Annals of the 6th International Science of Judo Symposium
25th August 2009, Rotterdam, The Netherlands

THE INTERNATIONAL ASSOCIATION OF
JUDO RESEARCHERS

26th WORLD JUDO CHAMPIONSHIPS
August, 25th, 2009
ROTTERDAM – THE NETHERLANDS

Annals for the 6th International Science of Judo Symposium
Dear Friend and Colleague,

On behalf of the Organising Committee of the International Association of Judo Researchers (IAJR), it is my great pleasure to welcome you to Rotterdam and to the 6th International Science of Judo Symposium.

The Congress has been designed to provide an innovative and comprehensive overview of the latest research developments in judo research.

Many distinguished judo researchers and scientists have joined our association and will take part in this Symposium. Papers will be presented in the form of Oral presentations and Posters and will include superb scientific material that was carefully selected by the Scientific Committee from over 60 abstracts submitted for presentation at the meeting. These studies, originating from 21 different countries, assure that our Symposium will be a major scientific event.

We would like to express our thanks to the Erasmus University Rotterdam for their generous support for their excellent arrangements in all aspects of the Symposium, to our dedicated staff, colleagues, friends and families for their untiring help, support and advice in planning and arranging this meeting.

We hope that you will enjoy the Symposium and that your interaction with your colleagues from many different countries will stimulate a creative exchange of ideas and will be personally rewarding. We also hope and trust that you will enjoy your visit to the very beautiful and exciting city of Rotterdam, in August 2009.

Yours sincerely,

Dr Mike Callan
President
SUMMARY

ORAL PRESENTATIONS

Judo Practice and Children with Attention Deficit Hyperactive Disorder: Comorbidity, Symptoms and their relationship

Differences among weight categories of elite judoists – dietary restrictions, food craving and bulimic symptoms

Effects of recovery type after a judo match on blood lactate and performance in specific and non-specific judo tasks

Remembering traditional concepts on judo values and teaching in France and Spain: in memory of Henri Birnbaum (1921-2004)

Judo bows between tradition and globalization

The study on the analysis of the feelings and expectations of the families towards judo sports of whose children perform judo

Match Analysis an undervalued coaching help -“An Italian judo Federation contribution”

Survey of System of attacks, a special case: Marc Huizinga

The use of proprioception in judo training

POSTER PRESENTATIONS

Can Judo Practice Helps Children’s with Attention Deficit Hyperactive Disorder?

Anxiety in elite judoists: Its relationship with mood, symptoms of eating disorders and purgative methods to reduce body weight

Sex Differences and age category in elite judoists: Anxiety, food restriction and Symptoms of eating disorders

Analyses vidéo assistées par ordinateur : études des distances et rotations dans les combats de judo

Accurate coordination of repeating uchi-komi (entrance or first part of the throw)

Technical efficiency of men judokas during the European championships (U23) in Zagreb 2008

Responses to the Special Judo Fitness Test by male and female members of the Australian judo team

Physiological profiles of Judo Athletes and Climbers: a comparison

The Acute Effect of “Uchikomi” for Centre of Pressure Disturbance

Análisis de los resultados de un entrenamiento de fuerza en judokas universitarios con y sin entrenamiento específico asociado (concurrente)

The bypass utilization treatment which leads a fracture by the JUDO and so on to the early healing-up

Usage of taping to prevent recurrence of knee Ligament injury in Judo-Taking cases of medial collateral Ligament as examples

Efectos hormonales y psicológicos de un periodo de entrenamiento y competición en judokas de alto rendimiento / Hormonal and psychological effects of a period of training and competition in high performance judokas

Influence of music on isometric handgrip strength endurance of judo players

Endurance in judogi grip strength tests: comparison between elite and non-elite judo players

Validation of a new software for notational analysis in judo matches

Changes in reaction time with consideration of gender and specific judo effort

Can special judo fitness test be used to endurance evaluation?

Kata practice and concepts according to highly experienced judo senseis and referees

Factors Influencing in the Success of Elite Female Judo Athletes Training in Alicante Judo Clubs. Spain

Fitness profiles of elite judokas of the Serbian national team

Technical efficiency of women judokas during the European championships (U23) in Zagreb 2008

Differences in Situational Efficiency between Balkans Judo Championship 2006 and National Judo Championship of Bosnia and Herzegovina for Senior Male Competitors

Comparison of Two Different training Methods in the learning and performance of judo Techniques

Anthropometric and physiological characteristics in judo – applicable for talent identification and development
Annals of the 6th International Science of Judo Symposium
25th August 2009, Rotterdam, The Netherlands

The world wide spread of the judo from the viewpoint of the number of the Olympic Games medal acquisition………………………… ..40
Use of Attack rate as a predictor of victory in Olympic level Judo………………………………………………………………………………..41
Methods of protection and attraction judo persons in through strategies of sport marketing…………………………………………………………….42
Metabolic cost and technical consequences of performing Koshiki-no-kata in yoroi (Japanese body armour) versus jūdōgi………………..43
Kōdōkan jūdō’s elusive tenth kata: the Gō-no-kata ― “Forms of proper use of force”…………………………………………………………………..44
Applied psychological Research for Judo (The image of judo). All Japan Masters Judo Athlete and Top Japanese University Judo
Athlete…………………………………………………………………………………………………………………… …………………...45
A comparison of two methods of teaching judo to 9-11 year olds…………………………………………………………………………………..46
Judo Primary School: Student Evaluation…………………………………………………………………………………………………………………………47
Body composition and physiological profile of elite Algerian judoka……………………………………………………………………………..48
Neuromuscular Fatigue on Explosive Strength and Power Output during COPTEST, in Male and Female Judokas………………………..49
Judo Practice and Children with Attention Deficit Hyperactive Disorder: Comorbidity, Symptoms and their relationship.

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Abstract:

A common childhood infirmities Attention deficit hyperactivity disorder (ADHD), can hang about adulthood. Associated to comorbidities (related to increases the public health costs) be capable of modern society problems. Learning problems from this disorder became scholar difficulties and give rise to education deficits. Comorbidity can be: oppositional defiant disorder (related to delinquency), anxious disorder, social problems, perfectionism, impulsivity, psychosomatic, etc. Particularly oppositional defiant disorder became a great problem of public health cost, however a public safety. Many of the children with oppositional defiant disorder develop into people who break the low, drug abuses and delinquency. The present study aim to investigate ADHD comorbidity in judo players (JP), with one year or more of practice, compared to control health population. With this objective we proposed a quantitative descriptive screening, by using a structured instrument for ADHD evaluation and a structured interview with their children parents. The instrument is called Conners’ Parents Rating Scale – Revised: Long Version (CPRS – R: L). 272 JP and 295 control subjects were enrolled in this study, all with similar social and parents scholar degrees. The data was compared by Student t test. 56 (20,59%) JP have ADHD symptoms, while 55 (18,65%) control. From this population and according to CPRS – R: L, 8 (14,29%) JP shown oppositional symptom, 12 (21,43%) anxious-shy, and 13 (23,64%) controls shown oppositional symptom, 5 (9,1%) anxious-shy. In relation to anxious-shy symptom (a symptom of Anxious Disorder) the control group demonstrated significantly less than JP (p = 0,01). The oppositional defiant symptom was significantly less (p = 0,03) in judo group than control group, indicating a possible benefit of judo practice for their children. However more research is needed to estimate the benefit for the people, public health and safety.
Differences among weight categories of elite judoists: dietary restrictions, food craving and bulimic symptoms

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Abstract:

Objectives. To identify the methods used by elite judoists to reduce body weight according to weight category. To determine if judoists’ behaviors, to reduce body weight, trigger eating disorders.

Methodology. The sample consisted of 129 elite judoists, 73 male and 56 female, aged between 15 and 30. Four groups were tested: cadet (n=45), under-20 (n=31), under-23 (n=30) and senior (n=23). A broad battery of psychological evaluation tests was administrated to all of them including RES, adapted to judoists’ eating habits days and/or moments before competition weigh-in, FCQ-T and BITE. In addition, information was obtained about methods used to reduce body weight.

Results. Participants in half and half-middleweight categories are involved in a greater proportion than the participants of the half-heavyweight and heavy categories in dieting (F [6.63] = 6121, p <0.000) and further restrict more their diet (F [6, 63] = 2626, p <0.025). Consequently, participants in half and half-middleweight categories suffered greater food craving (F [6.122] = 2744, p <0.015) and more severe bulimic symptomatology (F [6.121] = 1891, p <0.088). In turn, participants in half and half-middleweight categories were involved in a greater proportion (90% and 70% respectively) in the use of purgative weight control (laxative use, diuretics and vomiting) and not purgative (fasting, food and drink restriction, sauna, plastic clothes, extra physical exercise in addition to judo) that the participants of half-heavyweight and heavy categories (28.6% and 8.35% respectively).

Conclusions. Lighter categories (half and half-middleweight) have a higher percentage of lean muscle mass to the heaviest (half-heavyweight and heavy) so they have more work to maintain the weight. Consequently they do more diets, causing an increase in food craving and thus in bulimic symptomatology. Similarly, lighter categories use more methods of weight control, as purgative as not purgative, that the heaviest, impacting negatively on their health and sport performance.
Effects of recovery type after a judo match on blood lactate and performance in specific and non-specific judo tasks

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Abstract:

In a high level competition judo players perform 5-7 matches in the same day, with interval time varying from 10 to 50-min between two consecutive matches. For recovery periods of 10 to 20-min some studies (Siegler et al. 2006; McAinch et al. 2004) have indicated that active recovery (AR) is better than passive recovery (PR) for blood lactate removal, although the effect of AR on subsequent performance is controversial (Greenwood et al. 2008; Gupta et al. 1996). Thus, the objective of the present study was to verify if AR applied after a judo match resulted in a better performance when compared to PR in three tasks varying in specificity to the judo and in measurement of work performed: 4 upper-body Wingate tests (WT); Special Judo Fitness (SJFT); another match. For this purpose three studies were conducted. Sixteen highly trained judo athletes took part in study 1, 9 in study 2 and 12 in study 3. During AR they ran (15-min) at the velocity corresponding to 70% of 4 mmol.l\(^{-1}\) blood lactate intensity (~50% \(\text{VO}_{2}\text{peak}\)), while during PR they stayed seated. The results indicated that the minimal recovery time reported in judo competitions (15 min) is long enough to full recovery anaerobic performance of judokas in a non-specific (WT) and in a specific high-intensity test (SJFT). However, the probability of winning a match increased 10 times when a judokas performed AR and his opponent performed PR. As judo performance is influenced by many factors it is difficult to determine which mecanisms were responsible for the positive influence of AR on second match performance. One possible explanation could be a faster choice reaction time (Chmura, Nazar and Kaciuba-Uscilko, 1994; Chmura et al. 1998; Kashihara and Nakahara, 2005), movement initition and movement times after AR compared to PR (McMorris et al., 2005).

