



Past, Present, and Future of Judo in South Africa: A Systematic Review

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PRISMA 2020 CHECKLIST

Section and Topic	Item #	Checklist Item	Location where Item is Reported
TITLE			-
Title	1	In a review examining the Past, Present and Future of judo in South Africa, the authors identify the report as a systematic review.	√
ABSTRACT			-
Abstract	2	In a review examining the Past, Present and Future of judo in South Africa, the authors summarise the objectives, eligibility criteria, databases searched, and methods to assess risk of bias and synthesise results of meta-analyses, indicating the number of studies and participants included in each. Objectives: To compare the levels of judo participation between South Africa and developed countries, with a specific focus on Japan: Analyze and quantify the disparities in the number of registered judokas relative to the population size in these countries. Design: Systematic review and meta-analysis. Data sources: Google Scholar, PubMed, SCOPUS, SportDiscuss and Web of Science. JSA policy documents, documentary reviews, JSA notices to members, International Judo Federation open access website, www.ijf.org . and reviewed literature from 2001 to June 2020. Eligibility criteria: Inclusion criteria: Study Design: Randomized controlled trials (RCTs) and non-randomized controlled trials. Language: Studies published in English. Content Focus: Articles specifically related to judo history and judo training methods or protocols, comparisons between individuals or group recognition at national and international level. And studies examining participation of both sexes in judo. Exclusion criteria: Content Focus: Articles investigating nutritional and pathological issues, articles without a reference to judo, studies that did not involve judo as a training protocol. Language: Articles without an English translation. Interventions: Studies using pharmacological substance or nutritional supplementation. Data extraction and synthesis: Two independent reviewers assessed the risk of bias for each included study. Independent Review: Reviewers worked independently to evaluate the risk of bias in each study. This approach ensured objectivity and minimized potential bias in the assessment process. Each reviewer completed the checklists independently, without discussing their assessments until after their initial evaluations were complete. Results: The search yielded eighteen articles published between 2001 and 2022. Majority of the articles (three) emanated from the South Africa, closely followed by United States of America, Brazil, Spain and Japan with two articles each. England, New Zealand, Britain, Australia, Canada, Turkey, Iran, United Kingdom produced one article each.	√

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Abstract	2	Seven studies were qualitative research sampling (two were purposeful sampling); two were mixed methods; two were databases; two were surveys one was quantitative purposeful sampling; one was a comparative study; one was phenomenological; one was Science Citation Index & Social Science Citation Index; one was cross sectional; and one was case study.	√
INTRODUCTION			-
Rationale	3	Describe the rationale for the review in the context of existing knowledge. The rationale for conducting this systematic review is rooted in the significant disparities observed in judo participation between developing and developed countries. Despite the global reach and popularity of judo as one of the most widespread Olympic sports, there is marked difference in the number of registered judokas in countries like South Africa (SA) compared to nations such as Japan. Specifically, Judo South Africa has approximately 2139 registered members, a miniscule 0,00004% of its population, while Japan boasts 122, 000 judokas, accounting 0,001% of its population. This stark contrast prompt a need to explore underlying factors contributing to such disparities. Existing knowledge suggests several contributing elements, including economic affordability, cultural preferences, and historic contexts such as the legacy of apartheid in South Africa. These factors collectively influence the accessibility and popularity of judo within different demographics. In south Africa, historical racial inequalities and the apartheid regime’s segregation policies have left enduring impacts on sport participation. During apartheid, judo, like many other sports, was practised in racially segregated communities, which has had lasting effects on the sport’s development and inclusivity post-apartheid. Despite efforts to democratize participation since 1994, disparities persist, and judo remains predominantly practised by the white population, although there are exceptions in provinces like the Eastern Cape and Western Cape where more black people engage in the sport. Given these insights, there is a clear need to systematically review the literature to understand how judo has evolved in Sout Africa, identify the barriers and facilitators of participation, and assess the strategies that could enhance the sport’s growth and inclusivity. By synthesizing findings from a wide range of studies, this review aims to provide a comprehensive understanding of the current state of judo in South Africa and offer evidence-based recommendations for future development. The systematic review approach ensures a thorough and unbiased examination of existing research, drawing from diverse sources to paint a holistic picture of the changes and opportunities within South African judo. This comprehensive analysis is crucial for informing policy decisions, guiding the strategic planning of sports federations, and ultimately bridging the participation gap between developing and developed countries.	√
