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Development of a Sustainable Educational Programme for Judo Coaches of Older Practitioners: A Transnational European Partnership Endeavor

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Abstract: Following the European recommendations on sustainable educational skills, a strong need has emerged to provide judo coaches with solid and updated knowledge, competences, and attitudes to train older judo practitioners (≥ 65 years old). This study illustrates the participatory research methodology used to develop and validate the content of the “Educating Judo Coaches for Older practitioners” (EdJCO) online educational programme. From seven countries, 22 judo and sport science experts of the EdJCO team engaged in a four-phase iterative process: (i) a systematic literature review; (ii) seven national focus groups involving 88 experts and an online survey involving 470 judo coaches; (iii) the online EDJCO programme development; and iv) the educational programme evaluation engaging 51 judo coaches as potential end-users. The EdJCO programme encompasses six modules on organization, aging, safety, physiology, psychology, and coaching methodology. Despite the overall positive evaluations, the experts were required to streamline the online programme to meet the coaches’ demands, and to provide a comprehensive handbook to further deepen their knowledge. The cooperation among university scholars, experts from the International Judo Federation Academy, national-level sports clubs, and the judo coaches of older practitioners of different backgrounds and nationalities built a sustainable educational programme suitable for end-users to boost their teaching and training potential across their lifespan.

Keywords: judo; martial arts; older individuals; coaches; successful aging; sustainable education; online programme; digitalization; teaching; training

1. Introduction

In the multifaceted realm of sport disciplines, the traditional Japanese martial art judo has gained global recognition not only as an Olympic combat sport but also as a means of physical and mental well-being promotion [1–6]. Spanning across generations and attracting individuals of various ages, judo practice in older novice and expert practitioners showed promising benefits on psychological (e.g., the fear of falling, brain function), functional ability (e.g., gait stability, balance, falling skills) and anthropometric (e.g., BMI, the reduction in waist circumference) aspects [7–14]. However, notable research gaps still exist with a scarcity of comprehensive studies delving into the diverse impacts of judo later in life [15,16]. This lack of information underscores the need for an in-depth exploration of how judo can positively influence individuals' well-being, social inclusion, and the overall quality of life for successful aging [2,6]. To provide a nuanced understanding, it is thus essential to acknowledge the multifaceted nature of judo for older adults [1,10,17,18], highlighting not only the potential benefits (e.g., physical, mental, and social health) but also the possible challenges (e.g., injury risks, cardiovascular strain, psychological stress, social barriers) associated with practicing judo in this age group [2,16,19]. Furthermore, a crucial need is emerging for specialized and expert personnels training older judo practitioners.

In recent years, there has been a growing appreciation of the role of judo coaches in guiding and shaping the experiences of judo practitioners, particularly with respect to their knowledge, attitudes, and teaching skills [20,21]. This heightened emphasis on coaching effectiveness has led to an exploration of educational methods tailored to meet the unique needs of judo coaches [22,23]. In particular, through its ERASMUS+ Sport programme, the European Commission co-financed the Collaborative Partnership “Educating Judo Coaches for Older practitioners” (EdJCO), encompassing a consortium of sports (i.e., judo clubs from Croatia, Romania, Slovenia, Spain, and Türkiye) and educational partners (i.e., University of Rome Foro Italico, Italy, and International Judo Federation Academy Foundation, Malta) from seven countries, which aimed to develop an eminence and evidence knowledge-based sustainable educational programme tailored to the coaches' educational needs on judo training for older judo practitioners [24]. This project aligns with the international guidelines on sustainable lifestyle goals [25]. For instance, in the European Union, around 9 million professional and volunteer coaches support over 100 million citizens in improving and maintaining their performances and in achieving their active and sustainable lifestyle, thus representing one of the largest workforces in Europe [26]. In particular, sport coaches play a pivotal role in nurturing athletic talent, fostering physical activity, and promoting the values of sportsmanship [26,27]. Their impact extends beyond sports, contributing to public health, social cohesion, and competitive excellence [28,29].

This research and development endeavor aims to contribute to maintain and promote healthy aging, which represents a crucial priority for a sustainable contemporary society. Indeed, the substantial and continuous growth in the proportion of older adults in the general population urges both strategic policy implementation and concrete actions to nurture higher levels of health-enhancing physical activity, the reduction in sedentary behaviors, and the establishment of adapted programmes for older adults, meeting both health-related and social inclusion goals [30–33]. Actually, the sustainable development of adapted sports and physical activity programmes tailored for older individuals might positively impact not only the economic burden due to physical inactivity but also contribute to fostering the social inclusion of older people, quite often experiencing social isolation, loneliness, and consequent psychological disorders. From a physical standpoint, these programmes could address the loss of physiological and cognitive functions characterizing the aging process by delaying age-related decline, decreasing both the mortality and fall risks in late adulthood [34,35], and preserving health with advancing years. Furthermore, they could enhance older adults' psychological and social well-being by fostering positive feelings, social interaction, and the overall quality of life [36,37].

