Università degli Studi di Roma "Tor Vergata"

Facoltà di Medicina e Chirurgia

Corsi di Laurea in Scienze Motorie

Una selezione della letteratura internazionale sul tema della cura del Talento Sportivo

Anni 2000-2017

Forma Estesa

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Una selezione della letteratura internazionale sul tema della cura del Talento Sportivo

Il tema della cura del Talento Sportivo (i.e. identificazione, scoperta, sviluppo, selezione del talento) è uno degli argomenti più avvertiti in tutte le agenzie educative che si occupano di sport giovanile.
La letteratura internazionale presenta (fonte *PubMed* 2017) una importante mole di lavori alla voce "Talent"&"Sport" (904 *papers*, dal 1947 ad oggi – vedi Figura 1).

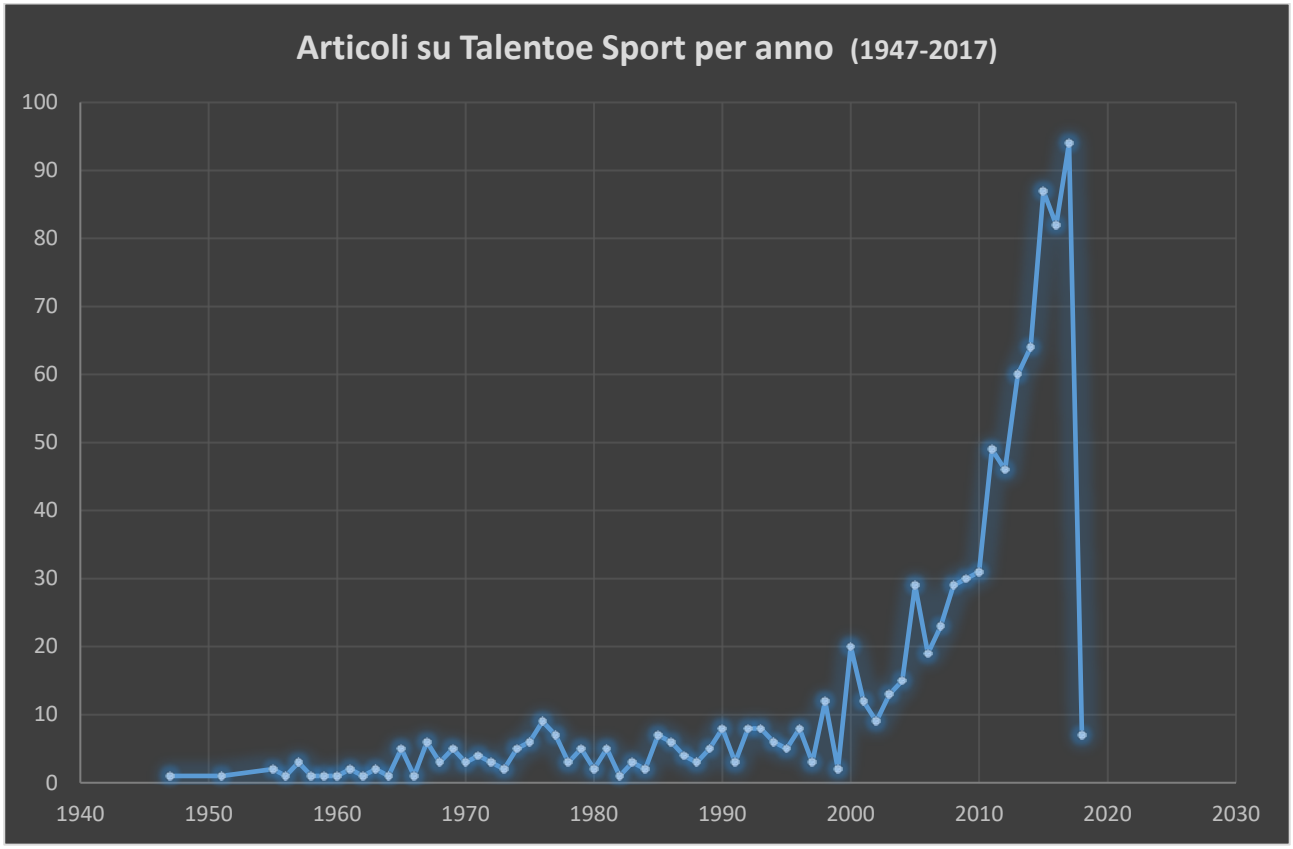

Figura 1 – Numero di pubblicazioni per anno sul tema "Talento e Sport" – Fonte PubMed, Novembre 2017

Si può notare in figura 1 come tale tematica ha sollecitato una notevole produzione scientifica negli ultimi 15 anni circa, a partire dal 2000.
Si può senz'altro affermare che tale tema è fortemente avvertito in tutti i sistemi nazionali interessati ad agire in senso proattivo rispetto agli scenari futuri da costruire. In realtà investire sul talento è agire in senso anticipatorio sulle agenzie che si occupano di formazione ed educazione, laddove la risorsa più utilizzata in sistemi paese meno attenti, risulta essere ancora quella della "casualità".

Il dibattito Internazionale in tal senso è molto ampio e supportato, come abbiamo visto, da una copiosa letteratura scientifica.

La selezione bibliografica che presentiamo (105 su 904 lavori, circa il 12% sul totale) è una raccolta "ragionata" di articoli che possono essere consultati da chiunque voglia farsi un'idea più precisa su questo tema, fornendo quindi un primo ordinamento per anno di uscita.
Sono considerate ed inserite tutte le informazioni reperibili su tali articoli (per lo più coperti di copyright) per una successiva ricerca:

- Autori
- Titolo dell'Articolo
- Rivista Scientifica
- Abstract (nella versione estesa del presente lavoro)
- Altre specifiche del lavoro (DOI, link, ecc.).

Per l'ottenimento dei lavori completi – full text – (spesso a pagamento) è possibile riferirsi alle case editrici indicate. In caso di studenti dei corsi di Laurea in Scienze Motorie è possibile rivolgersi alla Biblioteca Medica di Ateneo al sito www. http://d-library.uniroma2.it/ .
Si riporta in stile Vancouver l'elenco dei lavori prodotti per anno (Anno e numero degli articoli).
Nella sezione *references* la notazione bibliografica classica conduce il lettore alla identificazione degli articoli. La sezione references estesa riporta tutte le informazioni disponibili del testo, comprensive di abstract.

1. Anno 2017 (1-17)
2. Anno 2016 (18-30)
3. Anno 2015 (31-41)
4. Anno 2014 (42-47)
5. Anno 2013 (48-51)
6. Anno 2012 (52-59)
7. Anno 2011 (60-65)
8. Anno 2010 (66-70)
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12. Anno 2006 (81-83)
13. Anno 2005 (84-86)
14. Anno 2004 (87, 88)
15. Anno 2003 (89-91)
16. Anno 2002 (92)
17. Anno 2001 (93-96)
18. Anno 2000 (97-105)

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REFERENCES (forma estesa)

1. **Reference Type:** Journal Article

Record Number: 4071

Author: Rossing, N. N., Stentoft, D., Flattum, A., Cote, J. and Karbing, D. S.

Year: 2017

Title: Influence of population size, density, and proximity to talent clubs on the likelihood of becoming elite youth athlete

Journal: Scand J Med Sci Sports

Date: Nov 08

Short Title: Influence of population size, density, and proximity to talent clubs on the likelihood of becoming elite youth athlete

Alternate Journal: Scandinavian journal of medicine & science in sports

ISSN: 1600-0838 (Electronic)

0905-7188 (Linking)

DOI: 10.1111/sms.13009

Accession Number: 29117452

Abstract: Previous studies have found significant differences in the likelihood of becoming an elite athlete depending on community population sizes and densities, an effect known as the place of early development, or birthplace effect. However, the results have not been consistent between sports or European countries. Since both professional and voluntary clubs are vital to the talent development systems in Europe, the proximity of an athlete's place of early development to the location of talent clubs may be an important predictor of the likelihood of becoming an elite athlete. Therefore, the primary purpose of this study was to investigate the place of early development effect and the effect of proximity to talent clubs. The samples included elite youth league athletes (579 football and 311 handball) and national youth athletes (85 football and 80 handball) and a comparison group of 147,221 football and 26,290 handball youth athletes. Odds ratios showed variations in the optimal community size and density across sports. Geospatial analyses of proximity to talent clubs highlighted a trend indicating that most national and elite youth league athletes in both sports had their place of early development in their sport near a talent club. The results suggest that proximity is an important a predictor in the development of expertise across sports, but future studies need to clarify if proximity is important in other countries and sports. This article is protected by copyright. All rights reserved.

Notes: Rossing, Niels N

Stentoft, Diana

Flattum, Alexander

Cote, Jean

Karbing, Dan S

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Denmark

2017/11/09 06:00

Scand J Med Sci Sports. 2017 Nov 8. doi: 10.1111/sms.13009.

URL: http://www.ncbi.nlm.nih.gov/pubmed/29117452

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2. **Reference Type:** Journal Article

Record Number: 4072

Author: Johnston, K., Wattie, N., Schorer, J. and Baker, J.

Year: 2017

Title: Talent Identification in Sport: A Systematic Review

Journal: Sports Med

Date: Oct 29

Short Title: Talent Identification in Sport: A Systematic Review

Alternate Journal: Sports medicine

ISSN: 1179-2035 (Electronic)

0112-1642 (Linking)

DOI: 10.1007/s40279-017-0803-2

Accession Number: 29082463

Abstract: BACKGROUND: Talent identification (TID) programs are an integral part of the selection process for elite-level athletes. While many sport organizations utilize TID programs, there does not seem to be a clear set of variables that consistently predict future success. OBJECTIVE: This review aims to synthesize longitudinal and retrospective studies examining differences between performance variables in highly skilled and less-skilled athletes in elite-level sport. METHODS: The Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines were used to identify relevant studies (N = 20). RESULTS: There was a clear overrepresentation of studies that (1) examined physical profiles of athletes (60%); (2) focused on male samples (65%); (3) examined athletes between the ages of 10 and 20 years (60%); and (4) were published between the years 2010 and 2015 (65%). On closer examination, there was a high degree of variability in the factors that were found to discriminate between skilled and less-skilled individuals. CONCLUSION: Findings from this review highlight how little is known about TID in elite sport and emphasize the need for greater diversity in TID research.

Notes: Johnston, Kathryn

Wattie, Nick

Schorer, Jorg

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2017/10/31 06:00

Sports Med. 2017 Oct 29. doi: 10.1007/s40279-017-0803-2.

URL: http://www.ncbi.nlm.nih.gov/pubmed/29082463

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3. **Reference Type:** Journal Article

Record Number: 4078

Author: Mann, D. L., Dehghansai, N. and Baker, J.

Year: 2017

Title: Searching for the elusive gift: advances in talent identification in sport

Journal: Curr Opin Psychol

Volume: 16

Pages: 128-133

Date: Aug

Short Title: Searching for the elusive gift: advances in talent identification in sport

Alternate Journal: Current opinion in psychology

ISSN: 2352-2518 (Electronic)

2352-250X (Linking)

DOI: 10.1016/j.copsyc.2017.04.016

Accession Number: 28813336

Abstract: The incentives for sport organizations to identify talented athletes from a young age continue to grow, yet effective talent identification remains a challenging task. This opinion paper

examines recent advances in talent identification, focusing in particular on the emergence of new approaches that may offer promise to identify talent (e.g., small-sided games, genetic testing, and advanced statistical analyses). We appraise new multi-disciplinary and large-scale population studies of talent identification, provide a consideration of the most recent psychological predictors of performance, examine the emergence of new approaches that strive to diminish biases in talent identification, and look at the rise in interest in talent identification in Paralympic sport.

Notes: Mann, David L

Dehghansai, Nima

Baker, Joseph

eng

Review

2017/08/17 06:00

Curr Opin Psychol. 2017 Aug;16:128-133. doi: 10.1016/j.copsyc.2017.04.016. Epub 2017 Apr 26.

URL: http://www.ncbi.nlm.nih.gov/pubmed/28813336

Author Address: Department of Human Movement Sciences, Faculty of Behaviour and Movement Sciences, Vrije Universiteit Amsterdam, IPC Research and Development Centre for the Classification of Athletes with Vision Impairment, Amsterdam Movement Sciences & Institute Brain and Behavior Amsterdam (IBBA), van der Boechorststraat 9, 1081BT Amsterdam, The Netherlands. Electronic address: d.mann@vu.nl.

School of Kinesiology and Health Science, York University, 4700 Keele St., M3J 1P3 Toronto, Ontario, Canada.

4. **Reference Type:** Journal Article

Record Number: 4081

Author: Schorer, J., Rienhoff, R., Fischer, L. and Baker, J.

Year: 2017

Title: Long-Term Prognostic Validity of Talent Selections: Comparing National and Regional Coaches, Laypersons and Novices

Journal: Front Psychol

Volume: 8

Pages: 1146

Short Title: Long-Term Prognostic Validity of Talent Selections: Comparing National and Regional Coaches, Laypersons and Novices

Alternate Journal: Frontiers in psychology

ISSN: 1664-1078 (Print)

1664-1078 (Linking)

DOI: 10.3389/fpsyg.2017.01146

PMCID: 5504223

Accession Number: 28744238

Abstract: In most sports, the development of elite athletes is a long-term process of talent identification and support. Typically, talent selection systems administer a multi-faceted strategy including national coach observations and varying physical and psychological tests when deciding who is chosen for talent development. The aim of this exploratory study was to evaluate the prognostic validity of talent selections by varying groups 10 years after they had been conducted. This study used a unique, multi-phased approach. Phase 1 involved players (n = 68) in 2001 completing a battery of general and sport-specific tests of handball 'talent' and performance. In Phase 2, national and regional coaches (n = 7) in 2001 who attended training camps identified the most talented players. In Phase 3, current novice and advanced handball players (n = 12 in each group) selected the most talented from short videos of matches played during the talent camp. Analyses compared predictions among all groups with a best model-fit derived from the motor tests. Results revealed little difference between regional and national coaches in the prediction of future performance and little difference in forecasting performance between novices and players. The best model-fit regression by the motor-tests outperformed all predictions. While several limitations are discussed, this study is a useful starting point for future investigations considering athlete selection decisions in talent identification in sport.

Notes: Schorer, Jorg

Rienhoff, Rebecca

Fischer, Lennart

Baker, Joseph

eng

Switzerland

2017/07/27 06:00

Front Psychol. 2017 Jul 11;8:1146. doi: 10.3389/fpsyg.2017.01146. eCollection 2017.

URL: http://www.ncbi.nlm.nih.gov/pubmed/28744238

Author Address: Institute of Sport Science, University of OldenburgOldenburg, Germany.

Institute of Sport and Exercise Sciences, University of MunsterMunster, Germany.

School of Kinesiology and Health Science, York University, TorontoON, Canada.

5. **Reference Type:** Journal Article

Record Number: 4094

Author: McCall, A., Fanchini, M. and Coutts, A. J.

Year: 2017

Title: Prediction: The Modern-Day Sport-Science and Sports-Medicine "Quest for the Holy Grail"

Journal: Int J Sports Physiol Perform

Volume: 12

Issue: 5

Pages: 704-706

Date: May

Short Title: Prediction: The Modern-Day Sport-Science and Sports-Medicine "Quest for the Holy Grail"

Alternate Journal: International journal of sports physiology and performance

ISSN: 1555-0273 (Electronic)

1555-0265 (Linking)

DOI: 10.1123/ijspp.2017-0137

Accession Number: 28488907

Abstract: In high-performance sport, science and medicine practitioners employ a variety of physical and psychological tests, training and match monitoring, and injury-screening tools for a variety of reasons, mainly to predict performance, identify talented individuals, and flag when an injury will occur. The ability to "predict" outcomes such as performance, talent, or injury is arguably sport science and medicine's modern-day equivalent of the "Quest for the Holy Grail." The purpose of this invited commentary is to highlight the common misinterpretation of studies investigating association to those actually analyzing prediction and to provide practitioners with simple recommendations to quickly distinguish between methods pertaining to association and those of prediction.

Notes: McCall, Alan

Fanchini, Maurizio

Coutts, Aaron J

eng

2017/05/11 06:00

Int J Sports Physiol Perform. 2017 May;12(5):704-706. doi: 10.1123/ijspp.2017-0137. Epub 2017 May 10.

URL: http://www.ncbi.nlm.nih.gov/pubmed/28488907

6. **Reference Type:** Journal Article

Record Number: 4560

Author: Jensen, R. D., Christensen, M. K., LaDonna, K. A., Seyer-Hansen, M. and Cristancho, S.

Year: 2017

Title: How Surgeons Conceptualize Talent: A Qualitative Study Using Sport Science as a Lens

Journal: J Surg Educ

Date: Apr 12

Short Title: How Surgeons Conceptualize Talent: A Qualitative Study Using Sport Science as a Lens

Alternate Journal: Journal of surgical education

ISSN: 1878-7452 (Electronic)

1878-7452 (Linking)

DOI: 10.1016/j.jsurg.2017.03.008

Accession Number: 28412270

Abstract: OBJECTIVES: Debates prevail regarding the definition of surgical talent, and how individuals with the potential to become talented surgeons can be identified and developed. However, over the past 30 years, talent has been studied extensively in other domains. The objectives of this study is to explore notions of talent in surgery and sport in order to investigate if the field of surgical education can benefit from expanding its view on talented performances. Therefore, this study aims to use the sport literature as a lens when exploring how surgeons conceptualize and define talent. DESIGN: Semi-structured interviews were conducted with a sample of 11 consultant surgeons from multiple specialties. We used constructivist grounded theory principles to explore talent in surgery. Ongoing data analysis refined the theoretical framework and iteratively informed data collection. Themes were identified iteratively using constant comparison. SETTING: The setting included 8 separate hospitals across Canada and Denmark. PARTICIPANTS: A total of 11 consultant surgeons from 6 different surgical subspecialties (urology, orthopedic surgery, colorectal surgery, general surgery, vascular surgery, head & neck surgery) were included. RESULTS: We identified three key elements for conceptualizing surgical talent: (1) Individual skills makes the surgical prospect "good", (2) a mixture of skills gives the surgical prospect the potential to become talented, and (3) becoming talented may rely on the fit between person and environment. CONCLUSION: We embarked on a study aimed at understanding talent in surgery. Talent is a difficult construct to agree on. Whether in medicine or sports, debates about talent will continue to persist, as we all perceive talent differently. While we heard different opinions, three key ideas summarize our participants' discussions regarding surgical talent. These findings resonate with the holistic ecological approach from sport science and hence highlight the limits of a reductionist approach while favoring the individual-environment system as the minimal ontology for describing talented performances.

Notes: Jensen, Rune Dall

Christensen, Mette Krogh

LaDonna, Kori A

Seyer-Hansen, Mikkel

Cristancho, Sayra

eng

2017/04/17 06:00

J Surg Educ. 2017 Apr 12. pii: S1931-7204(17)30013-2. doi: 10.1016/j.jsurg.2017.03.008.

URL: http://www.ncbi.nlm.nih.gov/pubmed/28412270

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Centre for Education Research & Innovation, Schulich School of Medicine & Dentistry, London, Ontario, Canada.

Department of Obstetrics and Gynecology, Aarhus University Hospital, Aarhus N, Denmark.

7. **Reference Type:** Journal Article

Record Number: 4105

Author: Vlahovich, N., Fricker, P. A., Brown, M. A. and Hughes, D.

Year: 2017

Title: Ethics of genetic testing and research in sport: a position statement from the Australian Institute of Sport

Journal: Br J Sports Med

Volume: 51

Issue: 1

Pages: 5-11

Date: Jan

Short Title: Ethics of genetic testing and research in sport: a position statement from the Australian Institute of Sport

Alternate Journal: British journal of sports medicine

ISSN: 1473-0480 (Electronic)

0306-3674 (Linking)

DOI: 10.1136/bjsports-2016-096661

PMCID: 5256128

Accession Number: 27899345

Keywords: Academies and Institutes

Aptitude

Athletes

Athletic Injuries/genetics

Athletic Performance

Australia

Direct-To-Consumer Screening and Testing

*Ethics, Research

Genetic Testing/*ethics

Genomics/ethics

Guidelines as Topic

Humans

Sports/*ethics

Abstract: As Australia's peak high-performance sport agency, the Australian Institute of Sport (AIS) has developed this position statement to address the implications of recent advances in the field of genetics and the ramifications for the health and well-being of athletes. Genetic testing has proven of value in the practice of clinical medicine. There are, however, currently no scientific grounds for the use of genetic testing for athletic performance improvement, sport selection or talent identification. Athletes and coaches should be discouraged from using direct-to-consumer genetic testing because of its lack of validation and replicability and the lack of involvement of a medical practitioner in the process. The transfer of genetic material or genetic modification of cells for performance enhancement is gene doping and should not be used on athletes. There are, however, valid roles for genetic research and the AIS supports genetic research which aims to enhance understanding of athlete susceptibility to injury or illness. Genetic research is only to be conducted after careful consideration of a range of ethical concerns which include the provision of adequate informed consent. The AIS is committed to providing leadership in delivering an ethical framework that protects the well-being of athletes and the integrity of sport, in the rapidly changing world of genomic science.

Notes: Vlahovich, Nicole

Fricker, Peter A

Brown, Matthew A

Hughes, David

eng

England

2016/12/03 06:00

Br J Sports Med. 2017 Jan;51(1):5-11. doi: 10.1136/bjsports-2016-096661. Epub 2016 Nov 29.

URL: http://www.ncbi.nlm.nih.gov/pubmed/27899345

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CRN for Advancing Exercise and Sport Science, Bond University, University Drive, Robina, Queensland, Australia.

Research Institute for Sport and Exercise, University of Canberra, University Drive, Bruce, Australian Capital Territory, Australia.

Institute of Health and Biomedical Innovation, Queensland University of Technology, Translational Research Institute, Princess Alexandra Hospital, Brisbane, Queensland, Australia.

8. **Reference Type:** Journal Article

Record Number: 4106

Author: Woods, C. T., Cripps, A., Hopper, L. and Joyce, C.

Year: 2017

Title: A comparison of the physical and anthropometric qualities explanatory of talent in the elite junior Australian football development pathway

Journal: J Sci Med Sport

Volume: 20

Issue: 7

Pages: 684-688

Date: Jul

Short Title: A comparison of the physical and anthropometric qualities explanatory of talent in the elite junior Australian football development pathway

Alternate Journal: Journal of science and medicine in sport

ISSN: 1878-1861 (Electronic)

1878-1861 (Linking)

DOI: 10.1016/j.jsams.2016.11.002

Accession Number: 27899276

Abstract: OBJECTIVES: To compare the physical and anthropometric qualities explanatory of talent at two developmental levels in junior Australian football (AF). DESIGN: Cross-sectional observational. METHODS: From a total of 134 juniors, two developmental levels were categorised; U16 (n=50; 15.6+/-0.3 y), U18 (n=84; 17.4+/-0.5 y). Within these levels, two groups were a priori defined; talent identified (U16; n=25; 15.7+/-0.2 y; U18 n=42; 17.5+/-0.4 y), non-talent identified (U16; n=25; 15.6+/-0.4 y; U18; n=42; 17.3+/-0.6 y). Players completed seven physical and anthropometric assessments commonly utilised for talent identification in AF. Binary logistic regression models were built to identify the qualities most explanatory of talent at each level. RESULTS: A combination of standing height, dominant leg dynamic vertical jump height and 20m sprint time provided the most parsimonious explanation of talent at the U16 level (AICc=60.05). At the U18 level, it was a combination of body mass and 20m sprint time that provided the most parsimonious explanation of talent (AICc=111.27). CONCLUSIONS: Despite similarities, there appears to be distinctive differences in physical and anthropometric qualities explanatory of talent at the U16 and U18 level. Coaches may view physical and anthropometric qualities more (or less) favourably at different levels of the AF developmental pathway. Given these results, future work should implement a longitudinal design, as physical and/or anthropometric qualities may deteriorate (or emerge) as junior AF players develop.

Notes: Woods, Carl T

Cripps, Ashley

Hopper, Luke

Joyce, Christopher

eng

Australia

2016/12/03 06:00

J Sci Med Sport. 2017 Jul;20(7):684-688. doi: 10.1016/j.jsams.2016.11.002. Epub 2016 Nov 23.

URL: http://www.ncbi.nlm.nih.gov/pubmed/27899276

Author Address: Discipline of Sport and Exercise Science, James Cook University, Australia. Electronic address: carl.woods@jcu.edu.au.

School of Health Sciences, The University of Notre Dame, Australia.

Western Australian Academy of Performing Arts, Edith Cowan University, Australia.

9. **Reference Type:** Journal Article

Record Number: 4107

Author: Kovalchik, S. A., Bane, M. K. and Reid, M.

Year: 2017

Title: Getting to the top: an analysis of 25 years of career rankings trajectories for professional women's tennis

Journal: J Sports Sci

Volume: 35

Issue: 19

Pages: 1904-1910

Date: Oct

Short Title: Getting to the top: an analysis of 25 years of career rankings trajectories for professional women's tennis

Alternate Journal: Journal of sports sciences

ISSN: 1466-447X (Electronic)

0264-0414 (Linking)

DOI: 10.1080/02640414.2016.1241419

Accession Number: 27734754

Abstract: Official rankings are the most common measure of success in professional women's tennis. Despite their importance for earning potential and tournament seeding, little is known about ranking trajectories of female players and their influence on career success. Our objective was to conduct a comprehensive study of the career progression of elite female tennis talent. The study examined the ranking trajectories of the top 250 female professionals between 1990 and 2015. Using regression modelling of yearly peak rankings, we found a strong association between the shape of the ranking trajectory and the highest career ranking earned. Players with the highest career peak ranking were

the youngest when first ranked. For example, top 10 players were first ranked at age 15.5 years (99% CI = 14.8-15.9), 1.2 years (99% CI = 0.8-1.5) earlier than top 51-100 players. Top 10 players were also ranked in the top 100 longer than other players, holding a top 100 ranking until a mean age of 29.0 years (99% CI = 27.8-30.3) compared with age 24.4 years (99% CI = 23.7-25.2) for top 51-100 players. Ranking trajectories were more distinct with respect to player age than years from first ranking. The present study's findings will be instructive for players, coaches, and administrators in setting goals and assessing athlete development in women's tennis.

Notes: Kovalchik, Stephanie A

Bane, Michael K

Reid, Machar

eng

England

2016/10/14 06:00

J Sports Sci. 2017 Oct;35(19):1904-1910. doi: 10.1080/02640414.2016.1241419. Epub 2016 Oct 13.

URL: http://www.ncbi.nlm.nih.gov/pubmed/27734754

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b College of Exercise & Sport Science , Electronic Arts , Melbourne , Australia.

c Sport Science and Medicine Unit , Tennis Australia , Richmond South , Australia.

d School of Sport Science, Exercise and Health , The University of Western Australia , Perth , Western Australia.

10. **Reference Type:** Journal Article

Record Number: 4108

Author: Sherwin, I., Campbell, M. J. and Macintyre, T. E.

Year: 2017

Title: Talent development of high performance coaches in team sports in Ireland

Journal: Eur J Sport Sci

Volume: 17

Issue: 3

Pages: 271-278

Date: Apr

Short Title: Talent development of high performance coaches in team sports in Ireland

Alternate Journal: European journal of sport science

ISSN: 1536-7290 (Electronic)

1536-7290 (Linking)

DOI: 10.1080/17461391.2016.1227378

Accession Number: 27598851

Keywords: Adult

*Athletes

Humans

Ireland

*Leadership

Male

Middle Aged

Motivation

*Sports

Surveys and Questionnaires

Abstract: BACKGROUND: Coaches are central to the development of the expert performer and similarly to continued lifelong participation in sport. Coaches are uniquely positioned to deliver specific technical and tactical instruction and mentoring programmes that support the psychological and social development of athletes in a challenging, goal-oriented and motivational environment. The current study aimed to qualitatively investigate current coach learning sources and coaches' educational backgrounds in team sports in Ireland. METHODS: Coaches from five team sports in Ireland were asked to complete an online questionnaire. Subsequently male coaches (n = 19) from five team sports who completed the questionnaire and met the inclusion criteria were invited to attend a follow-up semi-structured interview. Inclusion criteria for coaches were that they possess at least 10 years' experience coaching their sport and were coaching more than 4 hours per week. RESULTS/DISCUSSION: Formal coach education does not meet the needs of high performance coaches who rely more on self-directed learning and coaching experience as their main sources of CPD. Although prior playing experience at a high level is both valuable and desirable, there are concerns about fast-tracking of ex-players into high performance coaching roles. CONCLUSIONS: Preferred sources of education and the best learning environment for coaches of team sports in Ireland are more informal than formal. Further research is needed to examine how this learning is applied in a practical manner by examining coaching behaviours and the impact it has on the athlete development process.

Notes: Sherwin, Ian

Campbell, Mark J

Macintyre, Tadhg Eoghan

eng

England

2016/09/07 06:00

Eur J Sport Sci. 2017 Apr;17(3):271-278. doi: 10.1080/17461391.2016.1227378. Epub 2016 Sep 6.

URL: http://www.ncbi.nlm.nih.gov/pubmed/27598851

Author Address: a Department of Physical Education & Sport Sciences , University of Limerick , Limerick , Ireland.

b Health Research Institute, University of Limerick , Limerick , Ireland.

11. **Reference Type:** Journal Article

Record Number: 4199

Author: Melchiorri, G., Viero, V., Triossi, T., Annino, G., Padua, E. and Tancredi, V.

Year: 2017

Title: Anthropometric and performance measures to study talent detection in youth volleyball

Journal: J Sports Med Phys Fitness

Volume: 57

Issue: 12

Pages: 1623-1632

Date: Dec

Short Title: Anthropometric and performance measures to study talent detection in youth volleyball

Alternate Journal: The Journal of sports medicine and physical fitness

ISSN: 1827-1928 (Electronic)

0022-4707 (Linking)

DOI: 10.23736/S0022-4707.17.07068-2

Accession Number: 28222582

Abstract: BACKGROUND: The aim of this work was to study anthropometric and performance measurements in 60 young male volleyball players (YV) and 60 youth not active in the sport (YNA) to assess which of these would be more useful to study the characteristics of potential performers. METHODS: Eight measures to assess anthropometric characteristics, six performance measures and two tests for joint mobility were used. Also relative age and level of maturation were assessed. RESULTS: The anthropometric variables, relative age and level of maturation measured did not show statistically significant differences between groups. The YV and YNA groups showed differences in the performance measures. YV group was characterized by a better performance of the ability to repeat short sprints, of the upper limbs, abdominal muscles and lower limbs, with a medium effect size (Shuttle Running Test: 0.6; Push-Up: 0.5; Sit-Up: 0.4; counter movement jump: 0.4). These performance variables were very sensitive and specific: the SRT measurement had the best positive likelihood ratio that indicates the utility of the test in identifying type of players (YV and YNA). CONCLUSIONS: In talent detection in youth volleyball, in the 11-13 age range, performance variables should be preferred to anthropometric ones.

Notes: Melchiorri, Giovanni

Viero, Valerio

Triossi, Tamara

Annino, Giuseppe

Padua, Elvira

Tancredi, Virginia

eng

Italy

2017/02/23 06:00

J Sports Med Phys Fitness. 2017 Dec;57(12):1623-1632. doi: 10.23736/S0022-4707.17.07068-2. Epub 2017 Feb 21.

URL: http://www.ncbi.nlm.nih.gov/pubmed/28222582

Author Address: Department of Systems Medicine, Faculty of Medicine and Surgery, School of Sport and Exercise Sciences, Tor Vergata University of Rome, Rome, Italy.

