

Life Review in Midlife: An Integrative Review

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Life review was developed to assist older adults to think back over their lives in a therapeutic way to improve their mental health, wellbeing, and quality of life. However, an important part of midlife is to review one's past to prepare for one's future. A life review in midlife might assist with this. The aims of this integrative review were to identify 1) the extent to which life review and life review therapy in midlife adults have been researched, and 2) the benefits and limitations of these interventions for midlife adults. The following databases were searched: CINAHL, Medline, PsychInfo, Embase, Scopus, Google Scholar and Trove. Forty-four articles were included in the results, and three themes were developed. Theme 1, *End of Life in Midlife* was a topic explored in 23 papers. Theme 2, *Mental Illness and Substance Abuse*, was identified in 20 papers: nine addressed mental illness, one described the application of life review to substance abuse, and 10 overlapped with Theme 1 on mental illness and end-of-life. Theme 3, *Personal Growth* was the primary topic of 11 papers. Life review can assist with reducing anxiety, depression, and other mental illnesses. Results from these studies showed how life review potentially reduces psychological distress and despair, addresses unsolved conflicts and regrets, and puts guilt into perspective. It potentially improves psychological wellbeing, creates hope, aids in personal growth, creates wisdom, and assists in the gaining of valuable insights through the lessons learnt. The psychological and psychospiritual wellbeing benefits of life review in midlife adults therefore are strongly supported in the literature. In essence, life review assists in creating a life with meaning and purpose, resolves regrets, and results in increased psychological wellbeing, life mastery and, ultimately, wisdom.

Keywords: life review; life review therapy; reminiscence; integrative review; midlife

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Definition of Life Review

Life review is a psychological process where an individual reflects on their life experiences, often looking back at key moments, decisions, and emotions. It can be a natural part of ageing or can occur during significant life events, such as retirement, a health crisis, or when approaching death. This life review reflection can involve reviewing one's past achievements, regrets, relationships, key milestones, and self-development moments. It often leads to greater self-awareness or a sense of closure. It has been shown to often resolve regrets and create more wisdom. Life review is frequently associated with therapeutic practices or interventions, such as in reminiscence therapy and life review therapy. These therapeutic interventions assist people to find sources of meaning in life and to resolve negative, impactful emotions about their past.

The formal study of life review began with the work of psychiatrist Dr Robert Butler (1963), who was the first to discuss and develop life review and reminiscence as described in "The Life Review: An Interpretation of Reminiscence in the Aged." He theorized that assisting people to think back over their lives could be therapeutic and can give them a sense of peace and empowerment about the life they had lived. He recommended life review as an important therapeutic tool for older adults. This was

in sharp contrast to the conventional attitudes of psychiatrists at the time who believed that older adults who spent time recalling events from their past were too fixated on the past and avoidant of the present and future. Therefore, Butler went against the times and was the trailblazer of a new way of thinking around how people could review their lives in a positive way.

Butler (1963; 1974) developed life review in the 1960's to assist older adults to think back over their lives in a therapeutic way. He proposed that depression and other disorders increased when reminiscing about the past in old age. Butler (1963) was concerned with the increasing levels of depression in ageing patients and the unstructured and aimless way they remembered their pasts. He wanted to change or influence this so these patients felt more serenity and wisdom in old age (Butler, 1963). By identifying positive benefits from reviewing the past, even from less fortunate experiences, Butler (1963; 1975) postulated that this focus created more hope and assisted them in promoting respect for their future selves.

There are many different ways to deliver life review; however, a typical scenario might be a nurse or a psychologist delivering a one-hour session per week for six to eight weeks using a structured process with older adults. It could be a group or individual program. The aim is to assist the older adult to review their life in a positive way and to come to some kind of peace and understanding of everything that has happened to or for them in their lives, resulting in mental health and wellbeing benefits. Life review is a form of therapy that has proven to be very beneficial for older adults in residential aged care facilities (Wren, 2018), or in palliative care units in hospitals (Ando et al., 2014).

Distinction Between Life Review and Reminiscence

Following Butler's (1963) lead, it is our position that life review is different from reminiscence even though the terms are commonly used interchangeably. Reminiscence is a recall of memories, which includes nostalgia about the past, storytelling, daydreaming and recounting of memories. It has been described (Gibson, 2011; Haber, 2006; King, 1982) as an unprompted spontaneous process that can occur from the age of 10 years onwards. Reminiscence can improve the lives of many people in all kinds of settings, including those experiencing significant trauma, including childhood abuse and war veterans with post-traumatic stress disorder (Gibson, 2019). Reminiscence can be utilised with many different cohorts such as individuals and couples, people from minority ethnic groups, people with dementia and their carers, people with hearing, sight, speech and intellectual disabilities, people with depression, the terminally ill, and those experiencing grief (Gibson, 2011).

Compared to reminiscence, life review is a more structured process focusing on one or more aspects of life;

for example, childhood, adulthood, parenthood, work, and retirement. It is more of an evaluative process where participants examine those memories that contribute to the meaning they assign to their lives (Gibson, 2019; Haber, 2006). Life review can be conducted for educational purposes by teaching or informing others about what is important in life, it can enhance one's own understanding of life, it can be therapeutic, and it can pass knowledge on to the next generation. If used therapeutically it can assist the person to cope better and facilitate finding meaning in life (Haber, 2006). Although life review is not therapy, it can be very therapeutic (Birren & Cochran, 2001). Life review therapy, however, is a therapeutic version of life review. In this integrative review, reminiscence, life review and life review therapy will all be explored, as they each aim for similar outcomes.

