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RESEARCH PAPER

How to Flourish during the Menopausal Transition: A Scoping Review on Emotional, Social and Psychological Wellbeing

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Abstract

Each year, at least 25 million women worldwide experience menopause, yet the potential for flourishing during this period remains underexplored. Flourishing, understood here as optimal emotional, social and psychological wellbeing, was used as the conceptual framework for synthesizing findings. This scoping review analyzed 181 longitudinal, experimental, cross-sectional and qualitative studies from four electronic databases. Only 39 studies primarily addressed emotional, social or psychological wellbeing, with eight encompassing comprehensive measures of flourishing. Results consistently showed a negative association between menopausal symptoms and emotional or psychological wellbeing. However, the qualitative findings suggest that some women may experience growth and elements of flourishing during the menopausal transition. Therefore, more in-depth exploration of positive experiences throughout this challenging yet transformative period is needed, and examining the potential of positive psychology interventions to promote flourishing appears timely and promising.

Keywords Menopause · Menopausal transition · Flourishing · Wellbeing · Positive psychology

The menopause is a major turning point in a woman's life, signifying the end of her reproductive phase and fertility. Typically occurring between the ages of 45 and 55, progressing ovarian depletion leads to hormonal changes, resulting in increasingly irregular menstrual cycles (Binkley et al., 2021). This perimenopausal stage can last from several months to a few years, with women reaching menopause at an average age of 49 (Schoenaker et al., 2014). The menopause or start of the postmenopausal stage is retrospectively recognized after 12 consecutive months without menstrual periods, absent any pathological cause (Binkley et al., 2021; Harlow et al., 2012; Talaulikar, 2022). Although the menopausal transition

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is a natural phase, it can significantly impact women's bio-physiological, sexual, socio-cultural, psychological and spiritual functioning (Shamsalizadeh et al., 2023). Common symptoms in peri- and postmenopausal women include vasomotor symptoms (i.e., hot flushes and night sweats), vaginal dryness, disturbed sleep, and adverse mood (Freeman, 2010; Santoro et al., 2015), albeit many more symptoms could be added to the list such as muscle and joint pain, sexual dysfunction, exhaustion, anxiety, irritability and urinary incontinence (Fang et al., 2024; Heinemann et al., 2004; Masjoudi et al., 2017; Santoro et al., 2015). The impact of these symptoms may be compounded by typical midlife events like divorce, serious illness (in the family), taking on a myriad of social roles, children leaving home, and a reorientation of professional, relational and personal life goals (Alexander et al., 2007; Baruch & Barnett, 1986; Infurna et al., 2020).

To date, most studies in the climacteric field have focused on bio-physiological symptoms associated with the menopausal transition. While there is a growing body of evidence addressing mental health, scholars often use the terms "mental health" and "psychological wellbeing" interchangeably with "quality of life" and the absence of mental illness. The WHO (2004) defines mental health as both the absence of mental illness or distress and the presence of mental wellbeing. The two-continua model suggests that these two dimensions (mental illness versus mental wellbeing) are independent yet related, and that the dimension of wellbeing runs from languishing to flourishing (Westerhof & Keyes, 2010). Thus, people can be flourishing despite experiencing significant psychological distress (Iasiello et al., 2019; Keyes, 2005; Schotanus-Dijkstra, Keyes, de Graaf, & Ten Have, 2019; Westerhof & Keyes, 2010), but also that individuals without psychopathological symptoms may still be hindered by low levels of wellbeing (Keyes & Simoes, 2012; Keyes et al., 2010). This two continua model implies that researchers should focus not only on preventing psychological distress but also on promoting flourishing. In fact, studies have shown that people who flourish have a reduced risk of developing mental illnesses (Schotanus-Dijkstra et al., 2017) and are more likely to recover from mental disorders (Iasiello et al., 2019; Schotanus-Dijkstra et al., 2019).

Psychological research on mental wellbeing and flourishing have developed substantially over the past decades. Early approaches focused primarily on emotional wellbeing, conceptualized as the balance of positive and negative emotions and overall life satisfaction (Diener, 1984). A major shift occurred with the emergence of social and psychological wellbeing perspectives, highlighting personal growth, autonomy, meaning, positive relationships (Ryff, 1989) and functioning in society (Keyes, 1998). Building on these foundations, contemporary frameworks have increasingly integrated emotional and psychological wellbeing. For example, the PERMA model proposes that positive emotion, engagement, relationships, meaning, and accomplishment jointly contribute to flourishing (Seligman, 2018), and VanderWeele's flourishing framework focuses on the five core domains of happiness and life-satisfaction, physical and mental health, meaning and purpose, character and virtue and close social relationships (VanderWeele, 2017). However, this review adopts Keyes' (2002) multidimensional model of flourishing as a guiding structure because it is widely used in empirical wellbeing research and provides a comprehensive taxonomy of emotional, social and psychological wellbeing. He explicitly conceptualizes flourishing as the presence of high emotional, social and psychological wellbeing across 14 dimensions, including happiness, life-satisfaction, social contribution, purpose in life and self-acceptance (Keyes, 2002; Keyes et al., 2008; Iasiello et al., 2022).

Besides these comprehensive frameworks, several specific wellbeing theories also contribute to understanding and explaining flourishing. Examples are the optimal experience or flow theory (Csikszentmihalyi, 2001), the broaden-and-build theory of positive emotions (Fredrickson, 2001), the self-compassion theory (Neff, 2003), the theory of hope (Snyder et al., 1991), the find-remind-and-bind theory of positive relationships (Algoe, 2012), the theory of posttraumatic growth (Tedeschi & Calhoun, 2004), and the growth mindset theory (Dweck & Leggett, 1988). Yet, it is largely unclear whether such specific concepts as well as overarching flourishing frameworks are considered in research among women who are in the menopausal transition. The menopausal transition encompasses substantial physical, psychological and social changes that may influence women's capacity for optimal functioning. A flourishing perspective is therefore particularly relevant, as it extends beyond the absence of distress and may be uniquely affected during this challenging time.

A prior systematic review was the first to focus on mental wellbeing during menopause and identified 19 quantitative studies up to 2014 (Brown et al. 2015c). The majority of these studies assessed emotional wellbeing, operationalized as positive affect, happiness and life-satisfaction. Merely two studies assessed the psychological wellbeing dimensions of purpose in life and self-acceptance. The authors concluded that mental wellbeing seemed largely unaffected by the menopausal transition. For example, mental wellbeing was more related to psychosocial variables such as stress, sense of mastery, loneliness, physical activity levels, work satisfaction, and attitudes toward menopause and ageing than to biological changes during the menopausal transition (Brown et al. 2015c). This review provided initial insights into mainly emotional wellbeing of menopausal women, significantly contributing to the scientific literature. However, the authors used the search term "well-being", neglecting the multidimensionality of this concept. Additionally, Brown et al. (2015c) excluded qualitative research, which could offer valuable insights into complex phenomena like flourishing and the menopausal transition. Moreover, no previous review explicitly examined flourishing as a conceptual framework for understanding how women may thrive—not merely cope—during the climacteric years. Given that at least 25 million women worldwide pass through the menopause annually (Hill, 1996), more attention to understanding and improving women's mental health is needed.

Therefore, the current scoping review aims to examine what is known about flourishing and its emotional, social and psychological wellbeing components throughout the menopausal transition. Because the broader literature often operationalizes flourishing using related constructs (e.g., resilience, optimism, self-compassion) that do not always map neatly onto Keyes' domains, flourishing is treated here as a broader umbrella concept. Keyes' model is therefore used as an orienting framework to organize wellbeing outcomes. In doing so, this review provides an updated and comprehensive overview of how flourishing and its components have been measured and associated with menopausal stages and symptoms. Based on the prior review (Brown et al. 2015c), it is anticipated that the literature will predominantly consist of cross-sectional studies focusing on emotional wellbeing.

1 Methods

1.1 Protocol, Registration and Pilot Study

The scoping review extension of the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines (Tricco et al., 2018) was used as a protocol for the current study. To familiarize with the topic, a pilot study was conducted prior to screening for the current review. The first author expanded the review of Brown et al. (2015c) focusing on studies from 2000 onwards and several wellbeing-related search terms (2893 records; 26 full-texts; 14 studies included in pilot results; Klukas, 2023). This pilot study informed the decision to broaden the final search strategy by including multiple positive psychology-related concepts with no restrictions on publication year. After this pilot study, a final protocol was registered on 20 November 2023 which was before the final screening of the current study had started (https://doi.org/10.17605/OSF.IO/PWCSU).

1.2 Eligibility Criteria

Eligible studies focused on midlife women from diverse cultural backgrounds and socioeconomic statuses, who were at least in the peri- or postmenopausal stage or presented menopausal symptoms such as hot flushes and night sweats. To allow for some variability in age range, at least 75% of the sample needed to be midlife women aged 40–60 years. Peer-reviewed journal papers were included if they reported original research, were written in English, German, or Dutch, and measured or described at least one aspect of flourishing or positive psychology-related concept. Quantitative, qualitative and mixed-methods studies were considered, while relevant reviews and meta-analyses were excluded after screening the reference lists for pertinent original papers. Studies were also excluded if they addressed surgical or premature menopause, hormonal treatment or medication, or alternative treatments such as acupuncture and flaxseed efficacy. Subgroup-specific studies (e.g., women with major depression, obesity, cancer, osteoporosis, urinary incontinence, or professional athletes) were excluded, as these could involve factors unrelated to menopause that might significantly influence flourishing. The pilot study showed that several commonly used constructs such as job satisfaction, sexual satisfaction, quality of life, social support, self-esteem, and self-efficacy fell outside the Keyes' flourishing framework guiding this review. Although conceptually related to wellbeing, these measures typically capture other domains such as physical functioning, illness burden, or contextual resources and are therefore not considered core components of emotional, social or psychological wellbeing within Keyes' model. As a result, constructs such as quality of life, self-efficacy and social support were excluded from the synthesis because they do not directly correspond to Keyes' domains, although they may be included within broader flourishing frameworks.

1.3 Information Sources

The four electronic databases Scopus, PubMed, Web of Science, and PsychInfo were searched because they collectively provide comprehensive coverage of biomedical, psychological, social science and interdisciplinary research relevant to menopause and flourishing. The search strategies were drafted by the authors and refined by an experienced librarian

and information specialist (J.M. van Eck) in consultation with the authors. The final search results were exported to Covidence, where duplicates were automatically removed, and manually during the screening process. Papers included in the full-text screening phase were scanned for additional studies.

1.4 Search

The final search strategy for all four databases can be found in Supplementary File 1. The last author conducted a search in titles, abstracts, and keywords on December 8, 2025, including the following search terms: (1) wellbeing, positive psychology, flourishing, hedonia, eudaimonia, happiness, life-satisfaction, interest in life, positive affect, positive emotion, the five social wellbeing dimensions (e.g. social acceptance), the six psychological wellbeing dimensions (e.g. personal growth), connectedness, kindness, compassion, joy, savoring, gratitude, hope, optimism, competence, strengths and virtues, engagement, goal setting, meaning in life, life review, reminiscence, spirituality, posttraumatic growth, psychological flexibility, resilience, mindfulness, and mindset; and (2) menopause, climacteric, vasomotor symptoms, hot flushes, and midlife women. The search was limited to articles and reviews, and to English, German, and Dutch language.

1.5 Selection of Sources of Evidence

Titles and abstracts from the final search strategy were independently and concurrently screened using Covidence by both reviewers, achieving substantial agreement according to Landis and Koch (1977, $\kappa = 0.65$). Discrepancies were resolved through discussion. Full-texts were screened by the second author, consulting the first author in case of uncertainty.

1.6 Data Charting Process

The data extraction Excel file from Hybholt (2022) was used as a template and adjusted by both authors. The second author independently charted the data and discussed the results with the first author. The data extraction file was compared with the pilot study results and those of Brown et al. (2015c) for validation.

1.7 Data Items

Data extracted from the articles were: authors, year of publication, country of origin, study design, sample size, age range and mean age (or median age), recruiting method, menopausal status (pre-, peri-, and postmenopausal), measurement instruments for menopausal status, measurement instruments for menopausal-related outcomes, measurement instruments for wellbeing-related outcomes, other measurement instruments, primary aim of the study, and relevant key findings. For qualitative studies, the analytic method was also extracted, and for RCT and quasi-experimental studies, information about the conditions and intervention duration.

1.8 Synthesis of Results

The included studies employed a wide range of instruments. To organize these measures, Keyes' framework served as the primary structure, and instruments were categorized into four groups: flourishing (i.e., multidimensional wellbeing), emotional wellbeing (e.g., happiness, positive affect), social wellbeing (e.g., sense of coherence), and psychological wellbeing (e.g., purpose in life, self-compassion, resilience, optimism). Because many studies operationalized flourishing using related constructs that do not always map directly onto Keyes' components, measures were assigned to the most closely corresponding category where possible. This classification guided the narrative synthesis but was not included as additional columns in the tables due to space constraints. Supplemental File 2 provides an overview of all measures listed in the "Wellbeing Outcomes" column and how they were categorized.

2 Results

2.1 Selection of Sources of Evidence

The PRISMA flow-chart is presented in Fig. 1. After removing duplicates, 4.928 citations were retrieved from the final electronic database searches. An additional 21 papers were identified during screening, resulting in 461 articles for full-text review. Of these, 35 articles could not be retrieved, including 2 papers from the review by Brown et al. (2015c). A total of 245 articles were excluded for reasons such as not including a wellbeing-related outcome ($n=99$), not measuring menopausal symptoms or specifying menopausal status ($n=36$), or having over 25% of the participants outside the 40–60 age range ($n=10$). During data extraction, the study by Hania et al. (2022) revealed identical results as Iioka and Komatsu (2015). After studying both articles in detail, this discovery of scientific fraud (ANONYMOUS, 2024) led to retraction of the paper of Hania et al. (2022) and removal of this paper from the current review. Ultimately, 181 articles from 158 studies met the eligibility criteria and were included in the review.

Figure 2 shows an overview of the most common words appearing in article titles per step in the screening process. The words "women" and those related to the menopausal transition (i.e., menopause, menopausal) were most central in all steps. However, vocabulary was broad and included diverse health-related concepts such as "cancer", "breast", "therapy", "sexual", "hormone" and "patients" when screening for titles and abstract. The words "menopausal", "menopause", "symptoms" and "wellbeing" became more visible in the full-text screening and included papers, while the words "midlife", "transition" and "psychological" appeared in those word clouds. After full-text screening, the word distribution became even more focused, by including "life satisfaction", "resilience" and "qualitative", and excluding "quality of life".

