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REVIEW: Artificial Intelligence for Personalized Exercise in Women's Health: A Systematic Review

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ABSTRACT

Physical inactivity remains a significant concern from a public health standpoint for women and contributes to the development of chronic diseases at every stage of life. Even though tailored exercise results in improved health outcomes, standard exercise prescriptions do not consider women's physiological differences, varying needs, or features linked to different phases of their lives. Artificial intelligence has recently emerged as a promising way of offering personalized, data-driven exercise programs, but there is still a lack of evidence specific to women.

The review was carried out following PRISMA 2020 guidelines and consisted of searching PubMed/MEDLINE, Scopus, Web of Science, and Google Scholar databases for peer-reviewed studies published between January 2020 and March 2026; ten studies met inclusion criteria and employed machine learning, wearable AI, computer vision, automated coaching systems, and large language models to personalize exercise. In the studies, those that used AI saw improvements in physical activity, body composition, musculoskeletal function, cardiometabolic health, adherence, and behavioral and mental health. Although most of the randomized trials were of high methodological quality, the pilot studies and case studies were of only moderate or lower quality due to limitations in their design. AI has the definite potential to make exercise interventions more precise, accessible, scalable, and tailored to women, but the existing evidence is limited due to small sample sizes, varying protocols, and short periods of follow-up; it is therefore necessary to conduct larger, higher-quality trials employing standardized measures and involving longer periods of follow-up before routine clinical use can be recommended.

Introduction

Women's health is still a major concern in the field of global public health, but physical inactivity continues to have a harmful effect on health at every stage of a woman's life. The World Health Organization (WHO) states that nearly one-third of adults worldwide, exactly 31 percent, or approximately 1.8 billion people, do not achieve the recommended levels of physical activity, and the rate of inactivity is greater among women than among men. This ongoing imbalance significantly increases women's risk of non-communicable diseases such as cardiovascular diseases, obesity, type 2 diabetes, osteoporosis, and depression, and has a negative effect on their reproductive, metabolic, and psychological well-being (1).

The latest developments in artificial intelligence have opened up completely new possibilities for overcoming a number of the limitations linked with conventional exercise prescription (1-3). Through the use of machine learning algorithms, wearable technology, mobile health applications, and real-time physiological monitoring, AI-powered systems are able to continuously examine multi-dimensional health data and produce personalized exercise

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recommendations that are adjusted in response to an individual's changing requirements and reactions (2-4). Unlike the fixed exercise programs that have been widely used in the past, these intelligent systems can alter the intensity, duration, frequency, and progression of exercise on the basis of continuous user feedback, physiological indicators, behavioral patterns, and health outcomes (2, 4). As a result, AI has become a promising means of providing more accurate, responsive, and individualized exercise interventions that help to promote long-term health and prevent disease in women.

Even though there has been an increasing amount of literature concerning AI, digital health, and personalized exercise, substantial gaps still exist (1, 2). The current evidence is scattered among various disciplines, populations, and kinds of technological applications, which makes it hard to gain a full understanding of how AI can effectively support personalized exercise for women's health (2, 4). Moreover, there is a great deal of methodological variety regarding study designs, AI techniques, outcome measures, and the features of the interventions, and this in turn makes it difficult to carry out meaningful comparisons between studies (2). Because of these gaps, the present systematic review seeks to give a comprehensive summary and critical assessment of the existing evidence regarding the use of AI in personalized exercise for women's health (1, 2). Specifically, it looks at AI technologies, the methods of personalization, the health outcomes that are aimed at, as well as the opportunities and challenges linked to the introduction of AI-led exercise interventions among different groups of women and at various stages of life.

Material and Methods

Study Design

It was a systematic review aimed at thoroughly assessing the existing evidence regarding the use of AI in personalized exercise for women's health (1, 2). The review was designed to address the following research question: What role can AI play in supporting personalized exercise interventions in order to improve women's health outcomes? The conduct and reporting of the review complied with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA 2020) statement in order to ensure methodological rigor, transparency, and reproducibility (5).