Reminiscence is about more than describing a memory, it is "the act or process of recalling the past" (Butler, 1963, p. 66). A reminiscence may be a single, recalled memory or a series of recalled memories related to personal experiences or the personal impact of public situations or events (Gibson, 2011). In contrast, life review is "a natural occurring, universal mental process characterized by the progressive return to consciousness of past experiences, and particularly, the resurgence of unresolved conflicts" (Butler, 1963, p. 72). Life review therapy encourages participants to focus on what the memory actually means, which can assist with difficult or unresolved memories to allow a person to find a sense of peace. Life review therapy can be informative, educational, and/or therapeutic. It can assist a person to reach Erikson's (Erikson, 1994) stage of Integrity; that is, 1) accepting one's life as it was lived (Haight & Haight, 2007), 2) gaining maturity and a sense of integrity by fully accepting one's self, and 3) being able to come to terms with death. It is accepting responsibility for one's life, being satisfied with one's life and oneself, and being able to accept the past. If the answer to the question of whether life has been meaningful is "yes", this avoids the state of despair associated with Erikson's (1994) final stages of life.

Benefits of Life Review for Older Adults

Life review and life review therapy were originally developed to help older adults to improve their quality of life and life satisfaction (Butler, 1963). As a result, life review has been shown to promote more positive perceptions of older adults about the degree to which their lives and life experiences have been meaningful (Wren, 2018). Life review can also help older adults to resolve past conflicts and regrets and to accept their present conditions. This is achieved by a "reconstruction of memories and life stories" to help individuals, particularly older adults, make sense of their past, resolve conflicts, and improve psychological well-being (Haight & Webster,

1995). Life review therapy facilitates the reconstruction of these life stories by helping individuals reinterpret their past in a way that fosters understanding and meaning (Cohen, 1991). This method has been shown to be an effective, viable, convenient, relatively quick, practical, and inexpensive approach (Sharif et al., 2018) as it allows for valuable insights to be gained from the lessons learned. Furthermore, according to Nall (2018), life review can help to reveal memories that might be relevant or important and to put unresolved conflicts, resentments, and guilt into perspective. In this way, lessons learned through life review can contribute to a more positive future.

Seeking to understand memories in terms of how they are recalled and how they influence present thinking and behaviour is at the heart of reminiscence, life review, and life review therapy (Gibson, 2019). This exploration of the uses of memories uncovers a rich goldmine of unexplored knowledge to assist people to better understand and value their connection to themselves and to other people, places, and times (Gibson, 2019). No matter what age a person is, they can grow, learn, and develop by understanding who they are and how they came to be that person. Provided people get the right support, they can continue to grow and better understand the meaning they attach to their current circumstances. Listening intently to people's stories and assisting them to understand their pasts has a myriad of benefits for both the person telling the story and the interviewer, including further personal growth and development for the storyteller (Gibson, 2011).

Additional benefits associated with these techniques include reducing depression (Butler, 1963), assisting participants reconnect with others (Butler, 1974), and enhanced bonding (Bergman, 1973), personal relationships (Butler, 1963), and a state of self-acceptance (Butler, 1963), closure, and peace (Butler, 1963). To this list we can add acceptance and gratitude towards life (Butler, 1974) and promoting respect for people's future selves (Butler, 1975).

Reminiscence, life review, and life review therapy have limitations when working with persons who have experienced traumatic events and those with repressed or painful memories (Cohen et al., 2000; Harris & Rhodes, 2018; Nall, 2018). In these cases, another type of therapy such as cognitive behavioural therapy or acceptance and commitment therapy may be a better option. The use of other techniques or therapies such as eye movement desensitization and reprocessing, mindfulness-based stress reduction, exposure therapy, distraction, or self-compassion may also be more beneficial for those with trauma in their past (Cohen et al., 2000). Clinicians need to assess and make recommendations about which approach is most appropriate when working with their clients.

Benefits of Life Review for Midlife Adults

The benefits of life review for older adults have been well-demonstrated. This integrative literature review addressed two primary questions. First, to what extent has life review been used with midlife adults, and second, is life review with midlife adults associated with the same benefits it creates for older adults. This integrative review also attempted to identify which cohorts have benefited most from its use and what further research might be required. Because the terms of reminiscence, life review, and life review therapy are often used interchangeably, this review included papers employing any of these three terms. The rationale for this integrative review is that the authors believe that midlife is a particularly good time to review and assess life so it can reduce regrets in later life. This can include reviewing what has been accomplished and what has not yet been accomplished, what are the lessons learnt or to be learned, and what regrets might need assistance to be reworked and reintegrated so that they do not remain unresolved.

The goal of life review has traditionally been seen as exploring how people can avoid Erikson's (1994) Despair Stage and move towards ego integrity, wisdom, and transcendence in later life. Life review helps with transcendence. Transcendence relates to a person rising above or going beyond personal struggles, limitations and self-centeredness. It relates to Maslow's (1943) hierarchy of needs where the goal is to reach self-actualization. Self-actualisation is where an individual reaches their full potential and occurs at the point when an individual seeks to connect to something larger than themselves, such as looking at the bigger picture to life. This information can then be used to assist people to be more successful and happier as they move through to the later phases of their lives.

In summary, this paper addressed the following research questions:

1. To what extent have reminiscence, life review, and life review therapy of midlife adults been researched?
2. What are the benefits and/or limitations of these interventions when used with midlife adults?
3. What future research is required?