Therefore, to investigate the knowledge and educational needs of judo coaches representing different countries and sports bodies (e.g., associations, federations), the EdJCO

research team opted for a participatory research design, which effectively captures the dynamics of an intertwined cultural group, wherein individuals heavily draw from their personal experiences to determine suitable decision-making schemes for specific contexts [38]. Thus, in the development process of a free and open digital educational resource encompassing independent and standalone learning objects and reusable educational units [39], the active engagement of coaches and experts was deemed crucial to ensure an user-friendly programme with clear contents matching the end-users' needs [40,41]. Indeed, to secure a thorough comprehension of critical aspects related to judo coaching for older practitioners (≥ 65 years) [42], it is imperative to collect diverse and multidimensional information encompassing contextual and structural elements related to both coaches and trainees and their dyadic interconnections. This approach aligns with the insights proposed by Genzuk (2003) [38], which emphasize the necessity of incorporating various perspectives to construct a holistic understanding. Therefore, the following three-step developmental process has been followed: (i) a systematic literature review on the risks and benefits of judo for middle-aged and older practitioners [2]; (ii) seven national focus groups involving a total of 88 experts from an international consortium of judo and educational partners who generated statements pertinent to educate coaches to support older judo practitioners such as required knowledge, training pros/cons and definitions, tools, and monitoring tests [21]; and (iii) the process of analysis, intercultural harmonization, and validation of the condensed 55 statements of the judo coaches' perceived needs and knowledge into six macro-areas related to aging, safety, physiology, psychology, organization, and andragogy, summarizing the most relevant content of a sustainable educational programme for coaching older judo practitioners [21].

Since judo coaches have the means and potential to facilitate and to boost the development and success of training and active lifestyle of older novice and expert practitioners, it is crucial to understand how they can be formally, non-formally, and informally educated to enhance their teaching and training proficiency [29,43,44]. Actually, the andragogical approach recognizes the distinctive characteristics of adult learners and tailors educational strategies accordingly [45]. Therefore, extending its significance beyond the realm of judo coaching, this study contributes to the broader discourse on sports coaching for an aging population [42], aligns with the contemporary understanding of successful and healthy aging, highlighting the importance of continued and meaningful physical activity and active engagement, and meets the demands of a sustainable lifelong education of coaches [26,37,46–50]. Therefore, a comprehensive andragogical approach is needed to cover the specific challenges and opportunities (e.g., aging processes, diet, hydration, safety, evaluation, and emotional health) as well as the practical implications (e.g., organizational issues, teaching and training aspects) posed by coaching older novice and expert practitioners in judo with a prospect of enduring effectiveness and ongoing impact [26,42]. In addressing these issues, the present research aims to shed light on how judo coaches can be equipped with the required knowledge, attitudes, and skills to foster the social inclusion and well-being of older practitioners, ultimately contributing to the overall vitality of judo as a sport and a way of life.

2. Materials and Methods

2.1. Study Design

Approved by the European Commission (622155-EPP-1-2020-1-IT-SPO-SCP) and the Institutional Review Board of the University of Rome Foro Italico, Italy (CAR 73/2021, obtained in Rome on 20 February 2021), the present study was performed during a 3-year period (i.e., 2021–2023) under the ERASMUS+ Sport Collaborative Partnership “EdJCO—Educating Judo Coaches for Older practitioners”. In line with the Declaration of Helsinki and the European General Data Protection Regulation (GDPR), this research adheres to high-quality research guidelines and ethical standards, ensuring a methodological rigor in data acquisition and analysis, and resulting in meaningful and coherent outcomes with significant resonance [51–53].

The EdJCO educational programme has been developed by the means of consensus-based mixed-methods within 4 phases [54], with judo coaches serving as insiders and end-users. This approach ensured the effective organization of the sustainable educational content with a focus on the essential aspects for the enhancement of the coaches' working capabilities with older practitioners [38,39]. Illustrated in Figure 1, the EdJCO educational programme involved two developmental phases (phases 1 and 2) and two consolidation phases (phases 3 and 4).

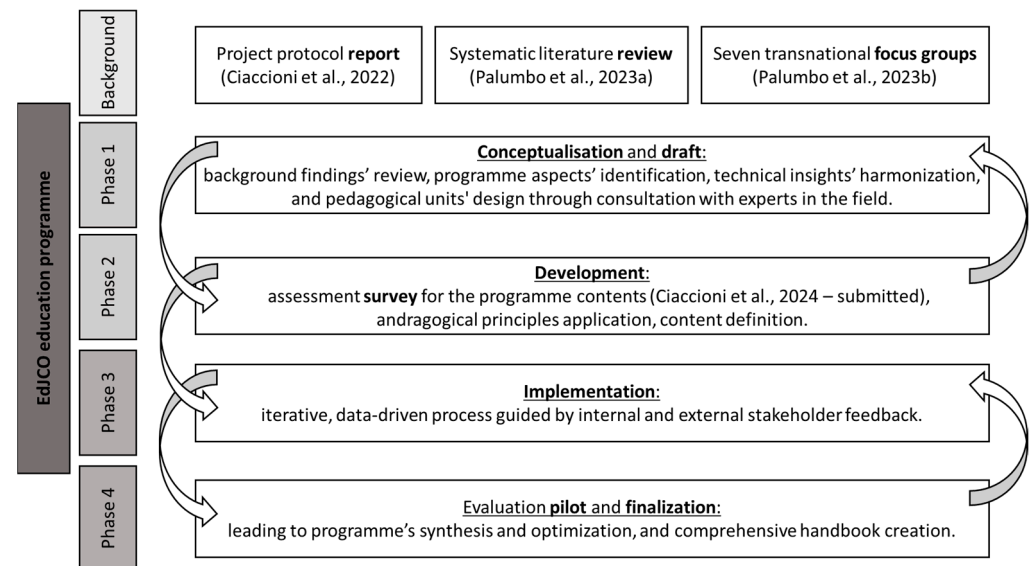


Figure 1. Schematic representation of the background stage, and the four developmental phases of the EdJCO educational programme for judo coaches of older practitioners, illustrating the constant back-and-forth circulation of opinions, suggestions, and feedback, between the experts and the end-users (i.e., the judo coaches) [2,20,21,55].