FAPESP support: 99/06408-2
Remembering traditional concepts on judo values and teaching in France and Spain: in memory of Henri Birnbaum (1921-2004)

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Abstract:

This paper presents some traditional concepts on judo values and teaching from Henri Birnbaum’s point of view. Henri Birnbaum (Warsaw, 6 January 1921 – Barcelona 8 December 2004) was a judo pioneer in Spain and also one of the first students of Mikonosuke Kawaishi (Himeji, 1899 – Paris, 1969), who is considered the father of French judo and even of European judo. For the elaboration of this paper, the interview we did to Henri Birnbaum during 9-10 April 2001 was rescued and analyzed in search of his educative concepts on judo. Other materials like interviews to some of his first students, newspapers and films were also employed. Starting from a wide view of his life history, which was deeply marked by the First and Second World Wars, then we describe his experience with Kawaishi and in Barcelona –where he taught judo in Spain–. Birnbaum’s discourse on judo educational values is solid and coherent, in accordance to his strong personality. Emerging concepts like courtesy, respect, judo as a way of life, the figure of the master, the figure of the disciple, the relationship between master and disciple, grades, competition not only show some of the ideas and mentality of continental Europe judo pioneers but also allow us to reflect about how judo has evolved since the middle of the 20th century to modern times.
Introduction

Budo, often translated as ‘Japanese martial ways’ is strongly connected to Japanese traditional value. Judo, the only Olympic Sport in budo, was first practiced by a limited number of foreign pupils who were fascinated by its unique value. As it spread out throughout the world, people show more interest in its sport value rather than traditional value. Nevertheless, no matter how much sport value is preferred, spirit of bow characterizes the unique identity of judo and its importance has not been lost at all in modern world judo. However, the traditional understanding of bows that was based on the Japanese culture has caused some problems in the process of globalization of judo.

In this study, meaning of bows in modern world judo is discussed through analyzing typical incidents regarding traditional bows and cultural differences in recent judo history.

Traditional meanings of budo/judo bow are summarized by literature survey. Then a few typical incidents related to international bows are analyzed.

Judo bow in Japan is traditionally understood as the way of expressing one’s spirit such as respect and appreciation to others and reverence to sacred object/space. It also includes a means of self-control.

The recent incidents analyzed in this study indicate that the meaning of traditional bows and international bows must be slightly different. Any religious implication must be excluded in the international bows, but other meanings that identify judo as budo should be emphasized in the global education.
The study on the analysis of the feelings and the expectations of the families towards judo sports of who’s children perform judo

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Abstract:

In this study, it is aimed to analyze the families’ and their children’s reasons for choosing judo sport and their feelings and expectations towards judo. Within this context, this study was carried out with the parents of 60 children whose ages differ from 6 to 9 learning judo sports registered in Edirne Provincial Directorate of the Youth and Sports School. “General Information Form” designed by the researchers in order to gain general information about the parents’ children performing judo sport and the other family members and to find out the feelings and expectations of the families towards judo sports. Whole study was conducted to the families who joined in the study voluntarily. The data obtained was evaluated and the results were discussed.

Key words: Judo, athletes, the families whose children do judo, the families’ expectations.
Match Analysis an undervalued coaching help “An Italian judo Federation contribution”

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Abstract:

From a Biomechanical point of view, Judo competition is an intriguing complex nonlinear system, with many chaotic and fractals aspects,
It is also the test bed in which all coaching capabilities and athlete’s performances are evaluated and put to the test.
Competition is the moment of truth of all conditioning time, preparation and technical work, before developed, and it is also the climax of the teaching point of view.
Furthermore, it is the most important source of technical assessment.
Studying it is essential to the coaches because they can obtain useful information for their coaching.
Match Analysis could be seen as the master key in all situation sports (dual or team) like Judo, to help in useful way the difficult task of coach or best for National or Olympic coaching equips.
In this paper it is presented a short summary of the most important methodological achievement in judo match analysis.
It is also presented, at light of the last technological improvement, the first systematization toward new fields.
On the basis of technological development, Match Analysis could be a valuable source of four levels of information:

1st. Athlete’s Physiological data
2nd. Athlete’s Technical data
3rd. Athlete’s Strategically data
4th. Adversary’s Scouting

These new interesting ways opened by this powerful coaching help, are very useful for national team technical management.
In the last part of the paper, the analysis is focalized toward a, till now, misused information:
“Dromograms” (athletes’ shifting paths) study as useful source of fighting habit of athletes.
Abstract:

In judo, making the opponent uncertain requires the mastery of several throws in 3 or 4 different directions and a firm grasp to secure the throw. In previous study the system of attacks for 28 judoka (18 men, 10 women) during their 185 respective matches over the competition season of 2001’2002 was analyzed (Calmet et al. 2005). Practice was regional or interregional. The mean number of matches was 3.3 ± 1.1. The mean number of successful directions of attack was 2.5 ± 1.3. The mean number of grasps was 1.4 ± 0.5. Analysis showed mean number of directions of attack was about 3 and was lower for higher competition although the mean time of matches did not vary in a significant way. Numbers of directions of attacks were constant for the higher classified judoka. The number of grasps used remained constant.

We can remind especially we are in Nederland, in 2001 and 2002 Marc Huizinga from Nederland met Rasul Salimov from Azerbaijan during European Championship. Analysis shown that these two combats had the same temporal structure and that Huizinga used a system of attacks based in 8 directions. The position of the left hand on the judogi seems to organize the Huizinga's system of attacks. This system is completed by a strategically management of the score and penalties. This kind of study shows that judo had to be taught about a system of complementary grasps, techniques, positions of the feet on the mat.
The use of proprioception in judo training

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Abstract:

Almost every day sports science offers a new form of training which is ready to be applied in practice. After that, it is up to every coach to recognize the practical value of such program in his sport and, by connecting it with the specific characteristics of his sport makes that new form of training more advanced as well as trying to accomplish better training effects. Proprioception is being achieved by the proprioceptors whom register changes in some body parts and in that way, also with the help of the visual and vestibular system, in the CNS (Central Nervous System) are forming a picture of the body's position in space. In judo bout proprioception is being achieved through surface and opponent contact, therefore first information come from distant parts of the body, such as palms and feet. Such information enables quick and quality reaction of the judo player, which is especially important in situations when the opponent is often not seen. Well trained and sensitized proprioceptors enable quick reaction which includes successful, fast and precise performance of the technical elements while attacking and counter-attacking. Throughout this actions the nervous system is constantly reversibly being informed about every muscle and its momentarily status through two major proprioceptors: muscle spindle and Golgi tendon organ. Main difference between the functions of the Golgi tendon organ and muscle spindle is in the fact that the spindle registers changes in muscle length, while the tendon organ registers changes in muscle tension. The miotactical reflex that is, the stretching reflex presents the muscle’s defensive mechanism and the physiological basis of proprioception development.

The stretching reflex is important in judo bout because it enables dynamic stabilization of the joints. With this it effects indirectly on the stability and speed of performing attacking techniques, and especially counter-attacking techniques which mainly depend on judoka’s reflex reaction. Although proprioceptive training can never replace classical physical or technical-tactical training it can represent a quality supplement to this training, whose positive effects would certainly improve judoka's technical and situational efficiency.
Can Judo Practice Helps Children’s with Attention Deficit Hyperactive Disorder?

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Abstract:

Attention deficit hyperactivity disorder (ADHD) is common childhood infirmities related with learning problems and comorbidities (related to increases the public health costs). The DSM-IV classifies tree ADHD types: Predominantly Hyperactive, Predominantly Inattentive and both combined. The physical exercises practice can increases cerebral plasticity into a healthy nervous system. This phenomenon is induced by increases trophic factor level. In a previous work of our group we found significative increases of grey matter volume in regions related to concentration, attention and motor activity. Areas related with grey matter loss in ADHD children’s. Some physicians indicate physical exercise to help the medicine treatment. However, only a few works are made on this subject, most relating medicine and dopin. The present study aim to investigate ADHD symptoms in judo players (JP), with one year or more of practice, compared to control health population. With this objective we proposed a quantitative descriptive screening, by using a structured instrument for ADHD evaluation and a structured interview with their children parents. The instrument is called Conners’ Parents Rating Scale – Revised: Long Version (CPRS – R: L). 272 JP and 295 control subjects were enrolled in this study, all with similar social and parents scholar degrees. According to structured interview, 112 (41,18%) JP have hyperactivity and inattentive complaint before initiate judo practice, while 55 (18,65%) control. According to CPRS – R: L, 24 (8,83%) JP shown ADHD combined, 16 (5,89%) Hyperactive-Impulsive, and 16 (5,89%) Inattentive, and 20 (6,78%) controls shown ADHD combined, 26 (8,81%) Hyperactive-Impulsive, and 18 (6,1%) Inattentive. Despite more JP complaint in relation to control, no difference between both group according to CPRS – R: L, indicating a possible role for judo practice for ADHD children, however more research are needed to estimate the benefit on this subject.
Anxiety in elite judoists: its relationship with mood, symptoms of eating disorders and purgative methods to reduce body weight

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Abstract:

Objectives. To determine whether elite judoists show anxiety and if it affects mood. To identify the relationship among anxiety, food craving, eating disorders and methods for losing weight.