Method

Overview of Using an Integrative Life Review to Explore the Use of Life Review in Midlife Adults

Whittemore and Knafl's (2005) method for producing integrative reviews was used to identify qualitative, quantitative, mixed methods research, and other theoretical materials relevant to the topic. Integrative reviews summarise the theoretical and empirical literature

to provide an understanding of the healthcare issue which can then inform the healthcare discipline (Broome, 2000). Integrative reviews also define concepts and theories, and they identify gaps in the literature (Whittemore & Knafl, 2005). In this study, the researchers considered this to be the most relevant approach to take to define life review, to identify how it is effective, and to identify gaps in the literature about how it might benefit those in the midlife age bracket.

Using the methodology presented by Whittemore and Knafl (2005), data were ordered, categorised, summarized, and then organised into a manageable framework which allowed for further analysis of life review in midlife. Themes began emerging from the data about its use and benefits. Critical analysis was conducted to confirm the accuracy of the final themes and provide an accurate overview of the topic of midlife life review. This allowed the researchers to capture accurately the breadth and depth of life review (Glaw et al., 2016; Whittemore & Knafl, 2005).

Data Collection

The results of each database search were screened initially by title, resulting in 1082 potential sources. Only those articles that appeared to meet the inclusion and exclusion criteria, see below, were exported to the Reference Manager EndNote X9.2, where duplicates were removed, leaving 99 potential papers. The reviewers conducted a further screening for relevance to the research questions, removing articles with a primary focus on older adults, the reminiscence bump, dignity therapy or any other unrelated topics.

Inclusion and Exclusion

The search strategy used in this integrative review aimed to locate published and related literature on life review in midlife adults. The keyword search terms were: life review, life story, life reflection, life history, life history review, life review therapy, reminiscence, midlife, mid-life, middle adulthood, middle age, and 40-60 years. The reviewer met with the academic support librarian and performed searches in CINAHL, Medline, PsycInfo, Scopus, and Embase, and a grey literature search was conducted which included Google Scholar and Trove. No date range was used. The operator functions of “and” and “or” were used in the search as appropriate. Search results found that the research available on this topic was

Table 1

MeSH terms, Keywords, Databases, and Search Terms Used

MeSH Terms	Keywords
- Life review; reminiscence; life reflection, life review therapy; life history review; life story - Midlife; mid-life; middle adulthood; middle age; 40-60 years	- Life review; reminiscence - Midlife; middle age; middle adulthood
Databases	Search Terms
CINAHL, MEDLINE, PsycInfo, Embase, Scopus.	(“life review*” OR reminiscence* OR “life review therapy*” OR “life story*” OR “life history review*” OR “life reflection”) AND (midlife OR mid-life OR middle OR age* OR adulthood* OR “40-60 years”)

conducted between 1992 and 2023. The title and abstract were reviewed to ensure that only relevant articles were included. Results were shared with the librarian and then run again to ensure the search strategy was accurate, comprehensive, and identified all relevant publications. Table 1 provides search terms and data.

Ninety-nine article abstracts were screened, and 33 sources were excluded due to not meeting the inclusion criteria. The remaining 66 articles were retrieved in full and were reviewed along with an additional 10 items identified via Google Scholar and Trove, totalling 76 sources to be reviewed. These papers were assessed against the following inclusion criteria: (1) they were published in English; (2) they focused on life review and midlife; (3) papers employed qualitative, quantitative, or mixed methodologies, or they were review articles or textbooks; (4) they could have been published at any time, and (5) they had to be middle-aged focused. The exclusion criteria were: (1) the article related exclusively to work with older adults, 2) the work was related to aged care, and (3) the source consisted of an editorial or commentary. Applying these inclusion and exclusion criteria, a final set of 44 data sources was identified.

The final set of results included research papers and dissertations that met the inclusion criteria. Sources in the final pool were drawn from the following search engines: 18 in CINAHL, 15 in PsycInfo, 0 in Medline, 11 in Embase, 1 in Scopus, and 9 in grey literature including Google Scholar and Trove (found online in Google searches). Some were duplicates and so were excluded. Twenty-six sources were excluded for the following reasons: 1) due to not being written in English, 2) focused on the reminiscence bump, 3) employed dignity therapy, 4) consisted of commentary, 5) did not provide quality

data (such as online blogs or websites), or 6) textbooks not specific to midlife. A total of two literature reviews, 16 quantitative articles, 20 qualitative articles, four mixed methods articles, and two dissertations were identified, again, resulting in a final total of 44 sources of data. All were published between 1992 and 2023 on both life review/reminiscence AND midlife/middle age/middle adulthood. The results of the search are presented in the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) updated flow diagram in Figure 1.

Data Extraction

Our research team was comprised of two researchers/reviewers (XL & PB) and one third reviewer to assist with consensus (SG). Data were extracted from the articles by the two reviewers (XL & PB) independently and added to a comprehensive table. The table had headings relevant to the research questions and was developed and used by each reviewer to save the most relevant data. The headings were: reference, aim, study type, sample age, key findings and recommendations, limitations, quality appraisal, and include or exclude. The two reviewers then began to come to a consensus on the data that were emerging. An additional third independent reviewer (SG) was available to be used when consensus needed to be reached about whether to include or exclude data during the process. Consensus was consistently reached between the first two reviewers, so the third reviewer was used to confirm independently the decision of the first two reviewers. Consensus was reached between the three reviewers, and a final data extraction table was agreed upon to use in collating findings and developing themes.