2.1.1. Phase 1

In November 2021, a meeting of the EdJCO team was planned in Rome, Italy, to discuss the preliminary findings of the scientific project report, the systematic literature review, and the seven national focus groups with experts. Carried out in 2021 and subsequently published in peer-reviewed journals, these activities highlighted seven pillars of the educational programme (e.g., aging, health, organization, physiology, psychology, teaching, and training) [2,20,21]. Notably, given the novelty of the topic and the limited available publications, the EdJCO research team concurred that expert consultation was a valid strategy in the absence of an extensive body of scientific evidence to obtain information from reliable and authoritative sources in the field [41,56,57]. Furthermore, between May and October 2021, seven focus groups were conducted in Croatia, Italy, Malta, Romania, Slovenia, Spain, and Türkiye, adhering to COVID-19 regulations. With a structured four-phase approach (≈ 100 min), the organizers as facilitators introduced the EdJCO project and outlined participant expectations, then presented five research questions, guided discussions, and recorded notes. Specifically, the experts were asked to highlight the potential benefits and risks of judo practice in advancing age, the core knowledge judo coaches should possess to train older judo practitioners, how to prevent and/or manage possible risks, how to organize groups of older practitioners, and the most appropriate tools/tests/measurements for monitoring the efficacy of training plans. A 15 min discussion per each question encouraged open interaction, sharing experiences, and forming consensus statements. A final discussion allowed additional feedback. Participants completed a quality assessment questionnaire and were invited to provide further insights via email [21].

Therefore, in April 2022 a second meeting was organized in Rijeka, Croatia, to reach a consensus agreement on the following crucial aspects to build a sound education pro-

gramme: (i) the necessary harmonization of the sport- and judo-specific technical insights with the an evidence-based scientific approach related to both education content and delivery; (ii) the need to construct pedagogical units coherent with coaches' necessary knowledge, competencies, and skills for coaching judo in older individuals, designed as on-line learning objects to be used either sequentially or independently through an appealing (e.g., graphics) and user-friendly structural format (e.g., with summary pages and infographics assisting the learner); and (iii) the need to consider coaches presenting different judo education levels, experience, and status (e.g., professional coaches, volunteer instructors) as potential end-users of the EdJCO education program, balancing the transfer of relevant knowledge, competencies, and skills related to the specific features of coaching judo in older individuals into condensed and streamlined learning contents.

2.1.2. Phase 2

Within the andragogical approach, the EdJCO team sought to create a learning environment facilitating effective adult learning experiences and respecting the following characteristics [43,58]: (i) self-concept and motivation: as adults capable of self-direction and self-control and responsible for their own decisions, coaches are motivated to learn from both extrinsic factors (e.g., job advancement, salary increase) and intrinsic factors (e.g., personal satisfaction, sense of achievement); (ii) experience and informal education: coaches' learning occurs in life and in informal settings (e.g., peers, mentors, or through self-study) and can serve as rich didactical resources within and outside formal "classroom" environments; (iii) readiness and orientation to learn: perceiving a direct relevance to their life situations or career goals, coaches are task-oriented and therefore more keen to learn when their decision to enroll in an education path sustains their specific professional needs (e.g., coaching individuals with special needs); (iv) problem-centered and direct application: as coaches are adult learners often more interested in solving real-life problems than acquire abstract theoretical knowledge, their learning activities should focus on the practical applications to elicit immediate benefits; and (v) respect for the learner: treating adult coaches as learners with respect and valuing their knowledge, contributions, and experiences, in line with the andragogical approach [58]. Therefore, to develop the prototype of the educational programme, the EdJCO team collected the informed opinion of 470 end-users (e.g., international judo coaches) by the means of an online survey where respondents indicated on a 1–7-point Likert scale their perceived knowledge and need of education regarding the contents of the proposed programme (Ciaccioni et al., submitted) [55]. Items showing the lowest values of perceived knowledge and the highest values of need of education were identified by the means of a bivariate go-zone plot.

In September 2022 a meeting of the EdJCO team was planned in Madrid, Spain, to review the results of the survey and identify a six-module structure with a total of 35 learning units (e.g., Aging Process: $n = 7$; Safety and First Aid: $n = 4$; Organization and Environment: $n = 5$; Physiology and Fitness: $n = 3$; Psychology and Mental Health: $n = 8$; Teaching and Training: $n = 8$), with links to the additional resources that allow in-depth individual learning, and a digital space with self-assessment tests (e.g., multiple choice) at the end of each module. In the context of the EdJCO international reach, the English language was selected for the online educational programme due to its numerous advantages including widespread global use, the standardization and consistency of education, employability, access to resources, and networking and cross-cultural exchange opportunities [59]. Nevertheless, by the means of digital resources of the International Judo Federation Academy (e.g., automated translation in several languages), the content will be also available in the coaches' native languages [60].

2.1.3. Phase 3

In April 2023, a meeting of the EdJCO team was organized in Izmir, Turkiye, to analyze and discuss the insights gathered from the online survey to structure the five steps of the implementation phase 3:

1. Programme drafting: the initial step involved drafting a roadmap for a comprehensive programme development plan, outlining its specific structure (e.g., modules, learning units, further resources, tests), the tasks and deliverables, the developers, and the content of the EdJCO online educational programme, incorporating the valuable input obtained from the international online survey.
2. Programme implementation: it encompassed the development and launch of the online educational programme, including the creation of the educational content, the development of the technical infrastructure of the online program, and the check of the user interfaces.
3. Programme review by EdJCO team members: based on the extensive experience of the IJF Academy on online judo educational programmes, the EdJCO team evaluated aspects related to the content quality, platform functionality, user experience, and alignment with the goals established in the project plan, and this internal review aimed to identify strengths and weaknesses and to ensure that the educational programme met the intended objectives.
4. Feedback integration: the identified shortcomings, the refinement of the content, and the observation of necessary adjustments were addressed to enhance the overall effectiveness and user-friendliness of the platform.
5. Further development: in building on the insights gained from both the online survey and the internal team review, the EdJCO educational programme underwent further development through the optimization of the educational materials, features, and usability, also in light of the best practices and the advancing needs within the field of judo and online education.