Objectives	4	Provide an explicit statement of the objective(s) or question(s) the review addresses. <ul style="list-style-type: none"> • To compare the levels of judo participation between South Africa and developed countries, with a specific focus on Japan: <ul style="list-style-type: none"> - Analyze and quantify the disparities in the number of registered judokas relative to the population size in these countries. • To identify and understand the factors contributing to the low participation rates of judo in South Africa: <ul style="list-style-type: none"> - Investigate economic, cultural, and historical influences, including the impact of apartheid, on the accessibility and popularity of judo. • To evaluate current management and organisational strategies of judo federation in South Africa: <ul style="list-style-type: none"> - Assess the effectiveness of voluntary versus professionalized management structures in supporting athlete development and participation. • To explore the role of financial resources, strategic planning, and professional staff in the successful management of judo federations: <ul style="list-style-type: none"> - Determine the importance of financial investment, long-term planning, and the presence of full-time coaching and administrative staff for the growth and success of judo. • To provide evidence-based recommendations for the improvement of judo participation and performance in South Africa: <ul style="list-style-type: none"> - Identify best practises and strategies from developed countries that could be adapted and implemented in South Africa to enhance the sport’s inclusivity and competitiveness. 	√
METHODS			-
Eligibility criteria	5	Specify the inclusion and exclusion criteria for the review and how studies were grouped for the syntheses. Inclusion criteria: <ul style="list-style-type: none"> • Study Design: Randomized controlled trials (RCTs) and non-randomized controlled trials. • Language: Studies published in English. • Content Focus: <ul style="list-style-type: none"> - Articles specifically related to judo history and judo training methods or protocols. - Comparisons between individuals or group recognition at national and international level. - Studies examining participation of both sexes in judo. - Studies involving athletes aged 18 years and older where judo is practised as a sport. • Participation Type: Peer-review journal studies or those published ahead of print. • Time Frame: Publication from 2001 to June 2020. Exclusion criteria: <ul style="list-style-type: none"> • Content Focus: <ul style="list-style-type: none"> - Articles investigating nutritional and pathological issues. - Articles without a reference to judo. - Studies that did not involve judo as a training protocol. • Language: Articles without an English translation • Interventions: Studies using pharmacological substance or nutritional supplementation. 	√

Section and Topic	Item #	Checklist Item	Location where Item is Reported
Information sources	6	<p>Specify all databases, registers, websites, organisations, reference lists and other sources searched or consulted to identify studies. Specify the date when each source was last searched or consulted.</p> <p>Specify all databases, registers, websites, organisations, reference lists and other sources searched or consulted to identify studies. Specify the date when each source was last searched or consulted.</p> <p>Sources Searched and Consultation Dates</p> <p>Databases:</p> <ul style="list-style-type: none"> • PubMed - Last searched: June 2020 • SCOPUS - Last searched: June 2020 • SportDiscuss - Last searched: June 2020 • Google Scholar - Last searched: June 2020 • Web of Science - Last searched: June 2020 <p>Websites:</p> <ul style="list-style-type: none"> • International Judo Federation (IJF) Open Access Website (www.ijf.org) - Last consulted: June 2020 <p>Organisations:</p> <ul style="list-style-type: none"> • Judo South Africa (JSA) - Consultation included policy documents and notices to members. - Last consulted: June 2020 	v