Don Gnocchi Foundation IRCS, Milan, Italy.

School of Sport and Exercise Sciences, Tor Vergata University of Rome, Rome, Italy - valerio.viero@gmail.com.

School of Sport and Exercise Sciences, Tor Vergata University of Rome, Rome, Italy.

Universita Telematica S. Raffaele, Rome, Italy.

12. **Reference Type:** Journal Article

Record Number: 4211

Author: Ruscello, B., Esposito, M., Partipilo, F., D, D. I. Cicco, Filetti, C., Pantanella, L. and D'Ottavio, S.

Year: 2017

Title: Exercise to rest ratios in RSA training in women's soccer

Journal: J Sports Med Phys Fitness

Date: Oct 27

Short Title: Exercise to rest ratios in RSA training in women's soccer

Alternate Journal: The Journal of sports medicine and physical fitness

ISSN: 1827-1928 (Electronic)

0022-4707 (Linking)

DOI: 10.23736/S0022-4707.17.07741-6

Accession Number: 29083126

Abstract: BACKGROUND: To investigate the applicability of three different exercise to rest ratios in RSA training in women's soccer players, applying those ones already adopted in male adult and young players, when performing three different sprinting modes (straight, shuttle and sprinting with

changing of direction). METHODS: 15 trained female soccer players (height: 1.65 +/- 0.06 m; weight: 59.3 +/- 9.0 kg; BMI 21.6 +/- 2.7 kg.m-2; age: 23.3+/-5.9 years) participated to the study. In order to compare the different values of the time recorded, an Index of Fatigue was used. Recovery times among trials in the sets were administered according to the 1:5, 1:3; 1:2 exercise to rest ratio, respectively. Blood lactate concentrations at the end of each set (3') were analyzed. RESULTS: Significant differences among trials within each set (Repeated Measures Anova; $p<0.05$) were found, as evidence of fatigue over time, with an average decay of performance of about 5% but no significant differences were found in IF%, among the three different sprinting modalities when applying the investigated exercise to rest ratios (Factorial Anova; between; $p>0.05$). Significant differences were found in blood lactate concentrations ($p<0.05$). CONCLUSIONS: The results of this study confirm that the exercise to rest ratios considered in this study might be suitable to design effective testing protocols and training sessions aimed at the development of the RSA in women's soccer players, keeping the performances in the speed domain (IF% < plus sign in circle7-8%) but inducing the fatigue processes sought with this kind of training method.

Notes: Ruscello, Bruno

Esposito, Mario

Partipilo, Filippo

DI Cicco, Dalila

Filetti, Cristoforo

Pantanella, Laura

D'Ottavio, Stefano

eng

Italy

2017/10/31 06:00

J Sports Med Phys Fitness. 2017 Oct 27. doi: 10.23736/S0022-4707.17.07741-6.

URL: http://www.ncbi.nlm.nih.gov/pubmed/29083126

Author Address: Interdepartmental Centre of Science and Culture of Sport, Department of Clinical Sciences and Translational Medicine, Faculty of Medicine and Surgery, "Tor Vergata" University, Rome, Italy - bruno.ruscello@uniroma2.it.

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School of Sports and Exercise Sciences, "San Raffaele" University, Rome, Italy.

Qatar Stars League, Doha, Qatar.

Federazione Italiana Giuoco Calcio, Italian Football Federation, Rome, Italy.

13. **Reference Type:** Journal Article

Record Number: 4554

Author: Collins, D. J. and Macnamara, A.

Year: 2017

Title: Making Champs and Super-Champs-Current Views, Contradictions, and Future Directions

Journal: Front Psychol

Volume: 8

Pages: 823

Short Title: Making Champs and Super-Champs-Current Views, Contradictions, and Future Directions

Alternate Journal: Frontiers in psychology

ISSN: 1664-1078 (Print)

1664-1078 (Linking)

DOI: 10.3389/fpsyg.2017.00823

PMCID: 5445164

Accession Number: 28603507

Abstract: In our 2016 paper (Collins et al., 2016a), we proposed that superchamps (athletes who have achieved the highest level in their sport) were differentiated from their less successful counterparts by their use of positive proactive coping and a "learn from it" approach to challenge. This skill-based focus to talent development (TD) is supported extensively in the literature (e.g., MacNamara et al., 2010a,b) and suggests that the differences between levels of adult achievement relate more to what performers bring to the challenges than what they experience (Collins et al., 2016a). In this focused review we present and discuss a number of key concepts related to this paper and other parallel research in TD. We begin by presenting our pragmatic objectives and the importance of considering how we evaluate the research with an emphasis on its application to the applied setting. We then consider commonalities and differences in recent psychological approaches to TD, namely the experiential, attitudinal, and skill-based. The paper then provides further exploration of the Psychological Characteristics of Developing Excellence and their role in TD processes. We conclude with a consideration of future research and the application of research in TD. Reflecting our pragmatic stance as researchers, we hope that this focused review provides suggestions for progress and stimulates critical debate amongst practitioners, researchers and policy makers.

Notes: Collins, David J

Macnamara, Aine

eng

Review

Switzerland

2017/06/13 06:00

Front Psychol. 2017 May 26;8:823. doi: 10.3389/fpsyg.2017.00823. eCollection 2017.

URL: http://www.ncbi.nlm.nih.gov/pubmed/28603507

Author Address: Institute of Coaching and Performance, University of Central LancashirePreston, United Kingdom.

14. **Reference Type:** Journal Article

Record Number: 4555

Author: Brazo-Sayavera, J., Olivares, P. R., Andronikos, G. and Martindale, R. J. J.

Year: 2017

Title: Spanish version of the Talent Development Environment Questionnaire for sport: Cultural adaptation and initial validation

Journal: PLoS One

Volume: 12

Issue: 6

Pages: e0177721

Short Title: Spanish version of the Talent Development Environment Questionnaire for sport: Cultural adaptation and initial validation

Alternate Journal: PloS one

ISSN: 1932-6203 (Electronic)

1932-6203 (Linking)

DOI: 10.1371/journal.pone.0177721

PMCID: 5459334

Accession Number: 28582387

Keywords: Adolescent

Aptitude/*physiology

Athletes

Female

Humans

Language

Male

Psychometrics/*methods

Reproducibility of Results

Social Environment

Spain

*Sports

Surveys and Questionnaires

*Translations

Young Adult

Abstract: This study aimed to translate the Talent Development Environment Questionnaire into Spanish and provide an initial validation. A recommended methodology for translation and cultural adaptation of questionnaires was applied. Once this had been completed, three hundred and thirty-two young athletes completed the Talent Development Environment Questionnaire. The results revealed that the five factor solution Talent Development Environment Questionnaire was confirmed. With the exclusion of one item due to low factor loading, the Talent Development Environment Questionnaire-5 had robust statistical support for its factor structure (chi2 (df = 305) = 499.64, p<0.01, CFI = 0.90, RMSEA = 0.045, SRMR = 0.055). It also demonstrated adequate convergent and discriminant validity. While the internal reliability was lower than in previous studies, it revealed acceptable levels. Specifically the overall 27 item Talent Development Environment Questionnaire-5 had a Cronbach alpha score of .877, and the reliability scores for individual factors 1-5 were .622; .761; .658; .605; .602 respectively. As such, it is recommended that the Spanish Talent Development Environment Questionnaire-5 can be used with confidence in Spain in both applied and research settings.

Notes: Brazo-Sayavera, Javier

Olivares, Pedro R

Andronikos, Georgios

Martindale, Russell J J

eng

2017/06/06 06:00

PLoS One. 2017 Jun 5;12(6):e0177721. doi: 10.1371/journal.pone.0177721. eCollection 2017.

URL: http://www.ncbi.nlm.nih.gov/pubmed/28582387

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Instituto Superior de Educacion Fisica, Universidad de la Republica, Rivera, Uruguay.

Instituto de Actividad Fisica y Salud, Universidad Autonoma de Chile, Talca, Chile.

School of Applied Sciences, Edinburgh Napier University, Edinburgh, United Kingdom.

15. **Reference Type:** Journal Article

Record Number: 4556

Author: Till, K., Scantlebury, S. and Jones, B.

Year: 2017

Title: Anthropometric and Physical Qualities of Elite Male Youth Rugby League Players

Journal: Sports Med

Date: Jun 03

Short Title: Anthropometric and Physical Qualities of Elite Male Youth Rugby League Players

Alternate Journal: Sports medicine

ISSN: 1179-2035 (Electronic)

0112-1642 (Linking)

DOI: 10.1007/s40279-017-0745-8

PMCID: 5633637

Accession Number: 28578541

Abstract: Rugby league is a collision team sport played at junior and senior levels worldwide, whereby players require highly developed anthropometric and physical qualities (i.e. speed, change-of-direction speed, aerobic capacity, muscular strength and power). Within junior levels, professional clubs and national governing bodies implement talent identification and development programmes to support the development of youth (i.e. 13-20 years) rugby league players into professional athletes. This review presents and critically appraises the anthropometric and physical qualities of elite male youth rugby league players aged between 13 and 20 years, by age category, playing standard and playing position. Height, body mass, body composition, linear speed, change-of-direction speed, aerobic capacity, muscular strength and power characteristics are presented and demonstrate that qualities develop with age and differentiate between playing standard and playing position. This highlights the importance of anthropometric and physical qualities for the identification and development of youth rugby league players. However, factors such as maturity status, variability in development, longitudinal monitoring and career attainment should be considered to help understand, identify and develop the physical qualities of youth players. Further extensive research is required into the anthropometric and physical qualities of youth rugby league players, specifically considering national standardised testing batteries, links between physical qualities and match performance, together with intervention studies, to inform the physical development of youth rugby league players for talent identification and development purposes.

Notes: Till, Kevin

Scantlebury, Sean

Jones, Ben

eng

Review

New Zealand

Auckland, N.Z.

2017/06/05 06:00

Sports Med. 2017 Jun 3. doi: 10.1007/s40279-017-0745-8.

URL: http://www.ncbi.nlm.nih.gov/pubmed/28578541

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Leeds Rhinos RLFC, Leeds, UK.

Rugby Football League, Red Hall, Leeds, UK.

16. **Reference Type:** Journal Article

Record Number: 4558

Author: Faber, I. R., Pion, J., Munivrana, G., Faber, N. R. and Nijhuis-Van der Sanden, M. W. G.

Year: 2017

Title: Does a perceptuomotor skills assessment have added value to detect talent for table tennis in primary school children?

Journal: J Sports Sci

Pages: 1-8

Date: Apr 18

Short Title: Does a perceptuomotor skills assessment have added value to detect talent for table tennis in primary school children?

Alternate Journal: Journal of sports sciences

ISSN: 1466-447X (Electronic)

0264-0414 (Linking)

DOI: 10.1080/02640414.2017.1316865

Accession Number: 28417687

Abstract: Talent detection intends to support lifelong sports participation, reduce dropouts and stimulate sports at the elite level. For this purpose it is important to reveal the specific profile which directs children to the sports that connect to their strengths and preferences. This study evaluated a perceptuomotor skills assessment as part of talent detection for table tennis, a sport in which perceptuomotor skills are considered essential to cope with the difficult technical aspects. Primary school children (n = 121) and gifted young table tennis players (n = 146) were assessed using the Dutch perceptuomotor skills assessment measuring "ball control" and "gross motor function". A discriminant function analysis confirmed the added value by identifying primary school children fitting the table tennis perceptuomotor profile of the young gifted table tennis players (28%). General linear model analyses for the assessment's individual test items showed that the table tennis players outperformed their primary school peers on all "ball control" items ($P < 0.001$). In conclusion, the assessment appears to be of added value for talent detection in table tennis at this young age. Longitudinal studies need to reveal the predictive value for sports participation and elite sports.

Notes: Faber, Irene R

Pion, Johan

Munivrana, Goran

Faber, Niels R

Nijhuis-Van der Sanden, Maria W G

eng

England

2017/04/19 06:00

J Sports Sci. 2017 Apr 18:1-8. doi: 10.1080/02640414.2017.1316865.

URL: http://www.ncbi.nlm.nih.gov/pubmed/28417687

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c International Table Tennis Federation , Lausanne , Switzerland.

d Institute for Studies in Sports and Exercise , HAN University of Applied Sciences , Nijmegen , The Netherlands.

e Faculty of Medicine and Health Sciences, Department of Movement and Sports Sciences , Ghent University , Ghent , Belgium.

f Faculty of Kinesiology , University of Split , Split , Croatia.

g Nijmegen School of Management , Radboud University , Nijmegen , The Netherlands.

17. **Reference Type:** Journal Article

Record Number: 4567

Author: Gullich, A.

Year: 2017

Title: International medallists' and non-medallists' developmental sport activities - a matched-pairs analysis

Journal: J Sports Sci

Volume: 35

Issue: 23

Pages: 2281-2288

Date: Dec

Short Title: International medallists' and non-medallists' developmental sport activities - a matched-pairs analysis

Alternate Journal: Journal of sports sciences

ISSN: 1466-447X (Electronic)

0264-0414 (Linking)

DOI: 10.1080/02640414.2016.1265662

Accession Number: 27923322

Abstract: The study examined developmental participation patterns of international top athletes. Pairs of 83 international medallists (including 38 Olympic/World Champions) and 83 non-medallists were matched by sport, age and gender. A questionnaire recorded their volume of organised (coach-led) practice/training in their respective main sport and in other sports through childhood, adolescence and adulthood, and also involvement in non-organised (peer-led) sport activity. Analyses revealed that the medallists started practice/training in their main sport at an older age than non-medallists and accumulated slightly, but significantly less main-sport practice/training through childhood/adolescence. But they participated in more practice/training in other sports, particularly before entering their main sport. The medallists also maintained engagement in other sports over more years and specialised later than the non-medallists. Other sports engaged in were mostly unrelated to an athlete's main sport. The results were robust across different types of sports. The observations are reflected against tenets of the "deliberate practice" and "Developmental Model of Sport Participation" frameworks. Early diversified practice and learning experiences are discussed relative to the expansion of youngsters' potential for future long-term learning. In elite athletes, interaction of sport-specific practice/training with early other-sports participation mostly facilitates long-term attainment of international senior medals.

Notes: Gullich, Arne

eng

England

2016/12/08 06:00

J Sports Sci. 2017 Dec;35(23):2281-2288. doi: 10.1080/02640414.2016.1265662. Epub 2016 Dec 6.

URL: http://www.ncbi.nlm.nih.gov/pubmed/27923322

Author Address: a Department of Sport Science , University of Kaiserslautern , Kaiserslautern , Germany.

18. **Reference Type:** Journal Article

Record Number: 4128

Author: Till, K., Jones, B. L., Cobley, S., Morley, D., O'Hara, J., Chapman, C., Cooke, C. and Beggs, C. B.

Year: 2016

Title: Identifying Talent in Youth Sport: A Novel Methodology Using Higher-Dimensional Analysis

Journal: PLoS One

Volume: 11

Issue: 5

Pages: e0155047

Short Title: Identifying Talent in Youth Sport: A Novel Methodology Using Higher-Dimensional Analysis

Alternate Journal: PloS one

ISSN: 1932-6203 (Electronic)

1932-6203 (Linking)

DOI: 10.1371/journal.pone.0155047

PMCID: 4880304

Accession Number: 27224653

Keywords: Adolescent

*Aptitude

*Football

Humans

Male

*Models, Theoretical

*Teaching

Abstract: Prediction of adult performance from early age talent identification in sport remains difficult. Talent identification research has generally been performed using univariate analysis, which ignores multivariate relationships. To address this issue, this study used a novel higher-dimensional model to orthogonalize multivariate anthropometric and fitness data from junior rugby league players, with the aim of differentiating future career attainment. Anthropometric and fitness data from 257 Under-15 rugby league players was collected. Players were grouped retrospectively according to their future career attainment (i.e., amateur, academy, professional). Players were blindly and randomly divided into an exploratory (n = 165) and validation dataset (n = 92). The exploratory dataset was used to develop and optimize a novel higher-dimensional model, which combined singular value decomposition (SVD) with receiver operating characteristic analysis. Once optimized, the model was tested using the validation dataset. SVD analysis revealed 60 m sprint and agility 505 performance were the most influential characteristics in distinguishing future professional players from amateur and academy players. The exploratory dataset model was able to distinguish between future amateur and professional players with a high degree of accuracy (sensitivity = 85.7%, specificity = 71.1%; $p<0.001$), although it could not distinguish between future professional and academy players. The validation dataset model was able to distinguish future professionals from the rest with reasonable accuracy (sensitivity = 83.3%, specificity = 63.8%; $p = 0.003$). Through the use of SVD analysis it was possible to objectively identify criteria to distinguish future career attainment with a sensitivity over 80% using anthropometric and fitness data alone. As such, this suggests that SVD analysis may be a useful analysis tool for research and practice within talent identification.

Notes: Till, Kevin

Jones, Ben L

Cobley, Stephen

Morley, David

O'Hara, John

Chapman, Chris

Cooke, Carlton

Beggs, Clive B

eng

Randomized Controlled Trial

2016/05/26 06:00

PLoS One. 2016 May 25;11(5):e0155047. doi: 10.1371/journal.pone.0155047. eCollection 2016.

URL: http://www.ncbi.nlm.nih.gov/pubmed/27224653

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Leeds Trinity University, Leeds, United Kingdom.

Buffalo Neuroimaging Analysis Center, Department of Neurology, School of Medicine and Biomedical Sciences, University at Buffalo, Buffalo, NY, United States of America.

19. **Reference Type:** Journal Article

Record Number: 4130

Author: Macnamara, B. N., Moreau, D. and Hambrick, D. Z.

Year: 2016

Title: The Relationship Between Deliberate Practice and Performance in Sports: A Meta-Analysis

Journal: Perspect Psychol Sci

Volume: 11

Issue: 3

Pages: 333-50

Date: May

Short Title: The Relationship Between Deliberate Practice and Performance in Sports: A Meta-Analysis

Alternate Journal: Perspectives on psychological science : a journal of the Association for Psychological Science

ISSN: 1745-6924 (Electronic)

1745-6916 (Linking)

DOI: 10.1177/1745691616635591

Accession Number: 27217246

Keywords: Athletes/psychology/*statistics & numerical data

Athletic Performance/psychology/*statistics & numerical data

Humans

*Practice (Psychology)

Abstract: Why are some people more skilled in complex domains than other people? According to one prominent view, individual differences in performance largely reflect individual differences in accumulated amount of deliberate practice. Here, we investigated the relationship between deliberate practice and performance in sports. Overall, deliberate practice accounted for 18% of the variance in sports performance. However, the contribution differed depending on skill level. Most important, deliberate practice accounted for only 1% of the variance in performance among elite-level performers. This finding is inconsistent with the claim that deliberate practice accounts for performance differences even among elite performers. Another major finding was that athletes who reached a high level of skill did not begin their sport earlier in childhood than lower skill athletes. This finding challenges the notion that higher skill performers tend to start in a sport at a younger age than lower skill performers. We conclude that to understand the underpinnings of expertise, researchers must investigate contributions of a broad range of factors, taking into account findings from diverse subdisciplines of psychology (e.g., cognitive psychology, personality psychology) and interdisciplinary areas of research (e.g., sports science).

Notes: Macnamara, Brooke N

Moreau, David

Hambrick, David Z

eng

Meta-Analysis

2016/05/25 06:00

Perspect Psychol Sci. 2016 May;11(3):333-50. doi: 10.1177/1745691616635591.

URL: http://www.ncbi.nlm.nih.gov/pubmed/27217246

Author Address: Department of Psychological Sciences, Case Western Reserve University brooke.macnamara@case.edu.

Centre for Brain Research, University of Auckland.

Department of Psychology, Michigan State University.

20. **Reference Type:** Journal Article

Record Number: 4133

Author: James, L. P., Haff, G. G., Kelly, V. G. and Beckman, E. M.

Year: 2016

Title: Towards a Determination of the Physiological Characteristics Distinguishing Successful Mixed Martial Arts Athletes: A Systematic Review of Combat Sport Literature

Journal: Sports Med

Volume: 46

Issue: 10

Pages: 1525-51

Date: Oct

Short Title: Towards a Determination of the Physiological Characteristics Distinguishing Successful Mixed Martial Arts Athletes: A Systematic Review of Combat Sport Literature

Alternate Journal: Sports medicine

ISSN: 1179-2035 (Electronic)

0112-1642 (Linking)

DOI: 10.1007/s40279-016-0493-1

Accession Number: 26993133

Keywords: Aptitude

Athletic Performance/*physiology

Competitive Behavior/physiology

Humans

Male

Martial Arts/*physiology

Motor Skills/*physiology

Muscle Strength/physiology

Physical Endurance/physiology

Abstract: BACKGROUND: Mixed martial arts (MMA) is a combat sport underpinned by techniques from other combat disciplines, in addition to strategies unique to the sport itself. These sports can be divided into two distinct categories (grappling or striking) based on differing technical demands. Uniquely, MMA combines both methods of combat and therefore appears to be physiologically complex requiring a spectrum of mechanical and metabolic qualities to drive performance. However, little is known about the physiological characteristics that distinguish higher- from lower-level MMA athletes. Such information provides guidance for training interventions, performance testing and

talent identification. Furthermore, while MMA incorporates techniques from both grappling and striking sports, it is unknown precisely how these disciplines differ physiologically. Understanding the relationship between higher-level competitors in grappling and striking combat sports can provide further insight into the development of the optimal performance profile of a higher-level MMA athlete. OBJECTIVE: This article aims to analyse the scientific literature on MMA and the primary combat sports underpinning it to determine the physiological adaptations that distinguish superior competitors, with a view to defining the optimal physiological profile for higher-level MMA performance. Furthermore, this article will explore the differences in these capabilities between grappling- and striking-based combat sports in the context of MMA. METHODS: A literature search was undertaken via PubMed, Web of Science, SportDiscus and Google Scholar. The following sports were included for systematic review based on their relevance to MMA: mixed martial arts, boxing, Brazilian jiu-jitsu, judo, karate, kickboxing, Muay Thai and wrestling. The inclusion criteria allowed studies that compared athletes of differing competition levels in the same sport using a physiological performance measure. Only male, adult (aged 17-40 years), able-bodied competitors were included. The search history spanned from the earliest record until September 2015. RESULTS: Of the eight combat sports searched for, five were represented across 23 studies. Sixteen investigations described maximal strength or neuromuscular power variables, while 19 articles reported anaerobic or aerobic measures. The results indicate that a number of strength, neuromuscular power and anaerobic variables distinguished higher- from lower-level combat sport athletes. However, these differences were less clear when groups were stratified within, rather than between competition grades. Greater aerobic power was generally not present amongst superior combat sport competitors. CONCLUSION: There appear to be differing physiological profiles between more successful grappling and striking combat sport athletes. This is represented by high-force demands of grappling sports causing an upwards shift of the entire force-velocity relationship driven by an increase in maximal strength. In comparison, smaller increases in maximal force production with more notable enhancements in lighter load, higher velocity actions may better identify superior performance in striking sports. Anaerobic capabilities largely distinguished higher- from lower-level combat sport athletes. In particular, longer-term anaerobic efforts seem to define successful grappling-based athletes, while superior competitors in striking sports tend to show dominance in shorter-term measures when compared with their lower-level counterparts. Given the demand for both forms of combat in MMA, a spectrum of physiological markers may characterize higher-level competitors. Furthermore, the performance profile of successful MMA athletes may differ based on combat sport history or competition strategy.

Notes: James, Lachlan P

Haff, G Gregory

Kelly, Vincent G

Beckman, Emma M

eng

Review

New Zealand

Auckland, N.Z.

2016/03/20 06:00

Sports Med. 2016 Oct;46(10):1525-51. doi: 10.1007/s40279-016-0493-1.

URL: http://www.ncbi.nlm.nih.gov/pubmed/26993133

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Centre for Sport and Exercise Science Research, Edith Cowan University, Perth, WA, Australia.

School of Human Movement and Nutrition Sciences, University of Queensland, St. Lucia, Brisbane, QLD, 4072, Australia.

Brisbane Broncos Rugby League Football Club, Brisbane, QLD, Australia.

21. **Reference Type:** Journal Article

Record Number: 4134

Author: O'Connor, D., Larkin, P. and Mark Williams, A.

Year: 2016

Title: Talent identification and selection in elite youth football: An Australian context

Journal: Eur J Sport Sci

Volume: 16

Issue: 7

Pages: 837-44

Date: Oct

Short Title: Talent identification and selection in elite youth football: An Australian context

Alternate Journal: European journal of sport science

ISSN: 1536-7290 (Electronic)

1536-7290 (Linking)

DOI: 10.1080/17461391.2016.1151945

Accession Number: 26923813

Keywords: Adolescent

Aptitude/*classification/*physiology

Athletes/*classification

Athletic Performance/*classification/*physiology

Australia

Cohort Studies

Football/*physiology

Humans

Male

Abstract: We identified the perceptual-cognitive skills and player history variables that differentiate players selected or not selected into an elite youth football (i.e. soccer) programme in Australia. A sample of elite youth male football players (n = 127) completed an adapted participation history questionnaire and video-based assessments of perceptual-cognitive skills. Following data collection, 22 of these players were offered a full-time scholarship for enrolment at an elite player residential programme. Participants selected for the scholarship programme recorded superior performance on the combined perceptual-cognitive skills tests compared to the non-selected group. There were no significant between group differences on the player history variables. Stepwise discriminant function analysis identified four predictor variables that resulted in the best categorization of selected and non-selected players (i.e. recent match-play performance, region, number of other sports participated, combined perceptual-cognitive performance). The effectiveness of the discriminant function is reflected by 93.7% of players being correctly classified, with the four variables accounting for 57.6% of the variance. Our discriminating model for selection may provide a greater understanding of the factors that influence elite youth talent selection and identification.

Notes: O'Connor, Donna

Larkin, Paul

Mark Williams, A

eng

England

2016/03/01 06:00

Eur J Sport Sci. 2016 Oct;16(7):837-44. doi: 10.1080/17461391.2016.1151945. Epub 2016 Feb 29.

URL: http://www.ncbi.nlm.nih.gov/pubmed/26923813

Author Address: a Faculty of Education and Social Work , University of Sydney , Sydney , Australia.

b Department of Life Sciences , Brunel University , London , UK.

22. **Reference Type:** Journal Article

Record Number: 4136

Author: Hill, A., MacNamara, A., Collins, D. and Rodgers, S.

Year: 2015

Title: Examining the Role of Mental Health and Clinical Issues within Talent Development

Journal: Front Psychol

Volume: 6

Pages: 2042

Short Title: Examining the Role of Mental Health and Clinical Issues within Talent Development

Alternate Journal: Frontiers in psychology

ISSN: 1664-1078 (Print)

1664-1078 (Linking)

DOI: 10.3389/fpsyg.2015.02042

PMCID: 4707871

Accession Number: 26793153

Abstract: Although significant research supports the association between physical activity and mental wellbeing, current literature acknowledges that athletes are no less susceptible to mental illness than the general population. Despite welcomed initiatives aimed at improving mental health within elite sport, these programs often fail to target young athletes; an important concern given that the genesis of many mental illnesses are recognized to occur during this critical period. Given the importance of early intervention and effective treatment, and the potentially devastating consequences of clinical issues going undiagnosed, the implications for talent identification and development (TID) become obvious. With this in mind, this study sought to examine the range of mental health issues that may impact upon developing athletes and potential consequences for the development process, specific risk and protective factors associated with talent development, along with an examination of current practices concerning the identification of mental health issues in such environments. Qualitative interviews were conducted with purposively sampled clinicians (n = 8) experienced in working with adolescents and/or young athletes. Inductive content analysis was undertaken, identifying four main themes: key behavioral indicators; associated risk factors; associated protective factors; and issues around identification and diagnosis. Key behavioral indicators included behavioral change, along with behaviors associated with eating disorders, anxiety and depression. Risk factors centered on family background, the performance environment, and issues surrounding adolescence. Protective factors were primarily social in nature. Finally, a lack of awareness and understanding of clinical issues, multiple causes of symptoms, non-disclosure and the need for triangulation of assessment were identified. The need for improved identification and intervention strategies was apparent, with coaches identified as well placed to detect general "warning signs" such as behavioral change. Short of integrating trained clinicians into talent development environments, as part of a triangulation process, ecologically validated assessment tools-coupled with appropriate training and signposting-could offer a practical way of flagging potential issues in developing athletes. The need for the development of such an instrument is therefore apparent. Finally, education around the influential role of family is also recommended in order to promote the protective elements and mitigate risk factors.

Notes: Hill, Andy

MacNamara, Aine

Collins, Dave

Rodgers, Sheelagh

eng

Switzerland

2016/01/23 06:00

Front Psychol. 2016 Jan 11;6:2042. doi: 10.3389/fpsyg.2015.02042. eCollection 2015.

URL: http://www.ncbi.nlm.nih.gov/pubmed/26793153

Author Address: Institute of Coaching and Performance, University of Central Lancashire Preston, UK.

Clinical Psychologist, Private Practice Inverness, UK.

23. **Reference Type:** Journal Article

Record Number: 4137

Author: Collins, D., MacNamara, A. and McCarthy, N.

Year: 2015

Title: Super Champions, Champions, and Almosts: Important Differences and Commonalities on the Rocky Road

Journal: Front Psychol

Volume: 6

Pages: 2009

Short Title: Super Champions, Champions, and Almosts: Important Differences and Commonalities on the Rocky Road

Alternate Journal: Frontiers in psychology

ISSN: 1664-1078 (Print)

1664-1078 (Linking)

DOI: 10.3389/fpsyg.2015.02009

PMCID: 4707280

Accession Number: 26793141

Abstract: The real-world experiences of young athletes follow a non-linear and dynamic trajectory and there is growing recognition that facing and overcoming a degree of challenge is desirable for aspiring elites and as such, should be recognized and employed. However, there are some misunderstandings of this "talent needs trauma" perspective with some research focusing excessively or incorrectly on the incidence of life and sport challenge as a feature of effective talent development. The objective of the study was to examine what factors associated with such "trauma" experiences may or may not discriminate between high, medium, and low achievers in sport, classified as super-champions, champions or almosts. A series of retrospective interviews were used with matched triads (i.e., super-champions, champions, or almosts) of performers (N = 54) from different sports. Data collection was organized in three phases. In the first phase, a graphic time line of each performer's career was developed. The second phase explored the specific issues highlighted by each participant in a chronological sequence. The third phase was a retrospective reflection on "traumatic" motivators, coach/significant other inputs and psychological challenges experienced and skills employed. Data suggested qualitative differences between categories of performers, relating to several perceptual and experiential features of their development. No evidence was found for the necessity of major trauma as a feature of development. There was a lack of discrimination across categories of performers associated with the incidence of trauma and, more particularly, life or non-sport trauma. These findings suggest that differences between levels of adult achievement relate more to what performers bring to the challenges than what they experience. A periodized and progressive set of challenge, preceded and associated with specific skill development, would seem to offer the best pathway to success for the majority.

Notes: Collins, Dave

MacNamara, Aine

McCarthy, Neil

eng

Switzerland

2016/01/23 06:00

Front Psychol. 2016 Jan 11;6:2009. doi: 10.3389/fpsyg.2015.02009. eCollection 2015.

URL: http://www.ncbi.nlm.nih.gov/pubmed/26793141

Author Address: Institute of Coaching and Performance, University of Central Lancashire, Preston UK.

Gloucester Rugby Club, Gloucester UK.

24. **Reference Type:** Journal Article

Record Number: 4138

Author: Webb, V., Collins, D. and Cruickshank, A.