Search Strategy

A thorough and systematic review of the literature was carried out in order to find studies that looked at the use of AI in personalized exercise interventions for women's health (2, 4). In order to identify articles relevant to the subject, the four electronic databases PubMed/MEDLINE, Scopus, Web of Science Core Collection, and Google Scholar were searched for publications dated from January 1, 2020, to March 31, 2026 (5).

The search strategy was created by combining controlled vocabulary (specifically Medical Subject Headings [MeSH] when appropriate) with free-text keywords. Terms relating to AI (for example, AI, machine learning, deep learning, large language models, ChatGPT), those concerning personalized exercise (such as exercise prescription, exercise recommendation, personalized exercise, physical activity) and women's health (for instance, women, female, pregnancy, postpartum, menopause, polycystic ovary syndrome, women's health) were joined together using Boolean operators. The database-specific syntax and indexing terms were modified in order to enhance the sensitivity of the search while at the same time keeping the specificity. The full search strategies for all the databases are given in Table 1.

The records that had been retrieved were then entered into a reference management software program, where the duplicates were deleted before the screening process. After that, the titles, abstracts, and full texts were separately assessed according to the previously defined eligibility criteria.

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Table 1. Electronic Search Strategy Across the Selected Databases

Database	Search Terms	Limits Applied
PubMed/MEDLINE	("AI OR "machine learning" OR "deep learning" OR "large language model*" OR ChatGPT OR chatbot*) AND ("personalized exercise" OR "exercise prescription" OR "exercise recommendation" OR "physical activity" OR "tailored exercise" OR "adaptive exercise") AND (women OR female* OR pregnancy OR postpartum OR menopause OR menopausal OR PCOS OR "women's health")	Publication date: January 1, 2020, to March 31, 2026; English language; Human studies
Scopus	TITLE-ABS-KEY (("AI OR "machine learning" OR "deep learning" OR "large language model*" OR ChatGPT OR chatbot*) AND ("personalized exercise" OR "exercise prescription" OR "exercise recommendation" OR "physical activity" OR "tailored exercise" OR "adaptive exercise") AND (women OR female* OR pregnancy OR postpartum OR menopause OR menopausal OR PCOS OR "women's health"))	Publication date: January 1, 2020, to March 31, 2026; English language
Web of Science Core Collection	TS= ((" AI OR "machine learning" OR "deep learning" OR "large language model*" OR ChatGPT OR chatbot*) AND ("personalized exercise" OR "exercise prescription" OR "exercise recommendation" OR "physical activity" OR "tailored exercise" OR "adaptive exercise") AND (women OR female* OR pregnancy OR postpartum OR menopause OR menopausal OR PCOS OR "women's health"))	Publication date: January 1, 2020, to March 31, 2026; English language
Google Scholar*	("AI") AND ("personalized exercise" OR "exercise prescription" OR "physical activity") AND (women OR female OR "women's health")	Publication date: January 1, 2020, to March 31, 2026; First 200 most relevant records screened

Eligibility Criteria

The eligibility criteria were set up in advance by using the Population, Intervention, Comparator, Outcomes, and Study design (PICOS) framework in order to make the process of selecting studies transparent and systematic (5). The inclusion and exclusion criteria are given in detail via the PICOS framework in **Table 2**.

A study was included only if it looked at the use of AI in the design, delivery, or optimization of personalized exercise interventions aimed at improving women's health outcomes. Only original peer-reviewed articles written in English and published between January 2020 and March 2026 were taken into account. Studies that included female participants of any age or health condition could be included as long as the AI was used in exercise personalization or in making decisions about exercise. However, studies that focused solely on athletic performance, competitive sports, or male populations were excluded. Conference abstracts, editorials, letters, study protocols, dissertations, and any studies that did not provide enough methodological details or from which the full text could not be obtained were also excluded. Review articles, such as systematic reviews, scoping reviews, narrative reviews, and meta-analyses, were excluded since the main aim of this systematic review was to combine the evidence solely from original studies that had evaluated the effectiveness of AI-based personalized exercise interventions and their related health outcomes in women (2, 6).