Search strategy	7	<p>Present the full search strategies for all databases, registers and websites, including any filters and limits used.</p> <p>Summary of Search Strategy: The systematic literature search involved the consultation of five major electronic databases, a key open access website, relevant organizational documents, and the reference lists of included studies. Each source was thoroughly searched or consulted in June 2020 to ensure a comprehensive and up-to-date collection of relevant literature for this review. This approach allowed for the identification of studies that provide insights into the disparities in judo participation between developing and developed countries, the factors influencing these disparities, and the management strategies of judo federations.</p> <p>Present the full search strategies for all databases, registers and websites, including any filters and limits used.</p> <ul style="list-style-type: none"> • "Judo participation" OR "judo registration" OR "judo demographics" OR "judo population" OR "judo federation" OR "judo management" OR "judo development" OR "judo sport" OR "judo performance" • "South Africa" AND "judo" • "apartheid" AND "judo" • ("Judo" AND "management") OR ("judo" AND "federation") OR ("judo" AND "organization") OR ("judo" AND "governance") • "professionalization" AND "judo" • "Financial resources" AND "judo" <p>Search Strategy for SCOPUS:</p> <ul style="list-style-type: none"> • TITLE-ABS-KEY ("judo participation") OR TITLE-ABS-KEY ("judo registration") OR TITLE-ABS-KEY ("judo demographics") OR TITLE-ABS-KEY ("judo population") OR TITLE-ABS-KEY ("judo federation") OR TITLE-ABS-KEY ("judo management") OR TITLE-ABS-KEY ("judo development") OR TITLE-ABS-KEY ("judo sport") OR TITLE-ABS-KEY ("judo performance") • TITLE-ABS-KEY ("South Africa") AND TITLE-ABS-KEY("judo") • TITLE-ABS-KEY("apartheid") AND TITLE-ABS-KEY("judo") • (TITLE-ABS-KEY("judo") AND TITLE-ABS-KEY("management")) OR (TITLE-ABS-KEY("judo") AND TITLE-ABS-KEY("federation")) OR (TITLE-ABS-KEY("judo") AND TITLE-ABS-KEY("organization")) OR (TITLE-ABS-KEY("judo") AND TITLE-ABS-KEY("governance")) • TITLE-ABS-KEY("professionalization") AND TITLE-ABS-KEY("judo") • TITLE-ABS-KEY ("financial resources") AND TITLE-ABS-KEY("judo") <p>Search Strategy for SportDiscuss:</p> <ul style="list-style-type: none"> • ("Judo participation" OR "judo registration" OR "judo demographics" OR "judo population" OR "judo federation" OR "judo management" OR "judo development" OR "judo sport" OR "judo performance") AND ("South Africa" OR "apartheid" OR "professionalization" OR "financial resources") <p>Search Strategy for Google Scholar:</p> <ul style="list-style-type: none"> • "Judo participation" OR "judo registration" OR "judo demographics" OR "judo population" OR "judo federation" OR "judo management" OR "judo development" OR "judo sport" OR "judo performance" OR "South Africa judo" OR "apartheid judo" OR "professionalization judo" OR "financial resources judo" <p>Search Strategy for Web of Science:</p> <ul style="list-style-type: none"> • TS = ("Judo participation" OR "judo registration" OR "judo demographics" OR "judo population" OR "judo federation" OR "judo management" OR "judo development" OR "judo sport" OR "judo performance") AND TS = ("South Africa" OR "apartheid" OR "professionalization" OR "financial resources") <p>Filters and Limits Used:</p> <ul style="list-style-type: none"> • Publication Date: 2001 to June 2020 • Language: English • Publication Type: Peer-reviewed journal articles or those published ahead of print <p>Specify the methods used to collect data from reports, including how many reviewers collected data from each report, whether they worked independently, any processes for obtaining or confirming data from study investigators, and if applicable, details of automation tools used in the process.</p>	v

Section and Topic	Item #	Checklist Item	Location where Item is Reported
Selection process	8	<p>Specify the methods used to decide whether a study met the inclusion criteria of the review, including how many reviewers screened each record and each report retrieved, whether they worked independently, and if applicable, details of automation tools used in the process.</p> <p>Inclusion and Exclusion Criteria</p> <p>Inclusion Criteria:</p> <ul style="list-style-type: none"> • Study Design: <ul style="list-style-type: none"> - Randomized controlled trials (RCTs) and non-randomized controlled trials. • Language: <ul style="list-style-type: none"> - Studies published in English. • Content Focus: <ul style="list-style-type: none"> - Articles specifically related to judo history and judo training methods or protocols. - Comparisons between individual or group recognition at national and international levels. - Studies examining participation of both sexes in judo. - Studies involving athletes aged 18 years and older where judo is practiced as a sport. • Publication Type: <ul style="list-style-type: none"> - Peer-reviewed journal studies or those published ahead of print. • Time Frame: <ul style="list-style-type: none"> - Publications from 2001 to June 2020. <p>Exclusion Criteria:</p> <ul style="list-style-type: none"> • Content Focus: <ul style="list-style-type: none"> - Articles investigating nutritional and pathological issues. - Articles without a reference to judo. - Studies that did not involve judo as a training protocol. • Language: <ul style="list-style-type: none"> - Articles without an English translation. • Interventions: <ul style="list-style-type: none"> - Studies using pharmacological substances or nutritional supplementation. 	√