Year: 2016

Title: Aligning the talent pathway: exploring the role and mechanisms of coherence in development

Journal: J Sports Sci

Volume: 34

Issue: 19

Pages: 1799-807

Date: Oct

Short Title: Aligning the talent pathway: exploring the role and mechanisms of coherence in development

Alternate Journal: Journal of sports sciences

ISSN: 1466-447X (Electronic)

0264-0414 (Linking)

DOI: 10.1080/02640414.2016.1139162

Accession Number: 26788766

Keywords: *Achievement

*Aptitude

Communication

Humans

Knowledge

*Physical Education and Training

Sports/*education

Abstract: Although our understanding of psychological and social factors in talent development continues to expand, knowledge of the broader system that underpins the entire talent pathways is relatively limited. Indeed, little work has moved beyond the recognition that coherence in this system is important to consider how this may be achieved; particularly in relation to coherent coaching. As such, the aim of this article was to address gaps in talent development and coaching literature and explore principles and potential mechanisms of coherent coaching in sport organisations' talent pathways. After defining and contextualising coherence in whole talent pathways, including barriers to attainment, we discuss how an understanding of coach epistemology can provide a basis for integrating personal and collective coach coherence and therefore a coherent performer experience. With epistemology as our focal point, we then consider how coherent coaching may be supported through the strategic recruitment and placement of coaches, complimentary coach education and development and the use of change agents who can set and shape the coaching milieu, facilitate cross-level communication and enable epistemology-focused reflection and evaluation. Finally, we conclude with some brief recommendations for advancing practically-meaningful knowledge in this important area.

Notes: Webb, Vincent

Collins, Dave

Cruickshank, Andrew

eng

England

2016/01/21 06:00

J Sports Sci. 2016 Oct;34(19):1799-807. doi: 10.1080/02640414.2016.1139162. Epub 2016 Jan 20.

URL: http://www.ncbi.nlm.nih.gov/pubmed/26788766

Author Address: a British Cycling , Manchester , UK.

b Institute of Coaching and Performance , University of Central Lancashire , Preston , UK.

c Grey Matters for Performance Ltd , Stratford-upon-Avon , UK.

25. **Reference Type:** Journal Article

Record Number: 4139

Author: Camporesi, S. and McNamee, M. J.

Year: 2016

Title: Ethics, genetic testing, and athletic talent: children's best interests, and the right to an open (athletic) future

Journal: Physiol Genomics

Volume: 48

Issue: 3

Pages: 191-5

Date: Mar

Short Title: Ethics, genetic testing, and athletic talent: children's best interests, and the right to an open (athletic) future

Alternate Journal: Physiological genomics

ISSN: 1531-2267 (Electronic)

1094-8341 (Linking)

DOI: 10.1152/physiolgenomics.00104.2015

Accession Number: 26757798

Keywords: *Aptitude

Athletic Performance/*ethics

Child

Genetic Testing/*ethics

Humans

Parents

Abstract: In this paper we discuss the ethics of genetics-based talent identification programs in sports. We discuss the validity and reliability of the tests and the claims made by direct to consumer companies, before presenting a range of ethical issues concerning child-parent/guardian relations raised by these tests, which we frame in terms of parental/guardian duties, children's rights, and best interests. We argue that greater ethical emphasis needs to be put on the parental decision on the wellbeing on the child going forward, not on ex post justifications on the basis of good and bad consequences. Best interests decisions made by a third party seem to comprise both subjective and objective elements, but only a holistic approach can do justice to these questions by addressing the wellbeing of the child in a temporal manner and taking into account the child's perspective on its wellbeing. Such decisions must address wider questions of what a good (sports)parent ought do to help the child flourish and how to balance the future-adult focus necessary to nurture talent with the wellbeing of the child in the present. We conclude that current genetic tests for "talent" do not predict aptitude or success to any significant degree and are therefore only marginally pertinent for talent identification. Claims that go beyond current science are culpable and attempt to exploit widespread but naive perceptions of the efficacy of genetics information to predict athletic futures. Sports physicians and health care professionals involved in sport medicine should therefore discourage the use of these tests.

Notes: Camporesi, Silvia

McNamee, Mike J

eng

2016/01/14 06:00

Physiol Genomics. 2016 Mar;48(3):191-5. doi: 10.1152/physiolgenomics.00104.2015. Epub 2016 Jan 12.

URL: http://www.ncbi.nlm.nih.gov/pubmed/26757798

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College of Engineering, Swansea University, Singleton Park, Swansea, United Kingdom.

26. **Reference Type:** Journal Article

Record Number: 4765

Author: Andronikos, G., Elumaro, A. I., Westbury, T. and Martindale, R. J.

Year: 2016

Title: Relative age effect: implications for effective practice

Journal: J Sports Sci

Volume: 34

Issue: 12

Pages: 1124-31

Short Title: Relative age effect: implications for effective practice

Alternate Journal: Journal of sports sciences

ISSN: 1466-447X (Electronic)

0264-0414 (Linking)

DOI: 10.1080/02640414.2015.1093647

Accession Number: 26417709

Keywords: Adolescent

*Age Factors

*Aptitude

*Athletes

Child

Female

Humans

Male

Mentoring

Sports/*physiology/*psychology

Abstract: Physical and psychological differences related to birthdate amongst athletes of the same selection year have been characterised as the "relative age effects" (RAEs). RAEs have been identified in a variety of sports, both at youth and adult level, and are linked with dropout of athletes and a reduction of the talent pool. This study examined the existence, mechanisms and possible solutions to RAEs using qualitative methodology. Seven experts in the field of talent identification and development were interviewed. Inductive analysis of the data showed that, while there was mixed evidence for the existence of RAEs across sports, the eradication of RAEs was attributed to controllable features of the development environment. The factors reported included the structure of "categories" used to group athletes within the sport (e.g. age, weight, size, skills), recognition and prioritisation of long-term development over "short term win focus." Education of relevant parties (e.g. coaches, scouts, clubs) about RAEs and the nature of "talent" within a long-term context was suggested, along with careful consideration of the structure of the development environment (e.g. delayed selection, provision for late developers, focus on skills not results, use of challenge). Implications for research and practice are discussed.

Notes: Andronikos, Georgios

Elumaro, Adeboye Israel

Westbury, Tony

Martindale, Russell J J

eng

England

2015/09/30 06:00

J Sports Sci. 2016;34(12):1124-31. doi: 10.1080/02640414.2015.1093647. Epub 2015 Sep 29.

URL: http://www.ncbi.nlm.nih.gov/pubmed/26417709

Author Address: a School of Life, Sport and Social Sciences , Edinburgh Napier University , Edinburgh , UK.

27. **Reference Type:** Journal Article

Record Number: 4143

Author: Faber, I. R., Bustin, P. M., Oosterveld, F. G., Elferink-Gemser, M. T. and Nijhuis-Van der Sanden, M. W.

Year: 2016

Title: Assessing personal talent determinants in young racquet sport players: a systematic review

Journal: J Sports Sci

Volume: 34

Issue: 5

Pages: 395-410

Short Title: Assessing personal talent determinants in young racquet sport players: a systematic review

Alternate Journal: Journal of sports sciences

ISSN: 1466-447X (Electronic)

0264-0414 (Linking)

DOI: 10.1080/02640414.2015.1061201

Accession Number: 26109450

Keywords: Anthropometry

Aptitude/*physiology

Athletic Performance/psychology

Body Composition

Child

Cognition

Goals

Humans

Intelligence

Motor Skills

Perception

Racquet Sports/*psychology

Abstract: Since junior performances have little predictive value for future success, other solutions are sought to assess a young player's potential. The objectives of this systematic review are (1) to provide an overview of instruments measuring personal talent determinants of young players in racquet sports, and (2) to evaluate these instruments regarding their validity for talent development. Electronic searches were conducted in PubMed, PsychINFO, Web of Knowledge, ScienceDirect and SPORTDiscus (1990 to 31 March 2014). Search terms represented tennis, table tennis, badminton and squash, the concept of talent, methods of testing and children. Thirty articles with information regarding over 100 instruments were included. Validity evaluation showed that instruments focusing on intellectual and perceptual abilities, and coordinative skills discriminate elite from non-elite players and/or are related to current performance, but their predictive validity is not confirmed. There is moderate evidence that the assessments of mental and goal management skills predict future performance. Data on instruments measuring physical characteristics prohibit a conclusion due to conflicting findings. This systematic review yielded an ambiguous end point. The lack of longitudinal studies precludes verification of the instrument's capacity to forecast future performance. Future research should focus on instruments assessing multidimensional talent determinants and their predictive value in longitudinal designs.

Notes: Faber, Irene R

Bustin, Paul M J

Oosterveld, Frits G J

Elferink-Gemser, Marije T

Nijhuis-Van der Sanden, Maria W G

eng

Research Support, Non-U.S. Gov't

Review

England

2015/06/26 06:00

J Sports Sci. 2016;34(5):395-410. doi: 10.1080/02640414.2015.1061201. Epub 2015 Jun 25.

URL: http://www.ncbi.nlm.nih.gov/pubmed/26109450

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c Institute for Studies in Sports and Exercise , HAN University of Applied Sciences , Nijmegen , The Netherlands.

d Scientific Institute for Quality of Healthcare , Radboud University Medical Center , Nijmegen , The Netherlands.

28. **Reference Type:** Journal Article

Record Number: 4611

Author: Chiwaridzo, M., Ferguson, G. D. and Smits-Engelsman, B. C.

Year: 2016

Title: A systematic review protocol investigating tests for physical or physiological qualities and game-specific skills commonly used in rugby and related sports and their psychometric properties

Journal: Syst Rev

Volume: 5

Issue: 1

Pages: 122

Date: Jul 27

Short Title: A systematic review protocol investigating tests for physical or physiological qualities and game-specific skills commonly used in rugby and related sports and their psychometric properties

Alternate Journal: Systematic reviews

ISSN: 2046-4053 (Electronic)

2046-4053 (Linking)

DOI: 10.1186/s13643-016-0298-1

PMCID: 4962394

Accession Number: 27460647

Abstract: BACKGROUND: Scientific focus on rugby has increased over the recent years, providing evidence of the physical or physiological characteristics and game-specific skills needed in the sport. Identification of tests commonly used to measure these characteristics is important for the development of test batteries, which in turn may be used for talent identification and injury prevention programmes. Although there are a number of tests available in the literature to measure physical or physiological variables and game-specific skills, there is limited information available on the psychometric properties of the tests. Therefore, the purpose of this study is to systematically review the literature for tests commonly used in rugby to measure physical or physiological characteristics and rugby-specific skills, documenting evidence of reliability and validity of the identified tests. METHODS/DESIGN: A systematic review will be conducted. Electronic databases such as Scopus, MEDLINE via EBSCOhost and PubMed, Academic Search Premier, CINAHL and Africa-Wide Information via EBSCOhost will be searched for original research articles published in English from January 1, 1995, to December 31, 2015, using a pre-defined search strategy. The principal investigator will select potentially relevant articles from titles and abstracts. To minimise bias, full text of titles and abstracts deemed potentially relevant will be retrieved and reviewed by two independent reviewers based on the inclusion criteria. Data extraction will be conducted by the principal investigator and verified by two independent reviewers. The Consensus-based Standards for the Selection of Health Measurement Instruments (COSMIN) checklist will be used to assess the methodological quality of the selected studies. DISCUSSION: Choosing an appropriate test to be included in the screening test battery should be based on sound psychometric properties of the test available. This systematic review will provide an overview of the tests commonly used in rugby union and other related high intermittent team sports characterised by skill executions using the hands and legs such as Rugby League and Australian Rules Football. In addition, the review will highlight the psychometric properties of the identified tests. This information is crucial in developing a sport-specific test battery which can be used for talent identification, especially among young adolescent players, and injury prevention programmes. SYSTEMATIC REVIEW REGISTRATION: PROSPERO CRD42015029747.

Notes: Chiwaridzo, Matthew

Ferguson, Gillian D

Smits-Engelsman, Bouwien C M

eng

England

2016/07/28 06:00

Syst Rev. 2016 Jul 27;5(1):122. doi: 10.1186/s13643-016-0298-1.

URL: http://www.ncbi.nlm.nih.gov/pubmed/27460647

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Division of Physiotherapy, School of Health and Rehabilitation Sciences, Faculty of Health Sciences, University of Cape Town, Observatory Campus, Cape Town, South Africa.

29. **Reference Type:** Journal Article

Record Number: 4612

Author: Mohammadi, S. F., Aghazade Amiri, M., Naderifar, H., Rakhshi, E., Vakilian, B., Ashrafi, E. and Behesht-Nejad, A. H.

Year: 2016

Title: Vision Examination Protocol for Archery Athletes Along With an Introduction to Sports Vision

Journal: Asian J Sports Med

Volume: 7

Issue: 1

Pages: e26591

Date: Mar

Short Title: Vision Examination Protocol for Archery Athletes Along With an Introduction to Sports Vision

Alternate Journal: Asian journal of sports medicine

ISSN: 2008-000X (Print)

2008-000X (Linking)

DOI: 10.5812/asjsm.26591

PMCID: 4870828

Accession Number: 27217923

Abstract: INTRODUCTION: Visual skills are one of the main pillars of intangible faculties of athletes that can influence their performance. Great number of vision tests used to assess the visual skills and it will be irrational to perform all vision tests for every sport. OBJECTIVES: The purpose of this protocol article is to present a relatively comprehensive battery of tests and assessments on static and dynamic aspects of sight which seems relevant to sports vision and introduce the most useful ones for archery. MATERIALS AND METHODS: Through extensive review of the literature, visual skills and respective tests were listed; such as 'visual acuity, 'contrast sensitivity', 'stereo-acuity', 'ocular alignment', and 'eye dominance'. Athletes were defined as "elite" and "non-elite" category based on their past performance. Dominance was considered for eye and hand; binocular or monocular aiming was planned to be recorded. Illumination condition was defined as to simulate the real archery condition to the extent possible. The full cycle of examinations and their order for each athlete was sketched (and estimated to take 40 minutes). Protocol was piloted in an eye hospital. Female and male archers aged 18 - 38 years who practiced compound and recurve archery with a history of more than 6 months were included. CONCLUSIONS: We managed to select and design a customized examination protocol for archery (a sight-intensive and aiming type of sports), serving skill assessment and research purposes. Our definition for elite and non-elite athletes can help to define sports talent and devise skill development methods as we compare the performance of these two groups. In our pilot, we identified 8 "archery figures" (by hand dominance, eye dominance and

binocularity) and highlighted the concept "congruence" (dominant hand and eye in the same side) in archery performance.

Notes: Mohammadi, Seyed Farzad

Aghazade Amiri, Mohammad

Naderifar, Homa

Rakhshi, Elham

Vakilian, Banafsheh

Ashrafi, Elham

Behesht-Nejad, Amir-Houshang

eng

Iran

2016/05/25 06:00

Asian J Sports Med. 2016 Mar 8;7(1):e26591. doi: 10.5812/asjsm.26591. eCollection 2016 Mar.

URL: http://www.ncbi.nlm.nih.gov/pubmed/27217923

Author Address: Eye Research Center, Farabi Eye Hospital, Tehran University of Medical Sciences, Tehran, IR Iran; Center for Non-Communicable Diseases Control, Ministry of Health and Medical Education, Tehran, IR Iran.

Deptartment of Optometry, Faculty of Rehabilitation Sciences, Shahid Beheshti University of Medical Sciences, Tehran, IR Iran.

Eye Research Center, Farabi Eye Hospital, Tehran University of Medical Sciences, Tehran, IR Iran.

30. **Reference Type:** Journal Article

Record Number: 4747

Author: Ruscello, B., Partipilo, F., Pantanella, L., Esposito, M. and D'Ottavio, S.

Year: 2016

Title: The optimal exercise to rest ratios in repeated sprint ability training in youth soccer players

Journal: J Sports Med Phys Fitness

Volume: 56

Issue: 12

Pages: 1465-1475

Date: Dec

Short Title: The optimal exercise to rest ratios in repeated sprint ability training in youth soccer players

Alternate Journal: The Journal of sports medicine and physical fitness

ISSN: 1827-1928 (Electronic)

0022-4707 (Linking)

Accession Number: 26609970

Keywords: Adolescent

Analysis of Variance

Athletic Performance/*physiology

Exercise

Exercise Test

Fatigue

Heart Rate/physiology

Humans

Male

Muscle Fatigue/physiology

Muscle Strength/physiology

Physical Exertion/physiology

Rest/*physiology

Running/*physiology

Soccer/*physiology

Time Factors

Abstract: BACKGROUND: The aim of this study was to investigate the applicability of three different exercise to rest ratios in RSA training in youth soccer players, applying those ones already adopted in adult players, when performing three different sprinting modes (straight, shuttle and sprinting with changing of direction). METHODS: Eighteen young trained male soccer players (Height: 1.66+/-0.07 m; weight: 58.22+/-7.64 kg; BMI 19.37+/-3.42 kg.m-2; age:14 years) participated to the study. In order to compare the different values of the time recorded, a Fatigue Index (FI) was used. Recovery times among trials in the sets were administered according to the 1:5, 1:3; 1:2 exercise to rest ratio, respectively. RESULTS: Significant differences among trials within each set (Repeated Measures Anova; P<0.05) were found. as evidence of fatigue over time. with an average decay of performance of about 4%, but no significant differences were found in FI%, among the three different sprinting modalities when applying the investigated exercise to rest ratios (Factorial Anova; between; P>0.05). CONCLUSIONS: The results of this study confirm that the exercise to rest ratios considered in this study might be suitable to design effective testing protocols and training sessions aimed at the development of the RSA in youth soccer players, keeping the performances in the speed domain (FI%< approximately 7-8%) but inducing the fatigue processes sought with this kind of training method.

Notes: Ruscello, Bruno

Partipilo, Filippo

Pantanella, Laura

Esposito, Mario

D'Ottavio, Stefano

eng

Italy

2015/11/27 06:00

J Sports Med Phys Fitness. 2016 Dec;56(12):1465-1475. Epub 2015 Nov 26.

URL: http://www.ncbi.nlm.nih.gov/pubmed/26609970

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Faculty of Medicine and Surgery, School of Sports and Exercise Sciences, Tor Vergata University, Rome, Italy.

Faculty of Medicine and Surgery, Doctoral School of Advanced Sciences and Technologies in Reabilitation Medicine and Sports, University of Rome "Tor Vergata", Rome, Italy.

School of Sports and Exercise Sciences, San Raffaele University, Rome, Italy.

Federazione Italiana Giuoco Calcio, Rome, Italy.

31. **Reference Type:** Journal Article

Record Number: 4150

Author: MacNamara, A. and Collins, D.

Year: 2015

Title: Second Chances: Investigating Athletes' Experiences of Talent Transfer

Journal: PLoS One

Volume: 10

Issue: 11

Pages: e0143592

Short Title: Second Chances: Investigating Athletes' Experiences of Talent Transfer

Alternate Journal: PloS one

ISSN: 1932-6203 (Electronic)

1932-6203 (Linking)

DOI: 10.1371/journal.pone.0143592

PMCID: 4658000

Accession Number: 26600303

Keywords: *Aptitude

*Athletes

Athletic Performance/physiology

Humans

Abstract: Talent transfer initiatives seek to transfer talented, mature individuals from one sport to another. Unfortunately talent transfer initiatives seem to lack an evidence-based direction and a rigorous exploration of the mechanisms underpinning the approach. The purpose of this exploratory study was to identify the factors which successfully transferring athletes cite as facilitative of talent transfer. In contrast to the anthropometric and performance variables that underpin current talent transfer initiatives, participants identified a range of psycho-behavioral and environmental factors as key to successful transfer. We argue that further research into the mechanisms of talent transfer is needed in order to provide a strong evidence base for the methodologies employed in these initiatives.

Notes: MacNamara, Aine

Collins, Dave

eng

2015/11/26 06:00

PLoS One. 2015 Nov 24;10(11):e0143592. doi: 10.1371/journal.pone.0143592. eCollection 2015.

URL: http://www.ncbi.nlm.nih.gov/pubmed/26600303

Author Address: Institute of Coaching and Performance, University of Central Lancashire, Preston, United Kingdom.

32. **Reference Type:** Journal Article

Record Number: 4767

Author: Ahmetov, II and Fedotovskaya, O. N.

Year: 2015

Title: Current Progress in Sports Genomics

Journal: Adv Clin Chem

Volume: 70

Pages: 247-314

Short Title: Current Progress in Sports Genomics

Alternate Journal: Advances in clinical chemistry

ISSN: 0065-2423 (Print)

0065-2423 (Linking)

DOI: 10.1016/bs.acc.2015.03.003

Accession Number: 26231489

Keywords: Athletic Performance/*physiology

DNA/*genetics

Genome-Wide Association Study

*Genomics/methods

Genotype

Humans

*Polymorphism, Genetic

Sports

Abstract: Understanding the genetic architecture of athletic performance is an important step in the development of methods for talent identification in sport. Research concerned with molecular predictors has highlighted a number of potentially important DNA polymorphisms contributing to predisposition to success in certain types of sport. This review summarizes the evidence and mechanistic insights on the associations between DNA polymorphisms and athletic performance. A literature search (period: 1997-2014) revealed that at least 120 genetic markers are linked to elite athlete status (77 endurance-related genetic markers and 43 power/strength-related genetic markers). Notably, 11 (9%) of these genetic markers (endurance markers: ACE I, ACTN3 577X, PPARA rs4253778 G, PPARGC1A Gly482; power/strength markers: ACE D, ACTN3 Arg577, AMPD1 Gln12, HIF1A 582Ser, MTHFR rs1801131 C, NOS3 rs2070744 T, PPARG 12Ala) have shown positive associations with athlete status in three or more studies, and six markers (CREM rs1531550 A, DMD rs939787 T, GALNT13 rs10196189 G, NFIA-AS1 rs1572312 C, RBFOX1 rs7191721 G, TSHR rs7144481 C) were identified after performing genome-wide association studies (GWAS) of African-American, Jamaican, Japanese, and Russian athletes. On the other hand, the significance of 29 (24%) markers was not replicated in at least one study. Future research including multicenter GWAS, whole-genome sequencing, epigenetic, transcriptomic, proteomic, and metabolomic profiling and performing meta-analyses in large cohorts of athletes is needed before these findings can be extended to practice in sport.

Notes: Ahmetov, Ildus I

Fedotovskaya, Olga N

eng

Review

2015/08/02 06:00

Adv Clin Chem. 2015;70:247-314. doi: 10.1016/bs.acc.2015.03.003. Epub 2015 Apr 11.

URL: http://www.ncbi.nlm.nih.gov/pubmed/26231489

Author Address: Sport Technology Research Center, Volga Region State Academy of Physical Culture, Sport and Tourism, Kazan, Russia; Laboratory of Molecular Genetics, Kazan State Medical University, Kazan, Russia. Electronic address: genoterra@mail.ru.

Department of Physiology and Pharmacology, Karolinska Institutet, Stockholm, Sweden.

33. **Reference Type:** Journal Article

Record Number: 4156

Author: Loland, S.

Year: 2015

Title: Against Genetic Tests for Athletic Talent: The Primacy of the Phenotype

Journal: Sports Med

Volume: 45

Issue: 9

Pages: 1229-1233

Date: Sep

Short Title: Against Genetic Tests for Athletic Talent: The Primacy of the Phenotype

Alternate Journal: Sports medicine

ISSN: 1179-2035 (Electronic)

0112-1642 (Linking)

DOI: 10.1007/s40279-015-0352-5

Accession Number: 26121951

Keywords: Athletic Injuries/genetics

*Athletic Performance

Dissent and Disputes

*Genetic Testing/ethics

Humans

*Phenotype

Risk Assessment

Abstract: New insights into the genetics of sport performance lead to new areas of application. One area is the use of genetic tests to identify athletic talent. Athletic performances involve a high number of complex phenotypical traits. Based on the ACCE model (review of Analytic and Clinical validity, Clinical utility, and Ethical, legal and social implications), a critique is offered of the lack of validity and predictive power of genetic tests for talent. Based on the ideal of children's right to an open future, a moral argument is given against such tests on children and young athletes. A possible role of genetic tests in sport is proposed in terms of identifying predisposition for injury. In meeting ACCE requirements, such tests could improve individualised injury prevention and increase athlete health. More generally, limitations of science are discussed in the identification of talent and in the understanding of complex human performance phenotypes. An alternative approach to talent identification is proposed in terms of ethically sensitive, systematic and evidence-based holistic observation over time of relevant phenotypical traits by experienced observers. Talent identification in sport should be based on the primacy of the phenotype.

Notes: Loland, Sigmund

eng

New Zealand

Auckland, N.Z.

2015/07/01 06:00

Sports Med. 2015 Sep;45(9):1229-1233. doi: 10.1007/s40279-015-0352-5.

URL: http://www.ncbi.nlm.nih.gov/pubmed/26121951

Author Address: Norwegian School of Sport Sciences, P.O. Box 4014, Ulleval Stadion, 0806, Oslo, Norway. Sigmund.loland@nih.no.

34. **Reference Type:** Journal Article

Record Number: 4158

Author: Malina, R. M., Rogol, A. D., Cumming, S. P., Coelho e Silva, M. J. and Figueiredo, A. J.

Year: 2015

Title: Biological maturation of youth athletes: assessment and implications

Journal: Br J Sports Med

Volume: 49

Issue: 13

Pages: 852-9

Date: Jul

Short Title: Biological maturation of youth athletes: assessment and implications

Alternate Journal: British journal of sports medicine

ISSN: 1473-0480 (Electronic)

0306-3674 (Linking)

DOI: 10.1136/bjsports-2015-094623

Accession Number: 26084525

Keywords: Adolescent

Adolescent Development/*physiology

Age Determination by Skeleton/methods

Aptitude/physiology

Child

Female

Growth/physiology

Humans

Male

Menarche/physiology

Musculoskeletal Development/physiology

Physical Education and Training/methods

Physical Examination/methods

Puberty/physiology

Sexual Maturation/physiology

Youth Sports/*physiology

Abstract: The search for talent is pervasive in youth sports. Selection/exclusion in many sports follows a maturity-related gradient largely during the interval of puberty and growth spurt. As such, there is emphasis on methods for assessing maturation. Commonly used methods for assessing status (skeletal age, secondary sex characteristics) and estimating timing (ages at peak height velocity (PHV) and menarche) in youth athletes and two relatively recent anthropometric (non-invasive) methods (status-percentage of predicted near adult height attained at observation, timing-predicted maturity offset/age at PHV) are described and evaluated. The latter methods need further validation with athletes. Currently available data on the maturity status and timing of youth athletes are subsequently summarised. Selection for sport and potential maturity-related correlates are then discussed in the context of talent development and associated models. Talent development from novice to elite is superimposed on a constantly changing base-the processes of physical growth, biological maturation and behavioural development, which occur simultaneously and interact with each other. The processes which are highly individualised also interact with the demands of a sport per se and with involved adults (coaches, trainers, administrators, parents/guardians).

Notes: Malina, Robert M

Rogol, Alan D

Cumming, Sean P

Coelho e Silva, Manuel J

Figueiredo, Antonio J

eng

Review

England

2015/06/19 06:00

Br J Sports Med. 2015 Jul;49(13):852-9. doi: 10.1136/bjsports-2015-094623.

URL: http://www.ncbi.nlm.nih.gov/pubmed/26084525

Author Address: Department of Kinesiology and Health Education, University of Texas, Austin, Texas, USA Tarleton State University, Stephenville, Texas, USA.

University of Virginia, Charlottesville, Virginia, USA.

Department of Health, Health and Exercise Science Research Group, University of Bath, Bath, UK.

Faculty of Sport Science and Physical Education, University of Coimbra, Coimbra, Portugal.

35. **Reference Type:** Journal Article

Record Number: 4160

Author: Suppiah, H. T., Low, C. Y. and Chia, M.

Year: 2015

Title: Detecting and developing youth athlete potential: different strokes for different folks are warranted

Journal: Br J Sports Med

Volume: 49

Issue: 13

Pages: 878-82

Date: Jul

Short Title: Detecting and developing youth athlete potential: different strokes for different folks are warranted

Alternate Journal: British journal of sports medicine

ISSN: 1473-0480 (Electronic)

0306-3674 (Linking)

DOI: 10.1136/bjsports-2015-094648

Accession Number: 25907182

Keywords: Adolescent

*Aptitude

Athletic Performance/*physiology

Competitive Behavior/physiology

Genetic Testing

Humans

Practice (Psychology)

Sleep/physiology

Youth Sports/*physiology

Abstract: Sport talent identification and development (TI and TD) in youth continues to attract strong interest among coaches, sport scientists and sport administrators. TI for sport in youth with the anticipation of future elite level sport achievement is both an art and a science, and is strongly influenced by within athlete and extraneous-to-athlete factors (ecosystem of support or the lack of). The returns from investment on current TI and TD models of sport in youth are subpar in that few continue in the sport to achieve podium positions at the elite sport level in adulthood. Why, where and how one succeeds in sport, and what that success means to the athlete and stakeholders are

dependent on the culture and context of the country. We advocate harnessing the power of sport to help in youth development, to be holistic in its nurturance, to allow for individual idiosyncratic expressions of the athletes, to provide for talent transfer across sport, and to facilitate key stakeholders to 'join' hands to work for the common interest and understanding for as many youth and adults so as to provide them with opportunities through support and coaching to compete at the different levels of competition in sport. Governments, policy makers and administrators of sport must decide, within their specific circumstances, if TI and TD in sport in youth is serving a meaningful purpose and is a viable return on investment; in short, is it mission possible or is it... a quest for the Holy Grail for a podium finish in elite level sport competition?

Notes: Suppiah, Haresh T

Low, Chee Yong

Chia, Michael

eng

Review

England

2015/04/25 06:00

Br J Sports Med. 2015 Jul;49(13):878-82. doi: 10.1136/bjsports-2015-094648. Epub 2015 Apr 23.

URL: http://www.ncbi.nlm.nih.gov/pubmed/25907182

Author Address: Physical Education and Sports Science Group, National Institute of Education, Nanyang Technological University, Singapore, Singapore.

Singapore Sports School, Singapore, Singapore.

36. **Reference Type:** Journal Article

Record Number: 4161

Author: Li, C., Wang, C. K., Pyun do, Y. and Martindale, R.

Year: 2015

Title: Further development of the talent development environment questionnaire for sport

Journal: J Sports Sci

Volume: 33

Issue: 17

Pages: 1831-43

Short Title: Further development of the talent development environment questionnaire for sport

Alternate Journal: Journal of sports sciences

ISSN: 1466-447X (Electronic)

0264-0414 (Linking)

DOI: 10.1080/02640414.2015.1014828

Accession Number: 25774438

Keywords: Adolescent

*Aptitude

Athletes/psychology

Factor Analysis, Statistical

Female

Humans

Male

Self Report

Sex Factors

Sports/*psychology

*Surveys and Questionnaires

Abstract: Given the significance of monitoring the critical environmental factors that facilitate athlete performance, this two-phase research aimed to validate and refine the revised talent development environment questionnaire (TDEQ). The TDEQ is a multidimensional self-report scale that assesses talented athletes' environmental experiences. Study 1 (the first phase) involved the examination of the revised TDEQ through an exploratory factor analysis (n = 363). This exploratory investigation identified a 28-item five-factor structure (i.e., TDEQ-5) with adequate internal consistency. Study 2 (the second phase) examined the factorial structure of the TDEQ-5, including convergent validity, discriminant validity, and group invariance (i.e., gender and sports type). The second phase was carried out with 496 talented athletes through the application of confirmatory factor analyses and multigroup invariance tests. The results supported the convergent validity, discriminant validity, and group invariance of the TDEQ-5. In conclusion, the TDEQ-5 with 25 items appears to be a reliable and valid scale for use in talent development environments.