Study Selection

The process of selecting the studies was in line with the PRISMA 2020 guidelines (5). The records obtained from the search of the electronic databases were transferred into reference management software, where the duplicates were detected and deleted before the screening phase. The records that remained were then screened on the basis of their titles and abstracts using the eligibility

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criteria that had been established in advance. Studies that might be relevant were next evaluated for eligibility on the basis of the full text.

The entire study selection process is shown in the PRISMA 2020 flow diagram (5). (Figure 1)

Table 2. Eligibility Criteria Based on the PICOS Framework

PICOS Component	Inclusion Criteria	Exclusion Criteria
Population (P)	Women of any age or life stage (e.g., adolescents, adults, pregnant/postpartum women, menopausal women, older women, women with specific health conditions such as obesity or PCOS).	Studies including only men, mixed populations without sex-specific analyses, elite athletes exclusively, animal or laboratory studies.
Intervention (I)	Artificial intelligence–based interventions designed to personalize exercise or physical activity programs, including machine learning, deep learning, wearable AI, intelligent decision support systems, virtual coaching, chatbots, or LLMs.	Non-AI interventions, non-personalized exercise programs, interventions focusing solely on nutrition, medication, or rehabilitation without AI-supported exercise personalization.
Comparator (C)	Standard care, conventional exercise programs, human coaching, usual care, alternative interventions, or studies without a comparator when appropriate for the study design.	Studies with insufficient methodological information or without clearly described intervention conditions.
Outcomes (O)	Outcomes related to women's health, including physical activity, exercise adherence, body composition, cardiovascular and metabolic health, musculoskeletal health, mental health, quality of life, physical fitness, and other health-related indicators.	Studies reporting outcomes unrelated to exercise, physical activity, or women's health.
Study Design (S)	RCTs, non-randomized intervention studies, cohort studies, case-control studies, cross-sectional studies, pilot and feasibility studies, and mixed methods research published in peer-reviewed journals.	Narrative reviews, systematic reviews, meta-analyses, scoping reviews, conference abstracts, editorials, letters, study protocols, dissertations, book chapters, and non-English publications.

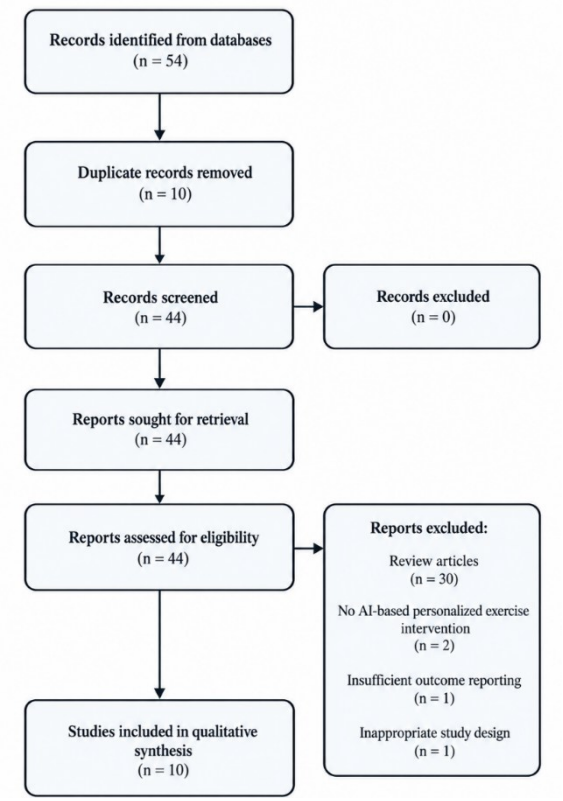


Figure 1. PRISMA 2020 Flow Diagram of the Study Selection Process

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Data Extraction

Before the review took place, a standardized form for data extraction was created in order to maintain consistency and completeness in the data collection process (5). For each study that was eligible, the following details were systematically obtained: the first author, the year of publication, the country, the study design, the participant characteristics, the sample size, the type of AI technology, the characteristics of the personalized exercise intervention, the duration of the intervention (if applicable), the primary health outcomes, and the main findings that were relevant to women's health. Where available, additional information on digital health technologies, wearable devices, personalization strategies, and the implementation challenges that had been reported was also extracted.