The process for data analysis involved Whittemore and Knell's (2005) "ordering" of all of the data. This involves organising and categorising the data to identify patterns, themes and similarities across sources. Ordering involves classifying the data, synthesizing the data, and developing relationships among the data sources so that they can answer the research question. The findings then create a meaningful and comprehensive whole from which the researchers were then able to draw conclusions. Part of the process involved developing "categories" (Whittemore & Knafl, 2005), which refers to thematic groupings during the process of data analysis. It is the organisation of data into themes or categories as part of the analytic process that makes it easier to interpret and identify underlying constructs and meanings. The process in this research project involved coding data and grouping similar codes of data into categories. These categories were then used to develop a deeper understanding of life review. After the initial process was conducted, some findings were then moved to other categories that were a more appropriate fit and some were excluded.

Once each source was summarised and had been assigned to a category, all categories were developed into a manageable framework and a table of findings was created. The process involved having the data sources sorted into categories, and then categories were consolidated into themes. Further analysis was conducted to make sure each paper's findings and the table it was summarised on were accurate as the themes began to emerge for each researcher. The researchers independently went back over the steps again and again to make sure the data were being captured correctly. Critical analysis was conducted by each researcher to confirm the accuracy of the themes they had developed. It was clear how each category theme should be referred to; for example, many data sources were related to life review in midlife and cancer and palliative care, so that was a clear theme that emerged. Then, the two independent researchers (XL & PB) compared their findings and came to a final consensus of the final themes that had emerged. A third reviewer (SG) was available to assess the final findings and assist with any disagreements. Several gaps in the literature were found for further research to be conducted in the future. This process followed carefully the steps required for an integrative review provided by Whittemore and Knafl (2005).

Results

Three main themes were identified from the articles. These themes captured the topics to which these studies of life review in midlife devoted attention. One feature of this literature highlighted an overlap among the themes, especially because a particular source could make a contribution to more than one theme.

Theme 1: End-of-life in Midlife and the Mental Health Impacts: Life review benefits midlife cancer and palliative care patients. It also assists those going through a life-threatening illness and their families.

Theme 2: Mental Illness and Substance Abuse: Life review has benefits for people in midlife in relation to their mental health, and it has an effective impact on anxiety and depression as well as their psychological and psychospiritual wellbeing. It has mental health benefits for those in midlife with an intellectual disability and coexisting psychiatric illness, drug users, Black adults, and those experiencing depression and cerebrovascular accident. The mental health benefits of those in end-of-life care or who have a life-threatening illness is abundantly clear and combines with Theme 1.

Theme 3: Personal Growth: Life review benefits many people in midlife with their personal growth and self-development, their self-esteem, their life satisfaction, and with acquiring further wisdom. Life