Overall, this implementation phase was intended to be a dynamic and iterative process, driven by data and feedback obtained from both external stakeholders and internal evaluation by the EdJCO team, ensuring that the EdJCO online educational programme evolved to meet the highest standards and effectively served its target audience.

2.1.4. Phase 4

Phase 4—Evaluation Platform and Content

In the first three phases, the comprehensive framework of the EdJCO educational programme has been delineated as a guidance system for users in search of both theoretical and practical information and its subsequent interpretation and application.

To meet the needs of judo coaches of older practitioners, a deliberate decision has been made to offer concise and indispensable content that can be readily used in their coaching endeavors. Furthermore, supplementary resources available for coaches interested in further deepening their knowledge relative to the main education contents were also included (e.g., scientific articles, books, websites, and instructional videos). Based on the main outcomes from seven EdJCO national focus groups [21], statements and items were organized in six modules categorized after macro-areas: “Organization and Environment”, “Aging Process”, “Safety and First Aid”, “Physiology and Fitness”, “Psychology and Mental Health”, and “Teaching and Training”. Profiting from the extensive expertise of the IJF Academy in delivering online judo education, the Rise 360 online platform (<https://articulate.com/360>, accessed on 13 November 2023) has been selected to issue the EdJCO education program. In particular, this platform provides the following: (i) an intuitive and user-friendly interface that simplifies the process of creating and accessing educational content, for both educators and learners; (ii) a flexible design, ensuring that the educational materials are accessible across various devices and screen sizes, promoting a seamless learning experience; (iii) support a wide range of multimedia elements, including videos, images, and interactive modules, which enhance the engagement and effectiveness of the educational content; (iv) collaboration features for educators, allowing them to work together on course development and updates, which is essential for maintaining a high standard in the program’s quality and relevance; (v) robust analytics and tracking features to monitor learners’ progress and assess the effectiveness of the educational

materials; (vi) accessibility standards compliant with relevant regulations, promoting inclusivity and equity in education; and (vii) a cost-effective subscription-based model for educational institutions, making it a viable choice for the EdJCO programme [61]. Hence, the structural and visual format was implemented and tested successfully to deliver high-quality, harmonized, and engaging educational content for judo coaches.

Regarding the content of the education program, an agreement was reached on organizing the training material in six modules. Specifically, the “Organization and Environment” module examined the essential aspects in the management of a judo course targeting older practitioners including economic factors, social and family support, relations, and engagement, living conditions, and contexts associated with judo practice, such as the dojo (training hall) and common spaces. Here, the appropriate statistics and infographics on a changing world facing a fast-aging process were provided. The “Aging Process” module covered the essential areas such as immune function, metabolic health, and musculoskeletal health. Additionally, it explored the impact of aging on eyes and hearing health. It also addressed the importance of healthy sleep patterns and their influence on the overall health. Lastly, considering the effects of aging on the heart and circulatory system, it examined in-depth the cardiovascular health. In fact, understanding these aging-related factors is crucial for tailoring effective and age-appropriate judo training programmes to promote optimal health and well-being in the participants. The “Safety and First Aid” module included topics such as the importance of medical certificates and considerations related to drug use. It emphasized risk prevention strategies, proper diet, and hydration for optimal performance. Furthermore, it addresses the significance of understanding participants’ medical history to ensure a safe training environment. Focused on the evaluation of participants’ functional fitness and physical capability, the “Physiology and Fitness” module explored the motor literacy knowledge, assessing their understanding of movement and coordination and also emphasizing the importance of developing and maintaining functional fitness to enhance the overall physical performance and well-being during judo training. To provide holistic support and foster a positive mental environment for all judo practitioners, the “Psychology and Mental Health” module examined psychological disorders, both trait and state related, the attitudes and motivations of older practitioners towards judo training, their activation and relaxation status, body image perceptions, and the levels of individual and group empathy. Moreover, this module delved into mood and emotional status, as well as addressing any fears that may arise during the judo training journey of older individuals. Finally, the “Teaching and Training” module covered the adaptation of judo techniques (e.g., falling techniques) and training modalities to suit the needs of older participants. It explored the benefits of introducing variability in practice, emphasizing short-term and long-term realistic goals, effective training methodologies and monitoring tests, proactive participation, and engagement, addressing considerations for group division or inclusion, effective communication strategies, and fostering a friendly context to create a positive and rewarding experience for older judo practitioners.

Phase 4—Evaluation Procedure

Whilst the EdJCO project was initiated in Europe and represents the results of a transnational research endeavor of seven countries (i.e., Croatia, Italy, Malta, Romania, Slovenia, Spain, and Türkiye), the project aims to extend its application and effects worldwide thanks to the partnership with the IJF Academy and international connections of the other partners. To secure this global perspective, useful resources developed within and outside Europe (e.g., United Nations, World Health Organization, National Institutes of Health) have been provided in English, and EdJCO material will be available to national bodies interested in translating it. Encompassing seven national workshops, the phase 4 was envisaged to introduce judo coaches to the EdJCO online educational programme and to gather their feedback through in-depth discussions regarding the perceived significance and clarity of the educational contents. Thus, the EdJCO team was offered the opportunity to consider the possible revisions or enhancements of the educational programme

based on the valuable feedback and insights of judo coaches. During the workshops, plenty of opportunities to individually explore the programme's functionality and content were provided followed by a general discussion and an individual discuss to gather the participants' opinions.

In September 2023, a final meeting of the EdJCO team was planned in Ljubljana, Slovenia, to analyze and discuss the feedback received from the national workshops for implementing the EdJCO online educational programme and creating a comprehensive handbook.