Quality Assessment

The methodological quality of the studies included in the review was evaluated by means of the Mixed Methods Appraisal Tool (MMAT) version 2018, a tool that has been developed to assess research involving a variety of different designs (7). Since the MMAT makes it possible to judge both qualitative and quantitative studies as well as mixed-method studies by using criteria that are specific to each design, it is suitable for use in systematic reviews that involve diverse types of evidence (7).

The studies listed were assessed using the appropriate MMAT criteria in relation to their study designs. The methodological quality was examined in a number of areas, such as the suitability of the study design, the way participants were selected, the methods of measurement, the completeness of the outcome data, and the potential for bias. The findings from this quality evaluation were compiled in order to aid in the interpretation of the evidence and to assist with the overall synthesis of the results. When evaluating the quality of the assessment, this was taken into account during the synthesis and interpretation of the results.

Data Synthesis

A quantitative meta-analysis was not regarded as appropriate because of the considerable heterogeneity existing among the studies included with respect to their study design, the characteristics of the participants, the AI techniques used, the exercise interventions employed, the outcome measures utilized, and the length of follow-up (5). Instead, a narrative synthesis method was chosen in order to summarize and interpret the evidence available systematically (5).

The studies were grouped together according to the type of AI technology, the characteristics of the personalized exercise interventions, the women's health outcomes that they aimed to target, and the demographic features of the population.

Results

Study Selection

The electronic search of PubMed/MEDLINE, Scopus, the Web of Science Core Collection, and Google Scholar yielded a total of 54 records (5). Ten of these were duplicates and were therefore excluded, leaving 44 distinct articles which were then screened on the basis of their titles and abstracts. After full-text assessment, 34 studies were excluded, mainly because they were review articles. Ten primary studies finally met all the eligibility criteria and were included in the qualitative synthesis.

Characteristics of Included Studies

The features of the studies referred to are given in Table 3.

AI Technologies Used

The AI technologies employed in the various studies listed are given in **Table 4**.

Health Outcomes of AI-Based Personalized Exercise Interventions

The health results assessed in the various studies included in the review are given in Table 5.

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Table 3. Characteristics of Included Studies Evaluating AI for Personalized Exercise in Women's Health

Study	Country	Study Design	Participants (n)	Women's Population	AI Technology	Personalized Exercise Intervention	AI Purpose	Duration	Health Outcomes Assessed	Key Findings
Jörke et al., 2025 (8)	USA	Lab study	16	Mixed (including women)	Large Language Model	LLM-based conversational physical activity coaching with wearable data	Behavioral coaching	Lab session (historical 3-month data)	Qualitative personalization, user comfort, and plan quality	Demonstrated ability to gather rich qualitative data and deliver personalized support
Qi et al., 2026 (9)	China	RCT	79	Healthy older women	Wearable AI	Home-based AI-assisted Baduanjin (multicomponent)	Personalized guidance	12 weeks	Balance, WOMAC score	Significantly improved balance and knee function compared with the education control.
Mathioudakis et al., 2025 (10)	USA	RCT	368	Adults with overweight/obesity (71% women)	Automated AI Coaching	AI-led Diabetes Prevention Program (physical activity + diet)	Lifestyle coaching	12 months	Weight loss, physical activity, HbA1c	Achieved noninferior outcomes to human coaching on weight loss, physical activity, and HbA1c
Choi et al., 2023 (11)	South Korea	RCT	30	Women with obesity	Wearable AI	Home-based multicomponent exercise (aerobic, resistance, flexibility)	Exercise monitoring	12 weeks	Body composition (fat mass, body fat %), vascular function, and autonomic function	Significantly reduced fat mass and body fat percentage; improved vascular and autonomic function
Pereira et al., 2026 (12)	USA	Matched cohort study	602	Women with pelvic floor dysfunction	AI care program	Home-based AI-structured pelvic floor exercise program	Personalized guidance + monitoring	12 months	Healthcare utilization, pelvic symptom burden, work productivity, and mental health	Significantly reduced healthcare spending and surgical procedures; improved pelvic symptoms and mental health.