Notes: Li, Chunxiao

Wang, Chee Keng John

Pyun, Do Young

Martindale, Russell

eng

England

2015/03/17 06:00

J Sports Sci. 2015;33(17):1831-43. doi: 10.1080/02640414.2015.1014828. Epub 2015 Mar 16.

URL: http://www.ncbi.nlm.nih.gov/pubmed/25774438

Author Address: a Department of Health and Physical Education , The Hong Kong Institute of Education , Hong Kong.

37. **Reference Type:** Journal Article

Record Number: 4163

Author: Muller, L., Muller, E., Hildebrandt, C., Kapelari, K. and Raschner, C.

Year: 2015

Title: [The assessment of biological maturation for talent selection - which method can be used?]

Journal: Sportverletz Sportschaden

Volume: 29

Issue: 1

Pages: 56-63

Date: Mar

Short Title: [The assessment of biological maturation for talent selection - which method can be used?]

Alternate Journal: Sportverletzung Sportschaden : Organ der Gesellschaft fur Orthopadisch-Traumatologische Sportmedizin

ISSN: 1439-1236 (Electronic)

0932-0555 (Linking)

DOI: 10.1055/s-0034-1399043

Original Publication: Die Erhebung des biologischen Entwicklungsstandes fur die Talentselektion - welche Methode eignet sich?

Accession Number: 25710395

Keywords: Adolescent

Age Determination by Skeleton/ethics/*methods

Age Factors

Anthropometry/*methods

*Aptitude

Austria

*Body Height

Child

*Competitive Behavior/ethics

Ethics, Professional

Female

Humans

Male

Predictive Value of Tests

*School Admission Criteria

*Skiing/ethics

*Sports

Abstract: BACKGROUND: The biological maturity status plays an important role in sports, since it influences the performance level and the talent selection in various types of sport. More mature athletes are favorably selected for regional and national squads. Therefore, the biological maturity status should be considered during the talent selection process. In this context, the relative age effect (RAE), which exists when the relative age quarter distribution of selected sports groups shows a biased distribution with an over-representation of athletes born in the first months after the specific cut-off-date for the competition categories, represents another problem in the talent development. From an ethical point of view, discrimination of young talented kids does exist: the relatively younger athletes have little to no chance of reaching the elite level, despite their talents and efforts. The causal mechanisms behind the RAE are still unclear and have to be assessed. In this context, the biological maturation seems to be a possible influential factor for the existence of a RAE in sport, which has to be examined. Several methods for estimating the biological maturity status exist; however, they are often expensive and not practicable. Consequently, the aim of the present study was to assess the concordance of a simple, yet accurate method of estimating biological maturation (prediction equation of age at peak height velocity, APHV) of Mirwald and co-workers, and the gold standard method of estimating skeletal age (SA, the x-ray of the left wrist). METHODS: In total, 75 Austrian students (40male symbol, 35female symbol) aged 10 - 13 years, were examined. Thirty of the participants (17male symbol, 13female symbol) were students of a well-known Austrian ski boarding school, and 45 (23male symbol, 22female symbol) of a non-sportive secondary modern school of the same region. The participants included in the study had not experienced a rupture of the carpal bones of the left wrist. Parents and participants were informed of the study aims, requirements and risks before providing written informed consent. The study was performed according to the Declaration of Helsinki. The study was approved by the Board for Ethical Questions in Science (Nr.: 2/2014) and the Institutional Ethics Review Boards for Human Research. For the prediction equations, the body height, the body mass and the sitting height were examined 8. The actual CA at time of measurement, and the leg length as the difference between body height and sitting height were calculated. These parameters were used to predict MO as time before or after PHV for boys and girls using the prediction equations of Mirwald et al. 19. According to Malina and Koziel 8, the participants were classified as late, on time (average) or early maturing on the basis of their APHV relative to the sample mean and standard deviation separated by sex. Participants within plus/minus the standard deviation of the mean were considered on time; participants with APHV > mean + standard deviation were classified late, while those with APHV < mean - standard deviation were classified early. An expert in pediatric endocrinology evaluated the x-rays of the left-hand wrist with the Greulich-Pyle-Method for assessing SA, the most widely used method of determining SA 24. The difference between SA and CA were calculated (= difference SA-CA). Consistent with other studies, the participants were divided into three groups according to their maturity status: on time or average maturity status was a SA within +/-1 year of CA, late maturating was a SA behind CA of more than 1 year, and early maturating was a SA in advance of CA of more than 1 year 5 19 25. The most accurate method used to compare two methods of measurement is the Bland-Altman plot and the 95 % limits of agreement 26 27 28. Bland-Altman plots of the difference between difference in APHV (from the literature mean) and difference SA-CA (y-axis) and the mean of difference in APHV and difference SA-CA (x-axis) were performed. Approximately 95 % of the points in the plot should lie within the limits; then the concordance between the two methods of measurement is given 28. Additionally, intraclass correlation coefficients (ICC(3,1); two-way-mixed, total agreement) were calculated between difference in APHV and difference SA-CA. Chi(2)-tests were used to assess the

difference in the percentage of pupils classified as on time, early or late maturing between the classifications based on the SA and on APHV, respectively. The level of significance was set at $p < 0.05$ and for highly significant at $p < 0.01$. All of the calculations were performed using PASW Statistics V.21.0. RESULTS: Chi(2)-tests did not show any significant differences ($p = 0.404$) in the percentage of participants classified as on time, early or late maturing between the two classifications based on SA and on APHV, respectively, neither for the total sample, nor for the two groups ski racers and non-athletes. The Bland-Altman analysis showed that more than 95 % of the points in the plot lie within the limits; consequently, there is concordance between the two methods with regard to estimating biological maturation. The ICC(3,1) statistics showed a highly significant correlation: $p = 0.002$, ICC (95 % CI) = 0.48 (0.13 - 0.69). CONCLUSIONS: The prediction equations to determine APHV seem to be a valid method of assessing the biological maturity status of youths aged 10 - 13 years. The percentage of pupils classified as on time, early or late maturing did not differ significantly between the classifications based on the two methods. Also the Bland-Altman analysis proved the concordance between the two methods. The RAE could be influenced and strengthened by the biological age in sports in which advantages in maturity parameters are important. Athletes born early in the selection year, who are also at the same time advanced in maturity, might be advantaged in the selection process. However, since the prediction equations seem to be valid, this method can be used in the future in the talent selection process in order to not disadvantage late-maturing athletes, which in turn could result in the reduction of the occurrence of the RAE in various types of sports in the future. In talent selection processes the growth spurt and the implemented changes in proportions between core and the extremities are often not considered; although it was shown that during this period, athletes showed poor performances in physical fitness. Since physical fitness is an important criterion in talent selection processes, athletes who go through their individual peak growth spurt at the time of selection have disadvantages due to the diverse proportions. As a consequence, it seems important to know the athlete's APHV in order to consider the variations in physical performance caused by developmental changes. The prediction equations to determine APHV include the leg length and sitting height in order to consider the diverse proportions between core and extremities; hence, this method seems to be accurate and should be implemented in the talent selection process.

Notes: Muller, L

Muller, E

Hildebrandt, C

Kapelari, K

Raschner, C

ger

English Abstract

Germany

2015/02/25 06:00

Sportverletz Sportschaden. 2015 Mar;29(1):56-63. doi: 10.1055/s-0034-1399043. Epub 2015 Feb 24.

URL: http://www.ncbi.nlm.nih.gov/pubmed/25710395

Author Address: Institut fur Sportwissenschaft, Universitat Innsbruck, Innsbruck, Osterreich.

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38. **Reference Type:** Journal Article

Record Number: 4622

Author: Lloyd, R. S., Oliver, J. L., Faigenbaum, A. D., Howard, R., De Ste Croix, M. B., Williams, C. A., Best, T. M., Alvar, B. A., Micheli, L. J., Thomas, D. P., Hatfield, D. L., Cronin, J. B. and Myer, G. D.

Year: 2015

Title: Long-term athletic development- part 1: a pathway for all youth

Journal: J Strength Cond Res

Volume: 29

Issue: 5

Pages: 1439-50

Date: May

Short Title: Long-term athletic development- part 1: a pathway for all youth

Alternate Journal: Journal of strength and conditioning research

ISSN: 1533-4287 (Electronic)

1064-8011 (Linking)

DOI: 10.1519/JSC.0000000000000756

Accession Number: 25486295

Keywords: Adolescent

Athletic Performance

Child

Humans

*Models, Theoretical

Motor Skills

Physical Conditioning, Human/*methods

Physical Education and Training/*methods

Physical Fitness

Sports/*physiology

Abstract: The concept of developing talent and athleticism in youth is the goal of many coaches and sports systems. Consequently, an increasing number of sporting organizations have adopted long-term athletic development models in an attempt to provide a structured approach to the training of

youth. It is clear that maximizing sporting talent is an important goal of long-term athletic development models. However, ensuring that youth of all ages and abilities are provided with a strategic plan for the development of their health and physical fitness is also important to maximize physical activity participation rates, reduce the risk of sport- and activity-related injury, and to ensure long-term health and well-being. Critical reviews of independent models of long-term athletic development are already present within the literature; however, to the best of our knowledge, a comprehensive examination and review of the most prominent models does not exist. Additionally, considerations of modern day issues that may impact on the success of any long-term athletic development model are lacking, as are proposed solutions to address such issues. Therefore, within this 2-part commentary, Part 1 provides a critical review of existing models of practice for long-term athletic development and introduces a composite youth development model that includes the integration of talent, psychosocial and physical development across maturation. Part 2 identifies limiting factors that may restrict the success of such models and offers potential solutions.

Notes: Lloyd, Rhodri S

Oliver, Jon L

Faigenbaum, Avery D

Howard, Rick

De Ste Croix, Mark B A

Williams, Craig A

Best, Thomas M

Alvar, Brent A

Micheli, Lyle J

Thomas, D Phillip

Hatfield, Disa L

Cronin, John B

Myer, Gregory D

eng

Review

2014/12/09 06:00

J Strength Cond Res. 2015 May;29(5):1439-50. doi: 10.1519/JSC.0000000000000756.

URL: http://www.ncbi.nlm.nih.gov/pubmed/25486295

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10The Micheli Center for Sports Injury Prevention, Boston, Massachusetts; 11Department of Trauma and Orthopaedics, University of Wales, Cardiff, United Kingdom; 12Department of Kinesiology, University of Rhode Island, Kingston, Rhode Island; 13Sport Performance Research Institute New Zealand, AUT University, Auckland, New Zealand; 14School of Exercise, Health and Biomedical Sciences, Edith Cowan University, Joondalup, Australia; 15Division of Sports Medicine, Cincinnati Children's Hospital Medical Center, Cincinnati, Ohio; 16Department of Pediatrics and Orthopaedic Surgery, College of Medicine, University of Cincinnati, Cincinnati, Ohio; and 17Sports Health and Performance Institute, Ohio State University, Columbus, Ohio.

39. **Reference Type:** Journal Article

Record Number: 4168

Author: Pion, J., Segers, V., Fransen, J., Debuyck, G., Deprez, D., Haerens, L., Vaeyens, R., Philippaerts, R. and Lenoir, M.

Year: 2015

Title: Generic anthropometric and performance characteristics among elite adolescent boys in nine different sports

Journal: Eur J Sport Sci

Volume: 15

Issue: 5

Pages: 357-66

Short Title: Generic anthropometric and performance characteristics among elite adolescent boys in nine different sports

Alternate Journal: European journal of sport science

ISSN: 1536-7290 (Electronic)

1536-7290 (Linking)

DOI: 10.1080/17461391.2014.944875

Accession Number: 25143133

Keywords: Adolescent

Athletes/*statistics & numerical data

Athletic Performance/*physiology

Belgium/epidemiology

Body Weights and Measures

Cohort Studies

Humans

Male

Sports/*physiology

Abstract: The aim of the present study was to evaluate the Flemish Sports Compass (FSC), a non-sport-specific generic testing battery. It was hypothesised that a set of 22 tests would have sufficient discriminant power to allocate athletes to their own sport based on a unique combination of test scores. First, discriminant analyses were applied to the 22 tests of anthropometry, physical fitness and motor coordination in 141 boys under age 18 (16.1 +/- 0.8 years) and post age at peak height velocity (maturity offset = 2.674 +/- 0.926) from Flemish Top Sport Academies for badminton, basketball, gymnastics, handball, judo, soccer, table tennis, triathlon and volleyball. Second, nine sequential discriminant analyses were used to assess the ability of a set of relevant performance characteristics classifying participants and non-participants for the respective sports. Discriminant analyses resulted in a 96.4% correct classification of all participants for the nine different sports. When focusing on relevant performance characteristics, 80.1% to 97.2% of the total test sample was classified correctly within their respective disciplines. The discriminating characteristics were briefly the following: flexibility in gymnastics, explosive lower-limb strength in badminton and volleyball, speed and agility in badminton, judo, soccer and volleyball, upper-body strength in badminton, basketball and gymnastics, cardiorespiratory endurance in triathletes, dribbling skills in handball, basketball and soccer and overhead-throwing skills in badminton and volleyball. The generic talent characteristics of the FSC enable the distinction of adolescent boys according to their particular sport. Implications for talent programmes are discussed.

Notes: Pion, Johan

Segers, Veerle

Fransen, Job

Debuyck, Gijs

Deprez, Dieter

Haerens, Leen

Vaeyens, Roel

Philippaerts, Renaat

Lenoir, Matthieu

eng

Research Support, Non-U.S. Gov't

England

2014/08/22 06:00

Eur J Sport Sci. 2015;15(5):357-66. doi: 10.1080/17461391.2014.944875. Epub 2014 Aug 21.

URL: http://www.ncbi.nlm.nih.gov/pubmed/25143133

Author Address: a Faculty of Medicine and Health Sciences, Department of Movement and Sports Sciences , Ghent University , Ghent , Belgium.

40. **Reference Type:** Journal Article

Record Number: 4169

Author: Deprez, D., Fransen, J., Boone, J., Lenoir, M., Philippaerts, R. and Vaeyens, R.

Year: 2015

Title: Characteristics of high-level youth soccer players: variation by playing position

Journal: J Sports Sci

Volume: 33

Issue: 3

Pages: 243-54

Short Title: Characteristics of high-level youth soccer players: variation by playing position

Alternate Journal: Journal of sports sciences

ISSN: 1466-447X (Electronic)

0264-0414 (Linking)

DOI: 10.1080/02640414.2014.934707

Accession Number: 24998472

Keywords: Adolescent

Age Factors

*Anthropometry

Child

Exercise Test

Humans

Motor Skills/*physiology

Physical Fitness/*physiology

Sexual Maturation

Soccer/*physiology

Abstract: The present study aimed to investigate positional differences in 744 high-level soccer players, aged 8 to 18 years. Players were assigned to six age groups (U9-U19) and divided into four playing positions (goalkeeper (GK), defender (DEF), midfielder (MF) and attacker (ATT)). MANOVA and effect sizes were used to examine anthropometrical and functional characteristics between all positions in all age groups. The main findings of the study were that GKs and DEFs were the tallest and heaviest compared with MFs and ATTs in all age groups. Further, between U9-U15, no significant differences in functional characteristics were found, except for dribbling skill, which MFs performed the best. In the U17-U19 age groups, ATTs seemed to be the most explosive (with GKs), the fastest and the more agile field players. These results suggest that inherent physical capacities (i.e., speed, power, agility) might select players in or reject players from an attacking position, which is still possible from U15-U17. Apparently, players with excellent dribbling skills at younger age are more likely to be selected to play as a MF, although, one might conclude that the

typical physical characteristics for different positions at senior level are not yet fully developed among young soccer players between 8 and 14 years.

Notes: Deprez, Dieter

Fransen, Job

Boone, Jan

Lenoir, Matthieu

Philippaerts, Renaat

Vaeyens, Roel

eng

England

2014/07/08 06:00

J Sports Sci. 2015;33(3):243-54. doi: 10.1080/02640414.2014.934707. Epub 2014 Jul 7.

URL: http://www.ncbi.nlm.nih.gov/pubmed/24998472

Author Address: a Movement and Sports Sciences , Ghent University , Ghent , Belgium.

41. **Reference Type:** Journal Article

Record Number: 4971

Author: Galy, O., Zongo, P., Chamari, K., Chaouachi, A., Michalak, E., Dellal, A., Castagna, C. and Hue, O.

Year: 2015

Title: Anthropometric and physiological characteristics of Melanesian futsal players: a first approach to talent identification in Oceania

Journal: Biol Sport

Volume: 32

Issue: 2

Pages: 135-41

Date: Jun

Short Title: Anthropometric and physiological characteristics of Melanesian futsal players: a first approach to talent identification in Oceania

Alternate Journal: Biology of sport

ISSN: 0860-021X (Print)

0860-021X (Linking)

DOI: 10.5604/20831862.1140428

PMCID: 4447759

Accession Number: 26060337

Abstract: This study assessed the anthropometric and physiological characteristics of elite Melanesian futsal players in order to determine the best performance predictors. Physiological parameters of performance were measured in 14 Melanesian (MEL-G, 24.4+/-4.4 yrs) and 8 Caucasian (NMEL-G, 22.9+/-4.9) elite futsal players, using tests of jump-and-reach (CMJ), agility (T-Test), repeated sprint ability (RSA), RSA with change-of-direction (RSA-COD), sprints with 5 m, 10 m, 15 m, and 30 m lap times, and aerobic fitness with the 30-15 intermittent fitness test (30-15 IFT). The anthropometric data revealed significantly lower height for MEL-G compared with NMEL-G: 1.73+/-0.05 and 1.80+/-0.08 m, respectively; P = 0.05. The CMJ was significantly higher for MEL-G than NMEL-G: 50.4+/-5.9 and 45.2+/-4.3 cm, respectively; P = 0.05. T-Test times were significantly lower for MEL-G than NMEL-G: 10.47+/-0.58 and 11.01+/-0.64 seconds, respectively; P = 0.05. MEL-G height was significantly related to CMJ (r = 0.706, P = 0.01), CMJpeakP (r = 0.709, P = 0.01) and T-Test (r = 0.589, P = 0.02). No significant between-group differences were observed for sprint tests or 30-15 IFT, including heart rate and estimated VO2max. Between groups, the percentage decrement (%Dec) in RSA-COD was significantly lower in MEL-G than NMEL-G (P = 0.05), although no significant difference was noted between RSA and RSA-COD. Within groups, no significant difference was observed between %Dec in RSA or RSA-COD; P = 0.697. This study presents specific anthropometric (significantly lower height) and physiological (significantly greater agility) reference values in Melanesians, which, taken together, might help coaches and physical fitness trainers to optimize elite futsal training and talent identification in Oceania.

Notes: Galy, O

Zongo, P

Chamari, K

Chaouachi, A

Michalak, E

Dellal, A

Castagna, C

Hue, O

eng

Poland

2015/06/11 06:00

Biol Sport. 2015 Jun;32(2):135-41. doi: 10.5604/20831862.1140428. Epub 2015 Feb 16.

URL: http://www.ncbi.nlm.nih.gov/pubmed/26060337

Author Address: ESPE de la Nouvelle-Caledonie, CNEP EA 4242, Universite de la Nouvelle-Caledonie, Campus de Nouville - BP R4 - 98851 Noumea, New Caledonia ; UPRES-EA 3596, Laboratoire ACTES, Unite de Formation et de Recherche des Sciences et Techniques des Activites Physiques et Sportives Antilles-Guyane, Campus de Fouillole, 97159 Pointe a Pitre Cedex, France a.

Athlete Health and Performance Research Centre, ASPETAR, Qatar Orthopaedic and Sports Medicine Hospital, Doha, Qatar.

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UPRES-EA 3596, Laboratoire ACTES, Unite de Formation et de Recherche des Sciences et Techniques des Activites Physiques et Sportives Antilles-Guyane, Campus de Fouillole, 97159 Pointe a Pitre Cedex, France a.

FIFA Medical Center of Excellence, Centre Orthopedique Santy, Lyon, France.

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42. **Reference Type:** Journal Article

Record Number: 4220

Author: de Oliveira, R. F., Lobinger, B. H. and Raab, M.

Year: 2014

Title: An adaptive toolbox approach to the route to expertise in sport

Journal: Front Psychol

Volume: 5

Pages: 709

Short Title: An adaptive toolbox approach to the route to expertise in sport

Alternate Journal: Frontiers in psychology

ISSN: 1664-1078 (Print)

1664-1078 (Linking)

DOI: 10.3389/fpsyg.2014.00709

PMCID: 4086479

Accession Number: 25071673

Abstract: Expertise is characterized by fast decision-making which is highly adaptive to new situations. Here we propose that athletes use a toolbox of heuristics which they develop on their route to expertise. The development of heuristics occurs within the context of the athletes' natural abilities, past experiences, developed skills, and situational context, but does not pertain to any of these factors separately. This is a novel approach because it integrates separate factors into a comprehensive heuristic description. The novelty of this approach lies within the integration of separate factors determining expertise into a comprehensive heuristic description. It is our contention that talent identification methods and talent development models should therefore be geared toward the assessment and development of specific heuristics. Specifically, in addition to identifying and developing separate natural abilities and skills as per usual, heuristics should be identified and developed. The application of heuristics to talent and expertise models can bring the field one step

away from dichotomized models of nature and nurture toward a comprehensive approach to the route to expertise.

Notes: de Oliveira, Rita F

Lobinger, Babett H

Raab, Markus

eng

Switzerland

2014/07/30 06:00

Front Psychol. 2014 Jul 8;5:709. doi: 10.3389/fpsyg.2014.00709. eCollection 2014.

URL: http://www.ncbi.nlm.nih.gov/pubmed/25071673

Author Address: Department of Applied Sciences, London South Bank University, London UK.

Institute of Psychology, German Sport University, Cologne Germany.

Department of Applied Sciences, London South Bank University, London UK ; Institute of Psychology, German Sport University, Cologne Germany.

43. **Reference Type:** Journal Article

Record Number: 4221

Author: Breitbach, S., Tug, S. and Simon, P.

Year: 2014

Title: Conventional and genetic talent identification in sports: will recent developments trace talent?

Journal: Sports Med

Volume: 44

Issue: 11

Pages: 1489-503

Date: Nov

Short Title: Conventional and genetic talent identification in sports: will recent developments trace talent?

Alternate Journal: Sports medicine

ISSN: 1179-2035 (Electronic)

0112-1642 (Linking)

DOI: 10.1007/s40279-014-0221-7

Accession Number: 25015477

Keywords: Age Factors

Anthropometry

Aptitude/*physiology

Athletes/psychology

Athletic Performance/*physiology/*psychology

Genetic Markers

*Genetic Testing/ethics

Humans

Personality

Personnel Selection/*methods

Polymorphism, Genetic

Self Efficacy

Sports/*physiology

Abstract: The purpose of talent identification (TI) is the earliest possible selection of auspicious athletes with the goal of systematically maximizing their potential. The literature proposes excellent reviews on various facets of talent research on different scientific issues such as sports sciences or genetics. However, the approaches of conventional and genetic testing have only been discussed separately by and for the respective groups of interest. In this article, we combine the discoveries of these disciplines into a single review to provide a comprehensive overview and elucidate the prevailing limitations. Fundamental problems in TI reside in the difficulties of defining the construct 'talent' or groups of different performance levels that represent the target variable of testing. Conventional and genetic testing reveal a number of methodological and technical limitations, and parallels are summarised in terms of the test designs, the point in time of testing, psychological skills or traits and unknown interactions between different variables. In conclusion, many deficiencies in the current talent research have gained attention. Alternative solutions include the talent development approach, while genetic testing is re-emphasised as a tool for risk stratification in sport participation. Future research needs to clearly define the group of interest and comprehensively implement all methodological improvement suggestions.

Notes: Breitbach, Sarah

Tug, Suzan

Simon, Perikles

eng

Review

New Zealand

Auckland, N.Z.

2014/07/13 06:00

Sports Med. 2014 Nov;44(11):1489-503.

URL: http://www.ncbi.nlm.nih.gov/pubmed/25015477

44. **Reference Type:** Journal Article

Record Number: 4224

Author: Collins, R., Collins, D., MacNamara, A. and Jones, M. I.

Year: 2014

Title: Change of plans: an evaluation of the effectiveness and underlying mechanisms of successful talent transfer

Journal: J Sports Sci

Volume: 32

Issue: 17

Pages: 1621-30

Short Title: Change of plans: an evaluation of the effectiveness and underlying mechanisms of successful talent transfer

Alternate Journal: Journal of sports sciences

ISSN: 1466-447X (Electronic)

0264-0414 (Linking)

DOI: 10.1080/02640414.2014.908324

Accession Number: 24814474

Keywords: Achievement

Adult

*Aptitude

Athletes

*Athletic Performance

Female

Humans

Male

*Sports/psychology

Young Adult

Abstract: Talent transfer (TT) is a recently formalised process used to identify and develop talented athletes by selecting individuals who have already succeeded in one sport and transferring them to another. Despite the increasing popularity of TT amongst national organisations and sport governing body professionals, however, there is little empirical evidence as to its efficacy or how it may be most efficiently employed. Accordingly, this investigation was designed to gain a deeper understanding of the effectiveness and underlying mechanisms of TT, achieved through a two-part study. Stage 1 provided a quantitative analysis of the incidence and distribution or, in this respect, epidemiology of TT, finding the most popular transfer to be sprinting to bobsleigh, with an average transfer age of 19

years. Stage 2 scrutinised the TT process and explored the specific cases revealed in stage 1 by examining the perceptions of four sport science support specialists who had worked in TT settings, finding several emergent themes which, they felt, could explain the TT processes. The most prominent theme was the psychosocial mechanism of TT, an aspect currently missing from TT initiatives, suggesting that current TT systems are poorly structured and should redress their approach to develop a more integrated scheme that encompasses all potential mechanisms of transfer.

Notes: Collins, Rosie

Collins, Dave

MacNamara, Aine

Jones, Martin Ian

eng

England

2014/05/13 06:00

J Sports Sci. 2014;32(17):1621-30. doi: 10.1080/02640414.2014.908324. Epub 2014 May 12.

URL: http://www.ncbi.nlm.nih.gov/pubmed/24814474

Author Address: a School of Sport and Exercise , University of Gloucestershire , UK.

45. **Reference Type:** Journal Article

Record Number: 4226

Author: Baker, J., Shuiskiy, K. and Schorer, J.

Year: 2014

Title: Does size of one's community affect likelihood of being drafted into the NHL? Analysis of 25 years of data

Journal: J Sports Sci

Volume: 32

Issue: 16

Pages: 1570-5

Short Title: Does size of one's community affect likelihood of being drafted into the NHL? Analysis of 25 years of data

Alternate Journal: Journal of sports sciences

ISSN: 1466-447X (Electronic)

0264-0414 (Linking)

DOI: 10.1080/02640414.2014.908319

Accession Number: 24738661

Keywords: Canada

*Competitive Behavior

Hockey/*trends

Humans

*Residence Characteristics

Rural Population

Urban Population

Abstract: The consistency of community size effects in North American contexts but not elsewhere, reinforces the notion that the effect is driven by socio-cultural factors specific to the country under examination. In order to identify and understand the various forces driving the community size effect, it is important to determine whether the effect has changed over time. Stability or instability over time would assist researchers in identifying the specific socio-cultural mechanisms driving these effects. This study compared the influence of community size on the likelihood of being drafted into the National Hockey League (NHL) among Canadian ice hockey players drafted to play in the NHL between 1985 and 2009. Although there was some variability over the timespan examined, most notably in communities with between 250,000 and 499,999 inhabitants and over 1,000,000 inhabitants, trends were generally stable over time, suggesting that the socio-cultural mechanisms may have also been relatively stable, although further work is necessary to confirm this assumption.

Notes: Baker, Joseph

Shuiskiy, Kasania

Schorer, Jorg

eng

England

2014/04/18 06:00

J Sports Sci. 2014;32(16):1570-5. doi: 10.1080/02640414.2014.908319. Epub 2014 Apr 16.

URL: http://www.ncbi.nlm.nih.gov/pubmed/24738661

Author Address: a School of Kinesiology and Health Science , York University , Toronto , Canada.

46. **Reference Type:** Journal Article

Record Number: 4227

Author: Robertson, S. J., Burnett, A. F. and Cochrane, J.

Year: 2014

Title: Tests examining skill outcomes in sport: a systematic review of measurement properties and feasibility

Journal: Sports Med

Volume: 44

Issue: 4

Pages: 501-18

Date: Apr

Short Title: Tests examining skill outcomes in sport: a systematic review of measurement properties and feasibility

Alternate Journal: Sports medicine

ISSN: 1179-2035 (Electronic)

0112-1642 (Linking)

DOI: 10.1007/s40279-013-0131-0

Accession Number: 24293244

Keywords: Athletic Performance/*physiology

Checklist

Humans

Motor Skills/*physiology

Reproducibility of Results

Sports/*physiology

Task Performance and Analysis

Abstract: BACKGROUND: A high level of participant skill is influential in determining the outcome of many sports. Thus, tests assessing skill outcomes in sport are commonly used by coaches and researchers to estimate an athlete's ability level, to evaluate the effectiveness of interventions or for the purpose of talent identification. OBJECTIVE: The objective of this systematic review was to examine the methodological quality, measurement properties and feasibility characteristics of sporting skill outcome tests reported in the peer-reviewed literature. DATA SOURCES: A search of both SPORTDiscus and MEDLINE databases was undertaken. STUDY SELECTION: Studies that examined tests of sporting skill outcomes were reviewed. Only studies that investigated measurement properties of the test (reliability or validity) were included. A total of 22 studies met the inclusion/exclusion criteria. STUDY APPRAISAL AND SYNTHESIS METHODS: A customised checklist of assessment criteria, based on previous research, was utilised for the purpose of this review. RESULTS: A range of sports were the subject of the 22 studies included in this review, with considerations relating to methodological quality being generally well addressed by authors. A range of methods and statistical procedures were used by researchers to determine the measurement properties of their skill outcome tests. The majority (95%) of the reviewed studies investigated test-retest reliability, and where relevant, inter and intra-rater reliability was also determined. Content validity was examined in 68% of the studies, with most tests investigating multiple skill domains relevant to the sport. Only 18% of studies assessed all three reviewed forms of validity (content, construct and criterion), with just 14% investigating the predictive validity of the test. Test responsiveness was reported in only 9% of studies, whilst feasibility received varying levels of attention. LIMITATIONS: In organised sport, further tests may exist which have not been investigated in this review. This could be due to such tests firstly not being published in the peer-review literature and secondly, not having their measurement properties (i.e., reliability or validity) examined formally. CONCLUSIONS: Of the 22 studies included in this review, items relating to test methodological quality were, on the whole, well addressed. Test-retest reliability was determined in

all but one of the reviewed studies, whilst most studies investigated at least two aspects of validity (i.e., content, construct or criterion-related validity). Few studies examined predictive validity or responsiveness. While feasibility was addressed in over half of the studies, practicality and test limitations were rarely addressed. Consideration of study quality, measurement properties and feasibility components assessed in this review can assist future researchers when developing or modifying tests of sporting skill outcomes.

Notes: Robertson, Samuel J

Burnett, Angus F

Cochrane, Jodie

eng

Review

New Zealand

Auckland, N.Z.

2013/12/03 06:00

Sports Med. 2014 Apr;44(4):501-18. doi: 10.1007/s40279-013-0131-0.

URL: http://www.ncbi.nlm.nih.gov/pubmed/24293244

Author Address: Centre for Exercise and Sports Sciences, School of Exercise and Nutrition Sciences, Deakin University, Burwood Campus, 221 Burwood Hwy, Burwood, Melbourne, VIC, 3125, Australia, sam.robertson@deakin.edu.au.