2.2 Study Characteristics

Publication dates ranged from 1980 to 2025, and over half published in 2017 or later with peaks in 2021 ($n=18$) and 2025 ($n=19$; Fig. 3). The majority of studies were conducted in

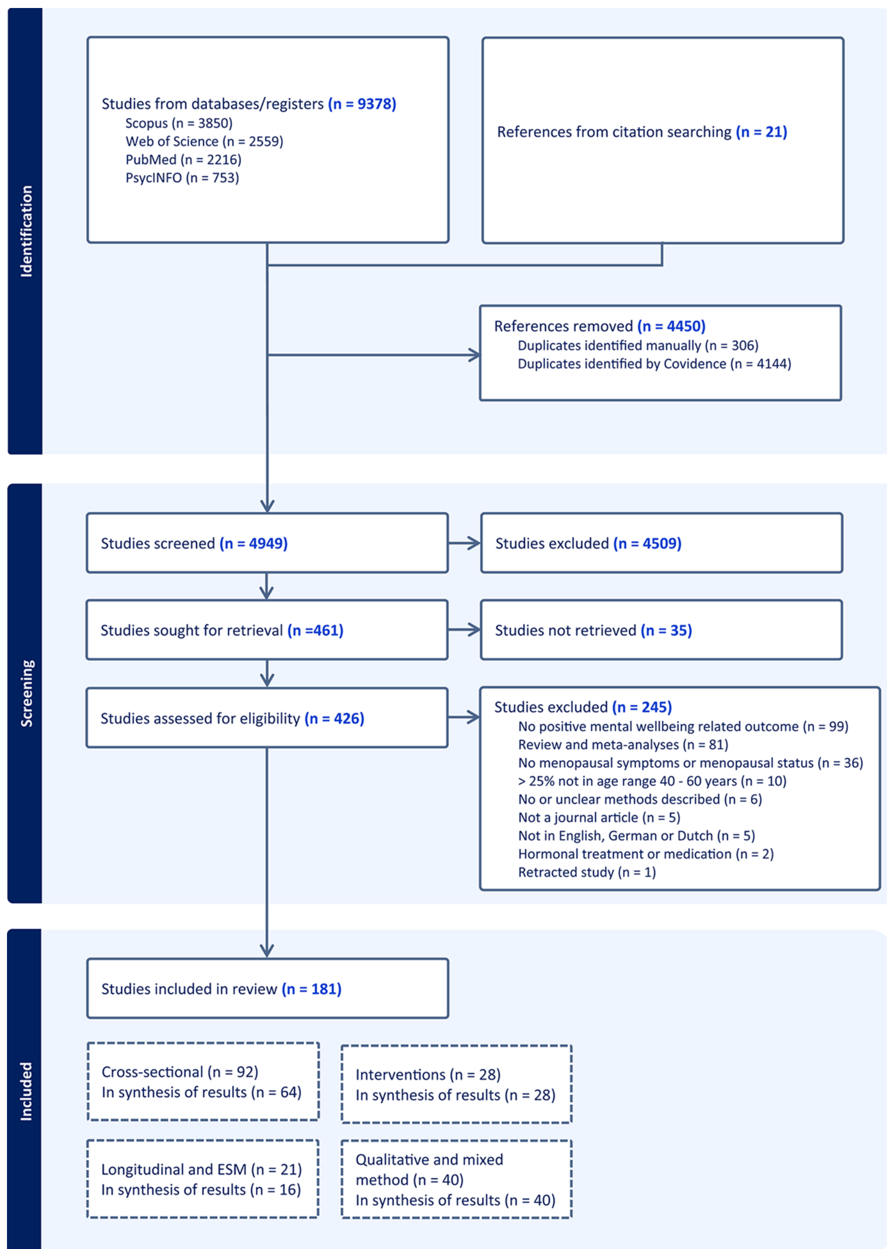

Fig. 1 PRISMA flow-chart

the USA (n=28), Australia (n=25) and Iran (n=22), followed by the UK (n=10), South Korea (n=10), China (n=9), Turkey (n=9), Spain (n=8), Poland (n=7), Canada (n=4), Italy (n=4), Mexico (n=4), Sweden (n=4), Switzerland (n=4), Brazil (n=3), Ecuador (n=3), Finland (n=3), India (n=3) and Ireland (n=3). Twenty other countries conducted

Fig. 2 Word clouds of the titles per screening phase created with CoPilot. The first word cloud is based on the 4949 article titles screened, the second word cloud is based on the 461 articles for full-text screening, the third word cloud is based on the 181 included articles

Fig. 3 Number of publications per year

one or two studies each: Argentina, Chile, Denmark, Dominican Republic, Egypt, India, Japan, Jordan, Nepal, New Zealand, Nigeria, Palestina, Panama, Paraguay, Peru, Portugal, Singapore, South Africa, Sri Lanka, and Thailand.

Most studies were cross-sectional ($n = 92$) or qualitative ($n = 36$) mainly based on interview-data. Other designs included longitudinal cohort studies between 2 and 19 years follow-up ($n = 17$), intervention studies using a randomized controlled trial ($n = 16$), a quasi-experimental ($n = 7$), pre-posttest ($n = 4$) or a longitudinal case study design ($n = 1$), experience sampling studies between 2 and 21 days ($n = 4$), and a mixed method design using an online survey including a qualitative analysis of one or more open-ended questions ($n = 4$). A minority of the articles focused primarily on emotional, social, or psychological wellbeing throughout the menopausal transition ($n = 39$).

There were 11 research projects covering more than one of the included publications. The majority of these projects were conducted in Australia and the USA. In Australia, data were used from a large community sample of adult men and women ($n = 7615$; 5 cross-sectional studies and 1 longitudinal study) and the Women's Midlife health Project (7 longitudinal studies and 1 cross-sectional study). In the USA, data were used from the Study of Women's Health Across the Nation (SWAN; 3 longitudinal studies and 2 cross-sectional studies), the

Seattle Women's Health Study (2 longitudinal studies), a RCT about the efficacy of a walking and a yoga intervention versus waitlist control (2 RCT and 1 follow-up study) and a 21-day ESM study (2 studies). The remaining projects were from Brazil (a cross-sectional and RCT study), China (2 cross-sectional studies), Finland (2 cross-sectional studies), Sweden (a cross-sectional and a qualitative study) and Switzerland (3 cross-sectional studies). As a result, the conclusions drawn in these articles are not independent and marked with an asterisk (*) in all Tables.

2.3 Participants Characteristics

The 37 dependent articles about 11 studies included 11,679 participants, with sample sizes ranging from 30 to 4,803 (mean = 1,062, median = 492). Independent studies included 42,709 participants, with sample sizes ranging from 1 to 2,710 (mean = 295, median = 160). Thus, the review covered results from 54,388 participants. Across all studies, women's age ranged from 18 to 100 years, with most being between 40 and 60 years. The mean age was less often provided, but 51.1 years overall (49.1 for the dependent samples, 51.2 for the independent samples). When information about menopausal status was provided, the majority of the women were postmenopausal. In 39 studies, 100% were postmenopausal, and on average was 64.4% postmenopausal. In 10 studies were 100% of the women in perimenopause, while in 3 studies all participants were premenopausal at baseline of a longitudinal study. On average, 44.4% were perimenopausal and 40.9% premenopausal. In some studies, it might be that the term premenopause was used for perimenopausal women. For instance, in a sample of 282 women aged 45–55, the authors mentioned that 49.6% were premenopausal and 50.4% were postmenopausal (Hashemipoor et al., 2019), while in this age category perimenopause would be expected.

2.4 Outcome Measures

Menopausal status was mainly assessed using self-reported questions about the menstrual cycle on which 39 studies referred to the STRAW or STRAW + 10 criteria (Harlow et al., 2012). However, no specific information was provided in the method sections about how these criteria were defined and assessed. Authors seem to have mainly focused on women with a regular (premenopausal) or irregular (perimenopausal) menstrual cycle or on the absence of a menstrual cycle for at least 12 months (postmenopause). Only 11 studies verified the menopausal stage with objective measures such as the follicle-stimulating hormone (FSH), a medical record or a physician's confirmation of the last menstruation.

Menopausal symptoms were mainly measured using the Menopause Rating Scale (MRS; $n = 27$), hot flushes related outcomes regarding frequency and severity like the Hot Flush Interference Scale (HFI) and the Hot Flush Rating Scale (HFRS; $n = 20$), and the Menopause Specific Quality of life questionnaire (MENQOL, $n = 14$). Other measures included menopausal symptom lists like the MSI and MENSI ($n = 18$), hormone levels ($n = 13$), the Green Climacteric Scale (GCS; $n = 11$), menopausal attitudes ($n = 8$), the Kupperman Menopausal Index (KMI or KKSI; $n = 5$), the Cervantes-Short Form ($n = 4$) and the Menopause Representations Questionnaire (MRQ; $n = 3$).

A variety of wellbeing related outcomes were used, but only eight studies measured flourishing. Yet, the majority measured emotional wellbeing: life-satisfaction ($n = 36$), positive

emotions including happiness (n=37) and overall subjective wellbeing (n=3). Other more psychological wellbeing related measures were spiritual and personal growth (n=21), resilience (n=17), optimism (n=13), interpersonal relations (n=15), self-compassion (n=12), mindfulness (n=12), purpose and meaning in life (n=5), self-acceptance (n=5), and overall psychological wellbeing (n=5). Social wellbeing was rarely covered, focusing on sense of coherence (n=2) or overall social wellbeing (n=1). Common wellbeing instruments were the Satisfaction with Life Scale (SWLS; n=21), the Health-Promoting Lifestyle Profile-II questionnaire (HPLP-II) of which only the spiritual growth and interpersonal relations subscales were considered (n=15), the Positive and Negative Affect Scale (PANAS; n=12), the Life Orientation Test to measure optimism (LOT or LOT-R; n=12), the Self-Compassion Scale (SCS or SCS-SF; n=12), the Affectometer (n=10), the Mindful Attention Awareness Scale (MAAS; n=8), and Ryff's Psychological Wellbeing Scale (PWBS; n=7). Only one of the studies used the Mental Health Continuum-Short Form (MHC-SF) to assess Keyes' 14 dimensions of flourishing (Branquino et al., 2025).

Other outcomes, though not central to this review, included lifestyle factors (n=46), depression (n=45), stress (n=29), anxiety (n=21), sleep or insomnia (n=20), and general or subjective health (n=20).

2.5 Synthesis of Results

In this synthesis, findings are organized by study design to accommodate methodological differences across studies. Within each section, outcomes are synthesized according to the four categories (flourishing, and emotional, social and psychological wellbeing). A comprehensive Excel dataset with all extracted details is available in the OSF repository belonging to this publication.

2.6 Longitudinal and ESM Studies

Of the 21 longitudinal and ESM studies, five did not relate the assessed wellbeing outcome to menopausal symptoms or status. This narrative synthesis is about the remaining 13 longitudinal studies and three ESM studies.

2.6.1 Flourishing

Although not completely flourishing, one study used a composite score of life-satisfaction, positive emotions, purpose in life, and personal growth which was measured only once during the longitudinal study (Avis et al., 2021). Results showed that less frequent vasomotor symptoms and sleep problems and better physical functioning over a 9 years perimenopausal period were associated with better wellbeing at older age (61–69 years). This study also indicated that women with more positive attitudes toward menopause and aging at baseline reported higher levels of wellbeing 9 years later.

2.6.2 Emotional Wellbeing

The longitudinal studies predominantly assessed emotional wellbeing, in particular positive emotions (Table 1). Findings from the Australian Women's Midlife Health Project (n=5)

indicated that hormone levels, menopausal status, and vasomotor symptoms were not significantly associated with changes in positive affect (Dennerstein et al. 1997, 2001, 2002a, b, 2007). Although women who were 1–2 years postmenopausal showed the lowest positive affect over a 4-year interval, positive affect levels remained stable in the 8-year period studies. Similar stability was observed in the two studies from the Seattle Women's Health Study (Smith-DiJulio et al. 2008a, b), and a 5-year Canadian study (Guérin et al., 2017).

Conversely, some studies revealed significant changes between menopausal symptoms and emotional wellbeing. For example, the 2-year longitudinal study of Elavsky (2009) found that increases in menopausal symptoms over time were significantly associated with decreases in positive affect. Also, a 21-day daily diary study found that on days when women experienced higher menopausal symptom burden than was typical for them, they had reduced levels of positive affect and life-satisfaction (Kishida & Elavsky, 2015, 2017). Contrarily, a 2-day ESM study showed that objectively measured hot flushes were more likely to occur after experiencing increased positive emotions (Thurston et al., 2005). Interestingly, a 10-year cohort study among mainly postmenopausal women revealed that positive affect and life-satisfaction remained stable or increased with more positive attitudes towards aging, while negative attitudes were linked to a decline in emotional wellbeing (Brown et al. 2015a).

2.6.3 Social and Psychological Wellbeing

Two longitudinal studies measured aspects of social and psychological wellbeing. One study followed women for 19 years and found that personality factors significantly predicted optimism at perimenopause, but that optimism was not significantly related to higher life-satisfaction at peri- or postmenopause (Godfrey and Bogg, 2025). Another study revealed that women with higher levels of stress and hostility, and lower levels of optimism and sense of coherence, were more likely to use hormone therapy and reported more vasomotor symptoms than their counterparts with lower or more moderate levels of stress and hostility and higher levels of optimism and sense of coherence (Jalava-Broman et al., 2020).

2.6.4 Intervention Studies

Mainly three types of interventions were found in our literature search, namely mindfulness-based exercises or programs ($n=9$), educational programs about lifestyle and/or menopause ($n=7$) and physical exercise including yoga ($n=6$; Table 2). Additionally, a combination of education and physical exercise was tested ($n=2$), as well as the efficacy of a positive psychology program ($n=1$), solution-focused counseling ($n=1$), motivational interviewing ($n=1$) and menopausal symptom monitoring ($n=1$). Eighteen studies included mainly postmenopausal women, six mainly perimenopausal women, and two an almost equal frequency of peri- and postmenopausal women. In two studies, the menopausal status was unknown.

2.6.5 Flourishing

One study found a large pre-to post effect size on flourishing for women who followed a menopause-specific physical exercise and health education program (Cooper et al., 2023).

Table 1 Overview of the included longitudinal and ESM studies with findings about the relation between wellbeing and menopausal symptoms or status

Author, year	Country	Follow-up	*N*	Age range; M age (SD)	Menopausal status	Menopausal outcomes	Wellbeing outcomes	Key findings about relation wellbeing and menopausal symptoms or status
Women's Midlife Health Project								
*Dennerstein et al. (1997)	Australia	4 years; start in 1991	405	45–55 at baseline	37% premenopausal; 51% perimenopausal; 12% postmenopausal at year 4	Hormones; Hot flushes (HF)	Positive emotions (Affectometer 2)	Positive affect and positive-negative affect balance decreased with progressing menopausal status, with the lowest levels in the 1–2 years postmenopausal group and return to earlier levels > 2 years postmenopausal; When hot flushes were taken into account, the association between positive affect and menopausal status was no longer significant; Hormone levels were not associated with changes in positive affect.
*Dennerstein et al. (2001)	Australia	8 years; start in 1991	267	45–55; 48.8 (2.5) at baseline	-	Menopause symptoms	Positive emotions (Affectometer 2)	Positive mood remained stable over time and was not significantly associated with menopausal status or vasomotor symptoms.
*Dennerstein et al. (2002a)	Australia	8 years; start in 1991	226	45–55	-	Menopause symptoms; Hormones	Positive emotions (Affectometer 2)	Hormone levels were not associated with changes in positive affect.
*Dennerstein et al. (2002b)	Australia	8 years; start in 1991	226	45–55; 48.5 (2.3) at baseline	-	Hormones	Positive emotions (Affectometer 2)	Positive mood did not correlate with any of the hormones measured.
*Dennerstein et al. (2007)	Australia	9 years; start in 1991	336	45–55; 48.6 (2.5) at baseline	40% late reproductive stage; 60% early menopausal transition at baseline; 51% postmenopausal at year 9	Menopause symptoms; Hormones	Positive emotions (Affectometer 2)	No significant association between mood and hormonal status or change in hormonal status was found over time.
Seattle Women's Health Study								

Table 1 (continued)

Author, year	Country	Follow-up	N	Age range; M age (SD)	Menopausal status	Menopausal outcomes	Wellbeing outcomes	Key findings about relation wellbeing and menopausal symptoms or status
*Smith-DiJulio et al. (2008a)	USA	16 years, start in 1990	334	35–55; 41.8 (4.8)	58.7% premenopausal; 29.6% perimenopausal; 0.9% postmenopausal at baseline	HFS; Hormones	Positive emotions (Subscale GWS); Mastery (MS)	Only the late transitional phase predicted a significant decrease in wellbeing, but only when stage was entered alone as a predictor; The variability in women's wellbeing was affected more by life events; Taken also (unpublished) answers of open questions into account, this study suggests that the menopausal transition is a normal or even positive period for most women.
*Smith-DiJulio et al. (2008b)	USA	16 years, start in 1990	334	35–55; 41.8 (4.8)	58.7% premenopausal; 29.6% perimenopausal; 0.9% postmenopausal at baseline	HFS; Hormones	Positive emotions (Subscale GWS); Mastery (MS)	Mean values of wellbeing were identical for each menopausal stage (4.1) and almost identical for women taking hormones (4.0); Hot flush severity was significantly and negatively related with wellbeing when women were using hormones ($r=-.18$), but not in any of the menopausal stages; Hormones were not significantly related with wellbeing in any of the stages.
Other longitudinal studies								
*Avis et al. (2021)	USA	SWAN; 9 years; start in 1996	1693	42–52; 45.8 at baseline	58.6% premenopausal; 41.4% early perimenopausal at baseline	-	Flourishing (Composite measure of life satisfaction (SWLS), positive emotions (PANAS) and Ryff's Purpose in Life and Personal Growth scales); Optimism (LOT); Spirituality (DSE); Resilience (CD-RISC)	More positive attitudes toward menopause and aging at baseline was associated with better mental wellbeing 9 years later; The only variables not associated with mental wellbeing were age, duration of perimenopause and ever use of hormone therapy.