Methodology. The sample consisted of 129 elite judoists, 73 male and 56 female, aged between 15 and 30, divided in two groups: high anxiety (n=32) and low (n=41). A broad battery of psychological evaluation tests was administrated to all of them including STAI-T, PANAS, FCQ-T, BITE and EAT-40.

Results. Judoists with high anxiety reported less positive mood (F [1, 71] = 6122, p <0.016) and higher negative mood (F [1, 71] = 46,808, p <0.000) than judoists with low anxiety. Moreover, judoists with high anxiety showed a greater food craving in three factors of FCQ-T (F [8, 568] = 5077, p <0.000) compared with low anxiety judoists. These factors were: Plans to Eat (t [71] = 2072, p <0.042), Concern for Food (t [71] = 2209, p <0.030) and Guilt (t [71] = 3128, p <0.003). In turn, judoists with high anxiety reported greater bulimic symptomatology (F [1, 71] = 11,801, p <0.001) and eating disorders in general (F [1, 71] = 4632, p < 0.035) compared with low anxiety judoists. Finally, judoists with high anxiety were involved in a greater proportion in the use of methods of purgative weight control (pills, laxatives, diuretics and vomiting) compared with low anxiety judoists.

Conclusions. The elite judoists, who express high anxiety, compared with low, showed negative moods, making them more vulnerable to suffering from eating disorders and used more purgative methods to lose weight, impacting negatively on their health and sport performance.
Sex differences and age category in elite judoists: anxiety, food restriction and symptoms of eating disorders

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Abstract:

Objectives. To identify the methods used by elite judoists to reduce body weight before the competition. To evaluate the impact on the body and athletic performance of weight reduction. To assess the influence of the coach on judoists to undergo weight loss.

Methodology. The sample consisted of 129 elite judoists, 73 male and 56 female, aged between 15 and 30. Four groups were tested: cadet (n=45), under-20 (n=31), under-23 (n=30) and senior (n=23). A broad battery of psychological evaluation tests was administrated to all of them including RES, adapted to judoists’ eating habits days and/or moments before competition weigh-in, STAI-T, BITE and EAT-40. In addition, information was obtained about the influence exerted by the sports setting on methods used to reduce body weight.

Results. Cadets and under-20 used less dietary restrictions compared with under-23 and seniors (F [3, 63] = 4627, p <0.005), with females of all categories dieting most frequently (F [3, 63] = 6298, p <0.015). The result was an increase in anxiety in the younger judoists (cadets) and a reduction of anxiety in the older (seniors) (F [3, 81] = 2914, p <0.039). In turn, the female cadets inferred more bulimic symptomatology (F [3, 63] = 2848, p <0.045) and eating disorders (F [3, 63] = 3715, p <0.016) compared to male cadets and the other categories. Food restriction, anxiety and symptoms of eating disorders were more intense when the judoists were under pressure from the sports setting to decrease weight (F [1.127] > 3485, p <0.064).

Conclusions. Weight categories predispose competitors to use drastic methods to reduce it, causing alterations that trigger psycho-physiological craving for food and bulimic symptoms, impacting negatively on their health and sport performance. Furthermore, suggestions of the coach to reduce weight are a risk factor in the proliferation of eating disorders.
Analyses vidéo assistées par ordinateur : études des distances et rotations dans les combats de judo

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L'observation des compétiteurs adverses est importante pour connaître leurs comportements, pour construire à l'avance des solutions qui renforcent l'efficacité du combattant. En judo les deux combattants se saisissent, se déplacent sur le tapis pour attaquer. Les saisies varient en distance, les judokas en se déplaçant sur le tapis changent leurs coordonnées géographiques et/ou de secteur angulaire face à l'autre combattant. Les vainqueurs de 35 combats ont été analysés (9 débutants, 16 confirmés, 10 experts) en relevant les distances et leur secteur angulaire face à l'autre combattant lors des déplacements. Les résultats permettent : i) Chez les experts d'évaluer les durées et le nombre de phases de combat (période entre "hajimé" et "maté" prononcés par l'arbitre). Ces valeurs correspondent à celles trouvés dans la littérature. ii) De présenter des modèles caractéristiques concernant les distances lors de l'approche et de la saisie. Les débutants viennent et saisissent simplement l'autre judoka. Les experts s'approchent et saisissent avec beaucoup d'attention et de précision. Les débutants utilisent généralement la saisie à deux mains pour projeter. Le rapport temps de saisie à deux mains / temps de combat est de 70% pour les débutants vs. 17% pour les experts. iii) De mettre en évidence des déplacements en rotations (avant la saisie et après la saisie). Le nombre de tours autour de l'autre judoka pendant une phase (moyenne ± écart-type) varie : experts 0,8 ± 0,8 ; débutants 1,8 ± 1,1. Les changements de sens dans une phase varient : experts 0,07%; débutants 55%. iv) De mettre en évidence des comportements d'experts : a) Intégration des rotations dans les stratégies pour gagner des combats ; b) développer des comportements atypiques pour les saisies et les projections pour surprendre les adversaires. Les modèles et informations semblent intéressantes, l'analyse devrait être plus poussée pour les confirmer.
Accurate coordination of repeating uchi-komi (entrance or first part of a throw)

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Abstract:

Scientific approach is always rigorous but not necessarily complicated and observation is always a difficult act. Four examples with micro analyses concerning accurate coordinations of repeating uchi-komi (entrance or first part of a throw) were analyzed. Tools to collect data are free softwares or free applications and permitted micro measurements with time in milliseconds and distances in mm. Results show: i) on specific uchi komi (ie. practicing o uchi gar), body of a judo player can be assimilated as a pendulum in which the fixed point is located on the shoulder level. Coordinations are stable during all the repetitions (ie. shoulder, talon, hips and toe always did the same movement and their trajectories on graphic crossed themselves at the same time. ii) after artificial disturbances about balance (ie. 10 fast rotations on the ground) or after judo action disturbance (blocking an attack) high level judo player recovered his regularity after 3 or 4 repetitions. Perspectives are to continue the analyses concerning artificial and judo disturbances and to observe how tiredness during training sessions disturb these coordinations.

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Faculty of Kinesiology University of Zagreb, Croatia

Abstract:

New rules of judo bout inevitably bring new tendencies of solving judo fight. Unlike some former Championships analyses research conducted during the European Championships for younger seniors in Zagreb 2008. showed that the use of techniques in tachi waza position was very similar for all weight categories in men’s part of competition. The research was conducted on the sample of 174 bouts during the European Championships. All fights were followed and analysed by well educated judokas with many year experience, all students of Faculty of Kinesiology in Zagreb. Throws were noted according to Kodokan Judo/Classification of Nage Waza. During the analysed bouts overall number of 24 different techniques of throws was used. Total of 214 throws were successfully applied (1.22 per bout) out of which the total of 75 throws (35%) were qualified as ippon. If we add to this number ippon scores in ne waza (21 techniques scored with ippon) we can conclude that 96 out of 174 bouts (approximately 52%) ended before regular time with attractive technique on the ground or in standing position. The most used groups of throws in men’s part of Championships were:

1. Hand throws with total of 102 techniques applied during the competition. The most frequent throws in this group were: Kata guruma (26), Te guruma (19) and Seoi nage (17).
2. Sacrifice throws with total of 58 techniques applied during the competition. The most frequent throws in this group were: Tani otoshi (21), Soto makikomi (14), Sumi gaeshi (9).
3. Leg throws with total of 43 techniques applied during the competition. The most frequent throws in this group were: Uchi mata (16), Ouchi gari and Kouchi gari (8).
4. Hip throws with total of 11 techniques applied during the competition. The most frequent throws in this group were: Harai goshi and Sode tsurikomi goshi (4), Koshi guruma (3).
Responses to the Special Judo Fitness Test by male and female members of the Australian judo team

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K. Fiona Iredale
Edith Cowan University, Australia

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Australian Institute of Sport

Abstract:

Success in judo is determined by a wide variety of factors, including technical, tactical and physiological parameters. The selection of an appropriate battery of tests to “assess” judo performance is therefore complicated. The Special Judo Fitness Test (SJFT) developed by S. Sterkowicz has recently been implemented in the testing battery for Elite Australian Judokas. The aim of the current study was to assess responses of both males and females to the SJFT.

Australian judo team members volunteered to participate (males n=12 and females n=9) and provided written consent to the testing. Subjects completed the SJFT consisting of 3 periods (15, 30 and 30s) of alternating running (6m) and throwing (ippon-seoi-nage), separated by 10s rest. Total number of throws and SJFT index were determined. Heart rate (HR) was recorded on completion and 60s (Polar Team, Finland), while blood lactate concentration ([Lac]) was measured 60s and 240s after completion using Lactate Pro (Arkray, Japan).

Mean ± SD for age, height and weight of the subjects were 23 ± 5 yrs, 173 ± 11 cm and 77 ± 16 kg respectively. T-tests showed no significant difference between male and female Australian team members for the test results shown in Table 1.

The current findings for Australian males agree well with those reported for Brazilian males (Franchini et al., 2007). The observed lactate responses are comparable to those reported following judo competition and randori. To date, the majority of judo research has focused on males and the current findings for female judokas provide a significant contribution to the sport.

Table 1. Responses to the SJFT by the Australian judo team (Mean ± SD).