47. **Reference Type:** Journal Article

Record Number: 4972

Author: Ostojic, S. M., Castagna, C., Calleja-Gonzalez, J., Jukic, I., Idrizovic, K. and Stojanovic, M.

Year: 2014

Title: The biological age of 14-year-old boys and success in adult soccer: do early maturers predominate in the top-level game?

Journal: Res Sports Med

Volume: 22

Issue: 4

Pages: 398-407

Short Title: The biological age of 14-year-old boys and success in adult soccer: do early maturers predominate in the top-level game?

Alternate Journal: Research in sports medicine

ISSN: 1543-8635 (Electronic)

1543-8627 (Linking)

DOI: 10.1080/15438627.2014.944303

Accession Number: 25295477

Keywords: Adolescent

Athletic Performance/*physiology

Follow-Up Studies

Growth/*physiology

Humans

Male

Prospective Studies

Soccer/*physiology

Young Adult

Abstract: Talent identification and development in soccer is often biased by maturation-related differences of young athletes. However, there is no information available about success rates for youth maturing at different tempos to achieve success in elite adult soccer. The purposes of this study were to determine the prevalence of different maturational groups among boys playing soccer, and to track them for competence in adult performance. A prospective cohort study design was used to follow 55, 14-year-old boys playing in Serbian youth soccer Division I over eight years. At the age of 14, biological age using skeletal age rates was determined, and participants were categorized as early maturers (EaM), normal maturers (NoM), and late maturers (LaM). Game competence for adult soccer at age 22 was described as elite if an individual played for clubs competing in top-five international soccer leagues (La Liga, Premier League, Bundesliga, Serie A, and Ligue 1), and/or has become a member of an adult National team. Among boys in our study group, 43.8% were categorized as EaM, 35.4% as NoM, and 20.8% as LaM ($P = 0.11$). A significant difference in biological age was found among maturational groups at age 14, with EaM > NoM > LaM ($P > 0.0001$). When assessed for adult soccer competence, 33.3% of participants (16 out of 48 players) succeed in achieving elite level. Elite soccer competence acquired 60.1% players from the group of LaM, 38.1% from NoM, and 11.8% from EaM ($P > 0.0001$). Our comparative analysis suggests that soccer excludes early maturing boys and favors late maturing boys as level of performance increases.

Notes: Ostojic, Sergej M

Castagna, Carlo

Calleja-Gonzalez, Julio

Jukic, Igor

Idrizovic, Kemal

Stojanovic, Marko

eng

Research Support, Non-U.S. Gov't

England

Print

2014/10/09 06:00

Res Sports Med. 2014;22(4):398-407. doi: 10.1080/15438627.2014.944303.

URL: http://www.ncbi.nlm.nih.gov/pubmed/25295477

Author Address: a Center for Health, Exercise and Sport Sciences , Belgrade , Serbia.

48. **Reference Type:** Journal Article

Record Number: 4235

Author: Nikolaidis, P. T. and Ingebrigtsen, J.

Year: 2013

Title: Physical and physiological characteristics of elite male handball players from teams with a different ranking

Journal: J Hum Kinet

Volume: 38

Pages: 115-24

Short Title: Physical and physiological characteristics of elite male handball players from teams with a different ranking

Alternate Journal: Journal of human kinetics

ISSN: 1640-5544 (Print)

1640-5544 (Linking)

DOI: 10.2478/hukin-2013-0051

PMCID: 3827752

Accession Number: 24235989

Abstract: The aim of this study was to examine possible discriminant physical and physiological characteristics between elite male handball players from elite teams with different league rankings. Players from three teams (A, B and C), which competed in the first league of the Greek championship during the season 2011-2012 participated in the study. Team A finished first, B came second and C came eighth out of eleven clubs. Teams A and B also participated in European Cups, and team A won the European Challenge Cup. The players (n=44) were examined for anthropometric characteristics and performed a series of physical fitness tests. Players from teams A and B were taller (6.2 cm (0.7;11.7), mean difference (95% CI) and 9.2 cm (4.0;14.5), respectively), and had a higher amount of fat free mass (6.4 kg (1.1;11.8) and 5.4 kg (0.2;10.5)) compared to those of team C. Players from team A performed better than players from team C in the squat jump (5.5 cm (1.0;10.0)), the countermovement jump without (5.5 cm (0.4;10.6)) and with arm-swing (6.0 cm (0.7;11.3)) and in the 30 s Bosco test (5.7 W.kg-1 (1.2;10.2)). Also, players from team A outperformed team B in mean power during the Wingate anaerobic test (WAnT, 0.5 W.kg-1(0;0.9)) and in the Bosco test (7.8 W.kg-1 (3.4;12.2)). Overall, players from the best ranked team performed better than the lowest ranked team on WAnT, vertical jumps and the Bosco test. Stepwise discriminant analysis showed that stature and mean power during the Bosco test were the most important characteristics in TH players,

accounting for 54.6% of the variance in team ranking. These findings indicate the contribution of particular physical fitness components (stature, fat free mass and anaerobic power) to excellence in TH. In addition, the use of the Bosco test as an assessment tool in talent identification and physical fitness monitoring in this sport is further recommended.

Notes: Nikolaidis, Pantelis T

Ingebrigtsen, Jorgen

eng

Poland

2013/11/16 06:00

J Hum Kinet. 2013 Oct 8;38:115-24. doi: 10.2478/hukin-2013-0051. eCollection 2013.

URL: http://www.ncbi.nlm.nih.gov/pubmed/24235989

Author Address: Department of Sports Medicine and Exercise Biology, Faculty of Physical Education and Sport, Athens, Greece.

49. **Reference Type:** Journal Article

Record Number: 4238

Author: Gulbin, J. P., Croser, M. J., Morley, E. J. and Weissensteiner, J. R.

Year: 2013

Title: An integrated framework for the optimisation of sport and athlete development: a practitioner approach

Journal: J Sports Sci

Volume: 31

Issue: 12

Pages: 1319-31

Short Title: An integrated framework for the optimisation of sport and athlete development: a practitioner approach

Alternate Journal: Journal of sports sciences

ISSN: 1466-447X (Electronic)

0264-0414 (Linking)

DOI: 10.1080/02640414.2013.781661

Accession Number: 23631711

Keywords: *Aptitude

Athletes

Humans

*Models, Biological

*Physical Education and Training

*Sports

Abstract: This paper introduces a new sport and athlete development framework that has been generated by multidisciplinary sport practitioners. By combining current theoretical research perspectives with extensive empirical observations from one of the world's leading sport agencies, the proposed FTEM (Foundations, Talent, Elite, Mastery) framework offers broad utility to researchers and sporting stakeholders alike. FTEM is unique in comparison with alternative models and frameworks, because it: integrates general and specialised phases of development for participants within the active lifestyle, sport participation and sport excellence pathways; typically doubles the number of developmental phases (n = 10) in order to better understand athlete transition; avoids chronological and training prescriptions; more optimally establishes a continuum between participation and elite; and allows full inclusion of many developmental support drivers at the sport and system levels. The FTEM framework offers a viable and more flexible alternative for those sporting stakeholders interested in managing, optimising, and researching sport and athlete development pathways.

Notes: Gulbin, Jason P

Croser, Morag J

Morley, Elissa J

Weissensteiner, Juanita R

eng

England

2013/05/02 06:00

J Sports Sci. 2013;31(12):1319-31. doi: 10.1080/02640414.2013.781661. Epub 2013 Apr 30.

URL: http://www.ncbi.nlm.nih.gov/pubmed/23631711

Author Address: Australian Institute of Sport, Athlete Pathway Development, BRUCE, Australia. jason.gulbin@baspo.admin.ch

50. **Reference Type:** Journal Article

Record Number: 4774

Author: Baker, J., Kungl, A. M., Pabst, J., Strauss, B., Busch, D. and Schorer, J.

Year: 2013

Title: Your fate is in your hands? Handedness, digit ratio (2D:4D), and selection to a national talent development system

Journal: Laterality

Volume: 18

Issue: 6

Pages: 710-8

Short Title: Your fate is in your hands? Handedness, digit ratio (2D:4D), and selection to a national talent development system

Alternate Journal: Laterality

ISSN: 1464-0678 (Electronic)

1357-650X (Linking)

DOI: 10.1080/1357650X.2012.755992

Accession Number: 23444944

Keywords: Adolescent

*Aptitude

*Athletes

Case-Control Studies

Female

Fingers/*anatomy & histology

Functional Laterality/*physiology

Germany

Humans

Male

Sex Characteristics

Statistics, Nonparametric

Abstract: Over the past decade a small evidence base has highlighted the potential importance of seemingly innocuous variables related to one's hands, such as hand dominance and the relative length of the second and fourth digits (2D:4D ratio), to success in sport. This study compared 2D:4D digit ratio and handedness among handball players selected to advance in a national talent development system with those not selected. Participants included 480 youth handball players (240 females and 240 males) being considered as part of the talent selection programme for the German Youth National team. Hand dominance and digit ratio were compared to age-matched control data using standard t-tests. There was a greater proportion of left-handers compared to the normal population in males but not in females. There was also a lower digit ratio in both females and males. However, there were no differences between those selected for the next stage of talent development and those not selected on either handedness or digit ratio. These results add support for general effects for both digit ratio and handedness in elite handball; however, these factors seem inadequate to explain talent selection decisions at this level.

Notes: Baker, Joseph

Kungl, Ann-Marie

Pabst, Jan

Strauss, Bernd

Busch, Dirk

Schorer, Jorg

eng

England

2013/03/01 06:00

Laterality. 2013;18(6):710-8. doi: 10.1080/1357650X.2012.755992. Epub 2013 Feb 28.

URL: http://www.ncbi.nlm.nih.gov/pubmed/23444944

Author Address: a School of Kinesiology and Health Science York University , Toronto , Canada.

51. **Reference Type:** Journal Article

Record Number: 4240

Author: Pankhurst, A., Collins, D. and Macnamara, A.

Year: 2013

Title: Talent development: linking the stakeholders to the process

Journal: J Sports Sci

Volume: 31

Issue: 4

Pages: 370-80

Short Title: Talent development: linking the stakeholders to the process

Alternate Journal: Journal of sports sciences

ISSN: 1466-447X (Electronic)

0264-0414 (Linking)

DOI: 10.1080/02640414.2012.733821

Accession Number: 23088326

Keywords: Adult

*Aptitude

Athletes

*Athletic Performance

Child

Female

Humans

Male

*Motor Skills

*Organizations

*Parents

Perception

*Physical Education and Training

Research

Surveys and Questionnaires

*Tennis

Abstract: The three stakeholders (coaches, parents and the National Governing Body) in Talent Identification and Development (TID) are important factors in athlete development. How each of them perceive the key constructs of Talent Identification and Development (i.e. sport specialisation and selection, practice, athlete development, junior and adult success, and the role of the stakeholders), and the coherence of that understanding is not well understood. This study focuses on junior performance tennis and investigates the perceptions of coaches, parents and sports organisations (a National Governing Body) of the five key constructs of Talent Identification and Development. We were interested in examining (a) the extent to which stakeholder perceptions relate to research, (b) the coherence of each stakeholder's perceptions and (c) the extent to which there is coherence between what stakeholders understand each other thinks. Seventy-five coaches, parents, and National Governing Body staff completed a questionnaire that asked participants to rate their degree of agreement/disagreement with researched 'principles' of Talent Identification and Development. The results suggest that stakeholders do not strongly agree with the research supporting principles of Talent Identification and Development. Furthermore, a significant lack of coherence of stakeholder perceptions was evident. This lack of coherence was also evident in each group's understanding of what the other stakeholders believed. The impact of these results on the Talent Identification and Development process is discussed.

Notes: Pankhurst, Anne

Collins, Dave

Macnamara, Aine

eng

England

2012/10/24 06:00

J Sports Sci. 2013;31(4):370-80. doi: 10.1080/02640414.2012.733821. Epub 2012 Oct 23.

URL: http://www.ncbi.nlm.nih.gov/pubmed/23088326

Author Address: Institute of Coaching and Performance, University of Central Lancashire, Preston, UK. anne@annepankhurst.co.uk

52. **Reference Type:** Journal Article

Record Number: 4246

Author: Helsen, W. F., Baker, J., Michiels, S., Schorer, J., Van Winckel, J. and Williams, A. M.

Year: 2012

Title: The relative age effect in European professional soccer: did ten years of research make any difference?

Journal: J Sports Sci

Volume: 30

Issue: 15

Pages: 1665-71

Short Title: The relative age effect in European professional soccer: did ten years of research make any difference?

Alternate Journal: Journal of sports sciences

ISSN: 1466-447X (Electronic)

0264-0414 (Linking)

DOI: 10.1080/02640414.2012.721929

Accession Number: 23005576

Keywords: Adolescent

*Age Factors

*Aptitude

*Athletic Performance

Chi-Square Distribution

Child

Europe

Humans

*Soccer

Abstract: The relative age effect (RAE) refers to an asymmetry in the birth-date distribution favouring players born early in the selection year and discriminating against participants born later in the year. While the RAE effect was initially reported in sport more than two decades ago, there have been few attempts to examine whether player selection strategies have changed over time in light of our improved understanding of the phenomenon. We compared the birth-date distributions of professional soccer players in ten European countries over a 10-year period involving the 2000-2001 and 2010-2011 competitive seasons, respectively. Chi-square goodness-of-fit tests were used to compare differences between the observed and expected birth-date distributions across selection years. Generally, results indicated no change in the RAE over the past 10 years in professional soccer, emphasizing the robust nature of this phenomenon. We propose a change in the structure of youth involvement in soccer to reduce the impact of the RAE on talent identification and selection.

Notes: Helsen, Werner F

Baker, Joseph

Michiels, Stijn

Schorer, Joerg

Van Winckel, Jan

Williams, A Mark

eng

England

2012/09/26 06:00

J Sports Sci. 2012;30(15):1665-71. doi: 10.1080/02640414.2012.721929. Epub 2012 Sep 24.

URL: http://www.ncbi.nlm.nih.gov/pubmed/23005576

Author Address: Department of Biomedical Kinesiology, Katholieke Universiteit Leuven, Belgium. werner.helsen@faber.kuleuven.be

53. **Reference Type:** Journal Article

Record Number: 4247

Author: Mills, A., Butt, J., Maynard, I. and Harwood, C.

Year: 2012

Title: Identifying factors perceived to influence the development of elite youth football academy players

Journal: J Sports Sci

Volume: 30

Issue: 15

Pages: 1593-604

Short Title: Identifying factors perceived to influence the development of elite youth football academy players

Alternate Journal: Journal of sports sciences

ISSN: 1466-447X (Electronic)

0264-0414 (Linking)

DOI: 10.1080/02640414.2012.710753

Accession Number: 22888797

Keywords: Adaptation, Psychological

Adolescent

Adult

*Aptitude

*Athletic Performance/psychology

Attitude

*Awareness

Child

Competitive Behavior

Emotions

Football

Goals

Humans

Intelligence

Interviews as Topic

Middle Aged

*Physical Education and Training

*Soccer/psychology

Social Environment

Abstract: Based on the developmental theory presented by Gagne (2009), we examined the factors perceived to influence the development of elite youth football players at a critical stage in their progression to the professional level. Transcribed interviews with ten expert development coaches were inductively and deductively content analysed. Conceptualisation of the data revealed six interrelated higher-order categories that represented the factors perceived to either positively or negatively influence player development. These were: awareness (e.g. self-awareness, awareness of others); resilience (e.g. coping with setbacks, optimistic attitude); goal-directed attributes (e.g. passion, professional attitude); intelligence (e.g. sport intelligence, emotional competence); sport-specific attributes (e.g. coachability, competitiveness); and environmental factors (e.g. significant others, culture of game). In this investigation, awareness emerged as a fundamental and mediating element for understanding how young players are able to transition to the professional level. Collectively, the findings underline the multidimensional nature of talent development and suggest that an intricate combination of stage-specific factors must manifest for gifted young players to translate their potential into excellence. Mechanisms by which academies could be helped to shape the characteristics and conditions associated with effective development are discussed.

Notes: Mills, Andrew

Butt, Joanne

Maynard, Ian

Harwood, Chris

eng

England

2012/08/15 06:00

J Sports Sci. 2012;30(15):1593-604. doi: 10.1080/02640414.2012.710753. Epub 2012 Aug 13.

URL: http://www.ncbi.nlm.nih.gov/pubmed/22888797

Author Address: Centre for Sport and Exercise Science, Sheffield Hallam University, UK. a.mills@shu.ac.uk

54. **Reference Type:** Journal Article

Record Number: 4248

Author: Marosi, K., Horvath, E., Nagy, P., Koles, B. and Nagy, Z. B.

Year: 2012

Title: [Review of genetic research and testing in sport]

Journal: Orv Hetil

Volume: 153

Issue: 32

Pages: 1247-55

Date: Aug 12

Short Title: [Review of genetic research and testing in sport]

Alternate Journal: Orvosi hetilap

ISSN: 0030-6002 (Print)

0030-6002 (Linking)

DOI: 10.1556/OH.2012.29412

Original Publication: A sportgenetikai kutatasi eredmenyek attekintese es gyakorlati alkalmazasuk lehetosegei.

Accession Number: 22878034

Keywords: Actinin/genetics

*Athletes/education

Athletic Injuries/*genetics/*prevention & control

Choice Behavior/ethics

Death, Sudden, Cardiac/etiology/prevention & control

*Genetic Research

*Genetic Testing

Humans

Interdisciplinary Communication

Muscle Strength/genetics

Peptidyl-Dipeptidase A/genetics

Physical Education and Training/ethics/standards/trends

*Polymorphism, Genetic

Psychomotor Performance

*Sports

Tendon Injuries/genetics

Abstract: There is compelling evidence for a genetic contribution to physical performance. In addition, there is an advanced scientific knowledge on the predisposition to sports-related diseases and injuries. Genetic testing of performance related polymorphisms can serve as a new opportunity for developing the process of talent selection. Sport-related genetic information may also allow for individualization of the training and improve performance. Genetic testing may also play an important role in the pre-participation screening for injuries and disease risks.

Notes: Marosi, Krisztina

Horvath, Endre

Nagy, Peter

Koles, Bernadett

Nagy, Zsolt B

hun

English Abstract

Review

Hungary

2012/08/11 06:00

Orv Hetil. 2012 Aug 12;153(32):1247-55. doi: 10.1556/OH.2012.29412.

URL: http://www.ncbi.nlm.nih.gov/pubmed/22878034

Author Address: Semmelweis Egyetem, Testnevelesi es Sporttudomanyi Kar Sporttudomanyi Kutatointezet Budapest. marosi@tf.hu

55. **Reference Type:** Journal Article

Record Number: 4249

Author: Goncalves, C. Eb, Rama, L. Ml and Figueiredo, A. B.

Year: 2012

Title: Talent identification and specialization in sport: an overview of some unanswered questions

Journal: Int J Sports Physiol Perform

Volume: 7

Issue: 4

Pages: 390-3

Date: Dec

Short Title: Talent identification and specialization in sport: an overview of some unanswered questions

Alternate Journal: International journal of sports physiology and performance

ISSN: 1555-0265 (Print)

1555-0265 (Linking)

Accession Number: 22868280

Keywords: Adolescent

Adolescent Development

Age Factors

*Aptitude

*Athletes/psychology

*Athletic Performance

*Body Size

Child

Child Development

Female

Humans

Male

Models, Biological

Motivation

*Physical Education and Training/methods

Soccer

*Sports

Task Performance and Analysis

Abstract: The theory of deliberate practice postulates that experts are always made, not born. This theory translated to the youth-sport domain means that if athletes want to be high-level performers, they need to deliberately engage in practice during the specialization years, spending time wisely and always focusing on tasks that challenge current performance. Sport organizations in several countries around the world created specialized training centers where selected young talents practice under the supervision of experienced coaches in order to become professional athletes and integrate onto youth national teams. Early specialization and accurate observation by expert coaches or scouts remain the

only tools to find a potential excellent athlete among a great number of participants. In the current study, the authors present 2 of the problems raised by talent search and the risks of such a search. Growth and maturation are important concepts to better understand the identification, selection, and development processes of young athletes. However, the literature suggests that sport-promoting strategies are being maintained despite the increased demands in the anthropometric characteristics of professional players and demands of actual professional soccer competitions. On the other hand, identifying biological variables that can predict performance is almost impossible.

Notes: Goncalves C, E B

Rama L, M L

Figueiredo, Antonio B

eng

Review

2012/08/08 06:00

Int J Sports Physiol Perform. 2012 Dec;7(4):390-3. Epub 2012 Jul 31.

URL: http://www.ncbi.nlm.nih.gov/pubmed/22868280

Author Address: Faculty of Sport Sciences, University of Coimbra, Coimbra, Portugal.

56. **Reference Type:** Journal Article

Record Number: 4250

Author: Roth, S. M.

Year: 2012

Title: Critical overview of applications of genetic testing in sport talent identification

Journal: Recent Pat DNA Gene Seq

Volume: 6

Issue: 3

Pages: 247-55

Date: Dec

Short Title: Critical overview of applications of genetic testing in sport talent identification

Alternate Journal: Recent patents on DNA & gene sequences

ISSN: 2212-3431 (Electronic)

1872-2156 (Linking)

Accession Number: 22789017

Keywords: Actinin/genetics

Aptitude/*physiology

Athletes

Exercise/physiology

Genetic Markers

Genetic Predisposition to Disease

Genetic Testing/economics/ethics/*methods

Genetic Variation

Genome, Human

Humans

Muscle Strength/genetics

Patents as Topic

Physical Fitness

Quantitative Trait, Heritable

Sports/*physiology

Abstract: Talent identification for future sport performance is of paramount interest for many groups given the challenges of finding and costs of training potential elite athletes. Because genetic factors have been implicated in many performance- related traits (strength, endurance, etc.), a natural inclination is to consider the addition of genetic testing to talent identification programs. While the importance of genetic factors to sport performance is generally not disputed, whether genetic testing can positively inform talent identification is less certain. The present paper addresses the science behind the genetic tests that are now commercially available (some under patent protection) and aimed at predicting future sport performance potential. Also discussed are the challenging ethical issues that emerge from the availability of these tests. The potential negative consequences associated with genetic testing of young athletes will very likely outweigh any positive benefit for sport performance prediction at least for the next several years. The paper ends by exploring the future possibilities for genetic testing as the science of genomics in sport matures over the coming decade(s).

Notes: Roth, Stephen M

eng

United Arab Emirates

2012/07/14 06:00

Recent Pat DNA Gene Seq. 2012 Dec;6(3):247-55.

URL: http://www.ncbi.nlm.nih.gov/pubmed/22789017

Author Address: Department of Kinesiology, School of Public Health, University of Maryland, College Park, MD 20742, USA. sroth1@umd.edu

57. **Reference Type:** Journal Article

Record Number: 4252

Author: Vandorpe, B., Vandendriessche, J. B., Vaeyens, R., Pion, J., Lefevre, J., Philippaerts, R. M. and Lenoir, M.

Year: 2012

Title: The value of a non-sport-specific motor test battery in predicting performance in young female gymnasts

Journal: J Sports Sci

Volume: 30

Issue: 5

Pages: 497-505

Short Title: The value of a non-sport-specific motor test battery in predicting performance in young female gymnasts

Alternate Journal: Journal of sports sciences

ISSN: 1466-447X (Electronic)

0264-0414 (Linking)

DOI: 10.1080/02640414.2012.654399

Accession Number: 22263781

Keywords: Anthropometry

*Athletic Performance

Child

*Competitive Behavior

Female

*Gymnastics

Humans

*Motor Skills

Physical Examination/*methods

*Physical Fitness

Abstract: Gymnastics talent identification focuses on the identification of young gymnasts who display characteristics for potential success in the future. The aim of this study was to identify which current performance characteristics are related to performance in competition 2 years later. Twenty-three female gymnasts aged 7-8 years completed a multidimensional test battery measuring anthropometric, physical, and coordinative characteristics and were technically evaluated by expert coaches. Two years later, the all-around competition results of those gymnasts now participating in elite (n = 12) and sub-elite (n = 11) competition were obtained. None of the initial measurements significantly correlated with the results of the sub-elite gymnasts 2 years later. For the elite gymnasts, a non-sport-specific motor test battery correlated strongly with the competition result, with more than 40% of the variation in competition performance being explained by the result on that test 2 years earlier. Neither the coaches' judgement nor the anthropometric and physical characteristics were sensitive enough to predict performance. A motor coordination test might be valuable in the early

identification of gymnasts, as its discriminative and predictive qualities might be sufficiently powerful for selection within a relatively homogeneous population of gymnasts exhibiting similar anthropometric and physical profiles.

Notes: Vandorpe, Barbara

Vandendriessche, Joric B

Vaeyens, Roel

Pion, Johan

Lefevre, Johan

Philippaerts, Renaat M

Lenoir, Matthieu

eng

Evaluation Studies

Research Support, Non-U.S. Gov't

England

2012/01/24 06:00

J Sports Sci. 2012;30(5):497-505. doi: 10.1080/02640414.2012.654399. Epub 2012 Jan 23.

URL: http://www.ncbi.nlm.nih.gov/pubmed/22263781

Author Address: Department of Movement and Sport Sciences, Faculty of Medicine and Health Sciences, Ghent University, Ghent, Belgium.

58. **Reference Type:** Journal Article

Record Number: 4254

Author: Koz, D., Fraser-Thomas, J. and Baker, J.

Year: 2012

Title: Accuracy of professional sports drafts in predicting career potential

Journal: Scand J Med Sci Sports

Volume: 22

Issue: 4

Pages: e64-9

Date: Aug

Short Title: Accuracy of professional sports drafts in predicting career potential

Alternate Journal: Scandinavian journal of medicine & science in sports

ISSN: 1600-0838 (Electronic)

0905-7188 (Linking)

DOI: 10.1111/j.1600-0838.2011.01408.x

Accession Number: 22092367

Keywords: Athletic Performance/*statistics & numerical data

Baseball

Basketball

Football

Forecasting

Hockey

Humans

Male

Personnel Selection/*statistics & numerical data

Sports/*statistics & numerical data

Abstract: The forecasting of talented players is a crucial aspect of building a successful sports franchise and professional sports invest significant resources in making player choices in sport drafts. The current study examined the relationship between career performance (i.e. games played) and draft round for the National Football League, National Hockey League, National Basketball League, and Major League Baseball for players drafted from 1980 to 1989 (n = 4874) against the assumption of a linear relationship between performance and draft round (i.e. that players with the most potential will be selected before players of lower potential). A two-step analysis revealed significant differences in games played across draft rounds (step 1) and a significant negative relationship between draft round and games played (step 2); however, the amount of variance accounted for was relatively low (less than 17%). Results highlight the challenges of accurately evaluating amateur talent.

Notes: Koz, D

Fraser-Thomas, J

Baker, J

eng

Denmark

2011/11/19 06:00

Scand J Med Sci Sports. 2012 Aug;22(4):e64-9. doi: 10.1111/j.1600-0838.2011.01408.x. Epub 2011 Nov 3.

URL: http://www.ncbi.nlm.nih.gov/pubmed/22092367

Author Address: School of Kinesiology and Health Science, York University, Toronto, Canada.

59. **Reference Type:** Journal Article

Record Number: 4625

Author: O'Reilly, J. and Wong, S. H.

Year: 2012

Title: The development of aerobic and skill assessment in soccer

Journal: Sports Med

Volume: 42

Issue: 12

Pages: 1029-40

Date: Dec 01

Short Title: The development of aerobic and skill assessment in soccer

Alternate Journal: Sports medicine

ISSN: 1179-2035 (Electronic)

0112-1642 (Linking)

DOI: 10.2165/11635120-000000000-00000

Accession Number: 23046223

Keywords: Humans

Physical Endurance

Physical Fitness

Soccer/*physiology

Abstract: Methods of assessing soccer players' performance have developed significantly in recent times. The fitness profiles and skill levels of a prospective elite soccer player is a valuable resource for coaches in the process of identifying talent. Traditional means to measure aerobic fitness have centred on the 'aerobic capacity' or '&OV0312;O(2max)' test (also known as the maximal oxygen consumption test) but, over time, this has been shown not to be a sensitive measure for specific aspects of soccer in a match situation. Therefore, numerous soccer-specific simulations have been designed to re-create exercise patterns similar to those experienced during a match. Some of these studies have yet to be validated, while others have been shown to result in a similar physiological load to that encountered during regular match play. Further developments have led to specifically designed intermittent sprint tests, which are used as a sensitive tool to accurately measure the fluctuations in players' ability both between and within soccer seasons. Testing procedures have also been developed that incorporate elements of both skill and physical ability. Soccer-specific field tests have been designed, incorporating skill and dynamic movements, and this opens up the possibility of teams testing the aerobic capacity of their elite players using soccer-specific movements. Valid studies assessing soccer-specific skills in an ecologically sound environment have been quite rare until recently. Some test protocols have been deemed largely irrelevant to soccer match play, while others have had limited impact on scientific literature. More recently, skill tests have been developed and shown to be valid and reliable methods of assessing soccer skill performance. Many new skill tests continue to be developed, and some have been shown to be highly reliable, but further study of these relatively novel concepts is required before a more solid recommendation can be made. Overall, while significant work has been completed to date, there is still a need for further focused investigations,

which can more closely assess the physiological demands of an elite soccer player, with a particular emphasis on sport-specific exercises during the execution of soccer skills. In this regard, more reliable and specific performance tests can be designed to more efficiently assess soccer players in the future.

Notes: O'Reilly, John

Wong, Stephen H S

eng

Review

New Zealand

Auckland, N.Z.

2012/10/11 06:00

Sports Med. 2012 Dec 1;42(12):1029-40. doi: 10.2165/11635120-000000000-00000.

URL: http://www.ncbi.nlm.nih.gov/pubmed/23046223

Author Address: Department of Sports Science and Physical Education, The Chinese University of Hong Kong, Hong Kong, China.

60. **Reference Type:** Journal Article

Record Number: 4257

Author: Ibrahim, H., Heard, N. P. and Blanksby, B.

Year: 2011

Title: Exploring the general motor ability construct

Journal: Percept Mot Skills

Volume: 113

Issue: 2

Pages: 491-508

Date: Oct

Short Title: Exploring the general motor ability construct

Alternate Journal: Perceptual and motor skills

ISSN: 0031-5125 (Print)

0031-5125 (Linking)

DOI: 10.2466/03.06.19.25.PMS.113.5.491-508

Accession Number: 22185064

Keywords: Adolescent

*Aptitude

Child

Cross-Cultural Comparison

Female

Humans

Kinesthesis

Malaysia

Male

*Motor Skills

*Postural Balance

*Psychomotor Performance

Sex Factors

Sports/*psychology

Abstract: Malaysian students ages 12 to 15 years (N = 330; 165 girls, 165 boys) took the Australian Institute of Sport Talent Identification Test (AIST) and the Balance and Movement Coordination Test (BMC), developed specifically to identify sport talent in Malaysian adolescents. To investigate evidence for general aptitude ("g") in motor ability, a higher-order factor analysis was applied to the motor skills subtests from the AIST and BMC. First-order principal components analysis indicated that scores for the adolescent boys and girls could be described by similar sets of specific motor abilities. In particular, sets of skills identified as Movement Coordination and Postural Control were found, with Balancing Ability also emerging. For the girls, a factor labeled Static Balance was indicated. However, for the boys a more general balance ability labeled Kinesthetic Integration was found, along with an ability labeled Explosive Power. These first-order analyses accounted for 45% to 60% of the variance in the scores on the motor skills tests for the boys and girls, respectively. Separate second-order factor analyses for the boys and girls extracted a single higher-order factor, which was consistent with the existence of a motoric "g".

Notes: Ibrahim, Halijah

Heard, N Paul

Blanksby, Brian

eng

Comparative Study

2011/12/22 06:00

Percept Mot Skills. 2011 Oct;113(2):491-508.

