				consent filling, demographic questionnaire, and interview questions. 6. The interviews took an average of 90 minutes to complete. Contact meetings by telephone range from 20-30 minutes.		

APPENDIX 2

Table 2. Overview of selected articles

Authors	**Aim**	**Results**	**Code**
Amy Allen, Irina Zaviryukha, Tetiana Kiriazova, Sheela Shenoi, and Julia Rozanova	To explore the challenges facing older adults during the AIDS peridiagnosis period	1:Low, self-perceived HIV risk. 2:HIV was diagnosed as a traumatic event. 3:Use information disclosure to seek support in a small group of families, friends, and / or healthcare providers. 4:Selective disclosure and anticipated stigma. 5:Treat age as an asset. 6:The HIV diagnosis is the basis for personal growth.	A
Brígida Maria Gonçalves de Melo Brandão. Rebeca Coelho de Moura Angelim. Sergio Corrêa Marques. Denize Cristina de Oliveira. Regina Célia de Oliveira. Fátima Maria da Silva Abrão.	to understand the representational content about HIV/AIDS among seropositive older people.	1:HIV/AIDS discovery and diagnosis impact 2: Representational content attributed to HIV/AIDS	B
Charles Furlotte.	to explore the housing experiences	1:Demographics	C

Karen Schwartz. Jay J. Koornstra. Richard Naster.	of older persons in the context of HIV/AIDS	2:Common Themes 3:HIV and Aging in Retirement Homes and LTC Facilities 4:Subsidized Housing 5:Homelessness	
Cláudia Mendes da Silva. Amuzza Aylla Pereira dos Santos. Elizabeth Moura Soares de Souza. Regina de Souza Alves. Renata Karina Reis.	To analyze social representations of individuals over 50 years old living with the Human Immunodeficiency Virus.	1:Description of study interviewees. 2:The moment of diagnosis and feelings about the discovery. 3:Social representations of aging with HIV. 4:Resignifying life.	D
Dana Rosenfelda , Jose Catalanb , Damien Ridgec and On behalf of the HIV and Later Life (HALL) Team	To study how OPLWH manage their mental health and the health posed by HIV ageing	1:The mutual intensification of ageing doctrine and HIV-related stigma, and the economic security consequences of career disruption are in the face of aging and HIV-related challenges. 2:Through HIV ; disclosure of HIV status, including children ; and uncertainty about the cumulative health consequences of HIV, AIDS drugs and "normal aging" , participants adopted strategies to maintain or improve their well-being. 3:These strategies will focus shifting from their own HIV to other aspects of their current lives and / or to new activities	E

		and social contacts, as well as gaining support from external institutions. 4:Compare your health with (comparing the health) of others; volunteering; valuing and pursuing positive environments and / or activities (emphasizing positive activities); and taking steps to contribute positively to their HIV drugs (minimizing the effects of HIV drugs), by analyzing these four strategies to shift focus. 5:Getting support from mental health professionals, getting support from HIV organizations, are the two strategies that they use to gain external support, as well as for avoiding HIV groups.	
Department of Social Policy, London School of Economics and Political Science, London, UK	The purpose of this study is to explore the aging and HIV infection experience of the older from the perspective of the older, and recognize any limitations on the interpretation of the experience of the older.	1:The challenge of HIV navigation for older people considering HIV and age-related stigma and disease processes is cross influenced by their identity 2:Provide insight into how older people experience HIV 3:Analysis of chronic and more stigmatized diseases that inform the theoretical understanding of the formation and maintenance of identity	F
Graciela Machado de Araujo.	to characterize the seropositive	1:Characterization of participants	G

Marinês Tambara Leite. Leila Mariza Hildebrandt. Cinthia Cristina Oliveski. Margrid Beuter.	older for the Human Immunodefi ciency Virus and Acquired Immunodefi ciency Syndrome (HIV/AIDS) in their socio-demographic aspects; to understand how the older take care of themselves from the diagnosis of HIV/AIDS.	2:(Lack of) knowledge of older people about the transmission of HIV/AIDS 3:Experiencing the condition of being old and having HIV/ AIDS and self-care 4:Life after HIV/AIDS diagnosis: coping with everyday life	
Mark Brennan-Ing, Liz Seidel, Louise Geddes, Ryann Freeman, Elizabeth Figueroa, Richard Havlik & Stephen E. Karpiak	To explore the grope for the feasibility of an adaptation of a respectful intervention in addressing depression in older HIV-infected individuals	1:Behavioral health issues：Many people report depression and sadness, and negative self-perception is also common. Many participants faced difficulties due to the current and / or previous use of drugs and efforts to maintain sobriety. Drug use is often associated with risky behavior. Participants' negative emotions and intertwined behavioral health problems are often offset by positive emotions and feelings, often associated to social interactions with family and friends, positive life events, expecting something, or doing something that brings goals to their lives. 2:Phone calls：Although weekly telephone calls (questions)	H