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Çıkırıkçı EK et al., 2025 (15)	Turkey	RCT	80	Women with overweight/obesity	Machine Learning (XGBoost)	Home-based ML-tailored physical activity program	Personalized guidance, behavioral coaching	12 weeks	Daily step count, exercise duration, self-efficacy, adherence	Significantly increased daily step count, exercise duration, and self-efficacy
Netz et al., 2025 (16)	Israel	RCT	239	Older adults (predominantly women)	Machine Learning	Home-based multicomponent exercise (balance, flexibility, strength)	Personalized guidance	8 weeks	Dynamic balance, total balance, arm flexibility, arm strength	Significantly improved dynamic balance, arm flexibility, and arm strength compared with controls
Li et al., 2025 (18)	China	Case study	1	Young woman	Large Language Model (GPT-4)	Personalized 16-week fitness plan for weight loss	Exercise recommendation	16 weeks	Personalization, effectiveness, safety, comprehensiveness (expert-rated)	Showed comparable personalization to human coaches but did not fully replace expert judgment
Yao et al., 2026 (19)	China	RCT	62	Adults with hypertension (mixed-sex)	Computer Vision AI	Home-based AI recognition-based telerehabilitation	Exercise monitoring, personalized guidance	8 weeks	6-minute walk distance, peak VO_2, systolic blood pressure, exercise self-efficacy	Significantly improved exercise capacity, physical activity, self-efficacy, and systolic blood pressure control
Stovall et al., 2026 (21)	Canada	Pilot study	21	Women with/without axial spondyloarthritis	Machine Learning	Home-based personalized exercise platform with real-time monitoring	Exercise recognition	Single-session	Exercise recognition accuracy, acceptability, safety	Demonstrated adequate exercise recognition accuracy and high acceptability with no serious adverse events

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Table 4. Classification of AI Technologies Used in Personalized Exercise Interventions for Women's Health

AI Technology	Primary Purpose	Representative Application	Studies (n)	Representative Studies
Machine Learning (ML)	Personalized exercise prescription, prediction, and decision support	Individualized exercise planning, exercise recognition, and behavioral prediction	3	(15,16,21)
Wearable Artificial Intelligence	Real-time exercise monitoring and feedback	Wearable sensors for monitoring exercise performance and delivering personalized feedback	2	(9,11)
Computer Vision AI	Exercise recognition and movement assessment	AI-based motion recognition for home-based telerehabilitation	1	(19)
Automated AI Coaching Systems	Lifestyle coaching and behavior modification	AI-driven coaching for physical activity, weight management, and diabetes prevention	1	(10)
AI-Based Digital Therapeutic Platform	Personalized rehabilitation guidance and remote monitoring	AI-supported pelvic floor exercise program with continuous monitoring	1	(12)
LLMs	Exercise recommendation, conversational coaching, and decision support	GPT-4-based exercise planning and conversational physical activity coaching	2	(8,18)

Table 5. Health Outcomes Evaluated in AI-Based Personalized Exercise Interventions for Women's Health

Health Domain	Specific Outcomes	Representative Studies
Physical Activity and Exercise Behavior	Daily step count, exercise duration, physical activity level, exercise adherence, exercise self-efficacy	(10,11,15,18,19)
Body Composition and Weight Management	Body weight, BMI, fat mass, body fat percentage	(10,11,18)
Cardiometabolic Health	Blood pressure, HbA1c, vascular function, and autonomic nervous system function	(10,11,19)
Musculoskeletal Function and Physical Performance	Balance, knee function, arm strength, flexibility, functional mobility, 6-minute walk distance, Peak VO_2	(9,16,19)
Mental Health and Patient-Reported Outcomes	Mental health, pelvic symptom burden, quality of life, user comfort, acceptability	(8,12,21)
Healthcare Utilization and Clinical Outcomes	Healthcare utilization, healthcare expenditure, and surgical procedures	(12)
AI Personalization and Decision Support	Personalization quality, exercise recommendation accuracy, comprehensiveness, safety, expert agreement	(8,18,21)