Table 1 (continued)

Author, year	Country	Follow-up	*N*	Age range; M age (SD)	Menopausal status	Menopausal outcomes	Wellbeing outcomes	Key findings about relation wellbeing and menopausal symptoms or status
*Brown et al. (2015a)	Australia	10 years; 2003 and 2013	492	40–60; 52.1 (5.5) based on sample of 517 women	29.2% premenopausal; 9.3% perimenopausal; 60.3% postmenopausal at baseline (based on sample of 517 women)	HFNS; HFI; MRQ	Positive emotions (PANAS); Life satisfaction (SWLS)	Attitudes to ageing did not differ per menopausal stage (cross-sectional); Unexpectedly, positive attitudes toward psychological growth with age were associated with more hot flush interference and feelings of low control over menopause (cross-sectional); Women with positive attitudes toward psychological loss with age typically increased or remained stable in well-being across adulthood while women with negative attitudes experienced decreased positive affect and life-satisfaction (longitudinal).
Elavsky (2009)	USA	2 years follow-up of a RCT; 2005 and 2007	99	42–58	12% premenopausal; 33% perimenopausal; 54% postmenopausal at 2 years follow-up	GCS; MENQOL	Positive emotions (Affectometer 2)	Menopausal symptoms were significantly associated with lower positive affect at the end of the trial and at 2 years follow-up ($r=-.56$ and −0.37 respectively); Increases in menopausal symptoms over time were significantly associated with decreases in positive affect.
Godfrey & Bogg, 2025	USA	MIDUS: 18 years; 1995, 2004 and 2013	247	39.92 (7.01) at baseline	Premenopause at wave 1 perimenopause at wave 2 and postmenopause at wave 3	Menopausal symptoms	Optimism (LOT); One item life satisfaction	Although premenopausal factors predicted perimenopausal optimism, coping, and symptoms, none was directly associated with postmenopausal health or well-being; Positive premenopausal attitudes toward aging were directly associated with greater postmenopausal well-being.
Guérin et al. (2017)	Canada	5 years	102	47–55; 49.9 (1.9)	100% premenopausal at baseline; 66% perimenopausal at year 2; 50% perimenopausal at year 4; 66% postmenopausal at year 5	-	Positive emotions (subscale vigor of POMS-SF)	Scores for vigor were high and stable over the 5-year period; 63% of participants belonged to a high vigor trajectory that increased significantly though not steeply over time; Time spent in perimenopause was not significantly associated with trajectory membership for vigor.

Table 1 (continued)

Author, year	Country	Follow-up	*N*	Age range; M age (SD)	Menopausal status	Menopausal outcomes	Wellbeing outcomes	Key findings about relation wellbeing and menopausal symptoms or status
Jalava-Broman et al. (2020)	Finland	HeSSup: 10 years; 2000 and 2010	2710	52–56	-	Four vasomotor symptom items	Optimism (LOT-R); Sense of coherence (SOC)	Women born in the 1940's and HT-users reported more stress and a lower sense of coherence than women at the same age born 10 years later or non-HT users respectively; The proportion of women using HT was significantly higher in class 1 (high stress and hostility, low optimism and sense of coherence) than in class 3 (low stress and hostility and high optimism and sense of coherence); Vasomotor symptoms were more prevalent in class 1 than in class 2 (moderate on all outcomes) or class 3.
ESM studies								
*Kishida and Elavsky (2015)	USA	21-day diary study	103	40–60; 52.6 (4.7)	14.6% premenopausal; 25.2% perimenopausal; 52.4% postmenopausal	GCS	Positive emotions (PANAS)	Women reported moderate levels of daily positive affect; On days when a women experienced greater positive affect than her average, she experienced less symptom burden; Positive affect reduced symptom burden only at the within-person level, not between-persons, thus on days a woman was more physically active than her average, she experienced greater positive affect, which in turn reduced her symptom burden which does not mean that more active women on average experience more positive affect and less symptom burden.
*Kishida and Elavsky (2017)	USA	21-day diary study	103	40–60; 52.6 (4.7)	14.6% premenopausal; 25.2% perimenopausal; 52.4% postmenopausal	GCS	One item life satisfaction	Overall physical activity, sedentary behavior and menopausal symptom burden were not significantly related to life-satisfaction; On days a woman reported more menopausal symptoms than was typical for her, life-satisfaction reduced significantly; Higher levels of neuroticism predicted reduced daily levels of life-satisfaction particularly on days characterized by heightened symptom burden.

Table 1 (continued)

Author, year	Country	Follow-up	N	Age range; M age (SD)	Menopausal status	Menopausal outcomes	Wellbeing outcomes	Key findings about relation wellbeing and menopausal symptoms or status
Thurston et al. (2005)	USA	2 day monitoring study	42	40–60; 50.5 (4.8)	42.9% perimenopausal; 52.3% postmenopausal; 4.8% surgically postmenopausal	Ambulatory skin conductance (HF); HF diary; Attitudes (ATM)	Three items positive emotions (relaxed, happy and in control)	Women’s attitudes toward menopause were relatively neutral; Positive emotions were high and objective hot flushes were more likely to occur after increased positive emotion; False-positive flushes were not more likely to occur after changes in feeling happy or relaxed.

Table 2 Overview of the included intervention studies

Author, year	Country	Intervention	*N*	Age range; M age (SD)	Menopausal status	Menopausal outcomes	Wellbeing outcomes	Relevant key findings
Randomized Controlled Trials								
Andrews et al. (2023)	UK	2-week symptom monitoring intervention vs. no intervention	100; 48 vs. 52	> 18; 46 (8)	67% perimenopausal; 33% postmenopausal	32 menopausal symptoms	Three items positive emotions (happy, content, fulfilled)	Symptom monitoring had no significant effect on improving positive affect compared to control.
Aparicio et al. (2021)	Spain	16-week exercise training vs. 4 counseling workshops about healthy lifestyle	111; 58 vs. 53	45–60; 52 (4)	75% perimenopausal (irregular menstruation)	KMI; Cervantes-SF	Positive emotions (PANAS-State and PANAS-Trait)	A 16-week concurrent exercise program was effective in improving positive affect compared to lifestyle counseling.
*Elavsky and McAuley (2009)	USA	4-months walking intervention vs. yoga intervention vs. wait-list control	164; 63 vs. 62 vs. 39	42–58; 49.9 (3.6)	17% premenopausal; 51% perimenopausal; 32% postmenopausal	GCS	Optimism (LOT-R)	Women with higher levels of optimism at baseline experienced greater reductions in vasomotor symptoms across the trial than women with lower levels of optimism, but no effect of optimism was found for psychological, somatic and sexual menopausal symptoms.
*Elavsky and McAuley (2007)	USA	4-months walking intervention vs. yoga intervention vs. wait-list control	164; 63 vs. 62 vs. 39	42–58; 49.9 (3.6)	17% premenopausal; 51% perimenopausal; 32% postmenopausal	GCS; MENQOL	Positive emotions (Affectometer 2); Life satisfaction (SWLS)	Positive affect and life-satisfaction significantly improved in the two experimental conditions compared to control; Menopause related quality of life significantly decreased over time in the experimental conditions; Women with reduced symptoms across the trial showed improved positive affect and life-satisfaction.
*Garcia et al. (2018)	Brazil	8-week mindfulness training vs. active control (weekly informal conversations and daily cross-word puzzles)	30; 19 vs. 11	50–65	100% postmenopausal	KMI; MENQOL	Meditation log; Mindfulness (MAAS)	8-weeks mindfulness meditation training significantly improved mindful attention and awareness levels, menopausal and vasomotor symptoms, menopausal quality of life, sleep quality and severity of insomnia compared to an active control group.

Table 2 (continued)

Author, year	Country	Intervention	*N*	Age range; M age (SD)	Menopausal status	Menopausal outcomes	Wellbeing outcomes	Relevant key findings
Gordon et al. (2021)	Canada	8-week MBSR vs. waitlist control	104; 52 vs. 52	45–55; 48.7 (3.0)	100% perimenopausal	Hormones; Cortisol awakening response; Vasomotor symptoms	Mindfulness (FFMQ); Resilience (CD-RS)	MBSR was effective in increasing mindfulness (d=0.46) and resilience (d=0.30) across 6 months follow-up period; Most women (65% in MBSR; 73% in waitlist condition) were in the early menopausal transition and they benefited more from MBSR then those in late perimenopause.
Hu et al. (2017)	China	4-months walking intervention vs. waitlist control	80; 40 vs. 40	45–65; 53.4 (3.4)	100% postmenopausal	MRS	Life satisfaction (SWLS)	Life-satisfaction significantly increased in the walking intervention (d = 0.72) compared to control; Increased life-satisfaction over time was significantly correlated with decreased menopausal symptoms over time (r=−.61).
Khodadadi et al. (2023)	Iran	5-week physical activity (PA) 2 times a week vs. weekly group discussions (GD) vs. PA+GD vs. routine care	160; 40 vs. 40 vs. 40 vs. 40	45–55	100% postmenopausal	-	Happiness (OHQ)	The happiness score was significantly higher in all three intervention groups immediately and two months after the intervention compared to control.
Mehrabi et al. (2021)	Iran	6 solution-focused counseling group sessions vs. no intervention	75; unclear how divided	50–60; 55.8 (3.1) in intervention group and 54.5 (3.3) in control group	100% postmenopausal	-	Happiness (OHQ)	At baseline, no differences between groups were found on happiness and its dimensions; After the intervention, the intervention group scored significantly higher on happiness compared to control, as well as its dimensions life-satisfaction, self-esteem, actual wellbeing, contentment and positive mood.

Table 2 (continued)

Author, year	Country	Intervention	*N*	Age range; M age (SD)	Menopausal status	Menopausal outcomes	Wellbeing outcomes	Relevant key findings
Moshki et al. (2018)	Iran	4 group-based education sessions about menopause vs. no intervention	80; 40 vs. 40	45–65; 51.6 (4.3)	100% postmenopausal	-	Self-acceptance (subscale PWBS)	The program led to a significant higher increase in self-acceptance in the intervention group compared to control.
Wong et al. (2018)	China	8-week MBSR vs. menopause education active control	197; 98 vs. 99	40–60; 52.0 (3.1)	60.9% perimenopausal; 39.1% postmenopausal	GCS	Mindfulness (FFMQ)	Symptoms improved over time for both groups; MBSR was more effective than active control in reducing overall menopausal symptoms (but not its subscales), and improving the mindful observation subscale of mindfulness (but not the other four subscales of mindfulness).
Quasi-experimental studies								
Iioka and Komatsu (2015)	Japan	3-week stress management program to aid living with menopause vs. self-guided learning	95; 55 vs. 42	40–59; 49.7	23.1% vs. 46.3% premenopausal; 28.9% vs. 22.0% perimenopausal; 48.1% vs. 31.7% postmenopausal	MSAC	Personal growth and self-acceptance (subscales of PWBS); One item happiness (on VAS)	Personal growth, self-acceptance and happiness did not significantly differ between groups at baseline; Personal growth and happiness improved between baseline and posttest in the experimental group versus the control group, but not on the other time-points or overall trajectories up to 1 month follow-up; Menopausal symptoms improved significantly more in the experimental group compared to control, but only between baseline and follow-up.

Table 2 (continued)

Author, year	Country	Intervention	*N*	Age range; M age (SD)	Menopausal status	Menopausal outcomes	Wellbeing outcomes	Relevant key findings
Jalambadani (2020)	Iran	6-week mindfulness-based art therapy vs. no intervention	104; 52 vs. 52	50–60; 60.8 (3.5) in intervention group, 60.4 (3.8) in control group	100% postmenopausal	-	Spiritual growth and interpersonal relations (subscales of HPLP-II)	Spiritual growth and interpersonal relations improved significantly more in the intervention group compared to control.
Nazari et al. (2016)	Iran	4 sessions health promoting lifestyle education program vs. no intervention	200; 100 vs. 100	45–60	100% postmenopausal	MRS	Spiritual growth and interpersonal relations (subscales of HPLP-II)	Spiritual growth and interpersonal relations improved significantly more in the intervention group compared to control; Menopausal symptoms decreased significantly more in the intervention group compared to control.
Rathnayake et al. (2019)	Sri Lanka	8-week lifestyle modifications (diet and physical activity) and health education of 1 h per week	72; 37 vs. 35	54.6 (5.4) in intervention group, 56.5 (3.4) in control group	100% postmenopausal	MRS	Spiritual growth and interpersonal relations (subscales of HPLP-II)	Spiritual growth and interpersonal relations improved significantly more in the intervention group compared to control up to 6 months follow-up; Menopausal symptoms significantly decreased more up to 6 months follow-up in the intervention group compared to control; The largest changes occurred between posttest and 6-months follow-up.