2.2. Evaluation of the EdJCO Educational Programme

2.2.1. Participants

The overall developmental process of the EdJCO educational programme encompassed 22 members of the EdJCO team; 88 experts of judo and university scholars [21]; and 470 judo coaches engaged in the Phase 2 (Ciaccioni et al., 2024 submitted) [55]. To validate the EdJCO educational programme, 51 European judo coaches (females 33%, males 67%; education: 71% > bachelor's) provided their opinions through the evaluation questionnaire (Table 1).

Table 1. Socio-demographic information of participants based on the questionnaire ($n = 51$).

Characteristic	Answer	%
Nationality	Croatia	15.7
	Italy	29.4
	Romania	5.9
	Slovenia	25.5
	Spain	15.7
	Türkiye	7.8
Gender	Male	66.7
	Female	33.4
	Prefer not to say	0
Education	High school	19.6
	Professional school	7.8
	Bachelor's	52.9
	Master's	11.8
	PhD	5.9
	Other	2.0

2.2.2. Instrument and Procedures of Data Collection

The EdJCO team produced the guidelines for the conduction of national workshops with judo coaches to ensure the relevance and accuracy of the outcomes. The EdJCO guidelines included the purposeful selection of participants, the methodological approach to conduct a general discussion stimulating a balanced participation, the information to be provided to participants regarding the aims, developmental phases, the operating procedures to access the pilot version of the online educational programme, and the instructions regarding the quantitative and qualitative evaluation of the educational programme. An email requesting to contribute to the evaluation of the EdJCO educational programme was sent to the participants, and respondents signed a consent form prior to the workshops, in which the time required and the voluntary nature of the task, the possibility to withdraw at any time without providing a reason, and insurance of anonymous and confidential nature of the responses were specified. Following their participation in the workshop, the coaches were invited to respond an online evaluation questionnaire. As the validated

assessment scales of educational programmes for judo coaches of older practitioners are missing, the EdJCO team created an electronic evaluation questionnaire (Supplementary Material S1) in English to provide flexibility in terms of both timing and geographic location for participants, allowing for self-administration and enhancing accessibility thanks to the multimedia modality [62]. Developed for probes and follow-up questions [38], this self-report measurement questionnaire encompassed a first section (i.e., Part A) to collect socio-demographic information from the participants sample, including their nationality, gender, and educational level. A second section (i.e., Part B) included 11 questions developed to gather the judo coaches' opinions on their first personal impression of the EdJCO educational programme (Q1), the perceived relevance, and the usefulness of the educational modules for supporting them in working with older practitioners (Q2–Q7), their feedback on how in general the EDJCO educational programme help judo coaches in learning useful and valuable information regarding older practitioners and how to teach and train them (Q8), and regarding texting, visual structure, and the overall evaluation score (Q9–Q11). To receive valuable feedback from a heterogeneous sample of judo coaches from different countries, close-ended questions with single or multiple response checklists were included. Additionally, to allow the coaches to express their thoughts spontaneously and to produce a more diverse set of answers [63], they were also asked to elaborate on their previous replies in open-ended comments. Coaches were requested to provide additional comments on the EDJCO educational programme (either positive or areas for improvement) regarding (i) their first experiences and (ii) each module. To reach a consensus on the identification and revision of major themes, avoiding the potential bias in the analytical process, two members of the EdJCO research team engaged in repeated, recursive readings of all questionnaire comments.

2.3. Data Analysis

Data were analyzed using the Excel software, version number: 2312 (Microsoft, Redmond, DC, USA). Descriptive statistics were applied to the answers of the close-ended questions, and the frequency of occurrence (expressed in absolute values or percentages) was calculated for the questions for which a single response or multiple responses were allowed. Except for neutral responses (4 pt), data reduction has been conducted by collapsing very positive and positive responses (5, 6, and 7 pt), as well as negative and very negative responses (1, 2, and 3 pt). In agreement with Braun et al., 2013 [64], for data analysis, both inductive (e.g., exploring coaches' comments) and deductive (e.g., utilizing a conceptual framework) methods were applied. In particular, the thematic analysis process consisted of six distinct phases, which included becoming familiar with the data, coding, developing, refining, and naming the themes, and finally, documenting the findings [57]. After coding individual raw quotes, they were categorized into sub-themes that were associated deductively with the conceptual lens (e.g., older individuals, judo, programme, importance). To mitigate the possibility of unfair judgments and systematic errors in the analytical process, efforts were made to reduce the researchers' bias. These strategies encompassed a thorough review of the text by two authors through multiple readings and the extraction of prominent themes, which were extensively discussed until a consensus was achieved [64]. Whilst one researcher facilitated the credibility of data analysis being a certified judo coach with experience of working with older practitioners and a post-doc scholar, the other researcher actively promoted critical self-reflection by questioning each formulation [56].

3. Results

The judo coaches' personal first impressions of the EdJCO educational programme were positive (98%), with just one answer neither positive nor negative (Table 2). The respondents also provided positive feedback on the relevance of the six education modules (range: 94.1–98.1%), especially considering the "Psychology and Mental Health" (51%) and "Safety and First Aid" (55%) modules, respectively, highly relevant (7 pt). The respondents

also reported positive feedback regarding the learning usefulness and information validity of the six modules (range: 79–92%), with the highest score for the “Psychology and Mental Health” module (92.2%). Whilst most of the coaches considered the clarity and simplicity of the text positive (range: 33–35%) or very positive (range: 49–51%), the amount of the provided information received mixed scores (positive: 39%; neutral: 29%; negative: 31%). Finally, the judo coaches considered the visual structure of the programme easy to navigate (82%), clear (84%), and well-structured (88%), with an overall positive evaluation (98%) of the EdJCO educational programme.