Data collection process	9	<p>Specify the methods used to collect data from reports, including how many reviewers collected data from each report, whether they worked independently, any processes for obtaining or confirming data from study investigators, and if applicable, details of automation tools used in the process.</p> <p>Date extraction:</p> <ul style="list-style-type: none"> • Critical information from included studies was extracted and organised into tables using Microsoft Word 2013. • Narrative descriptions complemented the tabular date, providing detailed insight into each study's findings. <p>Other Variables for Data Collection:</p> <ul style="list-style-type: none"> • Participant Characteristics: <ul style="list-style-type: none"> - Age: The age range and mean age of judo participants. - Gender: The proportion of male and female judo participants. - Race/Ethnicity: The racial and ethnic composition of judo participants. - Socio-economic Status: Indicators of socio-economic status, such as income or education level, of participants. • Intervention Characteristics: <ul style="list-style-type: none"> - Type of Judo Training: Description of the training protocols or interventions used in the study (<i>e.g.</i>, randori, kata, technical training). - Duration of Training: The length and frequency of judo training sessions. - Coaching Staff: Details about coaching staff involved in judo training (<i>e.g.</i>, qualifications, experience). • Funding Sources: <ul style="list-style-type: none"> - Source of Funding: Information on sources of funding for judo programs or research studies. 	√
Data items	10a	<p>List and define all outcomes for which data were sought. Specify whether all results that were compatible with each outcome domain in each study were sought (<i>e.g.</i> for all measures, time points, analyses), and if not, the methods used to decide which results to collect.</p> <p>List of Outcomes:</p> <p>Judo Participation:</p> <ul style="list-style-type: none"> • The number of registered judokas. • Demographics of judo participants (<i>e.g.</i>, age, gender, race). • Trends in judo participation over time. <p>Factors Influencing Judo Participation:</p> <ul style="list-style-type: none"> • Economic factors affecting participation (<i>e.g.</i>, affordability of training, access to facilities). • Cultural factors influencing participation preferences. • Historical influences, including the legacy of apartheid. <p>Management and Organizational Strategies:</p> <ul style="list-style-type: none"> • Structure and governance of judo federations. • Professionalization of judo federations. • Availability of financial resources for athlete support and development. • Long-term planning and strategic initiatives. <p>Athlete Performance and Success:</p> <ul style="list-style-type: none"> • Athlete performance indicators (<i>e.g.</i>, competition results, rankings). • Success in international competitions (<i>e.g.</i>, Olympic Games, World Championships). 	√

Section and Topic	Item #	Checklist Item	Location where Item is Reported
Data items	10b	<p>List and define all other variables for which data were sought (e.g. participant and intervention characteristics, funding sources). Describe any assumptions made about any missing or unclear information.</p> <p>Assumptions for Missing or Unclear Information:</p> <ul style="list-style-type: none"> • Participant Characteristics: <ul style="list-style-type: none"> - If participant characteristics were not clearly reported, assumptions may have been made based on available demographic data or general trends in judo participation. - For studies where participant characteristics were missing, efforts may have been made to contact study authors for clarification or additional information. • Intervention Characteristics: <ul style="list-style-type: none"> - In cases where intervention details were incomplete, assumptions may have been made based on the general practices and standards of judo training. - Any missing information or unclear descriptions may have been noted as limitations in the data extraction process. • Funding Sources: <ul style="list-style-type: none"> - If funding sources were not explicitly stated in the study, assumptions may have been made based on acknowledgments or disclosures provided by the authors. - Efforts may have been made to verify funding sources through additional correspondence with study authors or institutional records if necessary. <p>Specify the methods used to assess risk of bias in the included studies, including details of the tool(s) used, how many reviewers assessed each study and whether they worked independently, and if applicable, details of automation tools used in the process.</p>	v