URL: http://www.ncbi.nlm.nih.gov/pubmed/22185064

Author Address: Fakulti Pendidikan, Universiti Teknologi Malaysia, Skudai. p-halija@utm.my

61. **Reference Type:** Journal Article

Record Number: 4258

Author: Kannekens, R., Elferink-Gemser, M. T. and Visscher, C.

Year: 2011

Title: Positioning and deciding: key factors for talent development in soccer

Journal: Scand J Med Sci Sports

Volume: 21

Issue: 6

Pages: 846-52

Date: Dec

Short Title: Positioning and deciding: key factors for talent development in soccer

Alternate Journal: Scandinavian journal of medicine & science in sports

ISSN: 1600-0838 (Electronic)

0905-7188 (Linking)

DOI: 10.1111/j.1600-0838.2010.01104.x

Accession Number: 22126715

Keywords: Adolescent

Athletic Performance/*standards

Humans

Logistic Models

Netherlands

*Soccer

Abstract: Talent identification and development implicate recognizing youth players who will be successful in the future and guiding them to the top. A major determinant of this success is tactical skills. To identify possible key factors that help in predicting success over time, this study assesses the tactical skills of 105 elite youth soccer players who participated in a talent development program at an earlier stage of their sport career (mean age 17.8+/-0.9). These skills were related to their adult performance level, specifically whether they became professionals (n=52) or amateurs (n=53). Defenders, midfielders and attackers completed the Tactical Skills Inventory for Sports with scales for declarative and procedural knowledge in either attacking or defensive situations. A logistic regression analysis was performed to identify the tactical skills that contribute to professional performance level in adulthood. Positioning and deciding appeared to be the tactical skill that best predicts adult performance level ($P<0.05$). This is especially true for midfielders, with the correct classification of elite youth players in the range of 80%. For players scoring high on this skill, the odds ratios indicated a 6.60 times greater chance that a player became a professional than players scoring low ($P<0.05$).

Notes: Kannekens, R

Elferink-Gemser, M T

Visscher, C

eng

Denmark

2011/12/01 06:00

Scand J Med Sci Sports. 2011 Dec;21(6):846-52. doi: 10.1111/j.1600-0838.2010.01104.x. Epub 2010 Mar 11.

URL: http://www.ncbi.nlm.nih.gov/pubmed/22126715

Author Address: University Medical Center Groningen, University of Groningen, Groningen, The Netherlands. r.kannekens@med.umcg.nl

62. **Reference Type:** Journal Article

Record Number: 4261

Author: Macnamara, A. and Collins, D.

Year: 2011

Title: Development and initial validation of the Psychological Characteristics of Developing Excellence Questionnaire

Journal: J Sports Sci

Volume: 29

Issue: 12

Pages: 1273-86

Date: Sep

Short Title: Development and initial validation of the Psychological Characteristics of Developing Excellence Questionnaire

Alternate Journal: Journal of sports sciences

ISSN: 1466-447X (Electronic)

0264-0414 (Linking)

DOI: 10.1080/02640414.2011.589468

Accession Number: 21812724

Keywords: Adolescent

Adult

*Aptitude

Athletes/*psychology

Character

Factor Analysis, Statistical

Female

Humans

Interviews as Topic

Male

Pilot Projects

Reproducibility of Results

Sports/*psychology

*Surveys and Questionnaires

Young Adult

Abstract: The development of talent is a complex process mediated by a host of psychological, social, physical, and environmental variables. Unfortunately, the multiple processes involved in talent development are frequently ignored by the systems and protocols employed in sport. Modern approaches to talent development are beginning to stress the initial possession, then subsequent development, of generic psychological characteristics (e.g. psychological characteristics of developing excellence; MacNamara, Button, & Collins, 2010a , 2010b) as the best way to realize latent potential. Accordingly, this paper describes the development and initial validation of the Psychological Characteristics of Developing Excellence Questionnaire (PCDEQ). In the first phase, an initial list of 160 items was developed. A combination of expert panel reviews, cognitive interviews, and a pilot test was used to assess the relevance, representativeness, and validity of each item. Ninety-six items were retained following these steps. Exploratory factor analysis, with a sample of 363 athletes, revealed an interpretable 59-item, 6-factor solution with good internal consistency (0.870, 0.866, 0.847, 0.741, 0.749, and 0.701 respectively). The Psychological Characteristics of Developing Excellence Questionnaire would appear to hold promise as a useful tool to provide coaches and athletes with information about the psychological characteristics of developing excellence that are being properly addressed or neglected during different stages of development or in different contexts.

Notes: Macnamara, Aine

Collins, Dave

eng

Validation Studies

England

2011/08/05 06:00

J Sports Sci. 2011 Sep;29(12):1273-86. doi: 10.1080/02640414.2011.589468. Epub 2011 Aug 4.

URL: http://www.ncbi.nlm.nih.gov/pubmed/21812724

Author Address: Institute for Coaching and Performance, University of Central Lancashire, Preston, UK. amacnamara1@uclan.ac.uk

63. **Reference Type:** Journal Article

Record Number: 4262

Author: Collins, D. and MacNamara, A.

Year: 2011

Title: Comments on 'expert performance in sport and the dynamics of talent development'

Journal: Sports Med

Volume: 41

Issue: 7

Pages: 609-10; author response 610-1

Date: Jul 01

Short Title: Comments on 'expert performance in sport and the dynamics of talent development'

Alternate Journal: Sports medicine

ISSN: 1179-2035 (Electronic)

0112-1642 (Linking)

DOI: 10.2165/11593020-000000000-00000

Accession Number: 21688871

Keywords: Aptitude/*physiology

*Athletic Performance

Humans

Psychomotor Performance/*physiology

Notes: Collins, Dave

MacNamara, Aine

eng

Comment

Letter

New Zealand

Auckland, N.Z.

2011/06/22 06:00

Sports Med. 2011 Jul 1;41(7):609-10; author response 610-1. doi: 10.2165/11593020-000000000-00000.

URL: http://www.ncbi.nlm.nih.gov/pubmed/21688871

64. **Reference Type:** Journal Article

Record Number: 4265

Author: Armstrong, N. and McManus, A. M.

Year: 2011

Title: Physiology of elite young male athletes

Journal: Med Sport Sci

Volume: 56

Pages: 1-22

Short Title: Physiology of elite young male athletes

Alternate Journal: Medicine and sport science

ISSN: 0254-5020 (Print)

0076-6070 (Linking)

DOI: 10.1159/000320618

Accession Number: 21178364

Keywords: Adolescent

Athletic Performance/*physiology

Body Composition

Body Size

Child

Energy Metabolism/physiology

Exercise/*physiology

Humans

Lactates/blood

Male

Muscle Fatigue/physiology

Muscle Strength/physiology

Oxygen Consumption/physiology

Physical Fitness/physiology

Recovery of Function

Abstract: Performance in sport takes place within a matrix of bio-cultural characteristics but boys' success in elite youth sport is underpinned by a range of age-and maturity-related physical and physiological variables which act in a sport-specific manner to influence performance. Stature, body mass, and muscle mass increase with growth and maturation and earlier maturing boys are generally

taller, heavier, and more muscular than boys of the same chronological age who mature later. Earlier maturing boys also benefit from changes in body shape which are advantageous in many sports. Marked increases in muscle strength and muscle power are expressed during adolescence. The muscle enzyme profile needed to promote the anaerobic generation of energy is enhanced as children move through adolescence into young adulthood. Aerobic fitness benefits from age and/or maturation-related increases in stroke volume, haemoglobin concentration, and muscle mass. These individual differences are most pronounced at 12-15 years when participation in elite youth sport is at its peak. Many boys fulfil their potential, gain great pleasure from elite youth sport and become elite adult sportsmen. Other equally talented boys are denied access to elite youth sport through selection policies which are influenced by stage of maturation or age relative to the beginning of the selection year. Others drop-out prematurely through early specialisation in a sport inappropriate for their late adolescent or adult physique. Boys are not mini-men and coaches and parents should focus on providing opportunities for all boys and on nurturing talent irrespective of the ticking of individual biological clocks.

Notes: Armstrong, Neil

McManus, Alison M

eng

Review

Switzerland

2010/12/24 06:00

Med Sport Sci. 2011;56:1-22. doi: 10.1159/000320618. Epub 2010 Dec 21.

URL: http://www.ncbi.nlm.nih.gov/pubmed/21178364

Author Address: Children's Health and Exercise Research Centre, University of Exeter, Exeter, UK. N.Armstrong@exeter.ac.uk

65. **Reference Type:** Journal Article

Record Number: 4785

Author: Fukuda, D. H., Kendall, K. L., Smith, A. E., Dwyer, T. R. and Stout, J. R.

Year: 2011

Title: The development of physiological profiles and identification of training needs in NCAA female collegiate rowers using isoperformance curves

Journal: Eur J Appl Physiol

Volume: 111

Issue: 4

Pages: 679-85

Date: Apr

Short Title: The development of physiological profiles and identification of training needs in NCAA female collegiate rowers using isoperformance curves

Alternate Journal: European journal of applied physiology

ISSN: 1439-6327 (Electronic)

1439-6319 (Linking)

DOI: 10.1007/s00421-010-1683-4

Accession Number: 20963438

Keywords: Adolescent

*Athletes

Athletic Performance/*physiology

Female

Health Services Needs and Demand

Humans

*Learning Curve

Linear Models

Physical Education and Training/*methods

*Sports

Young Adult

Abstract: The purpose of this study was to propose a systematic method for the identification of training strategies and team selection using isoperformance curves. Rowing is a sport that relies on both aerobic and anaerobic energy contributions during a standard 2,000 m competition. The critical velocity model combines both aerobic (critical velocity, CV) and anaerobic (anaerobic rowing capacity, ARC) parameters in a single two-dimensional graphic display. The concept of isoperformance curves, a series of linear equations corresponding to minimum performance standards, allows for an objective overview of a large group of athletes of varying talent. The purpose of this study was to develop physiological profiles from the CV test, and to evaluate results with isoperformance curves to identify training strategies for collegiate rowers. Thirty-five female collegiate rowers completed four time trials over various distances (400, 600, 800, and 1,000 m). CV and ARC were calculated and compared between novice and varsity athletes. CV values for the varsity group were significantly higher than the novice group (P = 0.016). No significant differences were found between groups for ARC (P = 0.068). Mean and individual CV and ARC values were plotted on the x- and y-axes, respectively, and junior, collegiate, and elite isoperformance curves were developed using 2,000 m times from recent indoor rowing competitions. Stratification of athletes through isoperformance curves was used to identify specific training interventions (anaerobic and/or aerobic) needed to improve their 2,000 m performance. The information drawn from isoperformance curves and the parameters of the CV test can be used to provide an objective view of physiological capabilities and training needs on both an individual and team basis.

Notes: Fukuda, David H

Kendall, Kristina L

Smith, Abbie E

Dwyer, Teddi R

Stout, Jeffrey R

eng

Comparative Study

Evaluation Studies

Germany

2010/10/22 06:00

Eur J Appl Physiol. 2011 Apr;111(4):679-85. doi: 10.1007/s00421-010-1683-4. Epub 2010 Oct 21.

URL: http://www.ncbi.nlm.nih.gov/pubmed/20963438

Author Address: Metabolic and Body Composition Lab, Department of Health and Exercise Science, Huston Huffman Center, University of Oklahoma, 1401 Asp Avenue, Norman, OK 73019, USA.

66. **Reference Type:** Journal Article

Record Number: 4270

Author: Martindale, R. J., Collins, D., Wang, J. C., McNeill, M., Lee, K. S., Sproule, J. and Westbury, T.

Year: 2010

Title: Development of the talent development environment questionnaire for sport

Journal: J Sports Sci

Volume: 28

Issue: 11

Pages: 1209-21

Date: Sep

Short Title: Development of the talent development environment questionnaire for sport

Alternate Journal: Journal of sports sciences

ISSN: 1466-447X (Electronic)

0264-0414 (Linking)

DOI: 10.1080/02640414.2010.495993

Accession Number: 20694933

Keywords: Adolescent

Adult

*Aptitude

*Athletes

Female

Humans

Male

*Sports

*Surveys and Questionnaires

Young Adult

Abstract: As sporting challenge at the elite level becomes ever harder, maximizing effectiveness of the talent development pathway is crucial. Reflecting this need, this paper describes the development of the Talent Development Environment Questionnaire, which has been designed to facilitate the development of sporting potential to world-class standard. The questionnaire measures the experiences of developing athletes in relation to empirically identified "key features" of effective talent development environments. The first phase involved the generation of questionnaire items with clear content and face validity. The second phase explored the factor structure and reliability. This was carried out with 590 developing athletes through application of exploratory factor analysis with oblique rotation, principal axis factoring extraction and cronbach alpha tests. This yielded a 59-item, seven-factor structure with good internal consistency (0.616-0.978). The Talent Development Environment Questionnaire appears to be a promising psychometric instrument that can potentially be useful for education and formative review in applied settings, and as a measurement tool in talent development research.

Notes: Martindale, Russell J J

Collins, Dave

Wang, John C K

McNeill, Michael

Lee, Kok Sonk

Sproule, John

Westbury, Tony

eng

England

2010/08/10 06:00

J Sports Sci. 2010 Sep;28(11):1209-21. doi: 10.1080/02640414.2010.495993.

URL: http://www.ncbi.nlm.nih.gov/pubmed/20694933

Author Address: School of Life Sciences, Edinburgh Napier University, Edinburgh, UK. r.martindale@napier.ac.uk

67. **Reference Type:** Journal Article

Record Number: 4271

Author: Jonker, L., Elferink-Gemser, M. T. and Visscher, C.

Year: 2010

Title: Differences in self-regulatory skills among talented athletes: the significance of competitive level and type of sport

Journal: J Sports Sci

Volume: 28

Issue: 8

Pages: 901-8

Date: Jun

Short Title: Differences in self-regulatory skills among talented athletes: the significance of competitive level and type of sport

Alternate Journal: Journal of sports sciences

ISSN: 1466-447X (Electronic)

0264-0414 (Linking)

DOI: 10.1080/02640411003797157

Accession Number: 20544490

Keywords: Adolescent

*Aptitude

Athletes/*psychology

Child

*Competitive Behavior

Female

Humans

Male

*Mental Processes

Multivariate Analysis

*Social Control, Informal

Sports/*psychology

Abstract: Research has shown that talented athletes outscore their mainstream peers on the basis of self-regulation. Although valuable, this does not tell us more about the distinction between good athletes and the best, which is a prerequisite in talent development. Therefore, we examined the self-regulatory skills of 222 male and female talented athletes aged 12-16 years as a function of competitive sport level (junior international or junior national athletes) and type of sport (individual or team sports). Multivariate analyses of covariance in combination with a discriminant function analysis revealed that "reflection" distinguishes between athletes at the highest levels of excellence. Furthermore, athletes playing individual sports had higher scores on "planning" and "effort" than team sport athletes, highlighting the importance of differences between types of sport. In conclusion,

we emphasize the importance of reflection as a self-regulatory skill. Reflection facilitates the development of sport-specific characteristics, which may vary by type of sport. This means that an advanced sense of reflection may help talented athletes to acquire desirable characteristics during their "talent" years to ultimately reach adult elite levels of competition.

Notes: Jonker, Laura

Elferink-Gemser, Marije T

Visscher, Chris

eng

Research Support, Non-U.S. Gov't

England

2010/06/15 06:00

J Sports Sci. 2010 Jun;28(8):901-8. doi: 10.1080/02640411003797157.

URL: http://www.ncbi.nlm.nih.gov/pubmed/20544490

Author Address: Center for Human Movement Sciences, University Medical Center Groningen, University of Groningen, Groningen, The Netherlands. l.jonker@med.umcg.nl

68. **Reference Type:** Journal Article

Record Number: 4273

Author: Phillips, E., Davids, K., Renshaw, I. and Portus, M.

Year: 2010

Title: Expert performance in sport and the dynamics of talent development

Journal: Sports Med

Volume: 40

Issue: 4

Pages: 271-83

Date: Apr 01

Short Title: Expert performance in sport and the dynamics of talent development

Alternate Journal: Sports medicine

ISSN: 1179-2035 (Electronic)

0112-1642 (Linking)

DOI: 10.2165/11319430-000000000-00000

Accession Number: 20364873

Keywords: Aptitude/*physiology

*Athletic Performance

Humans

Psychomotor Performance/*physiology

Abstract: Research on expertise, talent identification and development has tended to be mono-disciplinary, typically adopting genocentric or environmentalist positions, with an overriding focus on operational issues. In this paper, the validity of dualist positions on sport expertise is evaluated. It is argued that, to advance understanding of expertise and talent development, a shift towards a multidisciplinary and integrative science focus is necessary, along with the development of a comprehensive multidisciplinary theoretical rationale. Here we elucidate dynamical systems theory as a multidisciplinary theoretical rationale for capturing how multiple interacting constraints can shape the development of expert performers. This approach suggests that talent development programmes should eschew the notion of common optimal performance models, emphasize the individual nature of pathways to expertise, and identify the range of interacting constraints that impinge on performance potential of individual athletes, rather than evaluating current performance on physical tests referenced to group norms.

Notes: Phillips, Elissa

Davids, Keith

Renshaw, Ian

Portus, Marc

eng

Editorial

New Zealand

Auckland, N.Z.

2010/04/07 06:00

Sports Med. 2010 Apr 1;40(4):271-83. doi: 10.2165/11319430-000000000-00000.

URL: http://www.ncbi.nlm.nih.gov/pubmed/20364873

Author Address: Biomechanics and Performance Analysis, Australian Institute of Sport, Canberra, Australian Capital Territory, Australia. elissa.phillips@ausport.gov.au

69. **Reference Type:** Journal Article

Record Number: 4274

Author: Burgess, D. J. and Naughton, G. A.

Year: 2010

Title: Talent development in adolescent team sports: a review

Journal: Int J Sports Physiol Perform

Volume: 5

Issue: 1

Pages: 103-16

Date: Mar

Short Title: Talent development in adolescent team sports: a review

Alternate Journal: International journal of sports physiology and performance

ISSN: 1555-0265 (Print)

1555-0265 (Linking)

Accession Number: 20308701

Keywords: Achievement

Adolescent

Adolescent Development/*physiology

Age Factors

Athletic Performance/*physiology

Competitive Behavior

Cooperative Behavior

Humans

*Interpersonal Relations

Models, Educational

Models, Psychological

Motor Skills/*physiology

Sports/*physiology

Task Performance and Analysis

Abstract: Traditional talent development pathways for adolescents in team sports follow talent identification procedures based on subjective games ratings and isolated athletic assessment. Most talent development models are exclusive rather than inclusive in nature. Subsequently, talent identification may result in discontentment, premature stratification, or dropout from team sports. Understanding the multidimensional differences among the requirements of adolescent and elite adult athletes could provide more realistic goals for potential talented players. Coach education should include adolescent development, and rewards for team success at the adolescent level should reflect the needs of long-term player development. Effective talent development needs to incorporate physical and psychological maturity, the relative age effect, objective measures of game sense, and athletic prowess. The influences of media and culture on the individual, and the competing time demands between various competitions for player training time should be monitored and mediated where appropriate. Despite the complexity, talent development is a worthy investment in professional team sport.

Notes: Burgess, Darren J

Naughton, Geraldine A

eng

Review

2010/03/24 06:00

Int J Sports Physiol Perform. 2010 Mar;5(1):103-16.

URL: http://www.ncbi.nlm.nih.gov/pubmed/20308701

Author Address: Australian Catholic University, Faculty of the Health Sciences, North Sydney, Australia.

70. **Reference Type:** Journal Article

Record Number: 4973

Author: Castagna, C., Manzi, V., Impellizzeri, F., Weston, M. and Barbero Alvarez, J. C.

Year: 2010

Title: Relationship between endurance field tests and match performance in young soccer players

Journal: J Strength Cond Res

Volume: 24

Issue: 12

Pages: 3227-33

Date: Dec

Short Title: Relationship between endurance field tests and match performance in young soccer players

Alternate Journal: Journal of strength and conditioning research

ISSN: 1533-4287 (Electronic)

1064-8011 (Linking)

DOI: 10.1519/JSC.0b013e3181e72709

Accession Number: 21068683

Keywords: Adolescent

*Athletic Performance

Confidence Intervals

Exercise Test

Heart Rate/physiology

Humans

Male

Physical Endurance/*physiology

Physical Fitness/physiology

Recovery of Function

Soccer/*physiology

Telemetry

Abstract: The purpose of this study was to examine the relationship between popular endurance field tests and physical match performance in elite male youth soccer players. Eighteen young male soccer players (age 14.4 +/- 0.1 years, height 1.67 +/- 4.8 cm, body mass 53.6 +/- 1.8 kg) were randomly chosen among a population of elite-level soccer players. Players were observed during international championship games of the corresponding age categories and randomly submitted to the level 1 of the Yo-Yo intermittent recovery test (Yo-Yo IR1), the Multistage Fitness Test (MSFT), and the Hoff test on separate occasions. Physical and physiological match demands were assessed using Global Positioning System technology and short-range telemetry (GPS Elite, Canberra, Australia), respectively. Players covered 6,087 +/- 582 m (5,098-7,019 m) of which 15% (930 +/- 362 m; 442-1,513) were performed as a high-intensity activity. During the first and second halves, players attained 86.8 +/- 6.5 and 85.8 +/- 5.8% of maximum heart rate (HRmax; $p = 0.17$) with peak HRs of 100 +/- 2 and 99.4 +/- 3.2% of HRmax, respectively. Players' Yo-Yo IR1 and MSFT performance were significantly related ($r = 0.62$-0.76) to a number of match physical activities. However, the Hoff test was only significantly related with sprint distance ($r = 0.70$, $p = 0.04$). The Yo-Yo IR1 showed a very large association with MSFT performance ($r = 0.89$, $p < 0.0001$). The results of this study showed that the Yo-Yo IR1 and MSFT may be regarded as valuable tests to assess match fitness and subsequently guide training prescription in youth soccer players. The very strong relationship between Yo-Yo IR1 and MSFT suggests their use according to the period of the season and the aerobic fitness level of the players. Because of the association of the Yo-Yo IR1 and MSFT with match physical performances, these tests should be considered in talent selection and development of players.

Notes: Castagna, Carlo

Manzi, Vincenzo

Impellizzeri, Franco

Weston, Matthew

Barbero Alvarez, Jose C

eng

Research Support, Non-U.S. Gov't

2010/11/12 06:00

J Strength Cond Res. 2010 Dec;24(12):3227-33. doi: 10.1519/JSC.0b013e3181e72709.

URL: http://www.ncbi.nlm.nih.gov/pubmed/21068683

Author Address: San Marino Football Federation (FSGC), Department of Research, San Marino. castagnac@libero.it

71. **Reference Type:** Journal Article

Record Number: 4276

Author: Vaeyens, R., Gullich, A., Warr, C. R. and Philippaerts, R.

Year: 2009

Title: Talent identification and promotion programmes of Olympic athletes

Journal: J Sports Sci

Volume: 27

Issue: 13

Pages: 1367-80

Date: Nov

Short Title: Talent identification and promotion programmes of Olympic athletes

Alternate Journal: Journal of sports sciences

ISSN: 1466-447X (Electronic)

0264-0414 (Linking)

DOI: 10.1080/02640410903110974

Accession Number: 19787538

Keywords: Adolescent

Age Factors

*Aptitude

*Athletes

*Athletic Performance

Child

Humans

Sports/*education

Teaching

Abstract: The start of a new Olympic cycle offers a fresh chance for individuals and nations to excel at the highest level in sport. Most countries attempt to develop systematic structures to identify gifted athletes and to promote their development in a certain sport. However, forecasting years in advance the next generation of sporting experts and stimulating their development remains problematic. In this article, we discuss issues related to the identification and preparation of Olympic athletes. We provide field-based data suggesting that an earlier onset and a higher volume of discipline-specific training and competition, and an extended involvement in institutional talent promotion programmes, during adolescence need not necessarily be associated with greater success in senior international elite sport. Next, we consider some of the promising methods that have been (recently) presented in the literature and applied in the field. Finally, implications for talent identification and promotion and directions for future research are highlighted.

Notes: Vaeyens, Roel

Gullich, Arne

Warr, Chelsea R

Philippaerts, Renaat

eng

England

2009/09/30 06:00

J Sports Sci. 2009 Nov;27(13):1367-80. doi: 10.1080/02640410903110974.

URL: http://www.ncbi.nlm.nih.gov/pubmed/19787538

Author Address: Department of Movement and Sports Sciences, Faculty of Medicine and Health Sciences, Ghent University, B-9000 Ghent, Belgium. roel.vaeyens@ugent.be

72. **Reference Type:** Journal Article

Record Number: 4277

Author: Trent, R. J. and Yu, B.

Year: 2009

Title: The future of genetic research in exercise science and sports medicine

Journal: Med Sport Sci

Volume: 54

Pages: 187-95

Short Title: The future of genetic research in exercise science and sports medicine

Alternate Journal: Medicine and sport science

ISSN: 0254-5020 (Print)

0076-6070 (Linking)

DOI: 10.1159/000235705

Accession Number: 19696516

Keywords: Athletic Injuries/genetics/prevention & control

Athletic Performance

Death, Sudden, Cardiac/prevention & control

Doping in Sports

*Exercise

Forecasting

*Genetic Research

Genetic Testing/ethics/legislation & jurisprudence

Genomics

Humans

*Sports Medicine

Abstract: BACKGROUND/AIMS: Genetic research is used to identify the relative contributions made by inherent abilities (nature) versus environmental effects (nurture) in human performance. The same approach allows a better understanding of how injuries or illnesses can result from sport or physical activity. Having identified the genes involved in athletic performance, there are the intriguing possibilities of using this information for talent search, developing individualized training programs and prevention of sports-related injuries. METHODS: There are many interacting genes involved in athletic performance. This class of genes is often described as 'complex' and the mode of inheritance is called 'multifactorial'. Discovery of these genes is difficult using the conventional case control (association) studies. Recent genomic-based developments allowing high throughput SNP analysis are very promising. Potentially more exciting is the availability in the near future of cheaper and faster whole-genome sequencing technologies. RESULTS: Genetic research in exercise science has produced a lot of data including the ability to draw a human exercise gene map. However, progress at the genetic level has been slow because gene-based association studies are not powerful enough to detect multiple small but cumulative gene effects. In future, the more efficient genomic-based research approaches will accelerate the finding of 'sports genes'. Data generated will be enormous, making it essential to have a direct link between the laboratory researcher and bioinformatics expertise. CONCLUSION: Genetics research has moved to the genomics era, i.e. the simultaneous testing of multiple genes is now possible.

Notes: Trent, Ronald J

Yu, Bing

eng

Switzerland

2009/08/22 09:00

Med Sport Sci. 2009;54:187-95. doi: 10.1159/000235705. Epub 2009 Aug 17.

URL: http://www.ncbi.nlm.nih.gov/pubmed/19696516

Author Address: Central Clinical School, University of Sydney, and Department of Molecular and Clinical Genetics, Royal Prince Alfred Hospital, Camperdown, NSW, Australia. rtrent@med.usyd.edu.au

73. **Reference Type:** Journal Article

Record Number: 4280

Author: Rogulj, N., Papic, V. and Cavala, M.

Year: 2009

Title: Evaluation models of some morphological characteristics for talent scouting in sport

Journal: Coll Antropol

Volume: 33

Issue: 1

Pages: 105-10

Date: Mar

Short Title: Evaluation models of some morphological characteristics for talent scouting in sport

Alternate Journal: Collegium antropologicum

ISSN: 0350-6134 (Print)

0350-6134 (Linking)

Accession Number: 19408612

Keywords: *Aptitude

Body Mass Index

*Expert Systems

*Fuzzy Logic

Humans

Personnel Selection

*Sports

Abstract: In this paper, for the purpose of expert system evaluation within the scientific project "Talent scouting in sport", two methodological approaches for recognizing an athlete's morphological compatibility for various sports has been presented, evaluated and compared. First approach is based on the fuzzy logic and expert opinion about compatibility of proposed hypothetical morphological models for 14 different sports which are part of the expert system. Second approach is based on determining the differences between morphological characteristics of a tested individual and top athlete's morphological characteristics for particular sport. Logical and mathematical bases of both methodological approaches have been explained in detail. High prognostic efficiency in recognition of individual's sport has been determined. Some improvements in further development of both methods have been proposed. Results of the research so far suggest that this or similar approaches can be successfully used for detection of individual's morphological compatibility for different sports. Also, it is expected to be useful in the selection of young talents for particular sport.

Notes: Rogulj, Nenad

Papic, Vladan

Cavala, Marijana

eng

Croatia

2009/05/05 09:00

Coll Antropol. 2009 Mar;33(1):105-10.

URL: http://www.ncbi.nlm.nih.gov/pubmed/19408612

Author Address: Faculty of Kinesiology, University of Split, Split, Croatia. nrogulj@pmfst.hr

74. **Reference Type:** Journal Article

Record Number: 4283

Author: MacDonald, D. J., King, J., Cote, J. and Abernethy, B.

Year: 2009

Title: Birthplace effects on the development of female athletic talent

Journal: J Sci Med Sport

Volume: 12

Issue: 1

Pages: 234-7

Date: Jan

Short Title: Birthplace effects on the development of female athletic talent

Alternate Journal: Journal of science and medicine in sport

ISSN: 1440-2440 (Print)

1878-1861 (Linking)

DOI: 10.1016/j.jsams.2007.05.015

Accession Number: 17889609

Keywords: *Achievement

Athletic Performance

Cities/*statistics & numerical data

Consumer Organizations

Female

Golf/*statistics & numerical data

Human Development

Humans

Internet

Monte Carlo Method

Residence Characteristics/*statistics & numerical data

Rural Population/statistics & numerical data

Soccer/*statistics & numerical data

United States

Urban Population/statistics & numerical data

Abstract: This study examined the extent to which an athlete's place of birth can influence the likelihood of playing professional sport. Information regarding the birthplace of all American female athletes in the Ladies Professional Golf Association and Women's United Soccer Association was gathered from official league websites. Monte Carlo simulations were used to determine if the birthplace of these professional athletes differed in any systematic way from official census population distributions. Odds-ratios were determined for cities within specific population ranges to ascertain if the likelihood of playing professional sport was influenced in any systematic way by city size. The analyses revealed that female professional soccer players born in cities of less than 1,000,000 were over-represented, as were female professional golfers born in cities of less than 250,000. Results are consistent with those of male professional athletes in suggesting that areas of lower population provide conditions more conducive to the development of expertise than do larger city environments.

Notes: MacDonald, Dany J

King, Jared

Cote, Jean

Abernethy, Bruce

eng

Research Support, Non-U.S. Gov't

Australia

2007/09/25 09:00

J Sci Med Sport. 2009 Jan;12(1):234-7. Epub 2007 Sep 21.

URL: http://www.ncbi.nlm.nih.gov/pubmed/17889609

Author Address: School of Kinesiology and Health Studies, Queen's University, Kingston, Ontario, Canada. 2djm5@queensu.ca

75. **Reference Type:** Journal Article

Record Number: 4788

Author: Bullock, N., Gulbin, J. P., Martin, D. T., Ross, A., Holland, T. and Marino, F.