Table 2 (continued)

Author, year	Country	Intervention	*N*	Age range; M age (SD)	Menopausal status	Menopausal outcomes	Wellbeing outcomes	Relevant key findings
Sener and Tashan (2021)	Turkey	8-week MBSR vs. no intervention	118; 55 vs. 63	45–70; 56.2 (5.4) intervention group; 56.1 (8.9) control group	100% postmenopausal	MRS; MENQOL	Mindfulness (MAAS)	Mindfulness increased significantly more in the intervention group compared to control; Only for psychological complaints (but not somatic or urogenital complaints), the intervention was also more effective compared to control; Menopause related quality of life was significantly more improved in the intervention group compared to control, except for the sexual domain.
Jang and Lee (2023)	South Korea	5-week positive psychology program vs. no intervention	47; 24 vs. 23	50–60	-	MENQOL	Self-compassion (SCS); Flourishing (PERMA-profiler); Engagement of new goals; Adaptive goal disengagement	The positive psychology program resulted in greater reductions up to 4-weeks follow-up in menopause self-awareness symptoms and rumination of regret, and higher scores for self-compassion, overall wellbeing, engagement of new goals and adaptive goal disengagement compared to control.
Zamani Zarchi et al. (2020)	Iran	8-week mindfulness training vs. no intervention; they were randomly allocated but did not follow RCT in method/results	28; 14 vs. 14	48–64	100% postmenopausal	-	Psychological wellbeing (PWBS)	The mindfulness training led to significant more improvement in all aspects of psychological wellbeing (autonomy, environmental mastery, personal growth, positive relations with others, self-acceptance and purpose in life) compared to no intervention. Unclear if there is a typo in the table which would mean that purpose in life decreased more in the experimental group compared to control.
Pre-post intervention study								

Table 2 (continued)

Author, year	Country	Intervention	*N*	Age range; M age (SD)	Menopausal status	Menopausal outcomes	Wellbeing outcomes	Relevant key findings
Carmody et al. (2006)	USA	7-week MBSR intervention study	14	48.5–60.7; 53.7 (3.7)	Peri- and postmenopausal women experiencing at least 7 hot flushes each day on the majority of the past 30 days and no menses in past 3 months	Daily HF log; MENQOL; HFRS	Mindfulness (TMS); Mindfulness practice daily log	78% practiced in each of the 7 weeks for an average of at least 45 min per day; The scores on mindfulness improved significantly from pre- to post-intervention.
Koçak and Beji (2019)	Turkey	4-week health promoting lifestyle education program of 2 sessions vs. no intervention	64; 32 vs. 32	40–65	100% postmenopausal	MRS	Spiritual growth and interpersonal relations (subscales of HPLP-II)	Menopausal symptoms significantly reduced in the experimental group between pre- and posttest; Interpersonal relations significantly reduced in the control group between pre- and posttest. No between group differences were tested.
Yidizhan and Aggon (2020)	Turkey	8-week Pilates exercises vs. no intervention	36; 21 vs. 15	50.1 (exp. group); 51.9 control group)	100% postmenopausal	-	Overall emotional wellbeing (SWS)	Practicing Pilates showed significant improvements on subjective wellbeing after 8 weeks, while the control group did not significantly change over time. However, mean scores were still lower in the intervention group than in the control group, but between-group differences were not tested.
Longitudinal Case Study								
Gulia & Shreedharan, 2022	India	24-weeks of yoga-Nidra practice and exercise module	1	56	Postmenopausal for 5 years	-	Mood during the day (very bad – very happy)	After 5 weeks of yoga-Nidra practice (of the 24 weeks interventions), daytime mood shifted toward a happier state.

2.6.6 Emotional Wellbeing

Ten articles reported one or more emotional wellbeing outcomes, including positive emotions ($n=4$), overall emotional wellbeing ($n=3$), life-satisfaction ($n=2$), and happiness ($n=2$). Eight of these studies showed improved emotional wellbeing over time (Gulia & Sreedharan, 2022; Terikani et al., 2025; Yidizhan & Aggon, 2020) and in comparison with control (Aparicio et al., 2021; Elavsky & McAuley, 2007; Hu et al., 2017; Khodadadi et al., 2023; Mehrabi et al., 2021), although one study found effects only between baseline and posttest, not on longer trajectories (Iioka & Komatsu, 2015). By contrast, a 2-week menopausal symptom monitoring intervention showed no significant effect on positive emotions compared to control (Andrews et al., 2023). Interestingly, most interventions including an emotional wellbeing outcome investigated the efficacy of a physical activity intervention and only one of them a mindfulness-based intervention.

2.6.7 Social Wellbeing

No social wellbeing outcomes were included in the intervention studies.

2.6.8 Psychological Wellbeing

Contrary to the longitudinal and ESM studies, most intervention studies included one or more psychological wellbeing related outcomes ($n=18$). This may be due to the types of interventions investigated, as mindfulness ($n=6$) was one of the outcomes used. Four studies stem from a meta-analysis of the Health-Promoting Lifestyle Profile-II questionnaire (HPLP-II; Moshfeghy et al., 2023), which includes spiritual growth and interpersonal relations subscales. Other psychological wellbeing related outcomes were optimism, resilience, self-acceptance, personal growth, self-compassion, goal attainment, and overall psychological wellbeing.

Most psychological wellbeing outcomes improved significantly over time (Carmody et al., 2006; El-Hawy et al., 2023) and compared to control (Amin et al., 2025; Bala et al., 2024; Garcia et al., 2018; Gordon et al., 2021; Jalambadani, 2020; Jang & Lee, 2023; Moshki et al., 2018; Nazari et al., 2016; Orhan & Yagmur, 2025; Rathnayake et al., 2019; Sener & Tashan, 2021; Zamani Zarchi et al., 2020). However, three studies showed mixed results. Wong et al. (2018) reported improvements on the mindfulness observation subscale in favor of an 8-week MBSR intervention compared to active control, but not on the other four subscales of mindfulness. A 3-week stress management program to aid living with menopause showed improved personal growth between baseline and posttest compared to self-guided learning, but not on self-acceptance and also not on other time points or overall trajectories up to 1 month follow-up (Iioka & Komatsu, 2015). Finally, one study comparing a walking intervention with a yoga intervention and waitlist control condition demonstrated that those women with higher levels of optimism at baseline experienced greater reductions in vasomotor symptoms over time in all conditions than women with lower levels of optimism, but no effect of optimism was found on psychological, somatic, and sexual menopausal symptoms (Elavsky & McAuley, 2009).

2.7 Cross-Sectional Studies

Of the 92 cross-sectional studies, 28 were excluded from Table 3 as they did not relate wellbeing to menopausal symptoms or status. The narrative description of the cross-sectional results is about the remaining 64 studies.

2.7.1 Flourishing

Multidimensional wellbeing was assessed in five cross-sectional studies. Results demonstrated a negative relation between flourishing and menopausal symptoms, with two studies showing lower levels of flourishing in perimenopausal women compared to postmenopausal women (Hashiguchi et al., 2020; Hickey et al., 2017). One study used Keyes' MHC-SF and showed that peri- and postmenopausal women who were flourishing in combination with low levels of depression and anxiety (34.5% of the sample), reported significantly fewer menopausal symptoms and were more likely to report improvement or stabilization of menopausal symptoms over time compared to women who were not flourishing (Branquinho et al., 2025).

2.7.2 Emotional Wellbeing

27 cross-sectional studies measured emotional wellbeing, primarily life-satisfaction ($n=19$) and positive affect ($n=9$). Mainly no significant differences in emotional wellbeing were found between peri- and postmenopausal stages. Only one study showed that women who were 0–2 years postmenopausal scored significantly lower on life satisfaction then those pre-, peri- or more than 2 years postmenopausal (Alarape et al., 2001). By contrast, all except one of the studies assessing menopausal symptoms showed a negative relationship between emotional wellbeing and menopausal symptoms like hot flushes and night sweats.

2.7.3 Social Wellbeing

Two cross-sectional studies measured social wellbeing. The study of Sharma and Negi (2025) focused solely on the five dimensions of social wellbeing as defined by Keyes (1998) and found a negative relation between social wellbeing and menopausal symptoms. The other study measured one dimension of social wellbeing (Caltabiano & Holzheimer, 1999) and reported that a high sense of coherence was related with fewer menopausal symptoms and more problem-focused coping.

2.7.4 Psychological Wellbeing

In 33 cross-sectional studies, one or more psychological wellbeing measures were included with the majority assessing resilience ($n=11$), self-compassion ($n=8$), optimism ($n=6$), and purpose or meaning in life ($n=4$). A similar pattern was found as for emotional wellbeing, namely that psychological wellbeing did mainly not significantly differ between menopausal stages, while all but three studies showed a negative relation between psychological wellbeing and menopausal symptoms. When significant differences in menopausal stages were found, women in perimenopause scored significantly lower on resilience compared to

Table 3 Overview of the included cross-sectional studies with findings about the relation between wellbeing and menopausal symptoms or status

Author, year	Country	*N*	Age range; M age (SD)	Menopausal status	Menopausal outcomes	Wellbeing outcomes	Key findings about relation wellbeing and menopausal symptoms or status
Abdel-rahman, Abushai-kha, & al-Motlaq (2014)	Jordan	193	40–55; 45 (4.5)	69.4% premeno-pausal; 18.1% perimeno-pausal; 12.4% postmenopausal	GCS	Purpose in life and Self-acceptance (subscales of PWI)	Purpose in life and self-acceptance did not differ per menopausal stage; Positively worded items were rated higher than negatively worded items; There were negative correlations between meno-pausal symptoms and purpose in life ($r=-.35$) and self-acceptance ($r=-.42$).
Alarape et al. (2001)	Nigeria	188	26–66; 50.9 (11.4)	34.0% pre/peri menopausal; 39.4% < 2 years postmenopausal; 26.6% > 2 years postmenopausal	-	Life satisfaction (Modified version of Neugarten's scale)	The group between 0 and 2 years after menopause scored signifi-cantly lower on life-satisfaction than the other groups; Women who experienced menopause late (75%) scored significantly lower on life-satisfaction then those who experienced menopause on time (25%).
Allahver-dipour, Karimza-deh, Alizadeh, Jafar-abadi, & Javadiva-la (2021)	Iran	300	40–60	61.6% pre-menopausal; 35% perimeno-pausal; 3.4% postmenopausal	-	Happiness (OHQ)	On average, 58% of the women had high happiness scores; in the premenopausal group, 65.1% had high happiness scores, in the perimenopausal group 58.2% and in the postmenopausal group 50%; There were no significant differences in happiness scores among menopausal status groups.
Arar and Erbil (2023)	Turkey	381	40–64; 54.0 (6.10)	67.5% postmenopausal	MRS	One item enjoy-ment of life	There was a large positive correlation between menopausal symp-toms and enjoyment of life ($r=.80$), which means in this case that the more severe menopausal symptoms were experienced, the more enjoyment of life was negatively impacted.
Asiamah et al., 2024	UK	324	Unclear; 59.7 in text, 49.7 in table	-	MRS	Flourishing (WHO-5)	Menopausal symptoms were negatively related with flourish-ing; Physical activity had a positive indirect effect on wellbeing through menopausal symptoms, stress, anxiety and depression.

Table 3 (continued)

Author, year	Country	*N*	Age range; M age (SD)	Menopausal status	Menopausal outcomes	Wellbeing outcomes	Key findings about relation wellbeing and menopausal symptoms or status
Ayranci et al. (2010)	Turkey	1551	40–65; 49.1 (6.4)	17.5% premenopausal; 17.7% perimenopausal; 53.1% natural postmenopausal; 11.7% surgical postmenopausal	GCS and more menopausal symptoms; Attitudes	Prime of life	Over 85% of the women agreed with positive attitude statements in a way that they seem happy to not have to wait for monthly bleeding, use sanitary equipment, take birth control methods and risk pregnancy; 89% of the women felt herself to be in the prime of life.
Bién et al., 2024	Poland	516	41–60; 50.24 (3.96)	-	MENQOL	Life satisfaction (SWLS)	Life satisfaction (r=−.11; p=.016) negatively correlated with the severity of menopausal symptoms; Only the subscales psychosocial menopausal symptoms (r = -.15) and sexual symptoms (r = -.10) and marginally vasomotor symptoms (r=−.08, p =.064) were significantly negatively related with life satisfaction.
*Bondarev et al. (2020)	Finland	1098	47–55; means varied from 50.3 (1.7) to 52.3 (2.0) per menopausal status	28% premenopausal; 37% perimenopausal; 35% postmenopausal	Hormones; vasomotor symptoms	Life satisfaction (SWLS); Positive emotions (PANAS-SF)	Life-satisfaction and positive affect did not significantly differ between menopausal groups; Menopausal status was not a significant predictor of life-satisfaction or positive affect although menopausal symptoms were increasingly experienced per menopausal stage (from 55% in premenopausal stage to 91% in postmenopausal stage).
Branquinho et al., 2025	Portugal	577	45–55; 50.12 (2.81)	66.6% perimenopausal; 33.4% postmenopausal	Cervantes Scale (CS-10)	Flourishing (MHC-SF)	Four mental health profiles were identified: impaired mental health (IMH; elevated depressive and anxiety symptoms and low positive mental health; 9%); threatened mental health (TMH; mild depressive and anxiety symptoms and low positive mental health; 27.4%); moderate mental health (MMH; low depressive and anxiety symptoms, and moderate positive mental health; 29.1%); complete mental health (CMH; low depressive and anxiety symptoms and high positive mental health; 34.5%). Significant differences between profiles were found, with women in the IMH profile reporting the highest levels of menopausal symptoms, insomnia severity, lower sexual functioning, and greater negative impact on work life, romantic relationships, and overall health and well-being. Menopausal stages did not significantly differ between profiles.

Table 3 (continued)

Author, year	Country	*N*	Age range; M age (SD)	Menopausal status	Menopausal outcomes	Wellbeing outcomes	Key findings about relation wellbeing and menopausal symptoms or status
*Brown, Bryant, Brown, Bei, & Judd (2014)	Australia	206	40–60; 53.6 (5.5)	14.6% premenopausal; 12.6% perimenopausal; 71.8% postmenopausal	HFNS; HFI	Self-Compassion (SCS)	Higher levels of self-compassion were associated with less HFNS frequency ($r=-.23$) and interference ($r=-.49$); Self-compassion was a direct predictor of HFNS interference but not HFNS frequency; Self-compassion was a powerful moderator of the relationship between HFNS frequency and interference of HFNS in daily life.
*Brown, Bryant, Brown, Bei, & Judd (2015b)	Australia	206	40–60; 53.6 (4.0)	14.6% premenopausal; 12.6% perimenopausal; 71.8% postmenopausal	HFNS; HFI; MRQ	Flourishing (WEMWBS); Self-compassion (SCS); Positive emotions (PANAS); Life satisfaction (SWLS)	Menopausal stage was independent of all outcomes and therefore not included in multivariate models; Mental wellbeing and self-compassion were negatively correlated with HFNS frequency ($r=-.17$ and -0.27); All positive outcomes were negatively correlated with HFI ($r=-.34$ and -0.51) and positively correlated with positive attitudes ($r=.38$ and 0.50); Self-compassion explained between 2 and 10% of unique variance above menopausal factors and demographics; Psychological aspects of menopause were more closely associated with wellbeing than physiological aspects including HFSN frequency and menopausal stage.
*Brown, Brown, Judd, & Bryant (2018)	Australia	387	40–60	13.9% premenopausal; 12.3% perimenopausal; 73.9% postmenopausal	MRQ; emotional representations of the menopause (items IPQ reframed to menopause)	Some items positively phrased, with words such as "relief", "pleased", "content", "coping well" and "confident".	The highest rated items about cognitive and emotional representations of menopause were positively framed; The majority of women endorsed the statements "I am pleased that my periods have come to an end" and "Overall I feel I'm coping reasonably well with my menopause"; Postmenopausal women had a significantly more positive cognitive representation of the menopause relative to perimenopausal women, and a more positive emotional representation relative to peri- and premenopausal women.