Methodological Quality Assessment

The methodological quality of the studies included in the review was evaluated using MMAT version 2018 (7). A full description of the quality assessment for each of the included studies can be found in Table 6.

Table 6. Methodological Quality Assessment of Included Studies Using the MMAT (Version 2018)

Study	Study Design	MMAT Assessment	Methodological Comments
Jörke et al., 2025 (8)	Laboratory study	Moderate methodological quality	Controlled laboratory evaluation with acceptable methodological rigor; limited real-world applicability.
Qi et al., 2026 (9)	Randomized controlled trial	High methodological quality	Appropriate study design with valid outcome measurements and satisfactory completeness of outcome data.
Mathioudakis et al., 2025 (10)	Randomized controlled trial	High methodological quality	Robust randomized design with comprehensive assessment of primary outcomes.
Choi et al., 2023 (11)	Randomized controlled trial	High methodological quality	Well-conducted randomized trial with validated outcome measures and acceptable follow-up.
Pereira et al., 2026 (12)	Matched cohort study	Moderate methodological quality	Appropriate observational design; potential risk of selection bias inherent to non-randomized studies.
Çıkırıkçı EK et al., 2025 (15)	Randomized controlled trial	High methodological quality	Appropriate intervention design and complete reporting of major outcomes.
Netz et al., 2025 (16)	Randomized controlled trial	High methodological quality	Good methodological rigor; minor attrition did not substantially affect study quality.
Li et al., 2025 (18)	Case study	Low methodological quality	Single-participant exploratory study with inherently limited external validity.
Yao et al., 2026 (19)	Randomized controlled trial	High methodological quality	Appropriate intervention protocol and validated outcome assessment; minor reporting limitations noted.
Stovall et al., 2026 (21)	Pilot study	Moderate methodological quality	Small sample size limits generalizability; methodology appropriate for a pilot feasibility study.

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Discussion

Principal Findings

This systematic review shows that AI is becoming a promising method for providing personalized exercise interventions, which can have a positive impact on various aspects of women's health (1, 2, 8, 9). In the studies that were included, exercise programs supported by AI showed beneficial effects regarding physical activity participation, body composition, musculoskeletal function, cardiometabolic health, exercise adherence, and behavioral outcomes (8-12). The findings are in line with recent systematic reviews indicating that AI technologies are increasingly improving exercise prescription, aiding individualized decision-making, and encouraging long-term engagement in healthy behaviors (2, 6, 13, 14).

Of the technologies identified, machine learning algorithms were the most commonly used method for customizing exercise prescriptions to suit individual characteristics. Wearable AI systems also allowed for continuous performance monitoring and immediate feedback to be given during home-based interventions (9, 15, 16). In more recent times, computer vision systems and LLMs have increased the capabilities of AI by offering automated movement analysis, conversational coaching, and adaptive behavioral support (8, 14, 17-19).

Even though these findings are encouraging, the existing body of evidence is still very limited. The majority of the studies included had small sample sizes, employed a variety of intervention protocols, and featured relatively brief follow-up periods. As a result, while the current evidence does support the effectiveness of AI-assisted personalized exercise interventions, there is a need for larger, higher-quality randomized controlled trials to confirm their long-term effectiveness and generalizability.

Clinical and Practical Implications

For healthcare professionals, AI-assisted exercise systems should be seen as useful clinical decision support tools rather than as a replacement for professional expertise (1, 3). Since the AI continuously examines data relating to physiological factors, behavior, and performance, it can help clinicians to choose the right kind of exercise, modify the intensity of training, keep track of patients' adherence, and spot those individuals who may need extra supervision or intervention.