Study risk of bias assessment	11	<p>Specify the methods used to assess risk of bias in the included studies, including details of the tool(s) used, how many reviewers assessed each study and whether they worked independently, and if applicable, details of automation tools used in the process.</p> <p>Risk Bias Assessment:</p> <ul style="list-style-type: none"> • The risk of bias in quantitative studies was assessed using the Downs and Black checklist. • Qualitative studies were evaluated using the JBI Appraisal Checklist for Qualitative Research. • Two independent researchers conducted these assessments to ensure standardization and objectivity 	v
Effect measures	12	<p>Specify for each outcome the effect measure(s) (e.g. risk ratio, mean difference) used in the synthesis or presentation of results.</p> <p>Data Collection Approach:</p> <ul style="list-style-type: none"> • Comprehensive Data Collection: <ul style="list-style-type: none"> - For each outcome domain, all relevant results that were compatible with the inclusion criteria were sought from each study. - This approach ensured a comprehensive collection of data related to each outcome, encompassing all relevant measures, time points, and analyses reported in the included studies. • Decision-Making Process: <ul style="list-style-type: none"> - There was no predefined method for deciding which results to collect within each outcome domain. - Instead, all results that met the criteria for relevance and compatibility with the outcome domain were sought from each study. - The inclusion of all compatible results aimed to capture the full breadth of information available within each study relevant to the outcomes of interest. <p>Overall, the data collection approach aimed for a thorough and inclusive gathering of information related to each outcome domain. By seeking all compatible results from each study, the review aimed to provide a comprehensive synthesis of the evidence pertaining to judo participation, influencing factors, management strategies, and athlete performance.</p>	v
Synthesis methods	13a	<p>Describe the processes used to decide which studies were eligible for each synthesis (e.g. tabulating the study intervention characteristics and comparing against the planned groups for each synthesis (item #5)). Studies were grouped based on their relevance to the following key themes to facilitate synthesis:</p> <ul style="list-style-type: none"> • Historical context and Participation Disparities: <ul style="list-style-type: none"> - Studies exploring the historical development of judo in South Africa and other countries. - Research comparing judo participation rates between South Africa and developed countries, particularly Japan. • Socio-Economic and Cultural Influences: <ul style="list-style-type: none"> - Articles examining the impact of socio-economic factors, cultural preferences, and the legacy of apartheid on judo participation in South Africa. • Management and Organisational Strategies: <ul style="list-style-type: none"> - Studies assessing the effectiveness of voluntary versus professionalized management structures within judo federations. - Research on the role of financial resources, strategic planning, and professional staff in successful management of judo federations. • Best Practises and Recommendations: <ul style="list-style-type: none"> - Articles identifying best practises from developed countries that could be adapted for South African judo federations. - Studies providing evidenced-based recommendations for improving judo participation and performance in South Africa. 	v

Section and Topic	Item #	Checklist Item	Location where Item is Reported
Synthesis methods	13b	Describe any methods required to prepare the data for presentation or synthesis, such as handling of missing summary statistics, or data conversions. Data Synthesis Approach: <ul style="list-style-type: none"> • Quantitative Data: -Proportion of Population Participating: <ul style="list-style-type: none"> ■ Use percentages to represent the proportion of the population engaged in judo. ■ Example: 0.00004% of the South African population are registered judokas. -Absolute Numbers: <ul style="list-style-type: none"> ■ Present the total count of registered judokas in each country. ■ Example: South Africa has 2,139 registered judokas. -Comparative Statistics: <ul style="list-style-type: none"> ■ Statistical comparisons (<i>e.g.</i>, chi-square tests) to examine differences in participation rates. ■ Example: Comparison of judo participation rates across different racial groups in South Africa. -Financial Investment Levels: <ul style="list-style-type: none"> ■ Summary statistics and descriptive analysis of financial data related to funding. ■ Example: Amount of funding allocated to judo federations and its impact on athlete development. • Qualitative Data: -Thematic Analysis: <ul style="list-style-type: none"> ■ Identify and synthesize key themes from qualitative data sources. ■ Example: Themes such as affordability, cultural preferences, and the impact of apartheid on judo participation. -Narrative Synthesis: <ul style="list-style-type: none"> ■ Descriptive summaries of qualitative findings related to organizational strategies. ■ Example: Description of how professionalization of federations impacts athlete success. 	√