Table 3 (continued)

Author, year	Country	*N*	Age range; M age (SD)	Menopausal status	Menopausal outcomes	Wellbeing outcomes	Key findings about relation wellbeing and menopausal symptoms or status
Caltabiano and Holzheimer (1999)	Australia	176	54	All peri or postmenopausal	Attitudes; Menopausal adaptation; Coping with menopause (COPE)	Optimism (LOT-R); Sense of Coherence (SOC)	Women with a strong sense of optimism or with high sense of coherence (SOC) reported fewer menopausal symptoms, explained variance was 11.2% for optimism and 7.7% for SOC when controlled for emotional stability; Optimistic women strongly endorsed attitudinal statements like ‘the menopause can be a time of personal growth for a woman’; Optimism and SOC were positively related with problem-focused coping but not emotion-focused coping indicating that women with an optimistic outlook engaged in direct attempts to master any problems experienced during the menopause.
Castiglione, Licciardello, & Rampullo (2015)	Italy	188	45–55; 49.5 (3.4)	48% premenopausal; 52% postmenopausal	-	Actual and future life-satisfaction (feeling thermometer 1–100)	Women were generally satisfied with life and believed that their level of satisfaction could further increase in the future; Menopausal status was not significantly associated with the levels of actual and future life-satisfaction.
Chedraui et al. (2012)	Ecuador	904	40–59; 49	26.5% premenopausal; 22.3% perimenopausal; 51.1% postmenopausal	One item HFS	Resilience (WYRS)	Resilience was significantly and inversely related with more severe hot flushes (r = -.11).
*Collins and Landgren (1994)	Sweden	1324	48	73% premenopausal; 21% postmenopausal	MENSI	Three items positive emotions (happiness, harmony and vitality)	No significant differences were found between menopausal status and wellbeing; Wellbeing was significantly associated only with regular physical exercise (β=0.15) and absence of vasomotor symptoms (β=0.11) which explained 0.03% of the total variance.
Converso et al. (2019)	Italy	94	53.6 (7.2)	Unclear all peri- or postmenopausal	MENQOL	Optimism (LOT); Resilience (CD-RISC)	Optimism and resilience were significantly and negatively associated with menopausal symptoms (r=−.33 and r=−.44 respectively); Optimism and resilience buffered the detrimental effects of menopausal symptoms on depersonalization, but not on emotional exhaustion.

Table 3 (continued)

Author, year	Country	*N*	Age range; M age (SD)	Menopausal status	Menopausal outcomes	Wellbeing outcomes	Key findings about relation wellbeing and menopausal symptoms or status
Coronado et al. (2015)	Spain	227	40–65; 52.4 (8.7)	26.9% premenopausal; 20.3% perimenopausal; 52.9% postmenopausal	MRS	Resilience (RS-14)	Resilience was significantly lower for perimenopausal women than for pre- or postmenopausal women (p <.01); Lower levels of resilience was significantly related to more severe menopausal symptoms (β = −0.32); Lower resilience scores were predicted by being perimenopausal (OR = 4.76, 95%CI = 1.69–13.39).
Coronado et al. (2021)	Spain	2430	40–70; 56.9 (5.8)	15.2% perimenopausal; 84.8 postmenopausal	Cervantes-SF	Resilience (RS-14)	Resilience did not significantly differ between peri- and postmenopausal women during covid-19.
Davison, Bell, LaChina, Holden, & Davis (2009)	Australia	295	18–65; 55.5 (5.4) postmenopausal group (39.6, 6.7 for premenopausal group)	55% premenopausal; 45% postmenopausal	-	Positive emotions (PGWB)	Pre- and postmenopausal women did not significantly differ in their level of positive emotions.
Deeks and McCabe (2004); Study 1	Australia	304	35–65 with at least one child; 47.8	39.4% premenopausal; 25% perimenopausal; 35.6% postmenopausal	-	Purpose in life and Self-acceptance (subscales of PWI)	Premenopausal women expected that they would have higher purpose in life and self-acceptance in the future than peri- and postmenopausal women, but when age was taken into account, no significant differences were found.
*Dennerstein et al. (1994)	Australia	1503	45–55; 50 (median)	Not reported	Attitudes	Positive emotions (Affectometer 2)	Positive affect was not significantly related to menopausal status and vasomotor symptoms; Women who were current or past sufferers of pre-menstrual complaints scored lower on positive affect; Women with higher positive affect reported in general more positive attitudes toward menopause.
*Elavsky and McAuley (2005)	USA	133	44–60; 51.1 (4.1)	22.6% premenopausal; 32.3% perimenopausal; 45.1% postmenopausal	MSL	Life satisfaction (SWLS)	Satisfaction with life did not significantly differ between menopausal stages; Life-satisfaction was significantly and negatively associated with symptom frequency (r = −.43) and symptom severity (r = −.40).

Table 3 (continued)

Author, year	Country	*N*	Age range; M age (SD)	Menopausal status	Menopausal outcomes	Wellbeing outcomes	Key findings about relation wellbeing and menopausal symptoms or status
* Falkingham, Evandrou, Qin, & Vlachantoni (2021)	China (CHARLS)	4803	45–59; 52.0 (4.3)	36.5% premenopausal; 63.5% postmenopausal	Self-reported signs of menopause	Three items positive emotions (enthusiastic, content, happy)	Positive emotions did not significantly differ between menopausal status groups.
Fernandez-Alonso et al. (2012)	Spain	182	40–65; 51.0 (9.0)	27.5% premenopausal; 17% perimenopausal; 55.5% postmenopausal	MRS	Life satisfaction (LSI-A)	Life-satisfaction was negative and significantly correlated with menopausal symptoms (rs = −0.39), and strongest with the psychological menopausal symptoms subscale (rs = −0.46); A multiple regression model showed that psychological menopausal symptoms predicted lower life-satisfaction (together with severe economic problems, BMI and loneliness).
France, Lee, & Schofield (1996)	Australia	258	51–60	10.2% pre- or perimenopausal; 89.8% postmenopausal	Some items MAQ	Positive emotions (PANAS)	Positive affect was not significantly different between groups of HRT (non)users or menopausal status groups; Positive affect was predicted by the number of menopausal symptoms ever experienced ($r2 = 0.07$) and attitudes towards HRT use ($r2 = 0.09$).
*Gallicchio, Miller, Zacur, & Flaws (2009)	USA	532	45–54	100% pre- or perimenopausal	Menopause symptoms	Life satisfaction (Cantril's self-anchoring ladder of life)	The number of menopausal symptoms were significantly higher for African-American women then for Caucasian women (p =.02); Higher levels of life-satisfaction was significantly related to fewer menopausal symptoms at present (p <.001) and in the past (p =.01), but not with expected symptoms in the future (p =.20); 3 or 4 menopausal symptoms (OR = 3.13. 95%CI = 1.65–5.97) or >4 menopausal symptoms (OR = 3.58; 95%CI = 1.89–6.75) were significantly associated with reduced levels of life-satisfaction in comparison to having 0–2 menopausal symptoms.
Martinez Garduno et al (2012)	Mexico	300	45–59; 51.0 (4.1)	50% perimenopausal; 50% postmenopausal	-	Life satisfaction (SWLS)	Life-satisfaction did not significantly differ between perimenopausal and postmenopausal women.

Table 3 (continued)

Author, year	Country	*N*	Age range; M age (SD)	Menopausal status	Menopausal outcomes	Wellbeing outcomes	Key findings about relation wellbeing and menopausal symptoms or status
Gerdes (1980)	South Africa	77	40–60; 51.1 (symptomatic group); 49.8 (asymptomatic group)	All climacteric	Gynecological symptoms	Self-acceptance; general contentment and positive attitude (unclear how measured)	Menopausal symptoms were significantly associated with more negative attitudes toward menopause (r =.40) and less self-acceptance (r =.32) and contentment (r =.33); The symptomatic group scored significantly lower on self-acceptance and contentment then the asymptomatic group (p <.01); Those women who could be considered as more resilient had high levels of self-acceptance, moderate to high levels of contentment, high levels of life-fulfilment, minimal and usually specific (e.g. hot flushes) physical menopausal symptoms, infrequent or mild psychological menopausal symptoms, a neutral or positive attitude towards menopause and informed knowledge about menopause.
Hashemipoor, Jafari, & Zabihi (2019)	Iran	282	45–55	49.6% premenopausal; 50.4% postmenopausal	-	Psychological wellbeing (PWBS)	The level of psychological wellbeing did not significantly differ between pre- and postmenopausal women; In premenopausal women, vulnerability, isolation and subjugation schemas were related to psychological wellbeing; In postmenopausal women were defective, self-control, dependence, self-approval, and isolation schemas associated with psychological wellbeing.
Hashiguchi et al. (2020)	Japan	170	40–60; 49.1 (5.4)	19.4% premenopausal; 48.2% perimenopausal; 32.4% postmenopausal	Kupperman Kohnenki Shogai Index (KKSI)	Flourishing (WEMWBS); Mindfulness (FFMQ); Self-compassion (SCS)	Menopausal status and menopausal symptoms were significantly associated with mindfulness (r=−.28), self-compassion (r=−.39) and wellbeing (r=−.30); Self-compassion predicted menopausal symptoms, although acceptance was a stronger predictor.
Hickey et al. (2017)	Australia	1085	40–73; 51.3 (7.4)	25% premenopausal; 21% perimenopausal; 52% postmenopausal	MRS	Flourishing (WEMWBS);	Mental wellbeing was significantly higher in postmenopausal women than in perimenopausal women (p=<0.05), but not significantly higher compared to premenopausal women.

Table 3 (continued)

Author, year	Country	N	Age range; M age (SD)	Menopausal status	Menopausal outcomes	Wellbeing outcomes	Key findings about relation wellbeing and menopausal symptoms or status
*Houston, Brown, Jones, Amonoo, & Bryant (2023)	Australia	274	40–65; 57.5 (5.5)	8.4% premenopausal; 5.8% perimenopausal; 55.8% postmenopausal	HFNS; HFI	Self-compassion (SCS)	Self-compassion did not significantly differ between the group with and without HFNS; Self-compassion was significantly and negatively associated with HF interference (rs = −0.32).
Hunter and Chilcot (2013)	UK	140	53.1 (5.4)	40% perimenopausal; 60% postmenopausal	HFRS; HFNS beliefs	Optimism (LOT-R)	The women reported on average 63 HFNS per week, they reported hot flushes for an average of 3.9 years; Optimism was significantly associated with HFNS problem rating; Optimism indirectly predicted HFNS problem rating via HFNS frequency (b = 0.03).
Hunter et al. (2013)	Chile, Ecuador, Panama, Spain	896	45–55; 50.5 (3.3)	44.9% perimenopausal; 55.1% postmenopausal	HFRS	One item life-satisfaction	71.5% rated themselves as mostly satisfied with life, 23% mixed (neither satisfied nor unsatisfied) and 5% as dissatisfied; 58.5% experienced HFNS; Hot flushes were more frequent (β = 5.91) and reported as being more problematic (β = 0.42) when life-satisfaction was lower.
Jeon & Lee, 2025	South Korea	200	44–55	31.5% premenopausal; 28.0% perimenopausal; 40.5% postmenopausal	One item menopausal symptoms (no, mild, moderate, severe)	Resilience (BRS)	Perimenopausal women had significantly lower levels of resilience compared to women at least 2 years postmenopausal; Women with severe, moderate and mild symptoms scored significantly lower on resilience than women with no menopausal symptoms; No significant differences were found for resilience when comparing severe with moderate or mild symptoms.
*Jones, Brown, Houston, & Bryant (2021)	Australia	109	45–66; 57.4 (5.4)	7.4% premenopausal; 3.7% perimenopausal; 89% postmenopausal	HFNS; HFI	Self-compassion (SCS)	Higher levels of self-compassion and its positive subscale were significantly associated with less HF interference (r = −.30 and −0.19), but not with frequency of HFNS; The level of self-compassion did not significantly differ in this subgroup of women experiencing HFNS compared to a larger sample of midlife women (N = 519).
Kim & Kim, 2024	South Korea	276	50.43 (5.56)	-	MENSI	Life satisfaction (SWLS)	A significant negative correlation (r = −.70) was found between menopausal symptoms and life-satisfaction.

Table 3 (continued)

Author, year	Country	N	Age range; M age (SD)	Menopausal status	Menopausal outcomes	Wellbeing outcomes	Key findings about relation wellbeing and menopausal symptoms or status
Kim and Park (2018)	South Korea	256	40–59	61.7% premenopause; 10.9% perimenopause; 27.3% postmenopause	MENSI	Resilience (SER)	Menopausal symptoms were significantly higher among those in peri- and postmenopause compared to premenopause; Aspects of ego-resilience (personal relationship, emotional control, curiosity and positivity) were not significantly related to menopausal symptoms.
Kuck & Hogervorst, 2024	UK	272	40–60; 51.26	13.6% premenopausal; 44.1% perimenopausal; 42.3% postmenopausal	MENQOL	Resilience (BRS)	Resilience did not significantly differ between the menopausal stages.
Lee and Lee (2022)	South Korea	300	45–60; 52.3 (4.2)	28.7% premenopausal; 15.7% perimenopausal; 55.7% postmenopausal	Menopausal management; MRS	Self-compassion (SCS); Psychological wellbeing (PWBS)	Psychological wellbeing did not significantly differ between menopausal stages; Menopausal management (β = -. 26) and menopausal symptoms (β = −0.13) were associated with psychological wellbeing.
Lee et al., 2024	South Korea	993	45–65	-	MENQOL	Life satisfaction (SWLS)	There was a significant negative association between menopausal symptoms and life satisfaction (r=−.43); Life satisfaction was a significant mediator of the relationship between menopausal quality of life and aging anxiety.
Lim, Lee, & Lee (2005)	South Korea	235	40–59; 48.1 (6.3)	-	MSI	Life satisfaction (LSI-Z)	Life-satisfaction was negative and significantly correlated with menopausal symptoms (r=−.28).
McLeod et al. (2022)	New Zealand	470	40	78% premenopausal; 20% perimenopausal; 2% postmenopausal	-	One item life satisfaction	The level (lowest quartile) of life-satisfaction did not significantly differ between pre-, peri- and postmenopause.

Table 3 (continued)

Author, year	Country	N	Age range; M age (SD)	Menopausal status	Menopausal outcomes	Wellbeing outcomes	Key findings about relation wellbeing and menopausal symptoms or status
Miller, Wilbur, Montgomery, & Chandler (1998)	USA	107	35–65	54% premenopausal; 14% perimenopausal; 22% postmenopausal; 10% hysterectomy	Hormones	Life satisfaction (ABS)	Life-satisfaction did not significantly differ by menopausal status.
Oliva et al. (2022)	Spain	101	50–58; 54.4	All were on late menopausal transition or in early postmenopause (3.5–60 months since last menstrual period)	Cervantes-SF	Resilience (WYRS)	Resilience scores did not significantly differ in those women who used hormone or nonhormonal treatment for climacteric symptoms and those who did not use such treatment; Menopause-related quality of life was significantly worse in women with low resilience compared to women with mid-high resilience (p =.004).
Ornat et al. (2013)	Spain	260	40–59; 47 (median)	33.1% premenopausal; 23.5% perimenopausal; 26.9% postmenopausal; 16.5% hormonal contraception	MRS	Life satisfaction (SWLS)	The median satisfaction with life scores did not significantly differ by menopausal status; Significant negative correlations were found between menopausal symptoms and life-satisfaction (rs = −0.33 for total scale; rs = −0.24 for somatic subscale, rs = −0.36 for psychological subscale, rs = −0.19 for urogenital subscale); Life-satisfaction was predicted by - among other things - less severe menopausal symptoms.
Park (2020)	South Korea	176	55–60; 55.2	-	MSI	Resilience (CD-RS)	Menopausal symptoms were negatively correlated with resilience (r = −.21); Health-promoting lifestyle mediated the relationship between menopausal symptoms and resilience.
Perez-Lopez et al. (2014)	Spain	169	48–68; 54 (median)	100% postmenopausal	MRS	Resilience (WYRS)	Severe menopausal symptoms were present in 35% of the women; Lower resilience was significantly related with more severe menopausal symptoms, rs = −0.25 for the total scale, rs = −0.30 for the psychological subscale and rs = −0.16 for the urogenital subscale.