Even though they have a great deal of potential, AI-assisted exercise programs can only be successfully implemented if due attention is paid to ethical, legal, and technical aspects (1, 3, 20). Data privacy, cybersecurity, algorithm transparency, fairness with respect to different demographic groups, and clinical validation must still be considered essential before such interventions can be implemented in a responsible way.

Strengths of the Review

This systematic review has several important strengths. It focused specifically on AI-based personalized exercise interventions for women's health, in contrast to previous reviews that generally examined artificial intelligence in broader healthcare or digital medicine contexts. In addition, the review incorporated the latest AI technologies, including machine learning, wearable AI systems, computer vision, automated coaching platforms, and large language models. The methodological quality of the included studies was systematically assessed using the MMAT version 2018, which increases confidence in the overall synthesis of the evidence.

Limitations

Even though it has some advantages, it is necessary to take into account a number of limitations when interpreting the findings of this review. Firstly, only ten primary studies satisfied the predefined eligibility criteria, which shows that research into AI-based personalized exercise interventions aimed specifically at women's health is still in a relatively early stage. The small number of eligible studies weakens the overall strength of the evidence and hampers the ability to reach definite conclusions.

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Secondly, a great deal of heterogeneity was seen among the studies included in the review with respect to participant characteristics, health conditions, AI technologies, the intervention components, the outcome measures, and the length of follow-up (5, 8, 9). Because of this variability, a meta-analysis could not be carried out, and a narrative method of synthesizing the evidence was therefore needed.

Third, some of the studies included had relatively small sample sizes, were based on pilot designs, involved laboratory-based assessments, or lasted for a short period of time (8, 21).

Finally, the review only included peer-reviewed studies written in English, and the protocol was not registered in advance in PROSPERO (5).

Future Research Directions

Future research ought to focus on large-scale, multicenter randomized controlled trials that assess the long-term effectiveness, safety, and cost-effectiveness of AI-assisted individualized exercise programs in diverse groups of women. Moreover, the standardization of the intervention procedures and the outcome criteria would also help in making comparisons between studies and contribute to future quantitative evidence synthesis.

Attention should finally be given to the application of personalized exercise among different population groups. Future research needs to look at AI-supported interventions in women at various stages of life and under a range of clinical conditions. Broadening research to include these different populations will enhance the generalizability of AI-assisted exercise interventions and help in the development of more inclusive, precision-based healthcare strategies.

Conclusion

The systematic review shows that AI has the potential to emerge as a transformative technology when it comes to providing personalized exercise interventions designed to meet women's health needs. The studies that were included in the review found that AI-supported exercise programs had promising results in a number of health areas, such as physical activity participation, body composition, musculoskeletal function, cardiometabolic health, exercise adherence, and behavioral outcomes.

Yet the current body of evidence is still rather limited. The majority of the studies that are available make use of diverse intervention protocols, have small sample sizes, and feature relatively short periods of follow-up, which shows that there is a need for larger, higher-quality randomized controlled trials with standardized outcome criteria and longer observation times. Furthermore, future research should also look into emerging technologies such as explainable artificial intelligence, multimodal AI systems, federated learning, digital twins, and generative AI, while at the same time tackling the ethical, legal, regulatory, and privacy issues connected with the implementation of AI in healthcare.

The conclusions of this review suggest that AI is a promising and rapidly developing method for optimizing personalized exercise programs aimed at meeting women's health needs. The use of individually tailored exercise prescriptions, continuous monitoring, adaptive behavioral support, and data-driven decision-making means that AI-assisted exercise has the potential to promote the development of precision exercise medicine as well as to improve preventive healthcare and long-term disease management for women. Ongoing collaboration between exercise scientists, clinicians, engineers, data scientists, and policymakers will be necessary if these technological advances are to be turned into safe, effective, fair, and evidence-based clinical practices.

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Not declare.

Authorship

All authors meet the ICMJE authorship criteria.

Conflicts of interest

The authors declared no conflict of interest.

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