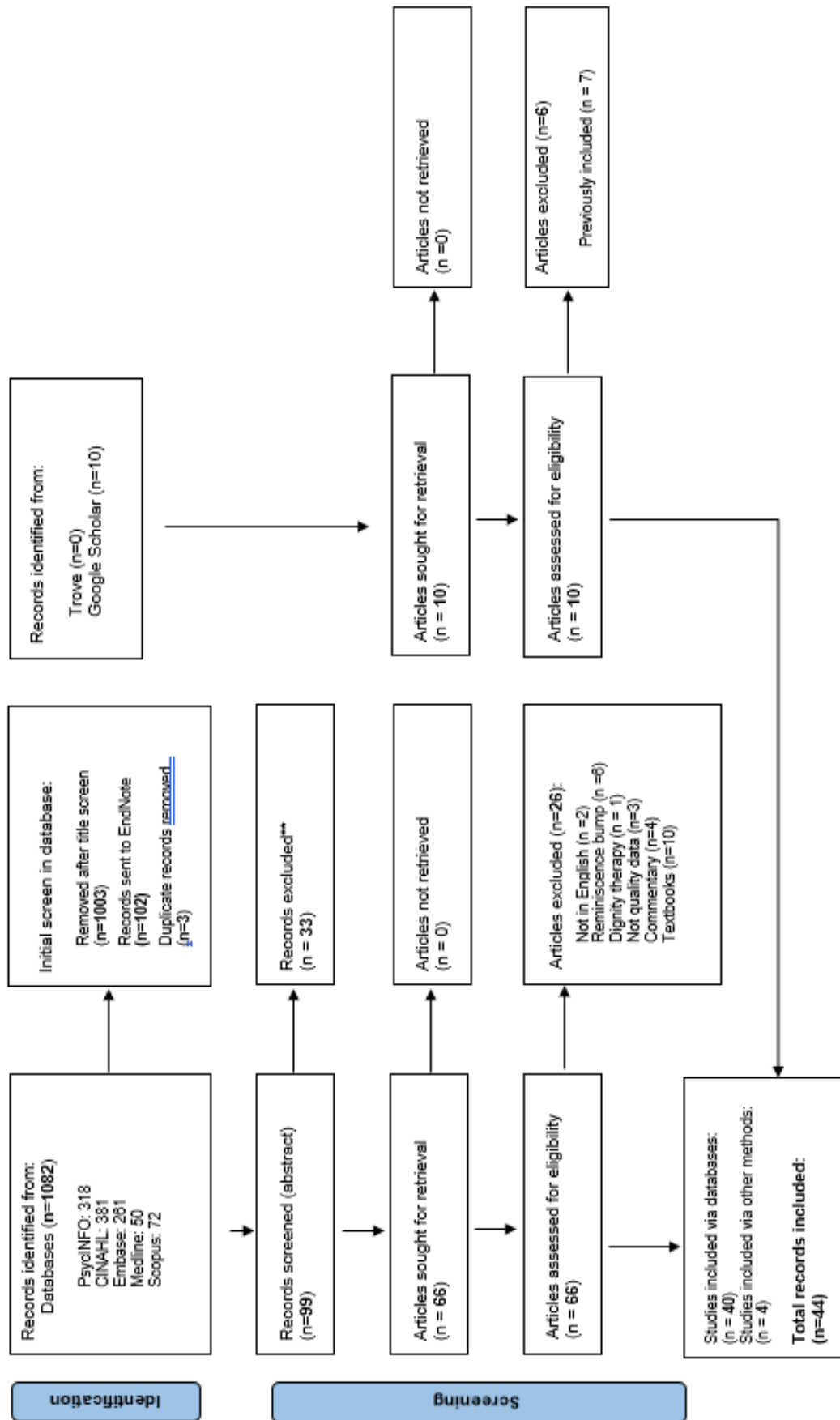


Figure 1. Midlife Life Review PRISMA Flow Diagram

review assists people in midlife to 1) gain renewed understandings about life and 2) resolve regrets.

Overview of Results

Across all sources, the topic receiving the most attention by researchers was end-of-life in midlife; specifically, research on patients experiencing midlife cancer, palliative care, and life-threatening illnesses. Twenty-three papers were found on this topic. The next most significant focus was present in the 20 papers we identified investigating life review in persons with mental illness. These included life review with persons with depression and anxiety as well as efforts to use life review to improve mental health, in general, and to promote psychological and psychospiritual wellbeing. Ten papers were related to cancer and palliative care patients; however, their main focus was mental illness, so they were included within Theme 2, even though they were also included in Theme 1, due to their significant overlap with end-of-life issues. In the other 10 papers, nine papers only focused on mental illness, and one paper focused on substance abuse. Specific populations addressed within the “Mental Health and Substance Abuse” theme consisted of persons with an intellectual disability and coexisting psychiatric illness, drug users, persons with clinically elevated levels of depression and/or anxiety, individuals with a history of cerebrovascular accident (CVA), and Black adults. Sources corresponding to the third theme of Personal Growth were 11 research papers on personal growth, including psychological wellbeing, self-esteem, life satisfaction, creating wisdom, and of how to gain renewed understanding about life through reconciling and resolving regrets. Some key books on life review were located; however, they did not specifically focus on midlife adults, so were excluded. It is noted that there were vastly different ways that the researchers conducted life review, and some very novel interventions were used. A full description of this palette of techniques is beyond the scope of this paper.

Thematic Analysis

Theme 1: End-of-life in Midlife and its Mental Health Impacts

Twenty-three research papers focused on cancer and palliative care patients or those with a life-threatening illness. Ten articles were related to depression, anxiety, and psychological wellbeing in this cohort. All but one article showed that reminiscence, life review, and life review therapy assisted patients to improve their mental health and psychological wellbeing. Overall, these papers showed that life review can improve depressive symptoms by providing a setting in which people can understand and overcome or accept their current challenging life

circumstances. Of the 23 articles, 18 primarily focused on how to conduct a life review with these end-of-life cohorts; five articles focused on the psychospiritual needs of these midlife cohorts; two focused on interviewing the nurses who care for persons at the end of life to hear how they apply life review to their work with patients and their families. One article focused on bereaved family members, and one was a systematic literature review looking at the available life review techniques. Six articles used novel techniques for conducting a life review and included telephone interviews with online life review education (Wise et al., 2009b), life review therapy combined with memory-specific training LRT-MST (Kleijn et al., 2019), text-mining techniques (Ando et al., 2007), WeChat-based Life Review (Zhang et al., 2019), Avatar-Facilitated Life Review (Dang et al., 2021), adaptation of the Transtheoretical Model (Ando et al., 2014), and Mind-Map-Based Life Review (Chen et al., 2018; Chen et al., 2022).

It was clear that life review with patients facing death was effective due to its ability to give them 1) a sense of hope, 2) time to reflect on their lives, 3) psychological relief from negative thoughts and emotions, and 4) an opportunity to be heard and supported. How life review was conducted was quite different in various settings, but all except one reported it as having positive impacts on those who received it. We noted that there is an extensive variety of life review techniques available, and there was no one standard technique; rather, adaptations of life review were made and depended on the context, cohorts, and circumstances. This shows that life review is adaptable and flexible in its applications.

There were multiple reasons why life review was beneficial, including its ability to improve mental health and psychological wellbeing (Chen et al., 2018), reduce depression and anxiety (Dong et al., 2019), and increase self-esteem (Ando et al., 2006). It can also elevate psychospiritual wellbeing (Kwan et al., 2019; Zhang et al., 2019), assist in creating deeper understandings about life and the self, resolve regrets, review and assist with lessons learnt (Wise et al., 2009a), add value as a psychological intervention, aid in understanding and confronting death more effectively, and assist with creating a sense of hope and quality of life.

There are a variety of approaches and interventions related to life review that can be used. These can be useful interventions for nurses to address problems more effectively. Life review was also shown to reduce anxiety and depression in cancer patients undergoing surgery and chemotherapy (Chen et al., 2022; Dong et al., 2019; Xiao et al., 2011; Zhang et al., 2017). Life review helped with reorganising thoughts, addressing problems, and improving people's overall psychological and spiritual wellbeing (Ando et al., 2009; Ando et al., 2012; Ando et al., 2007; Ando et al., 2014; Chen et al., 2016; Dang et al., 2021; Deng et al., 2015; Ent & Gergis, 2020; Jenko et al.,

2007; Kleijn et al., 2019; Trueman & Parker, 2006; Xiao et al., 2013; Zhang et al., 2017).