Table 3 (continued)

Author, year	Country	*N*	Age range; M age (SD)	Menopausal status	Menopausal outcomes	Wellbeing outcomes	Key findings about relation wellbeing and menopausal symptoms or status
Pimenta et al. (2014)	Portugal	710	42–60; 47.6 (3.8) for perimenopausal; 53.9 (4.2) for postmenopausal	42% perimenopausal; 58% postmenopausal	MSSI-38	Spirituality (SWQ)	81.1% of postmenopausal women reported to have had recent psychological problems versus 14.8% of perimenopausal women; Spirituality was significantly and inversely related with vasomotor symptoms ($\beta = -0.13$).
Sharma & Negi, 2025	India	224	50–60; 54	100% postmenopausal	MRS	Self-compassion (SCS); Social wellbeing (SWBS)	Menopausal symptoms were significantly negative related with social wellbeing ($r = -.80$) and 4 of the 5 subscales.
Çetinkaya & Yasar, 2025	Turkey	290	49 (8.1)	100% postmenopausal	ATM, MSAS	Psychological wellbeing (PWBS)	Psychological wellbeing was not significantly related with menopausal symptoms, but positively related with attitudes toward menopause ($r = .55$); Attitudes toward menopause was negatively related with menopausal symptoms ($r = -.42$); Psychological wellbeing was found to be significantly higher in those with a positive menopausal attitude and significantly lower in those experiencing higher menopausal symptoms.
Sood et al. (2019)	USA	1744	40–65; 53.4 (6.1)	-	MRS	Mindfulness (MAAS)	Higher mindfulness scores were significantly related to lower menopausal symptoms ($\beta = -1.16$ for the total scale, $\beta = -0.48$ for psychological symptoms, $\beta = -0.49$ for urogenital symptoms, $\beta = -0.39$ for somatic symptoms); This negative relation between mindfulness and menopausal symptoms was stronger when perceived stress was higher.
Sosa-Ortega, Lagunes-Córdoba, Martínez-Garduño, & Marván (2022)	Mexico	342	45–55; 49.2 (3.1)	73.7% perimenopausal; 26.3% postmenopausal	GCS	Meaning in life (DSML); Life satisfaction (SWLS)	Lower levels of meaning in life was significantly related with more psychological symptoms ($r = .49$), somatic symptoms ($r = .30$) and sexual symptoms ($r = .20$); Life-satisfaction was significantly and negatively related with psychological symptoms ($r = -.47$), somatic symptoms ($r = -.25$) and sexual symptoms ($r = -.13$); In regression models, meaninglessness was a stronger predictor of psychological symptoms than life-satisfaction or the only significant predictor of somatic and sexual symptoms.

Table 3 (continued)

Author, year	Country	*N*	Age range; M age (SD)	Menopausal status	Menopausal outcomes	Wellbeing outcomes	Key findings about relation wellbeing and menopausal symptoms or status
Steffen and Soto (2011)	USA	218	45–70; 55	35% premenopausal; 26% perimenopausal; 39% postmenopausal	WHQ	Spirituality (FACIT); Benefit Finding questionnaire adjusted to menopause	Spirituality (spiritual strength, peace/meaning and additional spiritual concerns) was significantly negative related to menopausal symptoms ($r=-.22$, $r=-.54$ and $r=-.40$ respectively) regardless of menopausal status; Higher levels of spirituality was related to increased positive attitudes about having experienced the menopause (benefit finding during menopause, $p<.001$).
*Süss, Willi, Grub, & Ehlert (2021a)	Switzerland	129	40–56; 48.6	100% perimenopausal	MRS-II; Hormones	Optimism (LOT-R); Self-compassion (SCS); Life satisfaction (SWLS)	Women with higher progesterone levels experienced significantly higher life-satisfaction than women with lower progesterone levels ($\beta=0.24$) and also higher levels of a composite resilience score consisting of optimism and self-compassion with emotional stability, emotion regulation and self-esteem ($\beta=0.27$).
*Süss, Willi, Grub, & Ehlert (2021b)	Switzerland	135	45–56; 48.6 (3.9)	100% perimenopausal	MRS-II	Optimism (LOT-R); Self-compassion (SCS); Life satisfaction (SWLS)	A higher composite score for resilience (optimism, self-compassion, emotional stability, emotion regulation and self-esteem) was associated with higher life-satisfaction ($\beta=0.39$) and milder menopausal complaints ($\beta=-0.41$).
Szpak et al. (2018)	Poland	60	45–55	55% pre-menopausal; 45% peri- or postmenopausal	-	Optimism (LOT-R)	48.3% of women aged 45–55 years showed a pessimistic attitude, 20% showed an optimistic attitude; In comparison to women aged 25–35 years, perimenopausal women were more pessimistic ($p=.01$).
Zarvekanloo et al., 2023	Iran	300	45–60 (56.4 (4.1)	100% postmenopausal	MRS	Spiritual growth and interpersonal relations (subscales of HPLP-II)	Spiritual growth was significantly negative related to menopausal symptoms ($r=-.26$) but interpersonal relations was only significantly negative related with psychological menopausal symptoms ($r=-.14$) and not with the other subscales or total score.

Table 3 (continued)

Author, year	Country	N	Age range; M age (SD)	Menopausal status	Menopausal outcomes	Wellbeing outcomes	Key findings about relation wellbeing and menopausal symptoms or status
Zhao et al. (2019)	China	732	40–60; 50.3 (5.8)	60.5% perimenopausal; 39.5% postmenopausal	MRS	Resilience (CD-RS)	76.4% experienced menopausal symptoms, of which 24.9% mild symptoms; Symptoms were the lowest in the early menopausal transition stage and highest in the early postmenopausal stage; Resilience was significantly and negatively associated with menopausal symptoms (r=−.32) and its subscales for somatic symptoms (r=−.24), psychological symptoms (r=−.32) and urogenital symptoms (r=−.21); Resilience and family support (but not friend support and other support) were significant predictors of the total and different menopausal symptoms, age was also a significant predictor but not for psychological symptoms.
Zhao et al. (2021)	China	797	40–60; 49.8 (5.1)	39.4% premenopausal; 27.1% perimenopausal; 33.5% postmenopausal	MRS	Mindfulness (MAAS)	Four potential classes were identified in middle-aged women: class 1 - severe symptoms (14.9%), class 2 - dominant sleep-emotion symptoms (31.4%), class 3 - physical/mental exhaustion symptoms (32.5%), and class 4 - no symptoms (21.2%); Mindfulness scores differed significantly between classes, with lowest scores for class 1 to highest scores for class 4.
Zhu et al., 2025	Australia	208	35–60; 51.14 (3.42)	100% perimenopausal	MENQOL	Mindfulness (MAAS)	A decreased likelihood of memory decline was significantly associated with higher levels of mindfulness (OR = 0.51, p =.002); Attentional difficulties were more likely to be reported when psychosocial menopausal symptoms were present (OR=2.35, p =.005), and less likely when higher mindfulness was present (OR = 0.37, p <.001).
Zmuda et al. 2025	Poland	267	40–65; 49.6 (4.7)	31.8% premenopausal; 30.3% perimenopausal; 37.8% postmenopausal	MRS; ATM	Life satisfaction (SWLS)	Life satisfaction did not significantly differ among menopausal stages; Life satisfaction was significantly negative related with menopausal symptoms (r=−.49) and negative attitudes toward menopause (r=−.58), and positive related with positive attitudes (r =.46); Women in perimenopause score significantly lower on positive menopausal attitudes and higher on negative attitudes compared to women in pre or postmenopause; Attitudes toward menopause mediated the relationship between menopausal symptoms and life-satisfaction.

pre- and postmenopausal women (Coronado et al., 2015; Jeon & Lee, 2025; Szpak et al., 2018).

2.7.5 Positive Attitudes

Interestingly, studies in which positive attitudes toward menopause were measured demonstrated that postmenopausal women exhibited more positive views on the menopausal transition than perimenopausal women (Brown & Yates, 2018; Zmuda et al., 2025) and that more positive attitudes were significantly related to reporting less menopausal symptoms (Cetinkaya and Yasar, 2025). In addition, a study among 1551 Turkish women showed that 89% of mainly postmenopausal women "felt herself to be in the prime of life" (Ayranci et al., 2010). Some studies found that women who were more optimistic or scored higher on psychological wellbeing or spirituality, also reported more positive attitudes toward menopause (Caltabiano & Holzheimer, 1999; Dennerstein et al., 1994; Cetinkaya and Yasar, 2025; Steffen & Soto, 2011).

3 Qualitative and Mixed Method Studies

The 36 qualitative and four mixed method studies primarily used interview data analyzed thematically or through content analysis (Table 4). In most of these studies, the focus was on experiences with the menopausal transition ($n=24$) and attitudes toward menopause ($n=7$). Yet, some of the studies focused on midlife ($n=7$) and participants found it sometimes difficult to distinguish attitudes or experiences related to menopause from those related to ageing, lifestyle, or underlying health issues (e.g., Ong et al., 2020; Parry & Shaw, 1999). Notably, only the Danish study of Hvas (2001) among 393 peri- or postmenopausal women of 51 years old specifically explored *positive* experiences during the menopausal transition, although the author stated that many women described bothering symptoms not covered by the study. Of the 393 women, 194 described one or more positive aspects of menopause with a total of 268 coded text fragments. Women described that they were in good health or 'lucky' to not have had menopausal problems, while others mentioned the relief of ceased menstruation and related problems, and personal growth in lifestyle changes, autonomy and peacefulness they experienced.

While the majority of the qualitative and mixed method studies highlighted challenges and disturbing menopausal symptoms, the included studies also noted some positive aspects. Often these positive experiences were only mentioned in one or a few paragraphs about looking forward to the end of menstrual problems, feeling relieved and "freedom" that pregnancy was no longer a concern, and viewing menopause as a natural process women have to cope with. Relief, equality and wisdom were topics likely associated with certain cultures or religious practice. For example, Islam women felt ritually clean and thereby more equal to men when entering the menopause because they can pray whenever they want when menstruation stops (Navvabi-Rigi et al., 2022; Yazdkhasti et al., 2019), while Nepalese women described that they did not have to worry anymore about exclusion from household activities, religious rituals and social events due to ceased menstruation (Paudel et al., 2025).

Examples of flourishing aspects which were briefly mentioned included the importance and strengthening of positive relations, finding new meaning and purpose in life, hopeful-

Table 4 Overview of the included qualitative and mixed-method studies

Author, year	Country	*N*	Age range; M age (SD)	Menopausal status	Method and analysis	Relevant key findings
Aririguzo et al. (2022)	USA	16	35–55	100% perimenopausal	Interviews and focus group; Inductive content analysis	Three of the four themes included some wellbeing related information; Examples are resilience and praying for hope, positive relationships for support and empowerment and a new direction and meaning (rediscover themselves despite difficult process); Menopause was viewed as a fulfilling and happy stage.
Arpanantikul (2004)	Thailand	32	44–54; 49.2	59.4% pre or perimenopausal; 40.6% postmenopausal	Interviews; Heideggerian phenomenology; paradigm cases, exemplars and thematic analysis	Two of the five themes included some wellbeing related information; the theme “adapting” showed acceptance and adapting to changes, women’s strengths, optimism and self-acceptance, and social support helped to prevent potential negative effects of change; The theme “thinking ahead” demonstrated a deep personal meaning in women’s life and four aspirations for positive growth (living with their children, being healthy, having own property and practice religion).
Berger and Forster (2001)	Australia	70	45–70; 56	33% perimenopausal; 66% postmenopausal	Interviews; Not tape-recorded, unclear what data gathered and how data it is analyzed	Most women were expecting the worst but ‘sailed right through it’; Menopausal transition was by all women viewed as a positive and welcome transition beyond the possibilities of child bearing and rearing; They appreciated the end of menstruation and newly acquired sexual and reproductive freedom; Women felt positive about menopause but negative about ageing.
Berterö (2003)	Sweden	39	47	Pre- or perimenopausal	Interviews; Content analysis	Positive expectations were feeling freedom (from menstruation, pregnancy and sexual freedom), reassuring and comforting because the menopausal period would mean a slower tempo and increased psychological wellbeing (taking care of time and each other); Women also talked about harmony in life, a peaceful time, comforting; The positive or neutral expectations expressed the women’s own thoughts and reflection, negative expectations were the result of what the women had seen, heard or discussed with other women; The majority of women stated that they were living an active social life, which could be seen as a self-care activity.

Table 4 (continued)

Author, year	Country	*N*	Age range; M age (SD)	Menopausal status	Method and analysis	Relevant key findings
Beyene et al. (2007)	USA	53	40–48; 44	100% premenopausal (unclear how defined or assessed)	Interviews; Content analysis	Women held generally positive attitudes toward middle age and more neutral toward menopause; Menopause is viewed as a natural process women have to deal with/undergo; Four themes about middle age emerged: (1) a time of maturity and being in control, (2) a time to focus on oneself, (3) a time of transition with new doors opening (self-growth) and (4) a time to reassess goals and options.
*Busch et al. (2003)	Sweden	130	48	48% premenopausal; 39% perimenopausal; 13% postmenopausal (at baseline)	Yearly interviews; Grounded theory	Women at 48 years were mainly neutral toward menopause (56%), while they were mainly positive (67%) at 52 years; Optimistic appraisal toward menopause was mostly enduring, a group who did not avoid or neglect menopausal issues; Optimistic and neutral expectations were associated with low levels of menopausal symptoms, but not with menopausal status or HRT; Pessimistic women both expected and reported many symptoms; Common themes among all women were gaining more life experience, increased sense of freedom, and more time to spend on own activities.
Capellini & Covelli, 2025	Italy	8	51–62; 55.8	Unclear	Interviews; Thematic analysis	Menopause was only mentioned within the subtheme ‘relationship with one’s own body’: All the women spontaneously raised the topic of their relationship with their bodies and mentioned menopause. Various experiences emerged, such as an improved understanding of their bodies, the need to adapt to changes, and finding new rhythms, both individually and as a couple. Regarding menopause, several women highlighted aspects of both gain and loss; all women even those identifying only negative aspects in the physical transition of menopause, adopted a predominantly optimistic narrative. For example, menopause has represented an opportunity to learn and take better care of their body, or it has meant liberation from certain issues related to their period.
Carolan (2000)	Ireland	6	-	100% postmenopausal mothers with 5 or more surviving children	Interviews; Phenomenological, using Calaizzi’s methodology	The predominant themes were a shared sense of relief at reaching menopause, particularly related to cessation of childbearing, a sense of acceptance of menopause as a natural event in a woman’s life cycle and a sense of satisfaction at having successfully raised their large families to adulthood; Regarding the latter theme, most of the participants and particularly the women with the largest families felt a sense of fulfillment and achievement at raising their families to adulthood and they looked forward to a quieter life invested largely in grandparenting; Menopausal experience typically spanned several years in the lives of the participants, and toward the end of this time a quieter time of reflection seemed to emerge.

Table 4 (continued)

Author, year	Country	*N*	Age range; M age (SD)	Menopausal status	Method and analysis	Relevant key findings
Cifcili et al. (2009)	Turkey	11	42–53	Unclear	Interviews; Thematic analysis using Glaser and Strauss' Constant Comparison Method	Menopause showed to be a positive as well as negative experience; Positive experiences had to do with feeling "cleanliness" and "comforting" because of no menstruation and associated symptoms like migraine; After menopause, women indicated that they felt more conscious and took care of themselves better by participating more often in routine health controls and share that with peers; Menopause was also defined as maturity as they went through all stages of femininity and some participants stated that the menopause was not as bad as they had thought it would be.
Daly & Hynes, 2025	Ireland	5	44–50; 46.8	100% perimenopausal	Interviews; Reflexive thematic analysis	Three themes were identified: "I just hadn't a clue what was going on," "I actually couldn't do those things anymore," "It's just not the same."; In theme 2 some positive aspects were mentioned: Some women embarked on new career paths during this time (2 women), which proved to be a positive experience and many women described exercise-related hobbies although they also described how physical symptoms of menopause impacted their ability to engage in these occupations; Women also experienced a loss of motivation and enthusiasm for meaningful occupations; Although menopause negatively impacted relationships, women also described gratitude for the endurance of relationships because of long histories together; Women found more devoted time to nurturing their own energy and wellbeing through menopause and discussed a shift in their priorities (e.g. new focus in life, withdrew from less significant relationships).
Hakimi, Simbar, Ramezani Tehrani, Zaiery, & Khatami (2016)	Iran	18	> 40	100% postmenopausal	Interviews; Hermeneutic phenomenology and thematic analysis by Van Manen	Five themes emerged: positive attitude, neutral attitude, negative attitude, positive feelings, and negative feelings; Less than half of the participants showed positive attitudes toward menopause, regarding religious tasks and cleanliness; A neutral attitude was associated with the believe that menopause was God's will and a woman's destiny, a natural phenomenon and phase in life; Happiness and comfort were the positive feelings mentioned, mainly associated with not menstruating anymore or experiencing the negative effects associated with menstruation.