Table 2. Results of the questionnaire responses ($n = 51$) on the pilot of the EdJCO education program.

Item	Answer	%
Personal first impression of the EDJCO educational program	Negative	/
	Neutral	2.0
	Positive	98.0
Relevance of the module 1 “Organization and Environment”	Negative	/
	Neutral	5.9
	Positive	94.1
Relevance of the module 2 “Aging Process”	Negative	/
	Neutral	5.9
	Positive	94.1
Relevance of the module 3 “Safety and First Aid”	Negative	/
	Neutral	2.0
	Positive	98.0
Relevance of the module 4 “Physiology and Fitness”	Negative	/
	Neutral	2.0
	Positive	98.1
Relevance of the module 5 “Psychology and Mental Health”	Negative	/
	Neutral	3.9
	Positive	96.1
Relevance of the module 6 “Teaching and Training”	Negative	/
	Neutral	3.9
	Positive	95.1
Usefulness and validity of the module 1 “Organization and Environment”	Negative	2.0
	Neutral	13.7
	Positive	84.3
Usefulness and validity of the module 2 “Aging Process”	Negative	2.0
	Neutral	17.6
	Positive	80.4
Usefulness and validity of the module 3 “Safety and First Aid”	Negative	4.0
	Neutral	3.9
	Yes	92.1
Usefulness and validity of the module 4 “Physiology and Fitness”	Negative	4.0
	Neutral	17.5
	Positive	78.5

Table 2. Cont.

Item	Answer	%
Usefulness and validity of the module 5 “Psychology and Mental Health”	Negative	2.0
	Neutral	5.9
	Positive	92.2
Usefulness and validity of the module 6 “Teaching and Training”	Negative	2.0
	Neutral	13.7
	Positive	84.3
Text of the EdJCO program: Easy to understand	Negative	/
	Neutral	15.7
	Positive	84.3
Text of the EdJCO program: Simple language	Negative	/
	Neutral	25.5
	Positive	74.5
Text of the EdJCO program: Quantity of information	Negative	31.3
	Neutral	29.4
	Positive	39.3
Visual structure of the EdJCO program: Well-structured	Negative	/
	Neutral	11.8
	Positive	88.2
Visual structure of the EdJCO program: Easy to navigate	Negative	2.0
	Neutral	15.7
	Positive	82.3
Visual structure of the EdJCO program: Clear structure	Negative	3.9
	Neutral	11.8
	Partially yes	84.3
Overall score of the EdJCO program	Negative	/
	Neutral	2.0
	Positive	98.0

Providing reflective responses based on individual experiences and opinions rather than answers shaped by the participants’ national backgrounds, the coaches’ perception resulted in 35 lower-order themes, further organized into 6 higher-order themes (e.g., older individuals, judo, programme, importance), in relation to the context (e.g., First impression, Module 1, Module 2) and the programme dimensions (e.g., programme organization and application and the overall judgment). As presented in Table 3, at the overall judgment dimension, four lower lower-order themes encompassing one higher-order theme (i.e., judo) and two contexts (i.e., first impression, module 5) emerged. The following quotes reflect the general considerations of the project:

A new way of reaching new people in the judo world.

Regular judo practice can help the elderly in several areas in terms of physical and psychological well-being.

From first impression I immediately considered the validity on a social level, I am sure that inclusion in a group of this type can bring many benefits on a psychological level. I also believe that the program can guarantee greater safety in daily movements. I would

like to encourage projects of this type and promote them, and I would launch training courses that ensure the teacher's competence in these specific modalities.

In the application dimension, 22 lower-order themes encompassing 6 higher-order themes (e.g., older individuals, program, importance) were found, with 3 pertaining to the coaches' first feedback about EdJCO and 19 pertaining to their perception about the six modules. In particular, judo coaches' focus on older people was evident across the different modules:

I think it's very important for an older person to feel part of the vitality of the family.

The family support is one of the basics that not all the older people have.

I think it is essential that judo teachers, as in any other discipline, are explained how to interact with different age groups and, in particular, with the older individuals who I believe have the right to the same attention that is paid to children.

Coaches' perceptions about EdJCO programme's validity and usefulness are as follows:

It's a well-rounded programme that presents areas where improvement is needed and offers solutions not only in sport but also in everyday life.

This educational programme is interesting as the older individuals are often kept on the margins of the society, especially from the movement point of view.

At the same time, they evaluated the impact of the programme on aspects that define the training experience:

It is very important for people to understand the background of older people and their social status, that way you can adjust accordingly to each individual and with it improve their life or focus more on the areas where they need more assistance.

It is important to respect the objective difficulties, perhaps by raising the tone of voice and using gestures, and I believe it is important to also make sure that every practitioner has understood how to carry out the exercise.

Having good communication both verbal and non-verbal is very important at every age group, adopting "strategies" in transmitting one's teaching.

Notably, motivation is a psychological aspect echoing among judo coaches:

I believe that for people of this age the motivation factor is fundamental, very strong connections can be established between practitioners, as if they were young again, furthermore continuous practice leads to evident improvements which can only increase motivation.

In my opinion, motivation is what pushes the athlete to improve and to seek out new knowledge and perfect the skills relating to the discipline. Motivation has different effects depending on the age group.

I think that motivation is the basis of every activity as it determines success or failure; I think that motivation cannot be sought in others, and that everyone must find their own reason to continue, after all the strongest motivation is the intrinsic one.

Finally, they reflected on the application of the proposed training methodologies:

Training judo for seniors is very different from competitive and children's judo. That's why Training Models are very welcome.

We need to personalize the training.