One paper reported on life review implemented for critical illness in younger men (Jones et al., 2003). The mean age of participants was 41 years old with age ranging between 21 to 54 years. These 18 participants were actually mostly midlife adults; however, the researchers referred to them as young men. The participants had survived an event that posed a serious threat to their lives and were at risk of depression, anxiety, and loss of self-esteem. Reminiscence or life review therapies were used therapeutically from an early stage of illness to reduce the negative psychological effects of being critically ill and close to death. This research showed there is a need to talk about threatening life events, and life review intervention appears to assist younger men to feel better psychologically and to reach a stage of ego-integrity that older adults can achieve using this process (Jones et al., 2003).

Only 1 of the 23 research papers showed null results related to life review. Hoffman's (2004) dissertation asserted there is little evidence to show that life review has a significant impact on women's subjective wellbeing (Hoffman, 2004). Hoffman's (2004) sample consisted of 10 women between the ages of 30 and 60 years of age living with cancer. Five participants were engaged in a structured life review process, and five participants were assigned to a control group. Because of the small sample size of only five women who were engaged in life review, broad conclusions cannot be drawn about its effectiveness. The study only focused on life review as a treatment option related to well-being in women living with cancer and so only limited conclusions can be drawn about the benefits of life review as a whole. All other research articles clearly showed the significant benefits of life review for cancer and palliative care patients as well as for those with a life-threatening illness.

Theme 2: Mental Illness and Substance Abuse

Twenty papers were aligned to this theme. Of the 20 papers with substantial content on mental illness and substance abuse, ten papers from Theme 1 (end of life issues) have also been included in this theme because their targeted outcome was improved mental health. So, there was some mental illness overlap between Themes 1 and 2. Within these 20 papers addressing mental illness, 19 showed life review to improve depressive symptoms and one addressed substance abuse and abuse behaviour improvements.

Depressive symptomatology in the midlife cohort was shown to be improved in midlife by reminiscence, life review, and life review therapy. Reminiscence, life review and life review therapy improved depressive symptomatology by promoting increases in self-esteem and optimism and by helping people to find meaning in

life (Hallford et al., 2012). Achieving meaning in life has been shown to decrease depressive symptoms long-term (Westerhof et al., 2010), and it improves depressive affect and pessimism (James & Bhar, 2016). These interventions show significant improvements in mood and affect, and they represent an effective intervention for depression symptomology for midlife adults (Hallford & Mellor, 2013). Significant improvements can be made to depressive symptoms, improvements in an uplifted mood and a love of life, a sense of mastery over one's life, and being more engaged in life more effectively (Westerhof et al., 2019). Those who engaged in life review interventions found more personal meaning compared to control groups (Westerhof et al., 2019). Online life review therapy (Westerhof et al., 2019) and online guided self-help for adults (Lamers et al., 2014) can be used for the reduction of depressive symptoms, but further research is needed to address how they might best be offered (Westerhof et al., 2019).

Of the 10 research papers about life review and depression in cancer patients, the research indicates that life review can decrease depressive symptoms, improve quality of life, and enhance self-esteem in patients with a life-threatening illness (Zhang et al., 2017). It can also result in improvements in anxiety and depression in this cohort (Kwan et al., 2019). A literature review (Zhang et al., 2017) demonstrated that life review programs benefit cancer patients by reducing depression and anxiety and improving a sense of hope, quality of life, self-esteem, and mental health and wellbeing (Zhang et al., 2017).

Creative approaches such as using a mind-map-based life review intervention, a nurse-led non-pharmacological program, can improve psychological wellbeing in cancer patients by assisting them to resolve past conflicts, elicit improvement in self-esteem, and reduce levels of regrets, remorse, despair, and depression (Chen et al., 2016). Telephone-based reminiscence therapy for colorectal cancer patients was used to reduce self-reported levels of depression and was found to reduce anxiety but did not improve subjective wellbeing or social support (Dong et al., 2019). A more recent study by Chen et al. (2022) using a mind-map-based life review intervention for cancer patients undergoing chemotherapy to improve anxiety and depression demonstrated that this nurse-led non-pharmacological program had the ability to reduce symptoms of depression and anxiety.

Themes 1 and 2 have both significant overlap and significant differences, which is why they have been categorised in two separate themes. However, it was agreed upon by the three reviewers (XL, PB & SG) that end-of-life has its own unique challenges, compared to those who have a mental illness and no end-of-life challenges. Life review for those at the end of life was a prominent finding in the literature. However, life review as an intervention for mental illness was also prominent in the literature but less so when conducted independently of

end-of-life issues. Therefore, these two themes were created, even though both identify life review as an effective intervention for depression and other mental health issues.

One research paper (Westerhof et al., 2016) identified how life review therapy was effective with people experiencing both an intellectual disability and a psychiatric illness. The results demonstrated significant changes in psychiatric symptoms, particularly depression, anxiety, interpersonal sensitivity, and obsessive-compulsive disorder in persons with intellectual disability in midlife. Life review therapy has also been used successfully for treatment of depression and to enhance life satisfaction in people with a history of right hemisphere cerebral vascular accident. The results included lower levels of depression and significantly higher levels of life satisfaction for this midlife cohort (Davis, 2009).

Shellman (2016) used reminiscence with Black adults in the United States to improve their mental health and wellbeing, noting the implications of her results for psychiatric nurses working with members of this group. Using Webster's (1993) Reminiscence Functions Scale, Shellman (2016) reported that Black men displayed higher levels of Bitterness Revival than Black women, which is a conflict that includes angry or fierce arguments or conflict with deep-seated resentment and bitterness. Black women more frequently endorsed the reminiscence function of "Teach/Inform," which consists of using reminiscence to pass lessons learned along to other people, especially those younger than themselves. Shellman (2016) noted that reminiscence can assist psychiatric nurses to facilitate therapeutic reminiscence with certain overlooked populations to improve their mental health and wellbeing.