Table 4 (continued)

Author, year	Country	*N*	Age range; M age (SD)	Menopausal status	Method and analysis	Relevant key findings
Hammoudeh et al. (2017)	Palestina	35	40–55	Unclear	Interviews; Thematic analysis	For many women, the menopause was merely one, often relatively unimportant, aspect of changes associated with ageing; Many women articulated a positive view about midlife and ageing and called the menopause the age of hope, the age of the 40 s, the age of power, the age of life and the age of security, they rejected the term "the age of despair"; Women did not complain about the menopause despite probing questions and they referred to menopausal symptoms as a natural ageing phenomenon; When childbearing and childrearing was finished, many women reported a phase of increased social power.
Hvas (2001)	Denmark	393	51	Peri- or postmenopausal	Open-ended question in survey	Almost 50% mentioned at least one positive aspect of the menopause; In total 268 positive aspects were mentioned; Statements were about wellbeing or "not having problems at all", relief, personal growth and freedom; Positive growth by changing life in a positive way such as by changing one's lifestyle.
Ilankoon, Samarasingh, & Elgan (2021)	Sri Lanka	20	46–55	100% postmenopausal	Interviews; Manifest and latent content analysis according to Graneheim and Lundman	Three categories emerged with 34 codes: (1) entering a new stage of life, (2) managing menopause and (3) not the end of life; Many positive aspects were mentioned such as feeling relieved (no pregnancies); Meditation and religious activities helped to manage menopausal symptoms, just like focusing more on family responsibilities and interactions with others and being helpful to others; Many women mentioned how the menopause had brought about positive changes in their pattern as they now had different needs to be accomplished before the end of life; Women viewed themselves as valuable as they continued to be engaged in different household activities; In collectivistic countries like Sri Lanka, Vietnam, Iran and Thailand, aging has a positive significance.
Im, Lee, & Chee (2010)	USA	20	40–58; 49.2 (5.0)	5.0% premenopausal; 70% perimenopausal; 25% postmenopausal	Online forum; Thematic analysis	Four themes emerged including (1) raised to be strong, in a way that women have learned to accept hardship in their lives including menopause, and (2) accepting a natural aging process, in a way that the women positively accepted the beginning of menopause and having menopausal symptoms because it meant "maturing", "increased wisdom", and "more love for themselves"; Consequently, women tried to keep moving forward and improving their lives.

Table 4 (continued)

Author, year	Country	*N*	Age range; M age (SD)	Menopausal status	Method and analysis	Relevant key findings
Im, Lee, & Chee (2011)	USA	13; 166 messages	42–59; 50.7 (5.6)	15.4% premenopausal; 46.2% perimenopausal; 38.5% postmenopausal	Online forum; Thematic analysis according to Braun and Clarke	Five themes emerged: being conditioned, becoming strong, appreciating, without making a fuss, quiet support; Family is viewed as most important making menopause one of the lowest priority; Suffering during the immigration transition helped women to be strong enough to successfully go through the menopausal transition; All women had a positive attitude toward menopause, they accept and dealt with symptoms and became more open to new things; Menopause was a relief and benefit and they appreciation that this life stage finally came; Natural temporal stage, using natural remedies including lifestyle modifications; Families gave strong support which helped them to go through the menopausal transition with less discomfort and to adapt to menopausal symptoms easily.
Kafanelis, Kostanski, Komesaroff, & Stojanovska (2009)	Australia	30	43–61	46.7% perimenopausal; 53.3% postmenopausal	Two interviews within 3 months' time; Thematic analysis; four stages of Giorgi's phenomenological analysis	The majority of women coped well with menopause (being positive and active), 15 were categorized as inventive copers, 7 as troubled copers and 8 as reactive copers (combination of inventive and troubled copers); Women mentioned many positive coping aspects, such as having a high level of reflexivity, view menopause as one of several life events, find meaning in their current status, not denying that menopause could be a painful process, having a positive outlook on life, being active, resourceful and able to move forward, and feeling both terrified and exciting about the menopausal journey.
Leonard and Burns (1999)	Australia	60	40–65	-	Interviews; Modified version of Clausen's coding scheme to code three classes of turning points	607 turning points in midlife were identified, 38.6% related to role transitions, 34.6% related to adversities and 26.5% related to personal growth; Only 2 women had spontaneously mentioned menopause, both were related to personal growth; "[menopause] taught me a lot about strength and working through things and looking after myself, nurturing myself … I'm coming into my power more in the last year, being able to get through it all myself virtually without anybody else's help"

Table 4 (continued)

Author, year	Country	*N*	Age range; M age (SD)	Menopausal status	Method and analysis	Relevant key findings
Lindh-Åstrand, Hoffmann, Hammar, & Kjellgren (2007)	Sweden	20	44–59; 52	55% perimenopausal; 30% postmenopausal	Interviews; Phenomenographic method and procedure	Women seeking medical advice due to climacteric symptoms held a wide variety of conceptions related to the menopausal transition, based on psychological and physical aspects of this phase of life; Several women had positive feelings related to the cessation of menses, these women usually had a history of troublesome menstruation with heavy bleeding or menstrual cramp; Regarding emotional changes, one women felt that the menopausal transition had made her braver and given here greater self-confidence; The role change (“new phase of life”) was experienced by some women as positive, associated with relief and having more time for themselves, their husbands etc. whereas others expressed feelings of emptiness.
Mackey (2007)	Australia	18	-	100% postmenopausal	Interviews; Interpretive phenomenology of Heidegger	Three major themes: (1) the continuity of menstrual experience, (2) the embodiment of menopausal symptoms and (3) the containment of menopause and menopausal symptoms; While the women experienced symptoms of menopause, the participants distinguished qualitative and quantitative differences between their own and other women’s experiences at menopause, this led them to evaluate their own experience as less problematic; The capacity to maintain a sense of continuity throughout the experience of change was a major contributing factor in the experience of being well at menopause; It was not menopause and its symptoms that stand in the foreground of their awareness and attention, but other events and their characteristics; Hot flushes were not experienced as problematic because they did not disrupt the familiar patterns and activities of the individual women’s life.
Mahadeen, Halabi, & Callister (2008)	Jordan	25	40–55; 50	-	Interviews; Thematic analysis	The major theme “A life transition” consisted of 3 subthemes: (1) a time for cessation of reproductive obligations, (2) a time for managing peri-menopausal symptoms, (3) a time for growing into a wise woman and accepting and celebrating aging; Menopause is viewed as a normal stage to which women need to adapt; The age of hope not of despair; Other positive descriptions were hardiness, resilience, growth, more realistic, rested, relieved, and contribution to society (as a wise woman).

Table 4 (continued)

Author, year	Country	*N*	Age range; M age (SD)	Menopausal status	Method and analysis	Relevant key findings
Makuwa, Rikhotso, & Mulaudzi (2015)	South Africa	18	45–60 (or more)	100% postmenopausal	Interviews; Thematic analysis using Tesch's eight steps of data analysis	Most participants viewed menopause as a natural process of ageing and life changes; African women above 60 years who experienced natural menopause for a longer period, perceived it positively, however, many more negative attitudes were mentioned by the participants in general; Women below 50 lack adequate knowledge about menopausal transition.
Mateo et al., 2025	Spain	20	41–66; 51.5 (7.2)	60% perimenopausal; 30% postmenopausal; 10% unclear	Discussion groups with photo-elicitation; Thematic analysis according to Braun and Clarke	The onset of symptoms prompted participants to prioritize their well-being, leading to changes in daily habits and a shift toward focusing on their own needs over pleasing others; Many participants moved from this experience of loss to a reconfiguration of identity based on the search for meaning, wisdom, and symbolic power; for many participants, perimenopause represented a time of transformation and self-discovery. Several reported that, although the onset of perimenopause was challenging, over time they became more emotionally stable as they gained more knowledge about perimenopause and adapted to their evolving needs; Moreover, some participants argued that growing older gave them wisdom and power.
Navvabi-Rigi et al. (2022)	Iran	18	41–70 and 1 women 100; 57.8	-	Interviews; Grounded theory using Corbin and Straus's approach	2311 primary codes were obtained in 14 subcategories and 7 main categories; A few positive aspects were mentioned, mainly related to religion; When women stop menstruating they can pray when they want and become equal to men, later they also feel more respected by family and society; Relevant main categories were social acceptance (support and respect from the community, acceptance of menopause by spouse) and feelings of transcendence (feeling of superiority, rationality and spiritual maturity and adopt the role of consultant).
Ong et al. (2020)	Singapore	20	47–54; 51.0 (1.7)	Perimenopausal or postmenopausal (naturally) with at least one climacteric symptom	Interviews; Thematic analysis according to Braun and Clarke	5 main themes and 15 subthemes were found; Relevant subthemes were (1) giving back to the younger generation (feeling pride, innate responsible), (2) sense of ownership (feeling pride and self-awareness), (3) sources of support (female family members, friends, online) and (4) longing for understanding and compassion (from family members and in their workplace); Women were in doubt whether symptoms were menopause-related, lifestyle-related or related to underlying health problems; Some women employed positive self-talk to maintain positivity throughout menopausal transition.

Table 4 (continued)

Author, year	Country	*N*	Age range; M age (SD)	Menopausal status	Method and analysis	Relevant key findings
Opayemi, 2025	USA	21	44–60; 52.2	38.1% perimenopausal; 61.9% postmenopausal	Interviews; Thematic analysis according to Riessman and Owen	Three distinct identities – the emancipated, overlooked, and renewed woman – emerged in participants' narratives. Additionally, a fourth identity type, the invisible woman, surfaced within the narratives of both the emancipated and overlooked women; The narrative of the renewed woman highlights the beneficial impact of peer relationships on women's personal growth during challenging and ambiguous life transitions; The renewed woman reframed her experience from a formidable challenge into a manageable journey, showcasing her resilience and optimistic outlook for the future; The emancipated woman highlights agency and autonomy who view menopause as a normal phase without many symptoms and with more positive attitude.
Parry and Shaw (1999)	Canada	5	47–52	100% perimenopausal	Interviews; Thematic analysis using Glaser and Strauss' Constant Comparison Method	Two main themes were (1) the linkage between menopause and midlife and (2) the beneficial effect of leisure on the experience of menopause and midlife; None of the women could identify whether the experienced emotional changes were caused by menopause or the challenges associated with midlife; Physically active leisure was something that improved mood and emotional wellbeing; Leisure provided some continuity what was deemed important because of the many changes and challenges women were facing; Leisure allowed women to focus on themselves in a positive way and it seemed to facilitate the development of positive self-attitudes (self-esteem, self-confidence, leisure being meaningful and worthwhile).
Paudel et al., 2025	Nepal	14	52.9	100% postmenopausal	Interviews; Thematic analysis according to Braun and Clarke	Most of the women felt relieved after menopause because after menopause they didn't have to worry about being deprived of different freedoms that they had to go through only because of menstruation. Additionally, they indicated that they were rather happy being in their menopause because of various cultural norms and restrictions in menstruation. "In our home during menstruation we have strict restrictions. We are not allowed to go anywhere we want, touch anything and be involved in different rituals."
Price, Storey, & Lake (2008)	Canada	25	43–60	"menopausal"	Interviews and focus group; Thematic analysis	4 main themes of which the significance of social support networks was most relevant; In coping with menopause, women drew heavily on shared experiences and humor; The key to their sense of health and wellbeing was validation from other menopausal women that what they were feeling and experiencing was "normal", that they were not "going crazy" and that they were not alone in their confusion and distress.

Table 4 (continued)

Author, year	Country	*N*	Age range; M age (SD)	Menopausal status	Method and analysis	Relevant key findings
Punyahotra and Dennerstein (1997)	Thailand	268	40–59	-	-	Many women expressed positive views about menopause; Many women were looking forward to the menopause, particularly those who had menstrual problems or who felt they had enough children and refused tubal sterilization; Thai women feel relaxed and independent when they become older; 59% had no idea whether menopause really changes a women; Closeness to friends and relatives as well as community togetherness is important to spread attitudes, beliefs and knowledge; The ideas of maintaining youth and beauty after menopause were very rare in this group of women.
Ray et al., 2023	UK	31	40–55; 46.9	100% perimenopausal	Focus groups; Content analysis	The question about wellbeing led to two negative aspects, namely impact of symptoms and lowered confidence: While some women were happy to have aged, others felt it impacted their sense of wellbeing and confidence; More about menstruation in general: Women experienced mixed emotions toward their periods (between resentment and dread, and awe of what their bodies are capable of)
Refaei, Mardanpour, Masoumi, & Parsa (2022)	Iran	16	>45; 47.5 (2.3)	100% perimenopausal	Interviews; Content analysis, multi-step method from Graneheim and Lundman	388 codes, 24 sub-subcategories, 11 subcategories and 5 categories; Relevant sub-subcategories were (1) seeing oneself competent, (2) hope for recovery, (3) feeling better physically, (4) having a better mood, (5) having good friends and (6) sharing experiences; Most of the participants stated that they were trying to reduce the problems by engaging in activities and hobbies such as exercising, going out with friends, shopping, etc. or by following the recommendations provided by a consultant or doctor; The women succeeded in reducing the problems to some extent by doing such activities.
Sampselle et al. (2002)	USA	30	35–60	50% pre- and perimenopausal; 50% postmenopausal	Focus groups; Content analysis of Manning & Cullum-Swan	Four midlife developmental transitions were identified: (1) recognizing personal mortality, (2) changing family relationships, (3) increasing authenticity and (4) revaluing life experiences; Menopause was not identified by any of the women as a personal life stage marker nor was it specifically incorporated into their descriptions of the life course; Postmenopausal women were more likely to reflect upon their increased freedom from social constraints and on greater appreciation of their individual worth; African American women tended to define menopause as a normal, even welcome part of life, although not purely positive. They were accepting the menopause while Caucasian women mentioned mainly the heralded physical evidence of aging; Both groups of postmenopausal women were grateful that the menopausal transition was not as bad as they had been led to believe.