Synthesis methods	13c	Describe any methods used to tabulate or visually display results of individual studies and syntheses. Articles used for the review were selected between 2021 to 2020 based on their literature content on judo. Objectives and key findings were also seen as important variables to use in the tabular presentation.	√
Synthesis methods	13d	Describe any methods used to synthesize results and provide a rationale for the choice(s). If meta-analysis was performed, describe the model(s), method(s) to identify the presence and extent of statistical heterogeneity, and software package(s) used. Details of the Assessment: <ul style="list-style-type: none"> • Downs and Black Checklist for Quantitative Research: <ul style="list-style-type: none"> - Reviewers assessed each quantitative study based on the 27 items in the checklist. - The checklist items included questions about the clarity of reporting, the representativeness of the study population, the appropriateness of the study design, the control of confounding variables, and the power of the study to detect a significant effect. • JB I Appraisal Checklist for Qualitative Research: <ul style="list-style-type: none"> - Reviewers evaluated each qualitative study using the ten-item checklist. - The items covered aspects such as the congruity between the research methodology and the research question, the representation of participants' voices, the researchers' influence on the research, and the ethical considerations. Specify for each outcome the effect measure(s) (<i>e.g.</i> risk ratio, mean difference) used in the synthesis or presentation of results.	√
Synthesis methods	13e	Describe any methods used to explore possible causes of heterogeneity among study results (<i>e.g.</i> subgroup analysis, meta-regression).	-
Synthesis methods	13f	Describe any sensitivity analyses conducted to assess robustness of the synthesized results.	-
Reporting bias assessment	14	Describe any methods used to assess risk of bias due to missing results in a synthesis (arising from reporting biases). Methods to Assess Risk of Bias: Tools Used: <ul style="list-style-type: none"> • Downs and Black Checklist for Quantitative Research: <ul style="list-style-type: none"> - The checklist consists of 27 items across five domains: Reporting, External Validity, Internal Validity—Bias, Internal Validity—Confounding, and Power. - This tool is used to evaluate the methodological quality and risk of bias in quantitative research studies. • JB I (Joanna Briggs Institute) Appraisal Checklist for Qualitative Research: <ul style="list-style-type: none"> - The checklist consists of ten items with four possible answers (Yes/No/Unclear/Not Applicable). - This tool is used to assess the quality and risk of bias in qualitative research studies. 	√
Certainty assessment	15	Describe any methods used to assess certainty (or confidence) in the body of evidence for an outcome.	-
RESULTS			-
Study selection	16a	Describe the results of the search and selection process, from the number of records identified in the search to the number of studies included in the review, ideally using a flow diagram. Presentation of Results: <ul style="list-style-type: none"> • Judo Participation: <ul style="list-style-type: none"> - Presented as proportions and absolute numbers, with comparative statistics where relevant. • Factors Influencing Participation: <ul style="list-style-type: none"> - Presented through qualitative themes and statistical comparisons. 	√

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Study selection	16a	<p>Management and Organizational Strategies:</p> <ul style="list-style-type: none"> - Described using narrative summaries and financial statistics. <p>• Athlete Performance and Success:</p> <ul style="list-style-type: none"> - Presented through performance indicators and competition outcomes, with appropriate statistical measures where applicable. 	√
Study selection	16b	<p>Cite studies that might appear to meet the inclusion criteria, but which were excluded, and explain why they were excluded.</p> <ul style="list-style-type: none"> • Inclusion criteria: • Content Focus: - Articles specifically related to judo history and judo training methods or protocols. - Comparisons between individual or group recognition at national and international levels. - Studies examining participation of both sexes in judo. - Studies involving athletes aged 18 years and older where judo is practiced as a sport. <p>• Exclusion Criteria:</p> <ul style="list-style-type: none"> • Content Focus: - Articles investigating nutritional and pathological issues. - Articles without a reference to judo. - Studies that did not involve judo as a training protocol. <p>• Language:</p> <ul style="list-style-type: none"> - Articles without an English translation. <p>• Interventions:</p> <ul style="list-style-type: none"> - Studies using pharmacological substances or nutritional supplementation. 	√