<table>
<thead>
<tr>
<th></th>
<th>Combined</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>SJFT index</td>
<td>12.53 ± 1.21</td>
<td>12.26 ± 1.34</td>
<td>12.88 ± 0.98</td>
</tr>
<tr>
<td>Total throws</td>
<td>26.86 ± 2.37</td>
<td>27.25 ± 2.73</td>
<td>26.33 ± 1.80</td>
</tr>
<tr>
<td>HR_end (bpm)</td>
<td>175 ± 9</td>
<td>174 ± 10</td>
<td>177 ± 6</td>
</tr>
<tr>
<td>HR_60s (bpm)</td>
<td>159 ± 9</td>
<td>157 ± 11</td>
<td>160 ± 4</td>
</tr>
<tr>
<td>[Lac]_60s (mmol·l⁻¹)</td>
<td>10.8 ± 3.0</td>
<td>11.3 ± 2.0</td>
<td>10.3 ± 4.1</td>
</tr>
<tr>
<td>[Lac]_240s (mmol·l⁻¹)</td>
<td>12.6 ± 2.0</td>
<td>13.1 ± 1.6</td>
<td>12.0 ± 2.4</td>
</tr>
</tbody>
</table>
Physiological profiles of Judo Athletes and Climbers: a comparison

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Elisabeth Holztrattner

Martin Burtscher
Department of Sport Science, University of Innsbruck, Austria

Abstract:

Introduction. Judo and climbing both use the whole body, but in different ways. In the literature there is apparently no comparison between spiroergometric parameters of athletes of these two sports.

Purpose. The aim of this study was to describe and to compare maximum arm and leg performance attributes of male adult judo athletes (n=6) and climbers (n=7) of different rank, derived from laboratory tests, which are similar in duration to a competition (5 minutes).

Material and Methods. Anthropometric measurements included height, body weight, BMI and body composition (BIA). The tests consisted of a continuous incremental load test with the arm crank ergometer and a 5-min cycle ergometer test with a constant maximum sustainable work load. Recorded parameters during the tests were: maximum power during arm cranking and mean power during cycling; HR, VO\textsubscript{2}peak, VE and RER.

Results and Discussion. The only anthropometric parameter that differed markedly between the two groups of athletes was the BMI (significantly lower among climbers) reflecting probably different constitutional types. Climbers had nearly the same arm and leg relative power values as judokas but their VO\textsubscript{2} values for reaching those performances were significantly higher. Therefore performance of judo athletes may depend more on anaerobic capacity. The reason of these differences could probably be explained by the different focus in the additional conditioning training: endurance (climbers) vs. strength (judokas). The correlations between upper and lower body physiological parameters of both groups reflected the general state of training of the whole body, since in judo as well as in climbing both upper and lower body are involved in determining the performance. A similar result was that of the athletes of the 1987 Canadian National Judo Team, among whom arms’ PWC\textsubscript{170} was significantly related with the VO\textsubscript{2}max as determined from the treadmill aerobic test (Thomas et al., 1989).
The Acute Effect of “Uchikomi” for Center of Pressure Disturbance

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Abstract:

The importance of equilibrium for Judo players is widely acknowledged because a judo athlete disturbs an opponent’s equilibrium and plays Tachiwaza. The purpose of the study was to investigate the acute effect of repetitive practices of “Uchikomi” for Center of Pressure disturbance (COP). [Methods] Subjects: 21 female collegiate athletes (mean age 19.0±1.2 years, mean height 160.7±5.4 cm, mean weight 66.5±13.9 kg). Experimental Procedures: The COP of subjects with their uniforms was measured for 30 seconds on the condition of open eyes and closed eyes. The measurement was taken before Uchikomi, after 50 reps of Uchikomi, and after 100 reps of Uchikomi. The forceplate was used to measure parameters (Enveloped Area, Rectangular Area, RMS Area, Total Locus Length, Locus Length per Unit Time, Locus Length per Unit Area). [Results] There were no significant differences between pre-Uchikomi and post-Uchikomi. However, some data showed the tendency of the COP shifting towards the pivot foot after Uchikomi.
Análisis de los resultados de un entrenamiento de fuerza en judokas universitarios con y sin entrenamiento específico asociado (concurrente)

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Universidade Lusófona (Portugal)

Bibiana Calvo Rico
Universidad Castilla la Mancha (Spain)

Alfonso García Muñoz
Universidad Politécnica (Madrid)

Abstract:

Los estudios sobre entrenamientos concurrentes se están multiplicando en los últimos años como consecuencia de las distintas orientaciones que adquieren las capacidades entrenadas cuando se asocian o no a otros tipos de entrenamiento. En Judo muy pocos son los estudios que afrontan esta temática. El propósito de este estudio es conocer qué influencia tiene en un entrenamiento de fuerza la asociación al mismo de un entrenamiento específico de Judo. Para ello se configuró una muestra de 19 judokas universitarios masculinos (n=19) con al menos una experiencia de 3 años de entrenamiento en Judo. Fueron aleatoriamente incluidos en uno de los dos grupos a estudio. El grupo con entrenamiento asociado (GEA) (edad 23,65±1,98; peso 74,63±4,89) y el grupo control (GC) (edad 22,14±2,96; peso 75,43±4,13). Tratamiento: La duración del estudio fue de 10 semanas. El entrenamiento de fuerza consistió en 3 sesiones a la semana donde se realizó una propuesta de 4x10x70%1RM/4' (modificando el peso cada 2 semanas con Isocontrol 5.1) de los ejercicios de press banco, carada y sentadilla. El protocolo seguido para hallar el 1RM fue el propuesto por García y col (2000). GEA asociaba a este trabajo un entrenamiento específico de Judo 4/semana. El 1er y 3er día realizaban un calentamiento y randori 5 x 5' con una intensidad submáxima. Se utilizó el lactate Pro y la escala de Borg (6-20) de percepción subjetiva del esfuerzo para asegurar la intensidad del trabajo realizado. El 2º y 4º día se entrenaban aspectos técnicos (30’ sotai-renshu + 10’ yaku gueiko+10’ kakari-gueiko+10’ new azu). En GEA las sesiones de fuerza no coincidían en el día con las de randori. Undécima semana post test. Resultados: Tanto GEA como GC mejoraron la F.D.Max, si bien los primeros obtuvieron una ganancia mayor de manera estadísticamente significativa (p≤0,05) (ES). GEA redujo el déficit de fuerza en Press Banco y Cargada ES. En sentadilla igualmente mejoró pero no ES. El GC aumentó el déficit de fuerza en Press Banco y Sentadilla y lo redujo en Cargada. El pico de potencia en GEA se desplazó hacia el 1RM sin embargo en el GC no hubo variación en este sentido. Conclusión: El entrenamiento asociado (concurrente) de fuerza via hipertrófica y Judo con intensidades submáximas modifica la orientación adaptativa del primero en judokas universitarios hacia una aspecto más neuronal. El entrenamiento de Judo con intensidades submáximas ayuda a reducir el déficit de fuerza que produce el trabajo de fuerza con orientación hipertrófica. Parece que las cargas sumatorias de los 2 entrenamientos alteran la orientación de las 2 propuestas contempladas de manera analítica.
The bypass utilization treatment which leads a fracture by the JUDO and so on to the early healing-up.

Michio Yamada
Japan judo therapist association

Abstract:

The Purpose of the publication is to introduce the epoch-making treatment that to release can make a pain and an anguish by the fracture to be short time from the patient.

What is the bypass (arteriovenous anastomosis)?

It is a shunt by which blood flows directly from the arteries to the veins without first passing through the capillaries.

In 1707 LEALIS-LEALIS first discovered and published it. Since then They have been a lot of the anatomical publications about it. But The publications about the function hasn’t been done.

Only Professor KATSUZO NISHI took notice of the function and used it for treatment and prevention. M.D.SHO WATANABE who is his follower has treated a lot of the sickness and fracture with this.

The bloodstream through the arteriovenous anastomosis (for short AVA) is very rapid because the flow is direct from arteries to the veins.

Generally, AVA controls the blood circulation, the body temperature and the blood pressure. For example the skin becomes pale when it is exposed to the coldness.

In other words it is the fact that AVA works according to an autonomic nerve, that it doesn’t expose blood to the coldness and that it keeps the temperature of the blood inside the body.

The effect incase of fracture treatment

1. Swelling disappears quickly, because the bloodstream is rapid.
2. There are little heat and redness by the swelling.
3. The pain by swelling decreases substantially.
4. Metabolism is full and restoration of the damage organization is fast.
5. Muscle and ligament have little stiffness and contracture doesn’t occur.

Two cases of fracture treatment are shown hereby.
Usage of taping to prevent recurrence of knee Ligament injury in Judo -Taking cases of medial collateral Ligament as examples-

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Japan judo Therapist Association

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Mr Takeshi Nakajima
Kokushikan University

Abstract:

Judo is a contact sport, and, among its practitioners, the occurrence of knee ligament injury is higher and it tends to be more severe compared to non-contact sports such as volleyball. Especially, the occurrence of medial collateral ligament (MCL) injury is markedly high. Even when judo players have knee joint ligament injuries, they cannot wear knee braces during practice or competitions as these may hurt the other player or themselves. Fixation with a bandage is not strong enough, and the recurrence rate is high. We performed taping to prevent injury recurrence in 5 judo players with a grade 1 (an incomplete tear without lateral instability) or grade 2 (a partial tear with slight lateral instability) MCL tear, who were given permission to practice judo after treatment at medical institutions, achieving favourable results. We would like to introduce the taping method.
Abstract:
The judo competition in its preparation requires a high technical, tactical, physical and psychological, as each of these aspects is essential to withstand the high loads of training and competition conducted by these athletes. In sum, the sport of combat is structurally characterized by weight category, which increase the importance of training in physiological judokas. The main objective of this work is to detect changes in body weight experienced by a group of 7 elite male judokas 21 ± 2.7 years of age during a period of intense training and competitions for two 6-week, and describe the hormonal effects (urinary catecholamines), and psychological changes that will occur. 8 ratings were made along the 6 weeks of study of the following variables: body weight (SECA 730 scale), collected urine (24 hours) to assess the levels of urinary catecholamines (adrenaline, noradrenaline and dopamine) and POMS (Fuentes et al., 1995) for the control of psychological variables. The results show significant decreases in body weight 5 days prior to the competition (p < .05), decreases between 2.5 and 3% of body weight of the judokas. Catecholamines in urine increased significantly during the 6 weeks (p < .05). However, the psychological variables showed no statistically significant changes. Therefore, it appears that the development of a competitive combined with intensive training for 6 weeks, with the factor of body weight decreased significantly in the days before judokas competitions, brings a sympathetic response from the system by increasing levels of catecholamines in urine in response to an alarm at the alleged fatigue judokas.