In the programme organization dimension, nine lower-order themes encompassing four higher-order themes (e.g., programme, importance, understanding, training) were found, with four pertaining to the feedback about EdJCO and five pertaining to the considerations on the six modules. The judo coaches appreciated the structure and contents of the programme:

I think it is a very interesting programme, it seems to be very well structured and it is good that judo includes older people since it is a sport with many benefits. It is very well explained.

It is very important for a teacher to know how to manage training based on the subject in front of her/him and I find that gensoku no genkei is an excellent example.

Easy to understand.

At the same time, the space for improvement was also highlighted as follows:

The text format is not justified. It could be a good idea an index at the beginning of each module. Some images are not of a good quality. Only some modules report the authors.

Table 3. Lower- and higher-order themes (e.g., older individuals, judo, program), organized in relation to the contexts (e.g., first impression, module 1, module 6) and the project dimensions (e.g., programme organization *, programme application, the overall judgment).

N	Lower-Order	Higher-Order	Context	Dimension
1	raising awareness of a poorly considered reality	Older individuals	First impression	Application
2	reaching new people in the judo world	Judo	First impression	Overall
3	validity on a social level	Program	First impression	Application
4	positive structure	Program	First impression	Organization
5	solutions in sport and everyday life	Program	First impression	Application
6	very attractive to the eyes	Program	First impression	Organization
7	easily understandable	Program	First impression	Organization
8	useful but time-consuming	Program	First impression	Organization
9	perceived inclusion	Older individuals	Module 1	Application
10	background and social status knowledge	Older individuals	Module 1	Application
11	grandparent-grandchild bonds	Older individuals	Module 1	Application
12	organization and environment for implementation	Importance	Module 1	Application
13	details enhancement	Importance	Module 1	Organization
14	to respect the objective difficulties	Importance	Module 2	Application
15	verbal and non-verbal communication	Importance	Module 2	Application
16	easiness	Understanding	Module 2	Organization
17	relevancy of the aging process	Understanding	Module 2	Application
18	risks, hazards, and health factors	Importance	Module 3	Application
19	safety in sport, especially with older people	Importance	Module 3	Application
20	underestimation	Importance	Module 3	Application
21	comprehensiveness of data and information	Program	Module 4	Organization
22	teacher and student relationship	Importance	Module 4	Organization
23	tests and assessments of newcomers	Importance	Module 4	Application
24	individualized evaluation	Importance	Module 4	Application
25	usefulness to improve the coaches' work quality	Program	Module 4	Application
26	different effects depending on the age group	Motivation	Module 5	Application
27	relevancy for older practitioners	Motivation	Module 5	Application
28	regular practice for psychophysical well-being	Judo	Module 5	Overall
29	learning by experience	Judo	Module 5	Overall
30	Relax	Judo	Module 5	Overall
31	appreciation of training models	Training	Module 6	Application
32	training structure by age group	Training	Module 6	Application
33	<i>gensoku no genkei</i> as an excellent example	Training	Module 6	Organization
34	professional approach	Importance	Module 6	Application
35	coaches' specialization	Importance	Module 6	Application

* Organization includes the perceived programme structure and contents.

4. Discussion

In supporting the lifelong learning and the professional and personal development of people in Europe and beyond, the European Commission promotes theory-driven and applicable educational programmes that involve end-users in the development and evaluation of the didactic tools, thereby contributing to sustainable growth, jobs, social cohesion, and innovation [44]. Based on a participatory research approach [38] and on evidence- and eminence-based knowledge on the educational needs of judo coaches [2,20,21], the EdJCO project developed a sound and sustainable educational programme largely appreciated by judo coaches who provided valuable insights for further improvements. This positive evaluation of the EdJCO educational programme could be due to the quality of its contents (e.g., effectiveness in skill development, adaptability to the coaches' demands and skill levels, the incorporation of scientific principles) and structure (e.g., modularity, progression, clear communication, and resource availability). Moreover, the positive evaluations of judo coaches align with their recognition of information relevancy of the key priorities they identified during the collaborative conceptualization of macro-areas of the programme [21]. In applying a participatory approach [41], the EdJCO educational programme benefited from the judo coaches' perceived relevancy, usefulness, and validity of its content, especially when related to the potential benefits in helping them relating with older practitioners.

In general, the coaches perceived the educational content of the EdJCO education programme as relevant throughout the different modules in assisting their working activities with older practitioners (range: 94.1–98.1%). In the context of successful aging and physical activity promotion, the EdJCO educational programme offers a comprehensive approach for understanding and addressing the unique needs and challenges that older individuals may face in engaging in judo training. In fact, a high perceived relevance (94%) and usefulness (84.3%) resulted for the "Organization and environment" module, which includes information on the older practitioners' social characteristics that can facilitate the establishment of a strong coach–athlete relationship and help in tailoring training programmes and considering statistical information and bibliographic support [65]. Whilst understanding the financial constraints that some may face can aid coaches in making necessary accommodations (e.g., offering reduced fees, seeking sponsorships to ensure inclusivity), a supportive social network can significantly influence an individual's commitment to judo and physical activity. Moreover, the social engagement represents a crucial aspect of successful aging [66], supporting the older practitioners' autonomy and independence. In this respect, coaches can create a welcoming and inclusive environment, encouraging family involvement, fostering a sense of community, and enhancing long-term adherence to training [21,67]. Furthermore, a physical environment ensuring adequate lighting, well-maintained and safe dojos, and accessible spaces should be considered in coaching older practitioners [42,65,68]. Actually, understanding and recognizing the age-related changes (e.g., organs and body systems conditions) allows coaches to pursue a more holistic and personalized training approach, addressing the specific health concerns and ensuring the safety and well-being of older athletes [2].