Study characteristics	17	<p>Cite each included study and present its characteristics.</p> <ul style="list-style-type: none"> • Effect Measures for Each Outcome: • Judo Participation: -Effect Measure: ■ Proportion of Registered Judokas: Percentage of registered judokas relative to the total population. ■ Absolute Number of Registered Judokas: Total count of registered judokas. -Example Metrics: ■ Proportion of judokas in South Africa: 0.00004% of the population. ■ Proportion of judokas in Japan: 0.001% of the population. ■ Total number of judokas in South Africa: 2,139. ■ Total number of judokas in Japan: 122,000. • Factors Influencing Judo Participation: -Effect Measure: ■ Qualitative Themes: Identification of recurring themes in qualitative data. ■ Socio-economic Comparisons: Comparative analysis of participation rates across different socio-economic groups. -Example Metrics: ■ Themes: Affordability, cultural preferences, impact of apartheid. ■ Comparative Statistics: Differences in participation rates between racial groups or socio-economic statuses. • Management and Organizational Strategies: -Effect Measure: ■ Descriptive Analysis: Narrative descriptions of organizational structure and governance. ■ Financial Investment Levels: Amount of funding allocated to judo federations. -Example Metrics: ■ Professionalization levels: Number of full-time staff, type of governance (voluntary vs. professional). ■ Funding Levels: Extent of financial resources available for judo development and athlete support. • Athlete Performance and Success: -Effect Measure: ■ Competition Outcomes: Number of medals won, world rankings. ■ Performance Indicators: Mean scores or points achieved in competitions. -Example Metrics: ■ Competition Results: Number of international medals won by South African judokas. ■ Performance Metrics: Average scores in international competitions, world ranking positions. 	√
Risk of bias in studies	18	<p>Present assessments of risk of bias for each included study.</p> <ul style="list-style-type: none"> • The search for the articles was conducted while taking into consideration the following inclusion criteria: - randomized and nonrandomized controlled trials, - available in the English language published journal studies or those that were published ahead of print were considered for this review. - articles specific to Judo history and judo training methods/protocols, - comparisons between individual/groups' national and international global recognition, - participation of both sexes, and - athletes aged 18 years and older. The only studies included were those where Judo was practiced as a sport. 	√
Results of individual studies	19	<p>For all outcomes, present, for each study: (a) summary statistics for each group (where appropriate) and (b) an effect estimate and its precision (<i>e.g.</i> confidence/credible interval), ideally using structured tables or plots. Table 1</p>	√

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Results of syntheses	20a	For each synthesis, briefly summarise the characteristics and risk of bias among contributing studies. - The risk of bias in quantitative studies was assessed using the Downs and Black checklist. - Qualitative studies were evaluated using the JBI Appraisal Checklist for Qualitative Research. - Two independent researchers conducted these assessments to ensure standardization and objectivity.	√
	20b	Present results of all statistical syntheses conducted. If meta-analysis was done, present for each the summary estimate and its precision (e.g. confidence/credible interval) and measures of statistical heterogeneity. If comparing groups, describe the direction of the effect. .N/A	√
	20c	Present results of all investigations of possible causes of heterogeneity among study results. N/A	√
	20d	Present results of all sensitivity analyses conducted to assess the robustness of the synthesized results.	-
Reporting biases	21	Present assessments of risk of bias due to missing results (arising from reporting biases) for each synthesis assessed. <ul style="list-style-type: none"> • Assumptions for Missing or Unclear Information: • Participant Characteristics: <ul style="list-style-type: none"> - If participant characteristics were not clearly reported, assumptions may have been made based on available demographic data or general trends in judo participation. - For studies where participant characteristics were missing, efforts may have been made to contact study authors for clarification or additional information. • Intervention Characteristics: <ul style="list-style-type: none"> - In cases where intervention details were incomplete, assumptions may have been made based on the general practices and standards of judo training. - Any missing information or unclear descriptions may have been noted as limitations in the data extraction process. • Funding Sources: <ul style="list-style-type: none"> - If funding sources were not explicitly stated in the study, assumptions may have been made based on acknowledgments or disclosures provided by the authors. - Efforts may have been made to verify funding sources through additional correspondence with study authors or institutional records if necessary. Specify the methods used to assess risk of bias in the included studies, including details of the tool(s) used, how many reviewers assessed each study and whether they worked independently, and if applicable, details of automation tools used in the process.	√