Words keys: judo, training, competition, weight, POMS, catecholamines.
Influence of music on isometric handgrip strength endurance of judo players

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Francisco Navarro
Gama Filho University

Abstract

Music has been used to motivate people during many activities, including physical activities and sport training. Previous studies (Karageorghis, Drew and Terry, 1996) indicated that handgrip isometric strength was improved after listening stimulative music compared to sedative music or white noise. In judo, kumikata depends in part of the isometric endurance grip strength. To evaluate this variable, Franchini et al. (2004) proposed a judogi isometric chin up test (JICT), which presented a high reliability (ICC = 0.98) and can also be used as a training task. Thus, the objective of this study was to verify if the isometric endurance grip strength during JICT would be modified by listening to music. For this purpose 8 highly trained judo players from –66 kg and –73kg categories (20.1 ± 2.7 years old; 68.3 ± 5.7 kg of body mass; 20h per week of training) performed twice the JICT in a balanced way. During one execution they were listening white noise and during the other they were listening “Eye of the tiger”. Judo athletes were informed to sustain the isometric position gripping the judogi as long as possible. A paired t test was used to compare both conditions, using p < 0.05 as significance level. The results indicated a significant difference (p < 0.05) between white noise (60.0 ± 9.7s) and the music condition (69.5 ± 9.7s). Thus, similar music stimulus could be used to improve isometric endurance strength during training sessions, which could benefit judo players in their training adaptation as they could perform more work or maybe train in a higher intensity when listening to music compared to the regular condition. Other studies using different judo training tasks should be conducted in order to establish if this approach can be used successfully.
Endurance in judogi grip strength tests: comparison between elite and non-elite judo players

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Abstract:

The ability to develop a strong grip and maintain it during a judo match has become an important element for judo players. Two types of grip strength are important for powerful gripping strategies that will create tactical advantage during combat: isometric and dynamic strength endurance to resist and control the approach between athletes during kumi-kata. Therefore, the purpose of this investigation was to examine differences between measurements of maximal isometric time on judogi chin-up, and number of repetitions during dynamic judogi chin-up. The sample was composed by two groups: 16 high-level athletes from Brazilian National Team (87.5 ± 24.3 kg of body mass and 18.8 ± 3.4 years of judo training) and 12 regional level athletes (77.9 ± 16.4 kg of body mass and 10.0 ± 3.9 years of judo training), with at least one athlete per weight category. The tests were compared through an analysis of covariance (body mass as covariate), followed by a post-hoc test (Scheffé). Significance level was set at 5% (p < 0.05). No difference was found in the isometric test: Brazilian Team: 35 ± 18s; Regional: 39 ± 14s. However, the Brazilian Team performed a high number (p < 0.05) of repetitions (12 ± 5 rep) compared to Regional group (10 ± 5 rep) during the dynamic grip strength endurance test. Thus, dynamic grip strength endurance seems to be a discriminant variable between judo players, probably because kumi-kata involves a lot of elbow extensions and flexions in order to avoid opponent’s grip and to dominate him/her.
Validation of a new software for notational analysis in judo matches

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Abstract:

This study tested a new computer program for notational analysis in judo. Three judo experts analyzed twenty judo matches with the software, after having received training on its use. The last expert analyzed twice the same matches with a 24h interval between them. The following variables of the matches were analyzed: i) time structure; ii) execution in both sides and orientations of attack techniques; iii) quantification of received and applied scores and penalties; iv) frequency of occurrences, and; v) grip types (kumi kata). 20 judo matches, determined at random, composed the sample. For statistical analysis, this study used the bootstrapping method to estimate properties of variances, where a set of observations were assumed. Next, this was implemented by constructing a number of 1000 resample of the observed dataset, each of which obtained by random sampling with replacement from the original data. A quartile criteria of the confidence interval was established by $\varphi \geq 0.70$, where concordance was classified as strong ($q \leq 30\%$), moderate ($30\% < q \leq 60\%$) or weak ($q > 60\%$). Results showed a strong or absolute agreement between experts in almost 110 variables; two (time of left back grip and number of transitions) had a moderate concordance and five (time of right back + right sleeve, right sleeve grips, and technique orientations for south, north-east and east) had a weak classification in variables with less than two observations or little time of occurrence. For intra-expert comparison, absolute or strong agreement in almost all variables was found, except for one (time of left sleeve grip) where time was less than three seconds. The computer program showed a strong agreement between and within evaluators’ comparisons. In conclusion, this type of analysis can clarify the understanding about technical and tactical judo match analysis with excellent accuracy.
Changes in reaction time with consideration of gender and specific judo effort

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Wojciech Rukasz
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Abstract

Purpose. To verify changes in reaction time with choice after specific judo effort.

Material and Method. Subjects were 7 female and 17 male judokas. They were in similar age (16.1 ± 2.19 vs. 16.6 ± 2.21 years) and not differed statistically in Special Judo Fitness Test (SJFT) performance (27 ± 1 vs. 28 ± 2 throws in total). The reaction time with choice (RTC) was measured directly before and after SJFT. Its accuracy equals 0.01 sec. During measurements of RTC specialized computer program with visual stimulus was used (Klocek et al., 2002). Two-way ANOVA for repeated measurements was used to verify significance effects of sex and time.

Results. RTC depend on sex (F=5.98, p<0.05) and time (F=4.86, p<0.05). Female group demonstrated longer RTC (0.426 sec) than male group (0.393 sec). Moreover RTC measured after SJFT was shorter (0.396 sec) than before this effort (0.423 sec).

Conclusion. During warm-up preceding a fight an advantage can have judoists, who use intermittent effort simulated their competition activity.
Can special judo fitness test be used to endurance evaluation?

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Tomasz Gabrys
Department of Theory of Sport, Academy of Physical Education in Krakow

Abstract:
Objective was to broadening the endurance evaluation protocol of a judoka, based on the Special Judo Fitness Test (SJFT) by means of using a second cardiac stress test.

The examined group consisted of 6 male judo competitors aged from 20 to 26 years. They were Poland’s representatives. The subjects undertook the SJFT (Sterkowicz, 1995) twice with a ten-minute rest between trials. During the exertion the number of throws was counted and in recovery periods the heart rate was recorded using the polar team system (Polar, Finland). Oxygen consumption (VO$_2$) was measured throughout with the K4b$^2$ (Cosmed, Italia). The blood sample was taken from the earlobe (Dr. Lange lactate – LA analyser).

In both repetitions of the effort (trial 1$^{st}$ vs. trial 2$^{nd}$) a similar characteristics were observed. Throws in total (29.2 ± 2 vs. 29.2 ± 2), as well as Index in SJFT (10.84 ± 0.8 vs. 10.88 ± 0.7) represents very good level of athletes. In the series A of SJFT we registered, the VO$_2$ reached 25.9 ± 5.38 vs. 28.9±4.4 ml.kg$^{-1}$.min$^{-1}$. During first 10-sec break the VO$_2$ reached 40.5 ± 5.63 vs. 40.2 ± 8.7 ml.kg$^{-1}$.min$^{-1}$. In series B, the VO$_2$ was increased to 48.5 ± 4.73 ml.kg$^{-1}$.min$^{-1}$ vs. 44.9 ± 8,9 ml.kg$^{-1}$.min$^{-1}$. During the second 10-sec break the VO$_2$ changes to 50,3 ± 5.0 vs. 49.1.0 ± 5.3 ml.kg$^{-1}$.min$^{-1}$. In series C, the VO$_2$ increased to 52.8 ± 4.18 vs. 50.0 ± 5.3 ml.kg$^{-1}$.min$^{-1}$. Those values of LA determined about 80% of VO$_2$max measured in progressive test. Before 1$^{st}$ trial LA was equaled to 1.81±0,32, but before 2$^{nd}$ trial reached 13,05 ± 2.92 mmol.l$^{-1}$ and VO$_2$ consumption falls to approximately 10 ml.kg$^{-1}$.min$^{-1}$.

We concluded the evaluation of a competitor is regarded in terms of his judo efficiency as opposed to the aerobic or anaerobic endurance separately measured in most laboratory tests.

Key words: judoka, endurance, aerobic, anaerobic efficiency.
Abstract:

Kata is a formal standard setting and pre-determined training of judo techniques. The reason for its creation was to leave an educational legacy of teaching judo principles and spread internationally its essence. Besides its common use for the grade promotions, lately, there was an increase in competition oriented practice. However, its configuration by referees specialized in kata competition and graduation examinations are unknown in literature. Thus, the objective of the present study was to characterize the kata practice among judo senseis responsible by São Paulo State Federation’s kata competition and grade examinations. For this purpose a closed questionnaire was applied to 20 judo senseis (male = 18; female = 2), specialized referees in kata competitions and graduation examinations, ranked between 3rd and 7th dan. Data are presented as mean ± standard deviation and percentage of total sample. The sample was 46 ± 10 years-old, with judo practice time of 34 ± 9 years. Practice often varied from 2 (50%) to 4 (30%) sessions per month. Nage no kata was identified as the most performed (78%) and preferred (32%) kata, followed by katame no kata (25%), ju no kata (21%) and kime no kata (12%). Initiation of kata study usually started by judo’s dojo sensei (79%) and through courses offered by state federation (21%). Practice continuity is directed to techniques improvement (46%), complementation for judo training (29%), spiritual practice (14%) and for competition preparation (11%). The following attributes are the most important meanings given for kata by this group: foundation (45%), essence (25%), origin (15%), form (10%) and basis (5%). As conclusion: Nage no kata was the most practiced and preferred kata; judo sensei seems to be crucial in the transmission of the original grounds of kata; continuity of kata practice suggests they are looking for improving techniques in judo.
Factors Influencing in the Success of Elite Female Judo Athletes Training in Alicante Judo Clubs.
Spain

Carbonell Pascual, Carlos
University of Bath, England.