Table 4 (continued)

Author, year	Country	*N*	Age range; M age (SD)	Menopausal status	Method and analysis	Relevant key findings
Thomas and Daley (2020)	UK	17	48–57	29.4% perimenopausal; 70.6% postmenopausal	Interviews; Pragmatic approach with focus on key themes using constant comparative method	One relevant finding: Participants who commented that physical activity benefited their psychological wellbeing, felt that it gave them a more positive outlook on life, a higher self-esteem, elevated mood, more energy and provided stress release.
Wood et al., 2025	Australia	509	45–64	Unclear	Online survey with open-ended questions; Reflexive thematic analysis according to Braun and Clarke	Within the theme “The diversity of women’s experiences of menopause”, some women described liberating menopause experiences: Some participants spoke about the benefits of menopause, and the positive impact that it had had on their lives. Many related their positive experiences of menopause to “freedom” from the end of painful or heavy periods – describing this as “terrific”, “the best thing ever”, “liberating”, and that they could “finally enjoy life”.
Yazdkhasti et al. (2019)	Iran	30	40–60	100% postmenopausal	Interviews; Grounded theory using Corbin and Strauss’ approach	Two main themes were a threat to feminine identity and latent opportunity, the latter consisted of “changing wisdom” and “better peace of mind”; In 18 of the 33 interviews of 30 participants, the women viewed menopause as a turning point toward self-awareness and change of self-image; In 16 of the 33 interviews, the participants experienced a change of wisdom with their menopause; They also felt clean and pure (ritually clean in Islam).
Mixed method						

Table 4 (continued)

Author, year	Country	*N*	Age range; M age (SD)	Menopausal status	Method and analysis	Relevant key findings
Aljumah, Phillips, & Harper (2023)	UK	829	>40 (53.9% were >56)	100% postmenopausal	Online survey with 1 open-ended question; Thematic analysis using Braun and Clarke	Quantitative results: 53.8% had a neutral attitude toward menopause before they went through it; 20.7% experienced menopause as fine; 71.7% felt happy about no longer having periods; 21.5% felt better than before the menopause. Qualitative results: for many women, the menopause brought a sense of relief (no menstruation, no more pain), some women felt menopause as a natural phase which women should learn to live/cope with.
Mc-Quaide (1998)	USA	103	40–59; 49.82 (4.9)	55.7% premenopausal; 44.3% postmenopausal	Online survey including open-ended questions	72.5% reported that they felt very happy or happy at this time in their life while only 41.2% reported to have a very easy time or easy time coping with midlife (and 39.2% difficult or somewhat difficult); Menopausal status and whether or not women reported menopausal symptoms were not related to an aggregated score for wellbeing (including also non-positive psychology related aspects); Comparing the 10 women with the highest wellbeing and the lowest wellbeing showed that those high in wellbeing were more likely to feel freedom to "do" something (e.g. developing new relations with women, building career) and those low in wellbeing to feel freedom "from" (e.g. menstruation, pregnancy, appearance worries); All high scorers felt understood by those around them, but none of the low scorers felt understood; High scorers had generally positive images of midlife although often mixed with some negative images, whereas low scorers reported predominantly negative images although they do find pleasure in children and grandchildren.
O'Dea et al. (1999)	UK	103	49–55	15% premenopausal; 68% peri- or postmenopausal	Online survey with 1 open-ended question	Quantitative results: Women scored 4.83 (1.12) on a 7-point scale for life-satisfaction (which was not significantly different from a male sample). Qualitative results: 7 women reported menopause as a current health concern, and only 3 women (2.9%) mentioned the menopause as a source of dissatisfaction.

Table 4 (continued)

Author, year	Country	*N*	Age range; M age (SD)	Menopausal status	Method and analysis	Relevant key findings
Steffan & Potocnik, 2025	UK	685 (53 interviewd)	40–65; 50.8 (6.3)	Unclear	Online survey and qualitative interviews	Quantitative results: Resilience was significantly and negative related with severity of psychological menopausal symptoms ($r=-.47$), physical menopausal symptoms ($r=-.27$), and negative emotional responses ($r=-.65$). Qualitative results: Many participants expressed how an understanding of the menopause transition could result in a different expression of resilience, through confidence and mood stability. Post-symptomatic women engaged in this narrative of renewed personal strength, which enabled a clarity to reposition oneself at work, commonly discussed as increased/renewed resilience, of which confidence was a component.

ness and being optimistic toward the future, feel harmonious, happy and (self-)accepting, having more time for personal growth and renewed connection with themselves, and societal acceptance as wise women contributing to younger generations. Furthermore, some studies reported menopause as a fulfilling and happy stage (Aririguzo et al., 2022), not as bad as women had thought it would be (Cifcili et al., 2009; Sampselle et al., 2002) and as a minor aspect of midlife changes (Hammoudeh et al., 2017; Mackey, 2007; O'Dea et al., 1999). Interestingly, a study from Sweden demonstrated that women with more optimistic or neutral expectations about the menopausal transition had fewer menopausal symptoms over four years compared to those with more pessimistic views (Busch et al., 2003). In addition, McQuaide (1998) found that the ten women who were flourishing mentioned freedom with active pursuits (e.g. *doing* something like developing new friendships, career-building), while those with the lowest wellbeing reported associated freedom with relief *from* menstruation, pregnancy, and appearance concerns.

4 Discussion

The present study aimed to provide a comprehensive and up-to-date overview of current scientific research on flourishing and its emotional, social, and psychological wellbeing components throughout the menopausal transition. By incorporating multiple search terms specifying aspects of flourishing, and including qualitative studies, our review identified 181 studies up to 2026, wherein at least menopause and one or more aspects of wellbeing were assessed. Although 149 of these studies were suitable for synthesizing results, this is still significantly higher than the 19 studies reported in a prior review up to 2014 (Brown et al., 2015c). This substantial increase is primarily due to the majority of the included studies being published after 2017, indicating a growing interest in this research field.

Despite this increase in studies, it remains largely unclear whether or how women can flourish throughout the menopausal transition. Flourishing is generally understood as an overarching concept that describes optimal human functioning and encompasses emotional, social and psychological dimensions (Keyes, 2002). Merely 39 studies primarily focused on flourishing, emotional or psychological wellbeing throughout the menopausal transition. Only one positive psychology intervention was investigated in a quasi-experimental design among 47 migrant women (Jang & Lee, 2023), and one of the qualitative studies specifically explored positive experiences during the menopausal transition using open-ended survey responses from peri- and postmenopausal women (Hvas, 2001). Moreover, solely one of the studies included Keyes' renowned framework of flourishing measuring 14 emotional, social and psychological wellbeing dimensions, and another seven studies measured multidimensional flourishing. Using more of such measures could have provided deeper insights into flourishing (Iasiello et al., 2022; Keyes, 2002; Keyes et al., 2008).

Rather, it appears that the term "wellbeing" is frequently used by researchers, even in titles and abstracts. As early as 1996, Dennerstein noted that "journal titles may be misleading", which remains true today. For example, Bianchi et al. (2021) prominently featured "wellbeing" in the title but mentioned it only once in the entire paper, which was not at all about wellbeing. Consequently, we screened almost 5000 titles and abstracts and over 400 full-texts, while most articles used "wellbeing" for measures related to quality of life or clinical aspects of illness and mental health, such as depression and anxiety (e.g., Toffol

& Partonen, 2013). We support the calls of other researchers for consistency, sensitivity and accuracy in using appropriate terminology for wellbeing concepts and measures, particularly in titles and abstracts (e.g., Bautista et al., 2023; Dennerstein, 1996; Iasiello et al., 2024).

Consistent with Brown et al. (2015c), the included studies predominantly consisted of cross-sectional research and assessed emotional wellbeing, usually through measures of positive affect or life-satisfaction. In contrast, while only two studies in the review by Brown et al. (2015c) assessed psychological wellbeing with self-acceptance and purpose in life, the current review revealed an abundant amount of studies examining psychological wellbeing outcomes such as personal growth, resilience, optimism, self-compassion, and purpose in life. This growing interest in psychological wellbeing outcomes, while maintaining a focus on positive affect, happiness and life-satisfaction, aligns with previous reviews in the field of positive mental health (Hendriks et al., 2019; Rusk & Waters, 2013; van Agteren et al., 2021; Weiss et al., 2016). However, social wellbeing was assessed in only three studies. Thus, viewed through the lens of Keyes' framework, the available evidence in this review primarily concerns emotional and psychological wellbeing domains, while the social dimension of flourishing remains largely unexplored.

A central finding of this review is that both longitudinal and cross-sectional studies consistently show that menopausal symptoms were negatively associated with flourishing, emotional and psychological wellbeing, while these variables did mainly not significantly differ between menopausal stages. When weighing the strength of evidence across study designs, the smaller set of longitudinal studies provides more nuanced insights, even though they are geographically restricted to a few specific Western countries. These studies indicate that emotional wellbeing remained generally stable over time, whereas studies with a shorter follow-up time or with more intensive repeated-measures designs such as daily diary studies found that changes in symptom burden were associated with changes in emotional wellbeing. These findings suggest that within-person variability in symptom burden may be more influential in shaping women's wellbeing across midlife than between-person differences based on menopausal stages.

The discrepancy in findings might be explained by the limitations of using the categorization of women in menopausal stages. First, the studies were difficult to compare because some included women from only one stage, while others included women from two or more stages. This also raises questions about the differences between such studies and those that used "middle-aged" or "midlife" samples, which were now excluded if they did not measure menopausal status or menopausal symptoms (e.g., Brown et al., 2016; Hartweg, 1993; Ko et al., 2019; Noh & Kwon, 2019). Additionally, 39 studies focused exclusively on postmenopausal women, often without clarifying whether they were truly interested in those women in the initial postmenopausal years, or whether they might have used postmenopausal women as an "easy" target population to control for hormonal fluctuations.

Second, the validity and reliability of categorizing women into menopausal stages remain unclear. Authors often referred to the STRAW 10+criteria (Harlow et al., 2012) consisting of seven stages in reproductive aging of which late reproductive, early and late perimenopause and early postmenopause are most relevant to climacteric research. However, details on how researchers collected data to categorize women into these stages were scarce, with most relying on self-reported "bleeding patterns". Thus, a standardized and validated questionnaire for menopausal or reproductive stages is lacking. Although some studies included

biological markers, the categorization was still primarily based on subjective estimates of bleeding pattern changes (e.g., Dennerstein et al., 2007; Gordon et al., 2021). Noteworthy, using biological markers is time-consuming, costly and also lacks standardized assays (Harlow et al., 2012).

Overall, this review provides consistent evidence of a negative association between menopausal symptoms and emotional and psychological wellbeing. In addition, mindfulness-based interventions, physical exercise, and educational programs about lifestyle and menopause appear effective in enhancing flourishing in peri- and postmenopausal women. However, we also found some discrepancies among different study types: (1) Studies were conducted in various countries and cultures, but all longitudinal studies were based in Western countries, primarily Australia and the USA; (2) Longitudinal studies mainly assessed emotional wellbeing, while intervention studies more frequently assessed psychological wellbeing; and (3) Quantitative results suggest the menopausal transition poses significant challenges negatively impacting women's mental health, albeit qualitative studies highlight potential positive experiences or flourishing aspects despite the challenging phase.

4.1 Limitations

The main limitations of this review concern the search methodology. The search was restricted to four electronic databases, published articles, and the screening of titles, abstracts, and keywords. Particularly for qualitative studies, relevant content might be found in single paragraphs or even sentences, potentially missing papers not mentioning our search terms in the title, abstract or keywords. Another limitation concerns the absence of a quality assessment of the included articles. However, as can be seen in the tables, data items for extraction was sometimes not reported or unclear (e.g. due to unclear definitions of the menopausal stages, missing sample characteristics, few items to assess menopausal symptoms or wellbeing instead of validated measures) which could be an indication of low quality. Researchers should also take into account that reported wellbeing outcome measures were heterogeneous, limiting firm conclusions about psychological wellbeing in particular. Furthermore, positive attitudes towards menopause were considered as menopausal measures (not wellbeing measures), but sometimes reported upon when relevant information was found. These findings are not conclusive as positive attitudes was not included in our search strategy. Nonetheless, several reviews on attitudes towards menopause were screened for relevant literature (Ayers et al., 2010; Dashti et al., 2021; Depenau, 2024) ensuring a comprehensive overview with a broad scope as a foundation for future research on flourishing including positive attitudes during climacteric years.

4.2 Directions for Future Research and Practical Implications

A first recommendation is to develop and validate a simple tool to assess menopausal stages to improve consistency across studies. For example, when women report an irregular menstruation pattern, it might be that some have always had an irregular menstruation pattern and are incorrectly identified as being in perimenopause. To date, it is unclear whether researchers consider such information when categorizing menopausal stages. In the meantime, we recommend combining questions about bleeding patterns with standardized measures for menopausal symptoms, such as the Menopause Rating Scale or Green Climacteric

Scale. Researchers and clinicians should also consider that postmenopausal women might still experience severe menopausal symptoms and that some of the menopausal symptoms could be due to other underlying problems (e.g. sleep deprivation, depressed mood).

Secondly, future research should examine the effectiveness of readily available and easy-to-implement positive psychology interventions (PPIs) during the menopausal transition. Previous research indicates that such interventions are consistently associated with increased wellbeing in the general population and appear more effective than classical cognitive behavioral interventions for this target audience (van Agteren et al., 2021). PPIs are already frequently investigated among middle-aged women (Bohlmeijer et al., 2020; Carr et al., 2024; Hendriks et al., 2019; Nelson-Coffey et al., 2021; Schotanus-Dijkstra et al., 2015), suggesting that including menopausal symptom measures in future studies is feasible. Notably, PPIs could not only promote flourishing during the menopausal transition, but also prevent the onset of mental illness during this challenging period (Iasiello et al., 2019; Schotanus-Dijkstra et al., 2017).

A final direction for future research is to investigate whether a more balanced perspective on the menopausal transition, encompassing both the potential negative and positive consequences of physical and hormonal changes, can aid women to flourish in midlife. Clinicians and educators should frame menopause in balanced, non-stigmatizing ways and provide guidance (e.g., in medical guidelines) that supports both symptom relief and wellbeing promotion. Public health messaging can help normalize the transition while emphasizing opportunities for growth and resilience. For instance. a prior systematic review of 10 studies found that women with neutral or positive attitudes towards menopause tend to cope better with the transition and report fewer menopausal symptoms compared to those with negative attitudes (Ayers et al., 2010). On one hand, this suggests the need for further research to promote positive attitudes about menopause in society. On the other hand, it is essential to first examine whether encouraging more positive attitudes might also have counterproductive effects. For instance, an overly optimistic view of the menopausal transition could trivialize the experiences of women with (severe) complaints or exacerbate complaints due to a larger gap between expectations and reality. While the saying "no expectations, no disappointments" holds some truth, it is crucial to better educate women before they enter the menopausal transition. This transformative period, which could surpass adolescence or parenthood in its length and impact, necessitates comprehensive education.

5 Conclusion

This review of 181 studies on flourishing during the menopausal transition reveals a growing research interest but a notable scarcity of multidimensional flourishing frameworks. Although menopausal symptoms consistently show negative associations with emotional and psychological wellbeing, current evidence offers limited insight into how women can truly flourish during this period. Concretely, we propose the following research agenda to improve research on flourishing in climacteric populations: (1) develop reliable tools for quantifying the menopausal stages in a uniform way; (2) conduct more balanced quantitative and qualitative research in a way that both mental illness and mental wellbeing are more equally measured and targeted, for example by incorporating multidimensional flourishing measures such as the MHC-SF; (3) evaluate scalable mindfulness, self-compassion

and multicomponent positive psychology interventions; and (4) examine how personal and societal attitudes toward menopause shape women's experiences. Advancing these areas will clarify how women can not only cope but also flourish throughout the menopausal transition.

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Data Availability The data used for this study such as the data extraction file are available via: https://doi.org/10.17605/OSF.IO/PWCSU.

Declarations

Competing Interests The authors report there are no competing interests to declare.

Ethics All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration. Informed consent was obtained from all individual participants included in the study.

AI Statement After the manuscript was completed for submission, Microsoft Copilot was used for assisting in the improvement of the manuscript's language and clarity, mainly on grammar and punctuation. The version before using Copilot is available upon request.

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