		illustrate some of the challenges of using telephone-based interventions, many participants had positive comments about the telephone intervention itself. Several participants highlighted the synergy between their behavioral health services and the respect intervention, and valuable interpersonal formation in the course of research provided vital social support resources in response to depression.	
Megan Johnson Shen, Ryann Freeman, Stephen Karpiak, Mark Brennan-Ing, Liz Seidel & Eugenia L. Siegler	The present study examined the intersectionality of stigma across varying groups of older persons living with HIV (PWH).	1:Disclosure of HIV Status. 2:Types of Stigma Experienced. 3:Discrimination Experienced. 4:Other Outcomes Associated with Experiencing Stigma. 5:Influence of Aging on Social Isolation Experienced Due to Stigma.	I
Warren L. Miller Jr.	To explore the life experiences of older BMSM living with HIV in the context of understanding the impact of HIV stigma on their use of spirituality.	1:Stigma strengthens the use of spirituality 2:Most participants perceived spirituality as a personal option with personal strength. 3:When faced with shame, spirituality is associated with self-empowerment, and spirituality also determines substance use.	J

APPENDIX 3

Table 4 Results of this literature review

Theme	Categories	Sub-categories	Study findings
Facilitators	Intrapersonal level	Attitudes,awareness,knowledge	A6:The HIV diagnosis is the basis for personal growth. D1:Description of study interviewees. D2:The moment of diagnosis and feelings about the discovery. E2:Through HIV ; disclosure of HIV status, including children ; and uncertainty about the cumulative health consequences of HIV, AIDS drugs and "normal aging" , participants adopted strategies to maintain or improve their well-being. E4:Compare your health with (comparing the health) of others; volunteering; valuing and pursuing positive environments and / or activities (emphasizing positive activities); and taking steps to contribute positively to their HIV drugs (minimizing the effects of HIV drugs), by analyzing these four strategies to shift focus.

			G1:Characterization of participants G3:Experiencing the condition of being old and having HIV/ AIDS and self-care J2:Most participants perceived spirituality as a personal option with personal strength.
	Interpersonal level	Supports from relatives or friends	A3:Use information disclosure to seek support in a small group of families, friends, and / or healthcare providers.
		Supports from professional	E5:Getting support from mental health professionals, getting support from HIV organizations, are the two strategies that they use to gain external support, as well as for avoiding HIV groups. F2:Provide insight into how older people experience HIV F3:Analysis of chronic and more stigmatized diseases that inform the theoretical understanding of the formation and maintenance of identity
		Support from others	C4:Subsidized Housing E3:These strategies will focus shifting from their own HIV to other aspects of their current lives and / or to new activities and social contacts, as well as gaining support from external

			institutions.
	Environmental level	Resources	A5:Treat age as an asset. C1:Demographics C2:Common Themes C3:HIV and Aging in Retirement Homes and LTC Facilities D3:Social representations of aging with HIV. E1:The mutual intensification of ageing doctrine and HIV-related stigma, and the economic security consequences of career disruption are in the face of aging and HIV-related challenges. G4:Life after HIV/AIDS diagnosis: coping with everyday life H2:Phone calls：Although weekly telephone calls (questions) illustrate some of the challenges of using telephone-based interventions, many participants had positive comments about the telephone intervention itself. Several participants highlighted the synergy between their behavioral health services and the respect intervention, and valuable interpersonal formation in the course of research provided vital social support resources in response to depression.

Barriers	Intrapersonal level	Attitudes,awareness and knowledge	A1:Low, self-perceived HIV risk. A4:Selective disclosure and anticipated stigma. H2:Phone calls：Although weekly telephone calls (questions) illustrate some of the challenges of using telephone-based interventions, many participants had positive comments about the telephone intervention itself. Several participants highlighted the synergy between their behavioral health services and the respect intervention, and valuable interpersonal formation in the course of research provided vital social support resources in response to depression. J3:When faced with shame, spirituality is associated with self-empowerment, and spirituality also determines substance use.
		health factors	H1:Behavioral health issues：Many people report depression and sadness, and negative self-perception is also common. Many participants faced difficulties due to the current and / or previous use of drugs and efforts to maintain sobriety. Drug use is often associated with risky behavior. Participants' negative emotions and intertwined behavioral health problems are often offset by positive emotions and feelings, often associated to social interactions with family and friends,

			positive life events, expecting something, or doing something that brings goals to their lives.
	Interpersonal level	Lack of supports from relatives or friends	D4:Resignifying life.
		Lack of supports from professional	G2:(Lack of) knowledge of older people about the transmission of HIV/AIDS
	Environmental level	Resources	A2：HIV was diagnosed as a traumatic event. B1:HIV/AIDS discovery and diagnosis impact B2: Representational content attributed to HIV/AIDS C5:Homelessness I1:Disclosure of HIV Status. I5:Influence of Aging on Social Isolation Experienced Due to Stigma. J1:Stigma strengthens the use of spirituality