Abstract:

Female judo in Alicante (Spain) has been giving extraordinary results worldwide during the past 16 years. Since its philosophy brought by Sergio Cardell, (Miriam Blasco Coach) in the middle 80’s until these days, Alicante judo has been at the top of international judo. This study attempts to identify and analyze the factors that influence directly or indirectly to the success of judo female players in the two main Alicante judo clubs. This work intended to explore physical, psychological, environmental and social factors that are a direct influence in their success. Since Inman’s thoughts in ‘Judo for Women’ (1987) when he stated that “The face of women judo will really change when the top women stop competing and become teachers” until today, this statement really become true when Miriam Blasco took the role of coach after her successful career as a player. This paper was carried on a form of qualitative data and the information was gathered in narrative form. The subjects who took part in the study were five (5) judo coaches and seven (7) female top judo players (mean age 31.75). Open discussions in depth with the coaches were carried out after gathering data from the interviews and questionnaires. Among the results that this research found out as important factors to succeed in judo were: psychological factors, mental skills and preparation towards the competition. Crucial for the first gold medal (Arruza, 1991-1992), good interaction athlete – coach, tailored coaching, physical and multifaceted preparation, well established game plan, overtraining avoidance, high levels of confidence, quality opponents, motivational factors, the effective use of past experienced athletes (Blasco, Fernandez) that impacted effectively in athletes currently competing, and well designed competition log of opposition players. The most notable conclusions were that 90% of the players had continuous impact from more than one coach while they train in Alicante, 85% showed high levels of optimism in training and competition and finally that 100% of the successful players have support services staff judo related.

There is a variety of open questions now that can further take this work into the next level. For example, why male judo players are not having the same results than females in Spain; another topic would be if this results can be applied in the same way to other clubs in Spain or abroad and finally whether or not this research could influence in creating a Spanish Centralised National Team or a model that replicates these clubs around the country.
Abstract:

The aim of this research is to determine the state of fitness (fitness profile) of Serbia’s elite judokas, and that physical, physiological and motor characteristics vary the most successful of the less successful competitors. The sample was done with 30 judokas. Subjects were divided into two groups (A and B) according to their competitive results achieved on the national and international competitions. Evaluated the aerobic and anaerobic capacity and maximum power. In almost all the investigated variables can be noticed A group dominance at the high level of security $p<0.01$. In conclusion, the work can be summarized that the differences between successful and less successful judokas in terms of ability reflected first in all aspects of the maximum power, and anaerobic power.

Keywords: strength, aerobic power, anaerobic power, elite athletes
Technical efficiency of women judokas during the European championships (u 23) in Zagreb 2008.

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Abstract:

The research was conducted on the sample of 84 bouts during the European Championships for younger seniors (U23) in Zagreb 2008. All bouts were followed and analysed by well educated judokas with many year experience, all students of Faculty of Kinesiology in Zagreb. Throws were noted according to Kodokan Judo/Classification of Nage Waza. During the analysed bouts overall number of 18 different techniques of throws was used. In comparison with men judokas women use less different techniques. Total of 100 throws were successfully applied (1.19 per bout) out of which the total of 26 throws (26%) were qualified as ippon. If one add to this number ippon scores in ne waza (13 techniques scored with ippon) one can conclude that 39 out of 84 bouts (approximately 46%) ended before regular time with attractive technique on the ground or in standing position. Analyses showed that the relation of ippon scores in tachi waza and ne waza position in women part of competition was 2:1, unlike the men’s part of competition where this relation was 3,5:1 in favour of throwing techniques. Number of different techniques used, number of total throws applied and relation between the tachi waza and ne waza techniques scored with ippon highlight the men’s judo as little more attractive than women’s.

The most used groups of throws in women’s part of Championships were:

5. Hand throws with total of 38 techniques applied during the competition (Seoi nage (13), Te guruma (7) and Kuchiki taoshi (7)).
6. Leg throws with total of 28 techniques applied during the competition (Uchi mata (10), Ouchi gari (7) and Osoto gari (4)).
7. Sacrifice throws with total of 25 techniques applied during the competition (Soto makikomi (15), Tani otoshi (5) and Yoko tomoe nage (3)).
8. Hip throws with total of 9 techniques applied during the competition. Interestingly only hip technique used in the 85 analysed bouts was Harai goshi.
Differences in Situational Efficiency Between Balkans Judo Championship 2006 and National Judo Championship of Bosnia and Herzegovina for Senior Male Competitors

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The purpose of this study was to examine differences in situational efficiency between Balkans Championship held in Bosnia and Herzegovina 2006 year and National Judo Championship of Bosnia and Herzegovina held 2006 years. The investigation has been conducted on sample of 129 fights from the Balkans Championship, and on sample of 94 fights from the National Judo Championship in all seven weight categories for male competitors (-60kg, -66kg, -73kg, -81kg, -90kg, -100kg and +100kg). The sample of variables in judo fights were monitored next tactical and tactical variables: grip configuration, place of attack on tatami, direction of attack, time of fights, penalties, points and individual throwing and grappling techniques. In this research we used canonical discriminant analysis to determine differences in situational efficiency. Summary of canonical discriminant functions show one isolated discriminant function. Function of centroids group separate BiH in the negative side with variables TWTOS, KWUGO, SHIDO 1, SHIDO 2, YUKO and Balkans group centroids separate on positive side with variables TIME OF FIGHTS, YSTNO, AWUMA, IPPON, RIGHT SIDE OF ATTACK and MIDLE ZONE OF TATAMI. The study about judo research of situational efficiency on competition has been used to identify tactical and technical variables that can distinguish between different level of competition for male judo competitors, which in future can lead better results in judo. Research about judo has become a subject of practical and scientific interest to coach and scientists in judo and other combat sports. This results would allow more specific technical, tactical and strategic preparation, from competitors recruitment to practice planning, application and control training in judo.
Comparison of Two Different training Methods in the learning and performance of judo Techniques

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Abstract:

The Subject learning performance activities have been studied and discussed by many researchers. The purpose of this research project was to study and compare the different training method in the learning and performing judo techniques.

To this end, a judging committee was formed in collaboration with five famous and experienced judo trainers to score and evaluate the trainees in addition some evaluating were prepared and the scores were registered by the judging committee.

The aforementioned two methods were used to study learning and performing judo skills in comparison and based on the previous researches in this regard, the following two researches hypothesis were formulated.: 1. the methods of blocked training is more effective than the blocked method on learning the judo skills.

The subject of the study are 21 Volunteer beginners male with the means of 19.90 years of age 170.71 centimetre height and 60.85 kg weight.

The duration of the treatment was 8 weeks training course consisted of 24 sessions. In each course the mean of the performance was calculated. Then the mean of the groups at the end and then the days after the end of the treatment was calculated based on the test of the independent groups.

In conclusion, no significant difference was observed between the means of the test. In other words the null hypothesis of the research was accepted and confirmed.

So it can be concluded that there is no significant difference between the methods of blocked and random exercise in learning and performance of Judo Skills significant
Anthropometric and physiological characteristics in judo: applicable for talent identification and development

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Abstract
Introduction: The purpose of this study is measurement and determination of relation and correlation of some of anthropometric (of 28) and physiological (of 7) characteristics of elite male judokas for talent identification and development in Judo. Previous studies results show that top judokas have distinct physiologic and anthropometric profile in comparison with others. (Emerson Francine and his colleague's 1999/Rine. H and his colleague's 2000 Pavi Land polkin 2001). Methods
Subjects were 20 (M=20.6 yr) male who were champions of world championships in recent years. Body composition set, tapeline, Coolies were used. Descriptive statistic was and pearson correlation coefficient used to describe and Analysis data.

Results
Table 1: shows the relation of each anthropometric past part to stature in Deferent weight category in elite male's judokas.
Table 2: shows the Data of physiological variable in Deferent weight category of mate elite judokas.

Discussion/ Conclusions
Each sport has specific means of talent identification that includes Testing and other related measurement. Tow specific means in talent identification are and anthropometric like stature to arms length, and physiological capabilities such as aerobic and anaerobic power. The purpose of this study is identification of physiological and anthropometric characteristics of male judo players, which is a useful help for talent identification for judo. result of This study shows a profile of anthropometrics and Physiological aspects of elite level male judokas, The results of the research present as table that show the relation of each anthropometric parts to stature Also the table shows the
The world wide spread of the judo from the viewpoint of the number of the Olympic Games medal acquisition

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Abstract:

The judo game formally adopted from the Tokyo Olympics in 1964 becomes the 11th holding in this Beijing Olympics. Japan is a judo origin country that acquired a lot of medals in past competitions. We have researched how the male judo has extended to the world during the Tokyo Olympics in 1964 and the Beijing Olympics in 2008, based on the number of each nation medal acquisition (The Moscow Olympics and the Los Angeles Olympics were excluded).

Method

1. The records of the male judo in the past Olympics were investigated.
2. The differences of colours of medals which are the gold, the silver or the bronze were not considered, because the medal acquisition is assumed to be indicator of level of the nation.
3. About the participation regulation of rule revision, a country, or an area, although there are various changes, it does not take into consideration.

Conclusion

The number of participating nations increases in the Olympics male judo, and Japan is always a high rank of the medal acquisition.

Especially, the position of Japan has not been in the decline, the No. 2 group which three nations of medal acquisition rate is always changed but the occupation rate of No.2 group is not decreasing.