A cohort with mixed results from life review consisted of persons who injected drugs such as heroin (Harris & Rhodes, 2018). Life review in this cohort assisted with harm reduction related to less heroin use and more engagement in services. These participants gained pleasure by receiving a personalised visual history book about their life, but the activity also elicited recall of difficult life circumstances, creating some psychological pain, which caused a small number of the participants to use additional heroin. The results of this study highlighted a number of ethical issues associated with the intervention. According to the authors, injectable drug users lack socially acceptable markers of a "successful life" so the intervention needs to be used with caution in cohorts such as these, so as not to exacerbate their already negative emotions, which may cause them to increase their drug use.

Theme 3: Personal Growth

Eleven papers on life review and personal growth were found. These papers showed that life review is not

only beneficial to those at the later stages of life but also for those in midlife. Studies have shown enhanced personal growth (Bohlmeijer & Westerhof, 2013; Leonard & Burns, 2007) and enhanced psychological wellbeing (O'Rourke et al., 2011), and that life review can have benefits for midlife adults as they advance towards later life, including the growth of wisdom (Leonard & Burns, 2007). One study (de Vries et al., 1995) compared women and men across the lifespan and noted that 1) women reported a greater number of life events, 2) the events reported by women were more vivid memories of relationships that were pleasant and desirable, and 3) women reported more successes than failures compared to men. Kowalski and McCord (2020) showed that important areas in midlife open for personal growth are relationships, education and selfhood, dealing with regrets, and the act of giving advice to the younger self. Stress relief, diminished presence of previous life stressors, and increases in life satisfaction were also found by Burns and Leonard (2005). Access to wisdom-related knowledge from professionals was pointed out as important (Staudinger et al., 1992). Life review has also been shown to assist physician's work with their patients by using written life stories to explore their lives and give meaning to it (Ehrenreich et al., 2009). Life review is a powerful clinical intervention to assist patients to make better choices in their lives (Lewchanin & Zubrod, 2001).

Significant studies have explored the benefits of life review for women. Life review can assist women's midlife wellbeing by aiding them in making midcourse corrections. It can assist in transforming regrets into life changes and in finding sources of motivation to prompt these women to make life changes in midlife (Stewart & Vandewater, 1999). It was found that in women, the most important area in life is self-development (Glaw et al., 2020; Lewchanin & Zubrod, 2001), not marriage, cancer, or motherhood, and not the onset of an empty nest syndrome or menopause. "Self-work" for personal growth is the most important element to prioritise and is important "work" needed to grow and evolve as a human (Lewchanin & Zubrod, 2001). The death of a relative or friend can be a turning point to re-examine life and have a personal growth experience with the assistance of life review (Leonard & Burns, 1999). A choice map is a structured clinical tool to guide midlife life review (Lewchanin & Zubrod, 2001). Life review for midlife women reveals the need to redefine the self to reach self-actualisation, and Leske (2004) observed that not only women should do this work but society as a whole.

Only one research paper found that life review was associated with negative outcomes (Katz et al., 2017), and one paper showed that there are more benefits for life review in older adults than midlife adults (Ikier & Duman, 2022). Katz et al (2017) reported that life review may in extreme conditions or extreme clinical cases create psychological distress or physiological stress. These

authors recommended that life review is probably better suited for use with healthier adults. Secondly, Ikier & Duman (2022) found that older adults may have a more positive evaluation of their lives and life experiences than younger or midlife adults (Ikier & Duman, 2022). This is because the authors posited that wisdom is gained as people age because they are less worried about things than when they were younger. They gain wisdom and tend to worry less due to increased emotional regulation and a shift in priorities (Ikier & Duman, 2022; Kowalski & McCord, 2020). Some wisdom is naturally gained as people age; however, life review can be beneficial in assisting people to gain deeper and more meaningful wisdom as they age. Clinicians need to consider who life review will benefit most, then only use life review and life review therapy on people in these categories, and only implement it with highly trained practitioners, so that the risks drop and the benefits remain.

Discussion

The overall purpose of this literature review was to answer the following questions. First, to what extent has reminiscence, life review and life review therapy of midlife adults has been researched? Second, what are the benefits and/or limitations of these interventions when used with midlife adults? This integrative review found 44 relevant articles and other sources and identified three significant themes about the benefits of life review for midlife adults. These centred around the application of life review to 1) end-of-life in midlife and associated mental health impacts, 2) mental illness and substance abuse, and 3) personal growth. The overarching benefits of life review include a variety of mental health improvements. These benefits include reducing anxiety and depression, elevating psychological and psychospiritual wellbeing, promoting improvements in personal growth and self-development, increasing self-esteem and life satisfaction. Further benefits include creating a deeper understanding of one's life, a sense of hope, further wisdom and a renewed quality of life. Life review also promotes more comfort around the concept of death.

Benefits of life review have also been reported in this literature for specific cohorts, such as persons with cancer, those receiving palliative care, persons with other life-threatening illnesses, persons with intellectual disability and comorbid psychiatric illness, depression and CVA, drug users, critically ill younger males, and Black adults experiencing issues related to mental health and wellbeing. Families, carers, and the nurses involved with these patients have also shown to gain benefits. Life review for midlife adults creates a renewed understanding about life, assists with struggling with and then releasing regrets, creates an opportunity for learning life lessons, and is the basis of multiple interventions that benefit and improve the overall psychological wellbeing of those with whom it is

implemented. The studies in this integrative review have shown some excellent results for life review in midlife adults; however, more research is needed to replicate and extend exploration of the benefits of these important interventions. Many different ways were found to conduct a life review, and some novel interventions are being used. Comparing and contrasting these interventions in terms of specific benefits and the populations with whom they are most effective could be a research focus in the future too.