Year: 2009

Title: Talent identification and deliberate programming in skeleton: ice novice to Winter Olympian in 14 months

Journal: J Sports Sci

Volume: 27

Issue: 4

Pages: 397-404

Date: Feb 15

Short Title: Talent identification and deliberate programming in skeleton: ice novice to Winter Olympian in 14 months

Alternate Journal: Journal of sports sciences

ISSN: 0264-0414 (Print)

0264-0414 (Linking)

DOI: 10.1080/02640410802549751

Accession Number: 19191166

Keywords: Adolescent

Adult

*Aptitude

*Athletic Performance

Australia

Female

Humans

*Snow Sports

Young Adult

Abstract: The aims of this study were to talent transfer, rapidly develop, and qualify an Australian female athlete in the skeleton event at the 2006 Torino Winter Olympic Games and quantify the volume of skeleton-specific training and competition that would enable this to be achieved. Initially, 26 athletes were recruited through a talent identification programme based on their 30-m sprint time. After attending a selection camp, 10 athletes were invited to undertake an intensified skeleton training programme. Four of these athletes were then selected to compete for Australia on the World Cup circuit. All completed runs and simulated push starts were documented over a 14-month period. The athlete who eventually represented Australia at the Torino Winter Olympic Games did so following approximately 300 start simulations and about 220 training/competition runs over a period of 14 months. Using a deliberate programming model, these findings provide a guide to the minimum exposure required for a novice skeleton athlete to reach Olympic representative standard following intensified sport-specific training. The findings of this study are discussed in the context of the deliberate practice theory and offer the term "deliberate programming" as an alternative way of incorporating all aspects of expert development.

Notes: Bullock, Nicola

Gulbin, Jason P

Martin, David T

Ross, Angus

Holland, Terry

Marino, Frank

eng

Research Support, Non-U.S. Gov't

England

2009/02/05 09:00

J Sports Sci. 2009 Feb 15;27(4):397-404. doi: 10.1080/02640410802549751.

URL: http://www.ncbi.nlm.nih.gov/pubmed/19191166

Author Address: Department of Physiology, Australian Institute of Sport, Canberra, Australia. nicola.bullock@ausport.gov.au

76. **Reference Type:** Journal Article

Record Number: 4974

Author: Mujika, I., Santisteban, J., Impellizzeri, F. M. and Castagna, C.

Year: 2009

Title: Fitness determinants of success in men's and women's football

Journal: J Sports Sci

Volume: 27

Issue: 2

Pages: 107-14

Date: Jan 15

Short Title: Fitness determinants of success in men's and women's football

Alternate Journal: Journal of sports sciences

ISSN: 0264-0414 (Print)

0264-0414 (Linking)

DOI: 10.1080/02640410802428071

Accession Number: 19058090

Keywords: Adolescent

Adult

*Athletic Performance

Female

Humans

Male

Motor Skills

Physical Endurance

*Physical Fitness

Sex Factors

*Soccer

Young Adult

Abstract: In this study, we examined gender and age differences in physical performance in football. Thirty-four elite female and 34 elite male players (age 17 +/- 1.6 to 24 +/- 3.4 years) from a professional football club were divided into four groups (n=17 each) according to gender and competitive level (senior males, senior females, junior males, and junior females). Players were tested for specific endurance (Yo-YoIR1), sprint over 15 m (Sprint-15 m), vertical jump without (CMJ) or with (ACMJ) arm swing, agility (Agility-15 m), and ball dribbling over 15 m (Ball-15 m). The Yo-YoIR1 and Agility-15m performances showed both a gender and competitive level difference ($P < 0.001$). Senior and junior males covered 97 and 153% more distance during the Yo-YoIR1 than senior and junior females, respectively ($P < 0.001$). Gender but not age differences were found for Sprint-15 m performance ($P < 0.001$). No difference in vertical jump and Ball-15 m performances were found between senior and junior males ($P > 0.05$). More marked gender differences were evident in endurance than in anaerobic performance in female players. These results show major fitness differences by gender for a given competitive level in football players. It is suggested that training and talent identification should focus on football-specific endurance and agility as fitness traits in post-adolescent players of both sexes.

Notes: Mujika, Inigo

Santisteban, Juanma

Impellizzeri, Franco M

Castagna, Carlo

eng

England

2008/12/06 09:00

J Sports Sci. 2009 Jan 15;27(2):107-14. doi: 10.1080/02640410802428071.

URL: http://www.ncbi.nlm.nih.gov/pubmed/19058090

Author Address: USP-Araba Sport Clinic, Vitoria-Gasteiz, Basque Country, Spain.

77. **Reference Type:** Journal Article

Record Number: 4285

Author: Vaeyens, R., Lenoir, M., Williams, A. M. and Philippaerts, R. M.

Year: 2008

Title: Talent identification and development programmes in sport : current models and future directions

Journal: Sports Med

Volume: 38

Issue: 9

Pages: 703-14

Short Title: Talent identification and development programmes in sport : current models and future directions

Alternate Journal: Sports medicine

ISSN: 0112-1642 (Print)

0112-1642 (Linking)

Accession Number: 18712939

Keywords: Adolescent

Aptitude/*physiology

Athletic Performance

Humans

*Models, Theoretical

Psychomotor Performance/physiology

*Sports

Abstract: Many children strive to attain excellence in sport. However, although talent identification and development programmes have gained popularity in recent decades, there remains a lack of consensus in relation to how talent should be defined or identified and there is no uniformly accepted theoretical framework to guide current practice. The success rates of talent identification and development programmes have rarely been assessed and the validity of the models applied remains highly debated. This article provides an overview of current knowledge in this area with special focus on problems associated with the identification of gifted adolescents. There is a growing agreement that traditional cross-sectional talent identification models are likely to exclude many, especially late maturing, 'promising' children from development programmes due to the dynamic and multidimensional nature of sport talent. A conceptual framework that acknowledges both genetic and environmental influences and considers the dynamic and multidimensional nature of sport talent is presented. The relevance of this model is highlighted and recommendations for future work provided. It is advocated that talent identification and development programmes should be dynamic and interconnected taking into consideration maturity status and the potential to develop rather than to exclude children at an early age. Finally, more representative real-world tasks should be developed and employed in a multidimensional design to increase the efficacy of talent identification and development programmes.

Notes: Vaeyens, Roel

Lenoir, Matthieu

Williams, A Mark

Philippaerts, Renaat M

eng

New Zealand

Auckland, N.Z.

2008/08/21 09:00

Sports Med. 2008;38(9):703-14.

URL: http://www.ncbi.nlm.nih.gov/pubmed/18712939

Author Address: Department of Movement and Sports Sciences, Faculty of Medicine and Health Sciences, Ghent University, Ghent, Belgium. roel.vaeyens@ugent.be

78. **Reference Type:** Journal Article

Record Number: 4286

Author: Meyers, M. C., Stewart, C. C., Laurent, C. M., Leunes, A. D. and Bourgeois, A. E.

Year: 2008

Title: Coping skills of olympic developmental soccer athletes

Journal: Int J Sports Med

Volume: 29

Issue: 12

Pages: 987-93

Date: Dec

Short Title: Coping skills of olympic developmental soccer athletes

Alternate Journal: International journal of sports medicine

ISSN: 0172-4622 (Print)

0172-4622 (Linking)

DOI: 10.1055/s-2008-1038679

Accession Number: 18548363

Keywords: *Adaptation, Psychological

Adolescent

Analysis of Variance

Athletic Injuries/*psychology

Awareness

Competitive Behavior

Female

Humans

Male

Multivariate Analysis

Pain/*psychology

Psychological Tests

Psychometrics

Soccer/physiology/*psychology

Abstract: Athletes at Olympic Developmental Program (ODP) camps experience unusually high levels of expectations and inherent mental and physical challenges within such a short span of time. With the increasing emphasis on talent development, there has been consensus by the ODP staff to more clearly define present levels of coping skills, in order to enhance athletic prediction, maximize training efforts, identify the predisposition to injury, and focus on areas pertinent to successful performance. This study examined athletic and pain coping skills of U. S. ODP soccer athletes not previously investigated. Following written informed consent, 70 males completed the Athletic Coping Skills Inventory and the Sports Inventory for Pain. Data were analyzed by competitive level (U-14, U-15), and skill position (goalkeeper/defense, midfield/foward). MANOVA indicated a significant main effect across competitive level (Wilks' Lambda F(12,57) = 2.27; p = 0.02; n-beta = 0.915) but no significant effect by skill position (Wilks' Lambda F(12,57) = 0.931; p = 0.523; n-beta = 0.457). Post hoc analyses indicated that U-15 athletes scored significantly higher in concentration (p = 0.01) and body awareness (p = 0.03), but lower in avoidance (p = 0.01) than U-14 competitors. In conclusion, older, more experienced athletes revealed more positive athletic and pain coping skills than younger, less experienced athletes, although athletes in skill positions requiring spontaneous decision-making skills and split-second adjustment in a constantly changing sport environment (forwards, midfielders) did not exhibit more positive athletic and pain coping skills than those positions requiring reaction and protection (defenders, goalkeepers).

Notes: Meyers, M C

Stewart, C C

Laurent, C M

Leunes, A D

Bourgeois, A E

eng

Germany

2008/06/13 09:00

Int J Sports Med. 2008 Dec;29(12):987-93. doi: 10.1055/s-2008-1038679. Epub 2008 Jun 11.

URL: http://www.ncbi.nlm.nih.gov/pubmed/18548363

Author Address: Sports and Exercise Sciences, West Texas A & M University, Canyon, Texas 79016, United States. mmeyers@mail.wtamu.edu

79. **Reference Type:** Journal Article

Record Number: 4287

Author: Nevill, A., Atkinson, G. and Hughes, M.

Year: 2008

Title: Twenty-five years of sport performance research in the Journal of Sports Sciences

Journal: J Sports Sci

Volume: 26

Issue: 4

Pages: 413-26

Date: Feb 15

Short Title: Twenty-five years of sport performance research in the Journal of Sports Sciences

Alternate Journal: Journal of sports sciences

ISSN: 0264-0414 (Print)

0264-0414 (Linking)

DOI: 10.1080/02640410701714589

Accession Number: 18228169

Keywords: Biomedical Research/*history

History, 20th Century

History, 21st Century

Humans

Periodicals as Topic/*history

Physical Education and Training/*history

Sports/*history/*physiology

Sports Medicine/*history

Abstract: In this historical review covering the past 25 years, we reflect on the content of manuscripts relevant to the Sport Performance section of the Journal of Sports Sciences. Due to the wide diversity of sport performance research, the remit of the Sport Performance section has been broad and includes mathematical and statistical evaluation of competitive sports performances, match- and notation-analysis, talent identification, training and selection or team organization. In addition, due to the academic interests of its section editors, they adopted a quality-assurance role for the Sport Performance section, invariably communicated through key editorials that subsequently shaped the editorial policy of the Journal. Key high-impact manuscripts are discussed, providing readers with some insight into what might lead an article to become a citation "classic". Finally, landmark articles in the areas of "science and football" and "notation analysis" are highlighted, providing further insight into how such articles have contributed to the development of sport performance research in general and the Journal of Sports Sciences in particular.

Notes: Nevill, Alan

Atkinson, Greg

Hughes, Mike

eng

Historical Article

England

2008/01/30 09:00

J Sports Sci. 2008 Feb 15;26(4):413-26. doi: 10.1080/02640410701714589.

URL: http://www.ncbi.nlm.nih.gov/pubmed/18228169

Author Address: School of Sport, Performing Arts and Leisure, University of Wolverhampton, Walsall, UK. a.m.nevill@wlv.ac.uk

80. **Reference Type:** Journal Article

Record Number: 4289

Author: Helton, W. S.

Year: 2007

Title: Deliberate practice in dogs: a canine model of expertise

Journal: J Gen Psychol

Volume: 134

Issue: 2

Pages: 247-57

Date: Apr

Short Title: Deliberate practice in dogs: a canine model of expertise

Alternate Journal: The Journal of general psychology

ISSN: 0022-1309 (Print)

0022-1309 (Linking)

DOI: 10.3200/GENP.134.2.247-258

Accession Number: 17503698

Keywords: Animals

*Aptitude

Competitive Behavior

Dogs/*psychology

Female

Male

Motivation

*Motor Skills

*Practice (Psychology)

Social Environment

Abstract: The acquisition of expertise is an area of controversy between those who lean more toward learning and those who lean more toward talent. Because the genetics and early life experiences of humans are not open to direct manipulation, human studies are of limited use in this debate. Studies using nonhumans as expert models may prove useful in resolving this dispute. For nonhumans to be considered proper models of human experts, there must be evidence supporting a shared acquisition mechanism. A candidate mechanism is deliberate practice. The author tested the deliberate practice theory of expertise acquisition on dogs competing in the sport of agility. The author examined the relationships between amounts of accumulated deliberate practice and agility performance measures. The author found there was a statistically significant relationship between the amount of deliberate practice and measured performance in agility dogs, even when controlling for sex, breed group, age, and height.

Notes: Helton, William S

eng

2007/05/17 09:00

J Gen Psychol. 2007 Apr;134(2):247-57.

URL: http://www.ncbi.nlm.nih.gov/pubmed/17503698

Author Address: Department of Psychology, Michigan Technological University, 1400 Townsend Dr., Houghton MI 49931, USA. Deak_Helton@yahoo.com

81. **Reference Type:** Journal Article

Record Number: 4324

Author: Vaeyens, R., Malina, R. M., Janssens, M., Van Renterghem, B., Bourgois, J., Vrijens, J. and Philippaerts, R. M.

Year: 2006

Title: A multidisciplinary selection model for youth soccer: the Ghent Youth Soccer Project

Journal: Br J Sports Med

Volume: 40

Issue: 11

Pages: 928-34; discussion 934

Date: Nov

Short Title: A multidisciplinary selection model for youth soccer: the Ghent Youth Soccer Project

Alternate Journal: British journal of sports medicine

ISSN: 1473-0480 (Electronic)

0306-3674 (Linking)

DOI: 10.1136/bjsm.2006.029652

PMCID: 2465033

Accession Number: 16980535

Keywords: Adolescent

Anaerobic Threshold/physiology

Anthropometry

Child

Humans

Multivariate Analysis

Physical Endurance/physiology

Physical Fitness/physiology

Soccer/*physiology

Task Performance and Analysis

Abstract: OBJECTIVES: To determine the relationships between physical and performance characteristics and level of skill in youth soccer players aged 12-16 years. METHODS: Anthropometry, maturity status, functional and sport-specific parameters were assessed in elite, sub-elite, and non-elite youth players in four age groups: U13 (n = 117), U14 (n = 136), U15 (n = 138) and U16 (n = 99). RESULTS: Multivariate analyses of covariance by age group with maturity status as the covariate showed that elite players scored better than the non-elite players on strength, flexibility, speed, aerobic endurance, anaerobic capacity and several technical skills ($p<0.05$). Stepwise discriminant analyses showed that running speed and technical skills were the most important characteristics in U13 and U14 players, while cardiorespiratory endurance was more important in U15 and U16 players. The results suggest that discriminating characteristics change with competitive age levels. CONCLUSIONS: Characteristics that discriminate youth soccer players vary by age group. Talent identification models should thus be dynamic and provide opportunities for changing parameters in a long-term developmental context.

Notes: Vaeyens, R

Malina, R M

Janssens, M

Van Renterghem, B

Bourgois, J

Vrijens, J

Philippaerts, R M

eng

Research Support, Non-U.S. Gov't

England

2006/09/19 09:00

Br J Sports Med. 2006 Nov;40(11):928-34; discussion 934. Epub 2006 Sep 15.

URL: http://www.ncbi.nlm.nih.gov/pubmed/16980535

Author Address: Faculty of Medicine and Health Sciences, Department of Movement and Sports Sciences, Ghent University, Gent, Belgium.

82. **Reference Type:** Journal Article

Record Number: 4325

Author: Pearson, D. T., Naughton, G. A. and Torode, M.

Year: 2006

Title: Predictability of physiological testing and the role of maturation in talent identification for adolescent team sports

Journal: J Sci Med Sport

Volume: 9

Issue: 4

Pages: 277-87

Date: Aug

Short Title: Predictability of physiological testing and the role of maturation in talent identification for adolescent team sports

Alternate Journal: Journal of science and medicine in sport

ISSN: 1440-2440 (Print)

1878-1861 (Linking)

DOI: 10.1016/j.jsams.2006.05.020

Accession Number: 16844415

Keywords: Achievement

Adolescent

Adolescent Development/*physiology

Anthropometry

*Aptitude

Humans

Male

Motor Skills/*physiology

Physical Education and Training

Research Design

Sports/*physiology

Abstract: Entrepreneurial marketing of sport increases demands on sport development officers to identify talented individuals for specialist development at the youngest possible age. Talent identification results in the streamlining of resources to produce optimal returns from a sports investment. However, the process of talent identification for team sports is complex and success prediction is imperfect. The aim of this review is to describe existing practices in physiological tests used for talent identification in team sports and discuss the impact of maturity-related differences on the long term outcomes particularly for male participants. Maturation is a major confounding variable in talent identification during adolescence. A myriad of hormonal changes during puberty results in physical and physiological characteristics important for sporting performance. Significant changes during puberty make the prediction of adult performance difficult from adolescent data. Furthermore, for talent identification programs to succeed, valid and reliable testing procedures must be accepted and implemented in a range of performance-related categories. Limited success in scientifically based talent identification is evident in a range of team sports. Genetic advances challenge the ethics of talent identification in adolescent sport. However, the environment remains a significant component of success prediction in sport. Considerations for supporting talented young male athletes are discussed.

Notes: Pearson, D T

Naughton, G A

Torode, M

eng

Australia

2006/07/18 09:00

J Sci Med Sport. 2006 Aug;9(4):277-87. Epub 2006 Jul 17.

URL: http://www.ncbi.nlm.nih.gov/pubmed/16844415

Author Address: Department of Exercise and Sports Science, University of Sydney, Sydney, NSW, Australia.

83. **Reference Type:** Journal Article

Record Number: 4326

Author: Gould, D., Lauer, L., Rolo, C., Jannes, C. and Pennisi, N.

Year: 2006

Title: Understanding the role parents play in tennis success: a national survey of junior tennis coaches

Journal: Br J Sports Med

Volume: 40

Issue: 7

Pages: 632-6; discussion 636

Date: Jul

Short Title: Understanding the role parents play in tennis success: a national survey of junior tennis coaches

Alternate Journal: British journal of sports medicine

ISSN: 1473-0480 (Electronic)

0306-3674 (Linking)

DOI: 10.1136/bjsm.2005.024927

PMCID: 2564313

Accession Number: 16702176

Keywords: *Achievement

Adult

Child

Female

Health Surveys

Humans

Male

*Parent-Child Relations

Parents/education/*psychology

Surveys and Questionnaires

Tennis/*psychology

United States

Abstract: OBJECTIVES: To assess coaches' perceptions about the role of parents and their positive and negative behaviours in junior tennis. METHODS: A national survey of 132 United States junior tennis coaches was completed. The extent and seriousness/impact of parent-child interaction problems and positive behaviours were rated. RESULTS: Parents were perceived as very important for junior tennis success. Most parents (59%) that these coaches had worked with were seen as having a positive influence on their player's development. However, the respondents also felt that 36% of parents negatively influenced their child's development. Positive parental behaviours included providing logistical, financial, and social-emotional support, as well as tennis opportunities and unconditional love. Negative parent behaviours included overemphasising winning, holding unrealistic expectations, and criticising their child. CONCLUSIONS: Findings are discussed relative to current sport parenting and athletic talent development research and theorising. The need to educate parents is emphasised.

Notes: Gould, D

Lauer, L

Rolo, C

Jannes, C

Pennisi, N

eng

Research Support, Non-U.S. Gov't

England

2006/05/17 09:00

Br J Sports Med. 2006 Jul;40(7):632-6; discussion 636. Epub 2006 May 15.

URL: http://www.ncbi.nlm.nih.gov/pubmed/16702176

Author Address: Institute for the Study of Youth Sports, Michigan State University, East Lansing, MI 48824-1049, USA. drgould@msu.edu

84. **Reference Type:** Journal Article

Record Number: 4791

Author: Lidor, R., Falk, B., Arnon, M., Cohen, Y., Segal, G. and Lander, Y.

Year: 2005

Title: Measurement of talent in team handball: the questionable use of motor and physical tests

Journal: J Strength Cond Res

Volume: 19

Issue: 2

Pages: 318-25

Date: May

Short Title: Measurement of talent in team handball: the questionable use of motor and physical tests

Alternate Journal: Journal of strength and conditioning research

ISSN: 1064-8011 (Print)

1064-8011 (Linking)

DOI: 10.1519/1533-4287(2005)19[318:MOTITH]2.0.CO;2

Accession Number: 15903369

Keywords: Adolescent

Age Factors

Aptitude/*physiology

*Aptitude Tests

Child

Competitive Behavior

Female

Follow-Up Studies

Group Processes

Humans

Male

Physical Education and Training/methods

Sports/*physiology

*Task Performance and Analysis

Abstract: Testing for selection is one of the most important fundamentals in any multistep sport program. In most ball games, coaches assess motor, physical, and technical skills on a regular basis in early stages of talent identification and development. However, selection processes are complex, are often unstructured, and lack clear-cut theory-based knowledge. For example, little is known about the relevance of the testing process to the final selection of the young prospects. The purpose of this study was to identify motor, physical, and skill variables that could provide coaches with relevant information in the selection process of young team handball players. In total, 405 players (12-13 years of age at the beginning of the testing period) were recommended by their coaches to undergo a battery of tests prior to selection to the Junior National Team. This number is the sum of all players participating in the different phases of the program. However, not all of them took part in each testing phase. The battery included physical measurements (height and weight), a 4 x 10-m running test, explosive power tests (medicine ball throw and standing long jump), speed tests (a 20-m sprint from a standing position and a 20-m sprint with a flying start), and a slalom dribbling test. Comparisons between those players eventually selected to the Junior National Team 2-3 years later with those not selected demonstrated that only the skill test served as a good indicator. In all other measurements, a wide overlap could be seen between the results of the selected and nonselected players. It is suggested that future studies investigate the usefulness of tests reflecting more specific physical ability and cognitive characteristics.

Notes: Lidor, Ronnie

Falk, Bareket

Arnon, Michal

Cohen, Yoram

Segal, Gil

Lander, Yael

eng

2005/05/21 09:00

J Strength Cond Res. 2005 May;19(2):318-25.

URL: http://www.ncbi.nlm.nih.gov/pubmed/15903369

Author Address: The Zinman College of Physical Education and Sport Sciences, Wingate Institute, Netanya, Israel and Faculty of Education, University of Haifa, Haifa, Israel. lidor@macam.ac.il

85. **Reference Type:** Journal Article

Record Number: 4329

Author: Abbott, A., Button, C., Pepping, G. J. and Collins, D.

Year: 2005

Title: Unnatural selection: talent identification and development in sport

Journal: Nonlinear Dynamics Psychol Life Sci

Volume: 9

Issue: 1

Pages: 61-88

Date: Jan

Short Title: Unnatural selection: talent identification and development in sport

Alternate Journal: Nonlinear dynamics, psychology, and life sciences

ISSN: 1090-0578 (Print)

1090-0578 (Linking)

Accession Number: 15629068

Keywords: Achievement

Adolescent

Adult

*Aptitude

Child

Growth and Development

Humans

Intention

Internal-External Control

Logic

Mind-Body Relations, Metaphysical

Motivation

Motor Skills

*Nonlinear Dynamics

Personal Autonomy

*Personnel Selection

Probability

*Psychomotor Performance

*Sports

Abstract: The early identification of talented individuals has become increasingly important across many performance domains. Current talent identification (TI) schemes in sport typically select on the basis of discrete, unidimensional measures at unstable periods in the athlete's development. In this article, the concept of talent is revised as a complex, dynamical system in which future behaviors emerge from an interaction of key performance determinants such as psychological behaviors, motor abilities, and physical characteristics. Key nonlinear dynamics concepts are related to TI approaches such as sensitivity to initial conditions, transitions, and exponential behavioral distributions. It is concluded that many TI models place an overemphasis on early identification rather than the development of potentially talented performers. A generic model of talent identification and development is proposed that addresses these issues and provides direction for future research.

Notes: Abbott, Angela

Button, Chris

Pepping, Gert-Jan

Collins, Dave

eng

2005/01/05 09:00

Nonlinear Dynamics Psychol Life Sci. 2005 Jan;9(1):61-88.

URL: http://www.ncbi.nlm.nih.gov/pubmed/15629068

Author Address: University of Edinburgh, UK.

86. **Reference Type:** Journal Article

Record Number: 4975

Author: Castagna, C., Abt, G. and D'Ottavio, S.

Year: 2005

Title: Competitive-level differences in Yo-Yo intermittent recovery and twelve minute run test performance in soccer referees

Journal: J Strength Cond Res

Volume: 19

Issue: 4

Pages: 805-9

Date: Nov

Short Title: Competitive-level differences in Yo-Yo intermittent recovery and twelve minute run test performance in soccer referees

Alternate Journal: Journal of strength and conditioning research

ISSN: 1064-8011 (Print)

1064-8011 (Linking)

DOI: 10.1519/R-14473.1

Accession Number: 16287348

Keywords: Adult

Cross-Sectional Studies

*Exercise Test

Humans

Lactic Acid/blood

Physical Endurance/*physiology

Physical Fitness/physiology

Recovery of Function/*physiology

Soccer/classification/*physiology

Abstract: The aim of this study was to examine yo-yo intermittent recovery test (Yo-Yo test) and 12-minute run test (12MRT) performances in experienced soccer referees of different competitive levels. Three groups (n = 14 each) of experienced Italian soccer referees officiating in the first (series AB, top-level), third (series C, medium-level), and fourth (series D, low-level) division, were randomly submitted to the 12MRT and the Yo-Yo test during 2 testing sessions, 48-hours apart. 12MRT performances were 3,000 +/- 112 m; 2,894 +/- 99 m; and 2,896 +/- 171 m for top-level, medium-level and low-level referees, respectively ($p > 0.05$). In the Yo-Yo test, the top-level, medium-level, and low-level referees covered 1,874 +/- 431 m; 1,360 +/- 172 m; and 1,272 +/- 215 m, respectively. The test performances of top-level referees in the Yo-Yo test was significantly different from those scored by medium-level and low-level referees ($p < 0.05$). After the Yo-Yo test, blood lactate concentrations (BLC) were higher in the medium-level and low-level referees compared with the top-level referees ($p < 0.05$). The results of the present study show that the Yo-Yo test and not the 12MRT can discriminate endurance performance in experienced elite level soccer referees. With respect to its discriminative and match performance validity, the Yo-Yo test may be considered a relevant field test to assess endurance preparedness for experienced soccer referees and a useful tool in talent selection.

Notes: Castagna, Carlo

Abt, Grant

D'Ottavio, Stefano

eng

2005/11/17 09:00

J Strength Cond Res. 2005 Nov;19(4):805-9.

URL: http://www.ncbi.nlm.nih.gov/pubmed/16287348

Author Address: School of Sport and Exercise Sciences, Faculty of Medicine and Surgery, University of Rome Tor Vergata, Rome, Italy. carlocastagna@teknosport.com

87. **Reference Type:** Journal Article

Record Number: 4330

Author: Falk, B., Lidor, R., Lander, Y. and Lang, B.

Year: 2004

Title: Talent identification and early development of elite water-polo players: a 2-year follow-up study

Journal: J Sports Sci

Volume: 22

Issue: 4

Pages: 347-55

Date: Apr

Short Title: Talent identification and early development of elite water-polo players: a 2-year follow-up study

Alternate Journal: Journal of sports sciences

ISSN: 0264-0414 (Print)

0264-0414 (Linking)

DOI: 10.1080/02640410310001641566

Accession Number: 15161108

Keywords: Achievement

Adolescent

Age Factors

Analysis of Variance

*Aptitude

Child

Exercise Tolerance/physiology

Humans

Male

Motor Skills/*physiology

Physical Education and Training

Physical Exertion/physiology

Physical Fitness/physiology

Predictive Value of Tests

Probability

Reaction Time

Sampling Studies

Sports

Swimming/*physiology

Abstract: The processes of talent detection and early development are critical in any sport programme. However, not much is known about the appropriate strategies to be implemented during these processes, and little scientific inquiry has been conducted in this area. The aim of this study was to identify variables of swimming, ball handling and physical ability, as well as game intelligence, which could assist in the selection process of young water-polo players. Twenty-four players aged 14-15 years underwent a battery of tests three times during a 2-year period, before selection to the junior national team. The tests included: freestyle swim for 50, 100, 200 and 400 m, 100-m breast-stroke, 100-m 'butterfly' (with breast-stroke leg motion), 50-m dribbling, throwing at the goal, throw for distance in the water, vertical 'jump' from the water, and evaluation of game intelligence by two coaches. A comparison of those players eventually selected to the team and those not selected demonstrated that, 2 years before selection, selected players were already superior on most of the swim tasks (with the exception of breast-stroke and 50-m freestyle), as well as dribbling and game intelligence. This superiority was maintained throughout the 2 years. Two-way tabulation revealed that, based on baseline scores, the prediction for 67% of the players was in agreement with the final selection to the junior national team. We recommend that fewer swim events be used in the process of selecting young water-polo players, and that greater emphasis should be placed on evaluation of game intelligence.

Notes: Falk, Bareket

Lidor, Ronnie

Lander, Yael

Lang, Benny

eng

Comparative Study

England

2004/05/27 05:00

J Sports Sci. 2004 Apr;22(4):347-55.

URL: http://www.ncbi.nlm.nih.gov/pubmed/15161108

Author Address: Ribstein Center for Sport Medicine Sciences and Research, Wingate Institute, Netanya, Israel. bfalk@post.tau.ac.il

88. **Reference Type:** Journal Article

Record Number: 4331

Author: Abbott, A. and Collins, D.

Year: 2004

Title: Eliminating the dichotomy between theory and practice in talent identification and development: considering the role of psychology

Journal: J Sports Sci

Volume: 22

Issue: 5

Pages: 395-408

Date: May

Short Title: Eliminating the dichotomy between theory and practice in talent identification and development: considering the role of psychology

Alternate Journal: Journal of sports sciences

ISSN: 0264-0414 (Print)

0264-0414 (Linking)

DOI: 10.1080/02640410410001675324

Accession Number: 15160593

Keywords: Humans

Motivation

*Personality

*Psychomotor Performance

Self Concept

Sports/*physiology/*psychology

Abstract: It is acknowledged that appropriate support and training are essential if talented individuals are to fulfil their potential. The early identification of talented athletes is an increasingly important consideration for researchers and practitioners alike. Once talented individuals have been detected, crucial but limited support resources can be optimally deployed to ensure that their needs are met and that their gifts are developed. However, there is considerable disagreement among experts on what talent is, and which factors can reliably be used within talent identification processes. This paper explores prerequisites to success in sport, and the comparative efficacy of employing these prerequisites within talent identification schemes. It is proposed that talent needs to be reconceptualized so that talent identification and talent development processes are perceived to be dynamic and interrelated. Additionally, the need to place greater emphasis on the capacity of a child to develop in sport and the psychological factors that underpin this process is highlighted. To this end, it is advocated that talent identification and development schemes, while emphasizing the multidimensional nature of talent, need to recognize the essential role of psychology in the ability of individuals to fulfil their sporting potential.

Notes: Abbott, Angela

Collins, Dave

eng

Research Support, Non-U.S. Gov't

Review

England

2004/05/27 05:00

J Sports Sci. 2004 May;22(5):395-408.

URL: http://www.ncbi.nlm.nih.gov/pubmed/15160593

Author Address: Scottish Centre for Physical Education, Sport and Leisure Studies, Moray House Institute of Education, University of Edinburgh, St Leonard's Land, Holyrood Road, Edinburgh EH8 8AQ, UK. angela_abbott@education.ed.ac.uk

89. **Reference Type:** Journal Article

Record Number: 4364

Author: Robertson, J.