The number of medals acquired by the nations of third group (from 4th to 8th rank nations) has decreased. Although the number of the nations which win a medal is also increasing with the increase in a participating nation in recent years, strong nations did not decline, but the third group and many nations have divided medals.

The nations which can get a medal are increasing in number, and globalization of the judo game has been spreading.

The level of each nation will go up and the monopolistic situation in a high-ranking nation will finish in the next stage.
Use of Attack rate as a predictor of victory in Olympic level Judo

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Abstract:

Outside the sport of Judo, considerable research has been conducted into the efficacy of attacking actions. For example the 2004 European Cup Soccer Tournament was analysed in detail with the focus being on descriptive statistics and efficacy of aspects of team play (Carmichael & Thomas, 2005).

A relationship between “shots at goal” and “victory” has been suggested by Papahristodoulou (2006, 2007), this study proposes a relationship between “attacks” and “victory” in Judo.

In this study, a sample of matches from the 2008 Beijing Olympic Judo Tournament were notated, recording scoring throws, ineffective attacks (as per Boguszewski & Boguszewska (2006) and also lesser attacks that would not be considered in previous studies.

In the results of this study, a majority of matches were won by the player who attacked most (55%). In players who won a medal in the event (67%). The attack rate for medalists is also higher than that for winning players generally across the sample. Medalists attacking almost 2 more times than their opponents and almost 1 more time than winning players generally.

The study also compared the structure of Judo matches to that from the 1987 research by Sikorski, Mickiewicz, Majle, & Laksa. This study confirms the findings of Sikorski et al. (1987) in relation to the average duration of fights and duration of segments of action in Judo fights. In the 1987 study, the most common scoring event was identified as penalties, this matches with this study where penalties make up over 50% of all scores.

This study finds that the structure of Judo matches has altered little since 1987, suggesting that existing training methods based on this study remain relevant to modern Judo. The study also found evidence to support the hypothesis that attacking more will result in victory, though not at statistically significant levels.
Methods of protection and attraction judo persons in through strategic of sport marketing

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Eslamic Azad University Central Tehran branch

Abstract:

Introduction: with a simple and primary look, we can notice which one of the important factors success and constancy per sport measure attention people to events sport. The main aim of sport marketing increasing number persons sport. Because with increasing people will increase income and will decrease income sport with inattentive people.

We face to 4 customer in judo:
1- previous athletes, coaches , referees , spectator
2-present athletes , coaches , referees , spectator
3-athletes, coaches , referees, spectator other sport
4-potentially athletes, coaches, referees, spectator (youths, women ,soldiers,…..)

Objective: the main aim of this research is to answer to the basic questions in study: which ways protection and attraction for people ?the effort is to answer some questions about the nature of protection and attraction and elements making it up. In this article it is tried will recognition factors which protection and attraction people to judo. Thus, we hope this article would attract their attention and will be taken in to consideration.

Method: in this article , answering the questionnaire , while having confirmed various factors tabled in questionnaire for attraction and protection extent in this article , which is presented based on a fundamental functional research was method multiple criteria decision making (mcdm). For this purpose, questionnaire including different factors in protection and attraction judo persons. This research in first study in Iran.

Results-conclusion: this approach has been discussed summarily a final conclusion is given at the end of this article. Interest and love judo important factor for present customer. For attraction people must increasing promotion and news media. For pervious customer must elimination dissatisfaction factors.
Metabolic cost and technical consequences of performing Koshiki-no-kata in yoroi (Japanese body armor) versus jūdōgi

Professor Carl De Crée
GER

Abstract:

In order to create the technical bedrock for the throwing principles of Kōdōkan jūdō, Dr. Jigorō Kanō largely based himself on a classical jūjutsu school called Kitō-ryū. The philosophical fundamentals of Kitō-ryū jūjutsu are complicated. Kanō-shihan wanted to make his jūdō accessible without requiring a deep intellectual investment which would be necessary to fully grasp the basis of Kitō-ryū jūjutsu. However, to honor Kitō-ryū and forever codify its principles within Kōdōkan jūdō, he retained two exercises, namely, the Omote kata and Ura kata of Kitō-ryū’s Takenaka-ha branch under the name Koshiki-no-kata. Performance of koshiki-no-kata is notoriously difficult, and regarded as one of the least understood parts of jūdō. Koshiki-no-kata originally was part of kumi’uchi and intended to be performed in yoroi. This is extremely rarely done in contemporary jūdō. It has been argued that the absence of familiarity with wearing and performing in yoroi has contributed to the lack of understanding of this exercise and its principles. No scientific studies exist that have looked into the added physiological or biomechanical difficulties of wearing yoroi. The purpose of this study is to compare performance of jūdō techniques, more specifically, koshiki-no-kata, in jūdōgi vs. yoroi. Six subjects, ranked 7th – 8th dan, performed koshiki-no-kata according to current Kōdōkan guidelines while equipped with an Oxycon Mobile oxygen analyzer. The results showed significant higher physical demands when wearing yoroi compared to ordinary jūdōgi. These differences are likely caused by the mass of the yoroi and by how it changes the dynamics of the exercise. Although confounding variables exist in that every subject in the study had decades of experience in performing jūdō in jūdōgi and not in yoroi, the results suggest that developing an appreciation for the limitations caused by wearing yoroi might be useful in improving an understanding of the principles underpinning jūdō’s techniques.
Kōdōkan jūdō’s elusive tenth kata: the gō-no-kata —“forms of proper use of force”

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Llyr C. Jones, PhD
Internal Association of Judo Researcher

Kōdōkan Jūdō is a Japanese form of pedagogy, created by Jigorō Kanō, based inter alia on neoconfucianist values, traditional Japanese martial arts, and modern Western principles developed by John Dewey, John Stuart Mill, and Herbert Spencer. Its practical study consists of randori (free exercise) and nine different kata (predetermined and choreographed physical exercises). In recent years, Gō-no-kata (“Prearranged forms of correct use of force”), a generally considered obsolete and reclusive ‘tenth’ kata of Kōdokan jūdō, has become the subject of some renewed interest within jūdō circles. Most information on gō-no-kata, as available in popular Western sports media, is ambiguous and often even blatantly erroneous. The purpose of the present paper is to provide a comprehensive study of this kata which once formed a part of the standard jūdō curriculum. We aim to remove the confusion and mystery which surrounds the gō-no-kata. To achieve this, we offer a critical evaluation of the available literature and source material on this kata. Gō-no-kata is the oldest kata of Kōdōkan, probably predating the two 1885 randori-no-kata. Despite being popularly thought of as defunct, the gō-no-kata survives today —having initially been preserved in Tōkyō by a small group of senior jūdōka, and now also by a handful of experts abroad. Gō-no-kata consists of ten forms, which depict a relatively primitive jūdō, still practiced in defensive jigotai position. Its aim was to serve both as an intense fitness exercise as well as illustrating the basic principle of conquering force with giving way.
All Japan Masters Judo Athlete and Top Japanese University Judo Athlete

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Kokushikan University in Tokyo Japan

Mr. Noboru HASHIMOTO
The Japan Society of Judo Therapy in Japan

Mr. Yasuyuki HIBAKO
Kyoto Sangyo University in Japan

Mr. Atsuhiko NAGAO
Meiji University of Integrative Medicine in Japan

Abstract:

Since the formal adoption of Judo as an event in 18th Olympic in 1964, Judo has undergone rapid development in terms of popularity and participation. People around the world have come to look upon Judo in various and distinctly different ways: as pure competition in which winning, above all other considerations, is supreme; as a commercial activity; as a lifework activity of physical education, and so on. However, in recent times, it is felt that the over-riding emphasis on victory in competition has become the main focus, and accordingly, that the concepts upon which the founding Jigorō Kanō developed Judo, the ideals and philosophy of Judo, are fading away with time.

Judo was originally developed from the life-taking techniques of jujutsu. The founder Kanō, upon creating Judo replaced the word “jutsu” or simply ‘technique,’ with “michi” (the “dō” of Judo) which served to re-interpret Judo as a path or means for development of the human character. This Judo, one that serves to develop human beings, is the system which spread to the various countries of the world.

With this foundation of Judo in mind, this study will examine life-long sport, life-long martial arts (Budo), and specifically life-long Judo as a sporting activity. In order to do so, we have investigated the subject groups of senior Judo competitors with long careers who have entered the Japan Master’s Tournament, and top-level competition university students.
A comparison of two methods of teaching judo to 9-11 year olds

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Judo in schools in the UK is in decline (Department for Children, Schools and Families, 2004). If British judo can show that it is possible to run judo classes that elicit the required agility, balance, coordination and speed developments in children and include some of the currently neglected skills such as kinesthetic sense, gliding, buoyancy, striking with an implement (KGBs) and catching, passing, kicking, striking with a body part (CPKs) then the inclusion of judo within the curriculum is plausible. Therefore the aim of the project was to compare two methods of teaching judo to children age 9-11 years.

Ninety children (n=90) aged 9-11 years old were selected from two schools. These participants were then randomly placed into three groups. The traditional judo teaching group (TJTG, n=29), the multi-skills/games judo teaching group (GJTG, n= 30) and the control group (CG, n=31).

Tests between the two experimental groups showed a significant improvement between TJTG and the GJTG in the ball co-ordination test (t=7.043, df=87, p<0.001) and vertical jump test (t=2.062, df= 87, p<0.05), with the GJTG having significantly greater results. There was also strong trends for improvement (GJTG Vs TJTG) trend showing an improvement, for the GJTG, in the sit and reach, Illinois agility test, 20m dash, grip test & muscular endurance although these were seen to be non-significant in the t-tests.

The results of this research show that there is a general trend for improvement in all of the parameters assessed across all three groups and that the two judo groups showed a greater trend for improvement across the majority of parameters. Statistically the two judo groups showed a greater response in hand eye co-ordination, agility, upper body power, balance, grip strength & lower body power and the games based judo groups elicited great adaptation than the traditional judo group in hand eye co-ordination and lower body power (P<0.01).
Judo Primary School: Student Evaluation

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RosaMaria Muroni
University of Genoa

Abstract:

To begin teaching a teacher needs to appraise their students in a realistic and individualized way. To evaluate the pupils during a sport course, tools of bodily measurement (weight, height) and suitable motor tests are used. The survey of the students characteristics must be performed at the beginning, in the middle and at the end of the Judo course.