Notably, the coaches evaluated the "Safety and First Aid" module both as very relevant (98%) and useful (92.1%). Indeed, to implement preventive measures and to respond effectively to emergencies, coaches can benefit from the knowledge of specific risks associated with older participants (e.g., falls and medical conditions) and guidance on proper nutrition and hydration [42,68]. In building productive, long-lasting, and healthy judo programmes, judo coaches are aware that safety is paramount, and therefore, they should be knowledgeable about injury prevention strategies, modifying training regimens to accommodate the unique needs and limitations of older individuals [19,69]. Guiding athletes not only in their technical abilities but also in soft skills and life choices [43], coaches can serve as mentors providing valuable insights for maintaining a healthy lifestyle, proper nutrition, and stress management [70,71]. When in possession of formal (e.g., Sport and Movement Sciences) and non-formal (e.g., IJF Academy) educational qualifications, they can effectively contribute to the development of evidence-based training methods for older

judo practitioners, informing on the best practices for training and injury prevention in this demographic [29,54,60].

The “Physiology and fitness” module was perceived to have the highest relevance (98.1%) and a relatively high usefulness (78.5%). This module contains three distinct learning units: (i) evaluation: the effective assessment of physical and physiological characteristics of older athletes; (ii) motor literacy knowledge: the age-related changes in motor skills and coordination; and (iii) functional fitness and physical capability: abilities to perform daily tasks in a safe and independent manner without undue fatigue or pain. By learning this information, coaches should be able to apply a multifaceted approach, including regular physical assessment (e.g., strength, flexibility, and balance to determine individual fitness levels), skill evaluation (e.g., judo-specific movements and techniques), functional test (to evaluate daily life movements), and suggesting health screening with healthcare professionals considering practitioners’ medical history [2,42,52]. As judo training involves a vast variety of physical activities, including throws, groundwork, and free (i.e., randori) and formalized (i.e., kata) practices [1], coaches can tailor training programmes to improve older practitioners’ fitness, which is essential for maintaining functional independence in later life [7,8,37,42].

Coaches perceived the information provided by the “Psychology and mental health” module as highly relevant (96.1%) and the most useful (92.2%). To suit older judo practitioners’ diverse needs, this module aimed to equip coaches with insights into the possible psychological, emotional, and cognitive characteristics (e.g., disorders, fear, traits, and states) of judo practitioners, fostering positive mental health, resilience, and well-being [5,6,8,14]. In fact, judo coaches can help older practitioners developing qualities such as mental resilience (e.g., discipline, focus, and toughness) and cognitive skills (e.g., strategic thinking and quick decision-making), which are emphasized in judo and are useful to cope with the challenges of aging [4,6,10,12,13]. Finally, it can be speculated that the perceived high relevancy and usefulness of the “Teaching and training” module could account for the potentially direct applicability of the critical elements incorporated in the EdJCO program. This includes adapted judo techniques, the introduction of different exercises (e.g., a new kata called *gensoku no genkei*), methodological training approaches with realistic goal setting, and an effective communication, supporting the older judo practitioners’ journey toward successful aging through judo [1,2,6,7,11].

In acknowledging the limitations of the current pilot study, it is crucial to highlight the relatively modest sample size of 51 participants and its potential impact on the generalizability of the findings to the broader population, especially considering the multi-country scope of the EdJCO project [24]. The diverse nature of the participants across various nations necessitates a cautious interpretation of the results. Recognizing the significance of a more in-depth analysis, future research could be built upon these preliminary insights. A pivotal aspect of these prospective studies could involve the incorporation of a more extensive and targeted questionnaire, enabling a nuanced exploration of the outcomes stemming from the application of the EdJCO programme [63]. This strategic enhancement aims to provide a comprehensive understanding of the programme’s impact, post-training challenges faced by participants, and the potential areas for refinement. By leveraging a more robust methodology and a larger participant pool, the subsequent investigations can contribute significantly to the broader field of judo coaching for older adults, fostering a more evidence-based and nuanced understanding of the program’s efficacy and implications [26].

5. Conclusions

In a fast-aging world [32,65], judo coaches play a vital role in promoting physical and mental well-being, social engagement, and successful aging [5,26,66]. Thus, the EdJCO educational programme represents an appreciated resource and the best practice for developing judo coaches’ knowledge and expertise to adapt training programmes, create a supportive environment, and contribute to the broader understanding of how judo

can positively impact the aging population through participatory research and sustainable development efforts. In answering its research objective, the present study showed that through comprehensive education modules coaches gain insights into building judo programmes for the unique needs of older individuals, fostering inclusive and engaging training conditions. From an andragogical perspective, the programme emphasizes both theoretical and practical strategies for effective communication, understanding the aging process, and tailoring judo techniques to suit older participants. By addressing the holistic health of older practitioners, EdJCO ensures that judo, as a sport and a lifestyle, remains a fulfilling and accessible pursuit for individuals of all ages.

Whilst this research was the first EU-funded collaborative partnership addressing the endeavor of supporting judo coaches in working with older practitioners [20], future studies are needed for the following: (i) to provide the empirical validation of the EdJCO programme open to the larger judo community; (ii) to explore the extension of the EdJCO programme to the intergenerational judo with the aim to connect younger and older practitioners and to promote healthier lifestyles, preserving cultural traditions and guiding evidence-based practices for the betterment of society; and (iii) to investigate how national and international judo-related (e.g., associations, federations) and academic (e.g., sport universities) bodies develop and sustain inclusive policies and programmes to address the European Guidelines, tackle long-term challenges fostering equity, excellence, and agility in education systems [29], and improve coaches' knowledge, skills, and attitudes for better and continuous employability [26].

Supplementary Materials: The following supporting information can be downloaded at: <https://www.mdpi.com/article/10.3390/su16031115/s1>, S1 File. Supplementary Material S1: EdJCO Pilot Evaluation Questionnaire. Part A: socio-demographic characteristics. Part B: the EdJCO educational programme.

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