Theoretical Rationale for Benefits of Life Review in Midlife

Having regrets and regretting missed opportunities creates high levels of despair, hopelessness, helplessness, and confusion, whereas assisting midlife adults to reflect on their lives can propel them towards healthy ego integrity in later life. Erikson and Erikson (1997) highlighted that ego integrity is wisdom, and that wisdom is "an informed detached concern with life itself in the face of death itself" (Erikson & Erikson, 1997, p. 61). This is a surrender and release of all stress and regret related to life and allows for life and death "to just be" in its significant amazing wholeness. This produces a liberating feeling and creates a host of psychological wellbeing benefits and wisdom. As adults age, they move towards healthy ego integrity naturally. So, assisting midlife adults to do this work that much earlier in life could have an array of extra benefits and is an area that is under-utilised and under-researched.

Cautions on the Use of Life Review

We identified several points of caution related to the use of life review interventions. First, caution should be taken when using life review with patients under high levels of physical or psychological stress or distress, including persons actively struggling with issues related to substance abuse and addiction. Injectable drug users may find life review to be confronting, and so caution may be needed so they do not inject more. Those with severe mental illness or ongoing substance abuse may not react as well to life review so mental health professionals should use caution in its application and adjust the intervention or give additional support to these individuals, if required. However, contrary to these limitations, for example, life review has been shown to be highly effective with Holocaust survivors, people one would assume to have high levels of psychological distress and PTSD (Forstmeier et al, 2020). It is also important to consider that women might respond differently to life review results than men, so gender differences may need to be considered too.

Limitations of the Present Study

Integrative literature reviews are a valuable method for synthesizing existing research across different studies on a specific topic; however, they come with certain limitations such as, first, the process of selecting studies and synthesizing information can introduce bias, particularly if the reviewer's judgment influences the inclusion or exclusion criteria and different researchers interpret the same inclusion and exclusion criteria in different ways. Second, the quality of the studies may be a limiting factor so that if the included research has methodological weaknesses like small sample sizes, then the findings may be compromised. Third, conflicting results in studies can also make it difficult to draw consistent conclusions. Even more concerning, the presence of inconsistent findings can introduce the possibility that authors of integrative reviews will favour studies supporting their views and minimize the importance of studies that do not support their positions. Fourth, there is no standardisation protocol for conducting these types of reviews. This can lead to differences in how studies are evaluated, categorized, or synthesized. Fifth, publication biases can influence the body of studies appearing in peer-reviewed publications. For example, research reporting positive results is more likely to be published than research reporting negative or no effects. This means that reviews of this literature may overestimate the effectiveness or importance of an intervention technique. Sixth, integrative reviews cover a wide range of studies so may lack the depth or nuanced analysis that other reviews offer. Seventh, it takes time and resources to gather all of the relevant literature under time constraints of the researchers. Finally, it can be challenging to integrate the findings in a coherent and meaningful way when studies used a wide variety of research designs, methods for data analysis (e.g., qualitative, quantitative, mixed), intervention techniques and outcome measures. Despite these limitations, integrative literature reviews are still a valuable tool for providing a broad and comprehensive understanding of a topic. However, it's important to recognize and address these potential weaknesses when interpreting the results.

Methodological limitations in this study include: 1) a relatively small pool of literature on which to base overall statements about treatment efficacy, and 2) the possibility that other reviewers could form different themes related to the studies found. Integrative literature reviews address some questions from the literature very well but not all. This method captures a wide variety of data but is not able to address all questions regarding a field of study. This needs to be taken into consideration when reviewing the findings, and the findings in this review indicate that more research on the topic would be of value.

Future Directions

The research summarized in this integrative review ranges in publication date from 1992 to 2023. There is some new research emerging; however, more current research is needed using different clinical and non-clinical midlife populations to gain further insights. Most of the research on the midlife age cohort focused on cancer and palliative care patients. Most of the research focused on the benefits of life review in promoting psychological well-being. In particular, the literature has focused on how to reduce anxiety and depression and on how to resolve conflicts and regrets related to the past.

Future research could focus on how life review can assist with dealing with past traumas, to encourage catharsis and healing to reduce their psychological impact. For example, mental healthcare professionals could assist people to explore and heal childhood trauma and abuse. Life review therapy is assisting older adults with trauma histories, and future research can extend this work to persons in midlife.

Future research could focus on the general population to see if life review in midlife is of benefit and to allow them to live a happier more productive and less psychologically burdened life, resulting in less regrets in later life. The researchers are currently developing a study addressing this phenomenon. Future research could also focus on specific cohorts such as those with mental illness or those with physical illnesses that are not life threatening. Future research could capture those going through a midlife crisis. Little research was found on midlife adults and future research projects could add value to life review work in the midlife age bracket.

Future research could also identify how and why life review assists midlife cohorts. Life review for midlife adults appears to allow time for people to review the past and prepare for a better future. It allows for unresolved questions and thoughts to be addressed and for unconscious thoughts and buried experiences to be identified and addressed. It has a freeing and releasing component that makes it effective. If life review is conducted effectively, it can create freedom, confidence, wisdom, and positivity to move into the present and the future in a different and more uplifting way. It assists with a person finding and/or creating more meaning, purpose, and wisdom in life.

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