Certainty of evidence	22	Present assessments of certainty (or confidence) in the body of evidence for each outcome assessed. <ul style="list-style-type: none"> • Assessment Process: • Number of Reviewers: <ul style="list-style-type: none"> - Two independent reviewers assessed the risk of bias for each included study. • Independent Review: <ul style="list-style-type: none"> - Reviewers worked independently to evaluate the risk of bias in each study. This approach ensured objectivity and minimized potential bias in the assessment process. - Each reviewer completed the checklists independently, without discussing their assessments until after their initial evaluations were complete. • Conflict Resolution: <ul style="list-style-type: none"> - Any discrepancies or conflicts in the assessments were resolved through discussion between the two reviewers. - If the reviewers could not reach a consensus, a third reviewer was consulted to make the final decision on the risk of bias assessment. • Automation Tools: <ul style="list-style-type: none"> - No automation tools were used in the risk of bias assessment process. All evaluations were conducted manually by the reviewers using the specified checklists. 	√
DISCUSSION			-
Discussion	23a	Provide a general interpretation of the results in the context of other evidence. <ul style="list-style-type: none"> • The search yielded eighteen articles published between 2001 and 2022. • Majority of the articles (three) emanated from the South Africa, closely followed by United States of America, Brazil, Spain and Japan with two articles each. England, New Zealand, Britain, Australia, Canada, Turkey, Iran, United Kingdom produced one article each. • Seven studies were qualitative research sampling (two were purposeful sampling); two were mixed methods; two were databases; two were surveys one was quantitative purposeful sampling; one was a comparative study; one was phenomenological; one was Science Citation Index & Social Science Citation Index; one was cross sectional; and one was case study. 	√
Discussion	23b	Discuss any limitations of the evidence included in the review. Articles reviewed were all in English, this may introduce bias since articles published in other languages may have been missed.	√
Discussion	23c	Discuss any limitations of the review processes used. The focus on English articles posed a limitation in relation to articles written in languages other than English.	√
Discussion	23d	Discuss implications of the results for practice, policy, and future research. Policy change is necessary to ensure professionalization and commercialization of federations to enhance development of athletes. More research in the area of volunteerism versus full time staff in sport should be a future research focus area to address perceived deficiencies in judo sport in its current form in South Africa.	√
OTHER INFORMATION			-
Registration and protocol	24a	Provide registration information for the review, including register name and registration number, or state that the review was not registered.	-

Section and Topic	Item #	Checklist Item	Location where Item is Reported
Registration and protocol	24b	Indicate where the review protocol can be accessed, or state that a protocol was not prepared.	-
Registration and protocol	24c	Describe and explain any amendments to information provided at registration or in the protocol.	-
Support	25	Describe sources of financial or non-financial support for the review, and the role of the funders or sponsors in the review. The corresponding author is funding the research and there are no other funders that may have an interest in the review. All authors confirm that no external funding is used for this review.	√
Competing interests	26	Declare any competing interests of review authors. Authors can confirm no conflict of interest of review to declare.	√
Availability of data, code and other materials	27	Report which of the following are publicly available and where they can be found: template data collection forms; data extracted from included studies; data used for all analyses; analytic code; any other materials used in the review. Any data source required and reasonably requested will be made available.	√

Note: From: Page MJ, McKenzie JE, Bossuyt PM, Boutron I, Hoffmann TC, Mulrow CD, *et al.* The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. *BMJ* 2021;372:n71. doi: 10.1136/bmj.n71
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