At the opening the measurements are taken for a consistent evaluation of the qualities of the subjects to program a suitable teaching plan. Then at the half period to verify if the plan is meeting the objectives and finally at the end to check if those objectives have been achieved.

In the school everything is more complicated compared to the gym because of the non homogeneity of the students. In a gym Judo course there are also genetic differences between the students, but at school the pupils come from different motor - sport experiences.

Another problem to consider is the lack of materials and human resources available at the school.

This research has been tested for 3 years in a primary school (children from 5 to 11 years old).

Our work has been to develop a valid test to understand what are the most appropriate measurements and how to build simple test instruments, and to make them usable in a school context.

The measurements selected to have a profile of the student were:

1. Individuals birth date
2. Height and weight
3. Back flexibility
4. Balance
5. Explosive lower body strength
6. Agility

Conclusion: after three years of research the measurements selected have easy availability and simple application. Thanks to their use the teacher is able to make a valid plan and meet the objectives.
Body composition and physiological profile of elite Algerian judoka

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Abstract:
The purpose of this study was to establish a body composition and physiological profile of elite judo player. Thirteen members of the Algerian team judo, seven males aged 27.14 ± 3.02 and six females aged of 24 ± 4.14 years. They were Africa champion on team at May 2008. All subjects took part at Olympic Games 2008.

The basic anthropometrical measures were carried out: body weight, height point and skinfold thickness (triceps, biceps, subscapular, abdominal). Body fat was estimated by Womersley and Durnin (1977) method. The body composition (BC) chart (Hattori et. al., 1997) was used for presentation of individual percent fat (PF%), fat free mass index (FFMI), fat mass index (FMI) and body mass index (BMI). In physiological testing in judo team were used: Ruffier-Dickson test (R-D), Power output (PWC$_{170}$ cycle test). Results in Sargent jump (VJ) was also used for counting Power (P) according to Lewis formula (Fox & Mathews, 1974).

There were significant differences (t-test, p<0.05) between males and females in body mass (91.85±25.06 vs. 65.5±10.59 kg), PF% (12.28±4.16 vs. 19.52±3.88), FFM (79.75±17.50 vs. 52.51±7.18 kg) and FFMI (25.51±4.01 vs. 19.62±1.11 kg.m$^{-2}$) and R-D (7.5±3.21 vs. 10.70 ±1.4). We find similarities between compared groups in: height (176.28±9.12 vs. 163.5±12.16 cm) and BMI (29.32±6.30 vs. 24.42±1.75 kg.m$^{-2}$), PWC$_{170}$ (21.36±3.7 vs. 18.46±2.5 (kg.m.min$^{-1}$.kg$^{-1}$) and VO$_{2}$max (50.6±9.3 vs. 50.72±6. (ml.kg$^{-1}$.min$^{-1}$), VJ (57.28±7.73 vs. 51.83±12.22 cm) and Power (151.75±29.82 vs. 104.08±24.43 (kg.m.s$^{-1}$)).

In conclusion. The BMI without counting FFMI and PF% is worthless for evaluation in judoists. IJF rules extended the time of female fights, so they have to compensate their aerobic fitness.
The purpose of this study was to compare the neuromuscular fatigue of the explosive strength and power in male and female judokas. Sixty three men and women of Portuguese, Tunisian, Brazilian, Spanish and French team (mean and sd body mass, M=73.5 ±11.2 and F=64.4 ± 818; age, M=22±2.3 and F=23 ±4.5; fat, 9.98 ±2.2 and 16.9 ± 3.1) were submitted to a five minutes simulated test of Judo.

The following upper extremity test actions: bar displacement, average velocity (metres per second), average strength (N), average power (watts), and rate of force development (N.s\(^{-1}\)) were recorded by linking a rotary encoder to the end part of the bar, which recorded the position and direction of the bar within an accuracy of 0.0002 m. Customized software (JLML I+D, ISOCONTROL 5.1, Madrid, Spain) was used to calculate the output of the each repetition of the bench-press performed throughout the whole range motion. The COPTEST\(^{(a)}\) a competitive simulation test was used to evaluate the blood lactate concentrations and remove and recovery, evaluate the “Explosive Strength” resistance loading and fatigue. The power-load relationships of the arm extensor muscles were tested in a bench-press position using progressive relative loads till 100% 1RM. During the COPTEST, for the Explosive Strength for the arms we used the load of the power (Watts), 5 sets of 4 repetitions in each minute.

Standard statistical methods were used to calculate the means and standard deviations (SD). The average of men’s and woman’s results, were compared using one-way analyses of variance (ANOVA). The P≤0.05 criterion was used for establishing statistical significance. To compare the results in each minute, we used the repeated measures Anova.

The explosive strength characteristics of the athletes for the upper extremity muscles are presented in Table 1. Average strength, speed, power and rate of force development in four repetitions with the power loading concentric maximum in each minute were register. No significant differences were observed and number repetitions of explosive resistance and the power strength (%1RM).

Table 1 – Mean(SD) and (ANOVA) repeated measures of Upper Body in speed, power, strength and RFD characteristics of explosive Strength in male (n=42) and female athletes (n=21).

<table>
<thead>
<tr>
<th>Time</th>
<th>1º Min</th>
<th>2º Min</th>
<th>3º Min</th>
<th>4º Min</th>
<th>5º Min</th>
<th>Sig.</th>
<th>% ↓</th>
</tr>
</thead>
<tbody>
<tr>
<td>M Speed (m/s)</td>
<td>0,76±0,11</td>
<td>0,73±0,15</td>
<td>0,67±0,14</td>
<td>0,69±0,14</td>
<td>0,69±0,15</td>
<td>**</td>
<td>10</td>
</tr>
<tr>
<td>F Speed (m/s)</td>
<td>0,77±0,15</td>
<td>0,73±0,15</td>
<td>0,67±0,14</td>
<td>0,69±0,14</td>
<td>0,69±0,15</td>
<td>**</td>
<td>9</td>
</tr>
<tr>
<td>M Power (W)</td>
<td>441±113</td>
<td>430±114</td>
<td>422±110</td>
<td>411±109</td>
<td>411±116</td>
<td>*</td>
<td>7,8</td>
</tr>
<tr>
<td>F Power (W)</td>
<td>285±102</td>
<td>261±98,5</td>
<td>249±90</td>
<td>255±89</td>
<td>245±86</td>
<td>**</td>
<td>14</td>
</tr>
<tr>
<td>M Strength (N)</td>
<td>595±111</td>
<td>594±112</td>
<td>591±111</td>
<td>592±112</td>
<td>593±115</td>
<td>ns</td>
<td>0</td>
</tr>
<tr>
<td>F Strength (N)</td>
<td>361±97</td>
<td>355±97</td>
<td>353±95</td>
<td>354±97</td>
<td>342±95</td>
<td>*</td>
<td>15</td>
</tr>
<tr>
<td>M RFD (N.s(^{-1}))</td>
<td>6738±2595</td>
<td>58820±257</td>
<td>70540</td>
<td>69001±254</td>
<td>66900±3221</td>
<td>*</td>
<td>9,9</td>
</tr>
<tr>
<td>F RFD (N.s(^{-1}))</td>
<td>4608±1388</td>
<td>43670±322</td>
<td>48370±1434</td>
<td>48534±143</td>
<td>45538±1653</td>
<td>ns</td>
<td>9,8</td>
</tr>
</tbody>
</table>

*p<0.05; **p<0.01

In COPTEST\(^{(a)}\), between the first and the last minute (5’) no differences between men and women regarding the average speed were obtained and for both there was a very slightly decrease of speed – 9/10%. In the power strength were encountered slightly decreases, but a higher difference in woman (14%) than man (7,8%) Regarding strength no decrease in men were verified, but women decreased till 15%. In addition appeared similar fatigue in rate of force development in man and woman with decreases of 9,9% after five minutes the COPTEST.

In summary, the results of this study indicated the explosive strength, rate of force development (RFD) and muscle power output in the bench press performance are significantly different in male and female athletes, but the neuromuscular fatigue only represented small differences.
Abstract:
Sarah Winifred Benedict Mayer has been reported (Svinth 2001,) as the first Western woman to be awarded her 1st dan in Japan. She trained in Kobe, Kyoto and Tokyo in 1934 and 1935, and was offered the grade by the Kyoto Butokukai. Her exploits are narrated in letters to Gunji Koizumi, President of the Budokwai.

Little was previously known of Mayer’s life apart from those letters, and this paper outlines additional biographical details. The paper draws on genealogical techniques, with primary and secondary research to place Mayer’s trip to Japan in a sociological and cultural context.

She is from a successful theatrical family. Her first marriage was to the grandson of the Lord Mayor of London, her second marriage was into an extremely wealthy family of diamond merchants. This supports the proposition of the influence of social class on the globalization of judo pre WW2, building on the earlier work; “The Internationalization of Judo and the Attention for Etiquette - Focusing on the UK.” (Callan, 2008).

Mrs Mayer was a blonde actress, playwright and journalist, she attended the Kings’ garden party. She was briefly Secretary of the Ladies Section of the Budokwai. She had met Kano and Mifune, and was close friends with Ichiro Hatta. This research provides an insight into the western view of judo and Japan during the 1930s. A period which included the Great Depression, the assassination of Tsuyoshi Inukai, the abdication of Edward VIII, the death of Kano, the Berlin Olympic Games, the rise of Hitler, the departure of Japan from the league of nations, and the descent into World War.

This analysis of the Mayer letters, in the context of contemporary events, and her personal story, reveals cross-cultural insights. This paper provides an addition to the literature on the early development of women’s judo.