Year: 2003

Title: The quest to balance talent and technology

Journal: MLO Med Lab Obs

Volume: 35

Issue: 11

Pages: 30-1

Date: Nov

Short Title: The quest to balance talent and technology

Alternate Journal: MLO: medical laboratory observer

ISSN: 0580-7247 (Print)

0580-7247 (Linking)

Accession Number: 14628642

Keywords: Clinical Laboratory Information Systems

Humans

Laboratories/*organization & administration/standards

Manuals as Topic

Medical Laboratory Personnel/*standards

*Medical Laboratory Science

Nebraska

*Professional Competence

*Quality Assurance, Health Care

Safety

Notes: Robertson, Judy

eng

2003/11/25 05:00

MLO Med Lab Obs. 2003 Nov;35(11):30-1.

URL: http://www.ncbi.nlm.nih.gov/pubmed/14628642

Author Address: Columbus Community Hospital, Columbus, NE, USA.

90. **Reference Type:** Journal Article

Record Number: 4369

Author: Reilly, T. and Gilbourne, D.

Year: 2003

Title: Science and football: a review of applied research in the football codes

Journal: J Sports Sci

Volume: 21

Issue: 9

Pages: 693-705

Date: Sep

Short Title: Science and football: a review of applied research in the football codes

Alternate Journal: Journal of sports sciences

ISSN: 0264-0414 (Print)

0264-0414 (Linking)

DOI: 10.1080/0264041031000102105

Accession Number: 14579867

Keywords: Anthropometry

Aptitude

Behavioral Research

Football/*physiology/psychology

Humans

Physical Fitness/psychology

*Research

Soccer/*physiology/psychology

Task Performance and Analysis

Abstract: Over the last two decades there has been a growth in research directly related to football. Although most of this research is focused on soccer (association football), there has been a steady increase in publications related to the other football codes. There is evidence of more systematic training and selection influencing the anthropometric profiles of players who compete at the highest level. Fitness is being optimized to cope with match demands while accommodating the need for specific requirements of positional roles. There is evidence of work rate being higher in contemporary football games than in previous decades, with consequences for training and dietary practices. Notation analysis of actions during matches is now used regularly to provide detailed objective feedback on performance to players and coaches. Training regimens are designed for game-specific purposes where possible. Sports psychologists working in a football context have a more eclectic body of knowledge to draw from. In the professional soccer clubs, the rewards associated with a successful investment in youth academies have helped to focus attention on talent identification and development models. It is a challenge to those specializing in science and football to contribute to the success of such schemes.

Notes: Reilly, Thomas

Gilbourne, David

eng

Review

England

2003/10/29 05:00

J Sports Sci. 2003 Sep;21(9):693-705.

URL: http://www.ncbi.nlm.nih.gov/pubmed/14579867

Author Address: Research Institute for Sport and Exercise Sciences, Liverpool John Moores University, Henry Cotton Campus, 15-21 Webster Street, Liverpool L3 2ET, UK. t.p.reilly@livjm.ac.uk

91. **Reference Type:** Journal Article

Record Number: 4383

Author: Keogh, J. W., Weber, C. L. and Dalton, C. T.

Year: 2003

Title: Evaluation of anthropometric, physiological, and skill-related tests for talent identification in female field hockey

Journal: Can J Appl Physiol

Volume: 28

Issue: 3

Pages: 397-409

Date: Jun

Short Title: Evaluation of anthropometric, physiological, and skill-related tests for talent identification in female field hockey

Alternate Journal: Canadian journal of applied physiology = Revue canadienne de physiologie appliquee

ISSN: 1066-7814 (Print)

1066-7814 (Linking)

Accession Number: 12955867

Keywords: Adult

*Anthropometry

*Aptitude

Body Composition

Female

*Hockey

Humans

Leg

Models, Biological

*Motor Skills

Muscle, Skeletal/physiology

Oxygen Consumption

*Personnel Selection

*Physical Fitness

Psychomotor Performance

Running

Time Factors

Abstract: The purpose of the present study was to develop an effective testing battery for female field hockey by using anthropometric, physiological, and skill-related tests to distinguish between regional representative (Rep, n = 35) and local club level (Club, n = 39) female field hockey players. Rep players were significantly leaner and recorded faster times for the 10-m and 40-m sprints as well as the Illinois Agility Run (with and without dribbling a hockey ball). Rep players also had greater aerobic and lower body muscular power and were more accurate in the shooting accuracy test, $p < 0.05$. No significant differences between groups were evident for height, body mass, speed decrement in 6 x 40-m repeated sprints, handgrip strength, or pushing speed. These results indicate that %BF,

sprinting speed, agility, dribbling control, aerobic and muscular power, and shooting accuracy can distinguish between female field hockey players of varying standards. Therefore talent identification programs for female field hockey should include assessments of these physical parameters.

Notes: Keogh, Justin W L

Weber, Clare L

Dalton, Carl T

eng

2003/09/06 05:00

Can J Appl Physiol. 2003 Jun;28(3):397-409.

URL: http://www.ncbi.nlm.nih.gov/pubmed/12955867

Author Address: School of Community Health & Sports Studies, Auckland Univ. of Technology, Auckland 1020, NZ.

92. **Reference Type:** Journal Article

Record Number: 4425

Author: Bencke, J., Damsgaard, R., Saekmose, A., Jorgensen, P., Jorgensen, K. and Klausen, K.

Year: 2002

Title: Anaerobic power and muscle strength characteristics of 11 years old elite and non-elite boys and girls from gymnastics, team handball, tennis and swimming

Journal: Scand J Med Sci Sports

Volume: 12

Issue: 3

Pages: 171-8

Date: Jun

Short Title: Anaerobic power and muscle strength characteristics of 11 years old elite and non-elite boys and girls from gymnastics, team handball, tennis and swimming

Alternate Journal: Scandinavian journal of medicine & science in sports

ISSN: 0905-7188 (Print)

0905-7188 (Linking)

Accession Number: 12135450

Keywords: *Anaerobic Threshold

Analysis of Variance

Anthropometry

Child

Female

Gymnastics/physiology

Humans

Male

Muscle, Skeletal/*physiology

Sports/*physiology

Statistics, Nonparametric

Swimming/physiology

Tennis/physiology

Abstract: The aim of the present investigation was to study the possible effects of specificity of training on muscle strength and anaerobic power in children from different sports and at different performance levels in relation to growth and maturation status. Hundred and eighty-four children of both gender participating either in swimming, tennis, team handball or gymnastics were recruited from the best clubs in Denmark. Within each sport, the coach had divided the children into an elite (E) and non-elite (NE) group according to performance level and talent. Tanner stage assessment and body weight and height measurements were performed by a physician. The anaerobic performances were assessed by Wingate tests and jumping performance in squat jump (SJ), countermovement jump (CMJ) and drop jump (DJ) from two heights. Most of the differences between groups in Wingate performance disappeared when the data were normalised to body mass. The gymnasts were the best jumpers and their superiority were increased in the more complex motor coordination tasks like DJ. The results may indicate some influence of training specificity, especially on the more complex motor tasks as DJ and there may be an effect of training before puberty. The performance in the less complex motor tasks like cycling and SJ and CMJ may also be influenced by specific training, but not to the same extent, and heritance may be an important factor for performance in these anaerobic tasks.

Notes: Bencke, J

Damsgaard, R

Saekmose, A

Jorgensen, P

Jorgensen, K

Klausen, K

eng

Comparative Study

Research Support, Non-U.S. Gov't

Denmark

2002/07/24 10:00

Scand J Med Sci Sports. 2002 Jun;12(3):171-8.

URL: http://www.ncbi.nlm.nih.gov/pubmed/12135450

Author Address: The Copenhagen Study Group of Children in SportsInstitute of Exercise and Sports Sciences, Department of Human Physiology, University of Copenhagen, Denmark.

93. **Reference Type:** Journal Article

Record Number: 4443

Author: Bunc, V. and Psotta, R.

Year: 2001

Title: Physiological profile of very young soccer players

Journal: J Sports Med Phys Fitness

Volume: 41

Issue: 3

Pages: 337-41

Date: Sep

Short Title: Physiological profile of very young soccer players

Alternate Journal: The Journal of sports medicine and physical fitness

ISSN: 0022-4707 (Print)

0022-4707 (Linking)

Accession Number: 11533564

Keywords: Adipose Tissue/anatomy & histology

Adult

Anaerobic Threshold/physiology

*Anthropometry

Body Mass Index

Child

Energy Metabolism

Exercise Test

Humans

Linear Models

Male

Oxygen Consumption/physiology

Respiratory Function Tests

Soccer/*physiology

Abstract: BACKGROUND: There is still much uncertainty and debate surrounding the physiological requirements of competitive soccer. The coaching emphasis on skill development, deficiencies in fitness training, conservative training methods lead to difficulty in the scientific study of soccer. METHODS: The physiological profiles of 22 young soccer players (mean age = 8.0+/-0.3 years, body mass = 28.2+/-3.2 kg, body height = 132.4+/-4.3 cm and body fat = 19.4+/-1.6 percent) were measured by the incremental exercise protocol on the treadmill with 5 percent inclination. All boys systematically trained at least 2 years with a minimum of two training units per week. During preseason, they trained two times per week, and during the competitive season they trained at least three times and competed in one or two games per week. RESULTS: Mean VO2max x kg(-1) was 56.7+/-4.9 ml x kg(-1) x min(-1). Mean value of maximal running speed on a treadmill with 5 percent of inclination was 12.0+/-0.9 km x h(-1). Mean values of Rmax = 1.11+/-0.07. The selected functional variables at the ventilatory threshold (VT) level corresponded to VO2 x kg(-1) = 42.9+/-5.0 ml x kg(-1) x min(-1), mean values of percent VO2max x kg(-1) at VT level were 76.5+/-1.3 percent, mean speed of running was 10.5+/-1.2 km x h(-1), mean values of percent Vmax at VT level were 87.5+/-1.9 percent. The mean of energy cost of running was 4.28+/-0.19 J x kg(-1) x m(-1). According to our results, we can conclude that the physiological characteristics of young soccer players about 8 years old should be as follows: VO2max x kg(-1) higher than 55 ml x kg(-1) x min(-1) in defenders, and higher than 60 ml x kg(-1) x min(-1), in midfielders and forwards. Maximal speed of running on the treadmill with 5 percent of inclination should be higher than 12 km x h(-1) in all players, the running speed at anaerobic threshold (5 percent) higher than 10.5 km x h(-1), percent VO2max at anaerobic threshold level higher than 77.0 percent, and the energy cost of running lower than 4.20 J x kg(-1) x m(-1). CONCLUSIONS: As in other sports where skills play a decisive role, the physiological data cannot be the sole predictor of competitive success. On the other hand, we must note that these physiological norms and standards are necessary conditions for success in high levels of soccer competition. The norms play decisive role in talent selection.

Notes: Bunc, V

Psotta, R

eng

Research Support, Non-U.S. Gov't

Italy

2001/09/05 10:00

J Sports Med Phys Fitness. 2001 Sep;41(3):337-41.

URL: http://www.ncbi.nlm.nih.gov/pubmed/11533564

Author Address: Sport Research Laboratory, Faculty of Physical Education and Sports, Charles University, Prague, Czech Republic. bunc@ftvs.cuni.cz

94. **Reference Type:** Journal Article

Record Number: 4455

Author: Hyllegard, R., Radlo, S. J. and Early, D.

Year: 2001

Title: Attribution of athletic expertise by college coaches

Journal: Percept Mot Skills

Volume: 92

Issue: 1

Pages: 193-207

Date: Feb

Short Title: Attribution of athletic expertise by college coaches

Alternate Journal: Perceptual and motor skills

ISSN: 0031-5125 (Print)

0031-5125 (Linking)

DOI: 10.2466/pms.2001.92.1.193

Accession Number: 11322587

Keywords: *Achievement

Female

Humans

Male

*Professional Competence

*Sports

*Teaching

Abstract: The goals of the study were to identify the factors that college coaches associate with athletic achievement and to test deliberate practice theory predictions for practice relevance, effort, and pleasure. Swimming, tennis, and volleyball coaches from Division I and Division III schools rank ordered 15 attributes that contribute to successful athletic achievement. They also rated the relevance, effort, and pleasure of 7 athletic and 7 everyday events for improving athletic achievement. The rank orders showed that the coaches primarily attributed athletic achievement to innate talent, intrinsic motivation, and effort while factors such as accumulated practice and type of the practice received lower rankings. Findings for practice effort were consistent with deliberate practice theory while the relevance and pleasure findings were mixed. Several explanations for successful athletic achievement, other than talent, are discussed.

Notes: Hyllegard, R

Radlo, S J

Early, D

eng

2001/04/27 10:00

Percept Mot Skills. 2001 Feb;92(1):193-207.

URL: http://www.ncbi.nlm.nih.gov/pubmed/11322587

Author Address: Department of Physical Education, Western Illinois University, Macomb 61455, USA. Randy_Hyllegard@ccmail.wiu.edu

95. **Reference Type:** Journal Article

Record Number: 4442

Author: Ribeiro, S. P., Mendonca-Junior, M. S., Barbosa, E. M. and Neto, J. A.

Year: 2001

Title: Brazil has the talent: just let us get on with the job

Journal: Nature

Volume: 413

Issue: 6851

Pages: 16

Date: Sep 06

Short Title: Brazil has the talent: just let us get on with the job

Alternate Journal: Nature

ISSN: 0028-0836 (Print)

0028-0836 (Linking)

DOI: 10.1038/35092697

Accession Number: 11544497

Notes: Ribeiro, S P

Mendonca-Junior, M S

Barbosa, E M

Neto, J A

eng

Letter

England

2001/09/07 10:00

Nature. 2001 Sep 6;413(6851):16.

URL: http://www.ncbi.nlm.nih.gov/pubmed/11544497

96. **Reference Type:** Journal Article

Record Number: 4467

Author: Schiermeier, Q.

Year: 2001

Title: Germany targets international talent

Journal: Nature

Volume: 409

Issue: 6821

Pages: 652

Date: Feb 08

Short Title: Germany targets international talent

Alternate Journal: Nature

ISSN: 0028-0836 (Print)

0028-0836 (Linking)

DOI: 10.1038/35055679

Accession Number: 11217826

Notes: Schiermeier, Q

eng

News

England

2001/02/24 12:00

Nature. 2001 Feb 8;409(6821):652.

URL: http://www.ncbi.nlm.nih.gov/pubmed/11217826

97. **Reference Type:** Journal Article

Record Number: 4484

Author: Hoare, D. G.

Year: 2000

Title: Predicting success in junior elite basketball players--the contribution of anthropometic and physiological attributes

Journal: J Sci Med Sport

Volume: 3

Issue: 4

Pages: 391-405

Date: Dec

Short Title: Predicting success in junior elite basketball players--the contribution of anthropometic and physiological attributes

Alternate Journal: Journal of science and medicine in sport

ISSN: 1440-2440 (Print)

1878-1861 (Linking)

Accession Number: 11235005

Keywords: Adolescent

Analysis of Variance

*Anthropometry

Basketball/*physiology

Exercise/*physiology

Female

Humans

Male

Physical Fitness/*physiology

Predictive Value of Tests

Regression Analysis

Sampling Studies

Sensitivity and Specificity

Sex Factors

Abstract: Talent identification programs have traditionally focused on individual sports with discrete physical and physiological characteristics. Limited attention has been directed toward predicting performance in team sports. This study measured anthropometric and physiological attributes of 125 male and 123 female junior basketball players competing at the Australian Under 16 championships in 1998. In addition, experienced coaches rated the performance of players during the championships. Performance profiles were compared across playing positions and by playing performance ('Best versus Rest'). Differences in anthropometric characteristics were present across some playing positions for both males and females. Speed and agility differences between some playing positions were also present. Best players differed to Rest players on a number of anthropometric and physiological variables for both males and females. Regression analyses indicated the test variables accounted for a significant proportion of variance in playing performance for both females (41.3%) and males (38.3%). A Z score analysis indicated good alignment between the test and coach ranking of the Best player in four out of five positions for females and two out of five positions for males. Anthropometric and physiological profiling can contribute to selection procedures in junior basketball, however determinants of success are multi-factorial.

Notes: Hoare, D G

eng

Comparative Study

Research Support, Non-U.S. Gov't

Australia

2001/03/10 10:00

J Sci Med Sport. 2000 Dec;3(4):391-405.

URL: http://www.ncbi.nlm.nih.gov/pubmed/11235005

Author Address: Division of Sport Sciences, Australian Institute of Sport, Canberra.

98. **Reference Type:** Journal Article

Record Number: 4503

Author: Hoare, D. G. and Warr, C. R.

Year: 2000

Title: Talent identification and women's soccer: an Australian experience

Journal: J Sports Sci

Volume: 18

Issue: 9

Pages: 751-8

Date: Sep

Short Title: Talent identification and women's soccer: an Australian experience

Alternate Journal: Journal of sports sciences

ISSN: 0264-0414 (Print)

0264-0414 (Linking)

DOI: 10.1080/02640410050120122

Accession Number: 11043900

Keywords: Adolescent

Adult

Anthropometry

Female

Humans

Motor Skills/*physiology

Physical Education and Training/*organization & administration

Program Development

Queensland

Soccer/*education/*physiology

Abstract: This study used a quasi-applied research model to identify and develop potentially talented female soccer players. Athletes aged 15-19 years with a background in team ball sports or athletics were targeted for recruitment using advertisements and promotions through various media. Interested athletes attended a 2-day programme of testing, which included assessment of anthropometric, physiological and skill attributes. A combination of factors was used in the final selection of 17 athletes to take part in a 12-month talent development programme. A pre-season programme of five training sessions per week was conducted for 2 months. This programme focused on enabling the players to acquire the necessary ball and game skills to perform competitively in a short time. The squad competed as a team in the reserve grade competition of an Australian state league. At the conclusion of the 25-game season, 10 players were selected for zone teams with two players progressing to state team selection within 6 months. The project demonstrates that it is possible to select potential female soccer players based on anthropometric, physiological and skill attributes. Selection procedures could be enhanced through the development of objective assessment tools that measure tactical and technical competence. Programmes such as this can offer an additional avenue of player recruitment in support of existing procedures.

Notes: Hoare, D G

Warr, C R

eng

England

2000/10/24 11:00

J Sports Sci. 2000 Sep;18(9):751-8.

URL: http://www.ncbi.nlm.nih.gov/pubmed/11043900

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99. **Reference Type:** Journal Article

Record Number: 4504

Author: Williams, A. M.

Year: 2000

Title: Perceptual skill in soccer: implications for talent identification and development

Journal: J Sports Sci

Volume: 18

Issue: 9

Pages: 737-50

Date: Sep

Short Title: Perceptual skill in soccer: implications for talent identification and development

Alternate Journal: Journal of sports sciences

ISSN: 0264-0414 (Print)

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DOI: 10.1080/02640410050120113

Accession Number: 11043899

Keywords: Attention/physiology

Humans

Memory/physiology

Physical Education and Training

*Psychomotor Performance

Soccer/education/*physiology/*psychology

Visual Perception/*physiology

Abstract: In this review, key components of perceptual skill in soccer are identified and implications for talent identification and development highlighted. Skilled soccer players can recall and recognize patterns of play more effectively than their less skilled counterparts. This ability to encode, retrieve and recognize sport-specific information is due to complex and discriminating long-term memory structures and is crucial to anticipation in soccer. Similarly, experts use their knowledge of situational probabilities (i.e. expectations) to anticipate future events. They have a better than average idea of what is likely to happen given a particular set of circumstances. Also, proficiency-related differences in visual search strategy are observed. Skilled players use their superior knowledge to control the eye movement patterns necessary for seeking and picking up important sources of information. The nature of the task plays an important role in constraining the type of search used. Skilled soccer players use different search strategies when viewing the whole field (i.e. 11 vs 11 situations) compared with micro-states of the game (i.e. 1 vs 1, 3 vs 3 situations). Visual search behaviour also differs between defensive and offensive plays. These observations have implications for the development of perceptual training programmes and the identification of potential elite soccer players.

Notes: Williams, A M

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Review

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J Sports Sci. 2000 Sep;18(9):737-50.

URL: http://www.ncbi.nlm.nih.gov/pubmed/11043899

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100. **Reference Type:** Journal Article

Record Number: 4505

Author: Helsen, W. F., Hodges, N. J., Van Winckel, J. and Starkes, J. L.

Year: 2000

Title: The roles of talent, physical precocity and practice in the development of soccer expertise

Journal: J Sports Sci

Volume: 18

Issue: 9

Pages: 727-36

Date: Sep

Short Title: The roles of talent, physical precocity and practice in the development of soccer expertise

Alternate Journal: Journal of sports sciences

ISSN: 0264-0414 (Print)

0264-0414 (Linking)

DOI: 10.1080/02640410050120104

Accession Number: 11043898

Keywords: Age Factors

Anthropometry

Humans

Motor Skills/*physiology

*Physical Education and Training

Soccer/*education/*physiology

Abstract: Here we consider the potential contributions of talent, physical precocity and deliberate practice in the development of soccer expertise. After presenting a working definition of 'talent', we examine how coaches perceive and select potential talent. Our findings suggest that much of what coaches see as early talent may be explained by physical precocity associated with a relative age advantage. Finally, as a test of the model of Deliberate Practice, we review the results of studies that assessed the progress of international, national and provincial players based on accumulated practice, amount of practice per week and relative importance and demands of various practice and everyday activities. A positive linear relationship was found between accumulated individual plus team practice and skill. Various practical suggestions can be made to improve talent detection and selection and to optimize career practice patterns in soccer.

Notes: Helsen, W F

Hodges, N J

Van Winckel, J

Starkes, J L

eng

Review

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J Sports Sci. 2000 Sep;18(9):727-36.

URL: http://www.ncbi.nlm.nih.gov/pubmed/11043898

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101. **Reference Type:** Journal Article

Record Number: 4506

Author: Morris, T.

Year: 2000

Title: Psychological characteristics and talent identification in soccer

Journal: J Sports Sci

Volume: 18

Issue: 9

Pages: 715-26

Date: Sep

Short Title: Psychological characteristics and talent identification in soccer

Alternate Journal: Journal of sports sciences

ISSN: 0264-0414 (Print)

0264-0414 (Linking)

DOI: 10.1080/02640410050120096

Accession Number: 11043897

Keywords: Humans

*Personality

*Psychomotor Performance

Self Concept

Soccer/physiology/*psychology

Abstract: I review research on psychological characteristics and sports performance and examine the literature on talent identification with particular reference to soccer to derive implications for the use of psychological variables in the talent identification and development process. Although the many cross-sectional studies of psychological characteristics and performance in all football codes conducted over the last 30 years have revealed no clear patterns, studies of both general inventories and specific variables are still being conducted. Reports on talent identification in all codes have increased in recent years, but most are descriptive in nature. In this review, I suggest that research on systematic expert observation has potential as a practical approach, but more studies of this type are needed. Considering the examination of specific psychological variables, only a solitary investigation of creativity in adolescents has shown promise. Further research on creativity and talent identification is required to replicate the positive results found in that study. In summarizing the research on psychological characteristics and talent identification, I conclude that cross-sectional research on adults cannot be extrapolated for use in talent identification with adolescents. I propose that resources would be more effectively used in the provision of psychological skills training for adolescent soccer players, pending more sophisticated research on a wider range of psychological variables. It is recommended that longitudinal or quasi-longitudinal research is essential to determine whether the same psychological variables are important for outstanding performance throughout the process of development and whether psychological variables measured during adolescence can predict outstanding performance in adulthood.

Notes: Morris, T

eng

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J Sports Sci. 2000 Sep;18(9):715-26.

URL: http://www.ncbi.nlm.nih.gov/pubmed/11043897

Author Address: Centre for Rehabilitation, Exercise and Sport Science and School of Human Movement, Recreation and Performance, Victoria University of Technology, Melbourne, Australia.

102. **Reference Type:** Journal Article

Record Number: 4507

Author: Davids, K., Lees, A. and Burwitz, L.

Year: 2000

Title: Understanding and measuring coordination and control in kicking skills in soccer: implications for talent identification and skill acquisition

Journal: J Sports Sci

Volume: 18

Issue: 9

Pages: 703-14

Date: Sep

Short Title: Understanding and measuring coordination and control in kicking skills in soccer: implications for talent identification and skill acquisition

Alternate Journal: Journal of sports sciences

ISSN: 0264-0414 (Print)

0264-0414 (Linking)

DOI: 10.1080/02640410050120087

Accession Number: 11043896

Keywords: Biomechanical Phenomena

Humans

Leg/*physiology

Motor Activity/physiology

Motor Skills/*physiology

Physical Education and Training

Soccer/*physiology

Abstract: In this review, we explore the role of motor control and biomechanics in developing an understanding of soccer skills using kicking as the main vehicle. The links between these sub-disciplines of sport science have not been well established in the past because of an emphasis on cognitive processes in traditional accounts of motor behaviour. We argue that a dynamical systems interpretation of the processes of coordination and control in movements with multiple degrees of freedom signals a new era in the relationship between the sub-disciplines of motor control and biomechanics. Although research on coordination and control of soccer skills is currently sparse, there are indications that the relationship between motor control and biomechanics could form a significant component of scientific programmes in talent identification and skill development. Further interdisciplinary work is needed to enhance understanding of coordination and control of soccer skills.

Notes: Davids, K

Lees, A

Burwitz, L

eng

Review

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J Sports Sci. 2000 Sep;18(9):703-14.

URL: http://www.ncbi.nlm.nih.gov/pubmed/11043896

Author Address: Department of Exercise and Sport Science, Manchester Metropolitan University, Alsager, Cheshire, UK. k.davids@mmu.ac.uk

103. **Reference Type:** Journal Article

Record Number: 4508

Author: Reilly, T., Williams, A. M., Nevill, A. and Franks, A.

Year: 2000

Title: A multidisciplinary approach to talent identification in soccer

Journal: J Sports Sci

Volume: 18

Issue: 9

Pages: 695-702

Date: Sep

Short Title: A multidisciplinary approach to talent identification in soccer

Alternate Journal: Journal of sports sciences

ISSN: 0264-0414 (Print)

0264-0414 (Linking)

DOI: 10.1080/02640410050120078

Accession Number: 11043895

Keywords: Adolescent

Analysis of Variance

Anthropometry

Discriminant Analysis

Humans

Male

Oxygen Consumption/physiology

Personality

Physical Endurance/physiology

Psychomotor Performance/physiology

Soccer/*physiology/*psychology

Abstract: The requirements for soccer play are multifactorial and distinguishing characteristics of elite players can be investigated using multivariate analysis. The aim of the present study was to apply a comprehensive test battery to young players with a view to distinguishing between elite and sub-elite groups on the basis of performance on test items. Thirty-one (16 elite, 15 sub-elite) young players matched for chronological age (15-16 years) and body size were studied. Test items included anthropometric (n = 15), physiological (n = 8), psychological (n = 3) and soccer-specific skills (n =

2) tests. Variables were split into separate groups according to somatotype, body composition, body size, speed, endurance, performance measures, technical skill, anticipation, anxiety and task and ego orientation for purposes of univariate and multivariate analysis of variance and stepwise discriminant function analysis. The most discriminating of the measures were agility, sprint time, ego orientation and anticipation skill. The elite players were also significantly leaner, possessed more aerobic power (9.0 +/- 1.7 vs 55.5 +/- 3.8 ml x kg(-1) x min(-1)) and were more tolerant of fatigue ($P < 0.05$). They were also better at dribbling the ball, but not shooting. We conclude that the test battery used may be useful in establishing baseline reference data for young players being selected onto specialized development programmes.

Notes: Reilly, T

Williams, A M

Nevill, A

Franks, A

eng

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J Sports Sci. 2000 Sep;18(9):695-702.

URL: http://www.ncbi.nlm.nih.gov/pubmed/11043895

Author Address: Research Institute for Sport and Exercise Sciences, Liverpool John Moores University, UK. t.p.reilly@livjm.ac.uk

104. **Reference Type:** Journal Article

Record Number: 4509

Author: Reilly, T., Bangsbo, J. and Franks, A.

Year: 2000

Title: Anthropometric and physiological predispositions for elite soccer

Journal: J Sports Sci

Volume: 18

Issue: 9

Pages: 669-83

Date: Sep

Short Title: Anthropometric and physiological predispositions for elite soccer

Alternate Journal: Journal of sports sciences

ISSN: 0264-0414 (Print)

0264-0414 (Linking)

DOI: 10.1080/02640410050120050

Accession Number: 11043893

Keywords: Adolescent

Adult

*Anthropometry

Child

Humans

Male

Motor Skills/physiology

Muscles/physiology

Oxygen Consumption/genetics/physiology

Physical Education and Training

Physical Endurance/genetics/physiology

Soccer/education/*physiology

Abstract: This review is focused on anthropometric and physiological characteristics of soccer players with a view to establishing their roles within talent detection, identification and development programmes. Top-class soccer players have to adapt to the physical demands of the game, which are multifactorial. Players may not need to have an extraordinary capacity within any of the areas of physical performance but must possess a reasonably high level within all areas. This explains why there are marked individual differences in anthropometric and physiological characteristics among top players. Various measurements have been used to evaluate specific aspects of the physical performance of both youth and adult soccer players. The positional role of a player is related to his or her physiological capacity. Thus, midfield players and full-backs have the highest maximal oxygen intakes (> 60 ml x kg(-1) x min(-1)) and perform best in intermittent exercise tests. On the other hand, midfield players tend to have the lowest muscle strength. Although these distinctions are evident in adult and elite youth players, their existence must be interpreted circumspectly in talent identification and development programmes. A range of relevant anthropometric and physiological factors can be considered which are subject to strong genetic influences (e.g. stature and maximal oxygen intake) or are largely environmentally determined and susceptible to training effects. Consequently, fitness profiling can generate a useful database against which talented groups may be compared. No single method allows for a representative assessment of a player's physical capabilities for soccer. We conclude that anthropometric and physiological criteria do have a role as part of a holistic monitoring of talented young players.

Notes: Reilly, T

Bangsbo, J

Franks, A

eng

Review

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J Sports Sci. 2000 Sep;18(9):669-83.

URL: http://www.ncbi.nlm.nih.gov/pubmed/11043893

Author Address: Research Institute for Sport and Exercise Sciences, Liverpool John Moores University, UK. t.p.reilly@livjm.ac.uk

105. **Reference Type:** Journal Article

Record Number: 4510

Author: Williams, A. M. and Reilly, T.

Year: 2000

Title: Talent identification and development in soccer

Journal: J Sports Sci

Volume: 18

Issue: 9

Pages: 657-67

Date: Sep

Short Title: Talent identification and development in soccer

Alternate Journal: Journal of sports sciences

ISSN: 0264-0414 (Print)

0264-0414 (Linking)

DOI: 10.1080/02640410050120041

Accession Number: 11043892

Keywords: Anthropometry

Attitude

Humans

Male

Motivation

Motor Skills/physiology

Personality

*Physical Education and Training

Self Concept

*Soccer/education/physiology/psychology

Abstract: In this review, we attempt to integrate the main research findings concerned with talent identification and development in soccer. Research approaches in anthropometry, physiology, psychology and sociology are considered and, where possible, integrated. Although some progress has been made in identifying correlates of playing success, it appears that no unique characteristics can be isolated with confidence. Both biological and behavioural scientists have indicated a strong genetic component in performance of sports such as soccer; nevertheless, the influence of systematic training and development programmes should not be underestimated. We conclude that the sport and exercise sciences have an important support role in the processes of identifying, monitoring and nurturing talented soccer players towards realizing their potential.

Notes: Williams, A M

Reilly, T

eng

Review

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J Sports Sci. 2000 Sep;18(9):657-67.

URL: http://www.ncbi.nlm.nih.gov/pubmed/11043892

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