



UNIVERSITY OF PÉCS  
MEDICAL SCHOOL



**SPORTMED**

University of Pécs Medical School  
Sports Medicine Center

# Talent selection

# Sport anthropometry

Dorottya Szabó

Pécs University Medical School

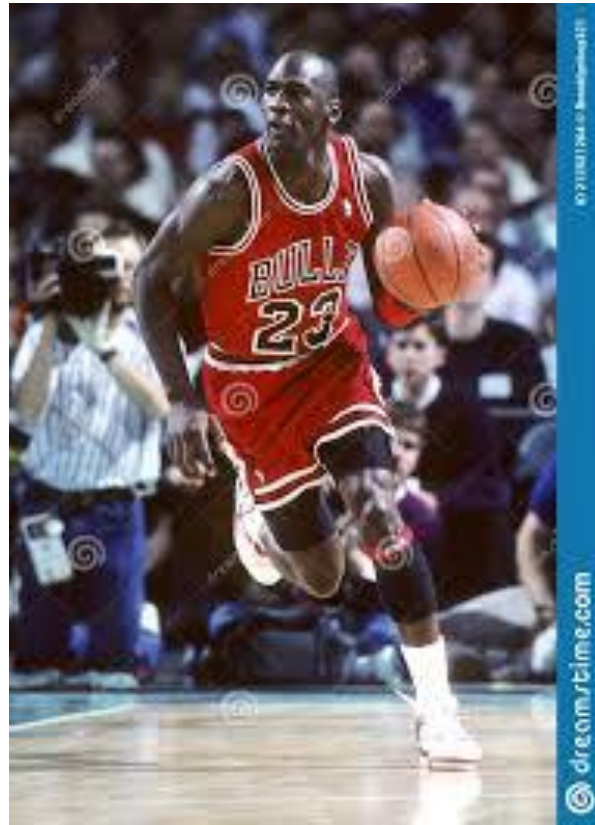
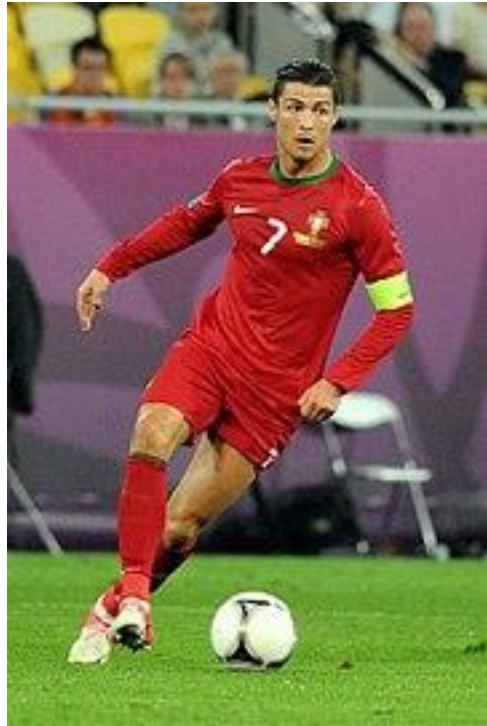
Sportsmed Center

11.02.2025 Pécs



Talent selection

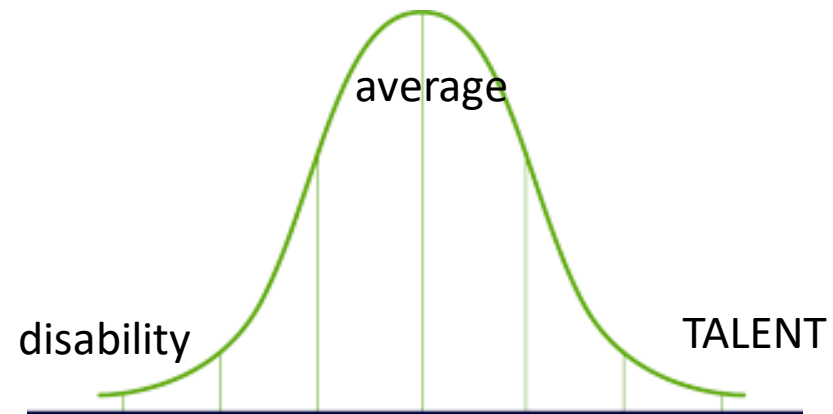
Who is the talent?



## Selection- who is the talent?

-RARETY

Gauss curve standard normal distribution



## Selection- who is the talent?

### -COMPLEXITY

- ✓ General intellectual ability
- ✓ Special mental ability (Thurstone 1938) spatial orientation, detection speed, verballity, speed of word typing, rememberance, numeracy, ability of induction
- ✓ H. Gardner (1983) 7 talent sphere :linguistic, mathematical-logical, spatial orientation, musical, interpersonal, intrapersonal, movement
- ✓ Creativity
- ✓ Motivation



Talent selection

## Selection- who is the talent?

DUAL-ROOTEDNESS



P= performance  
G= genetics  
E= enviroment

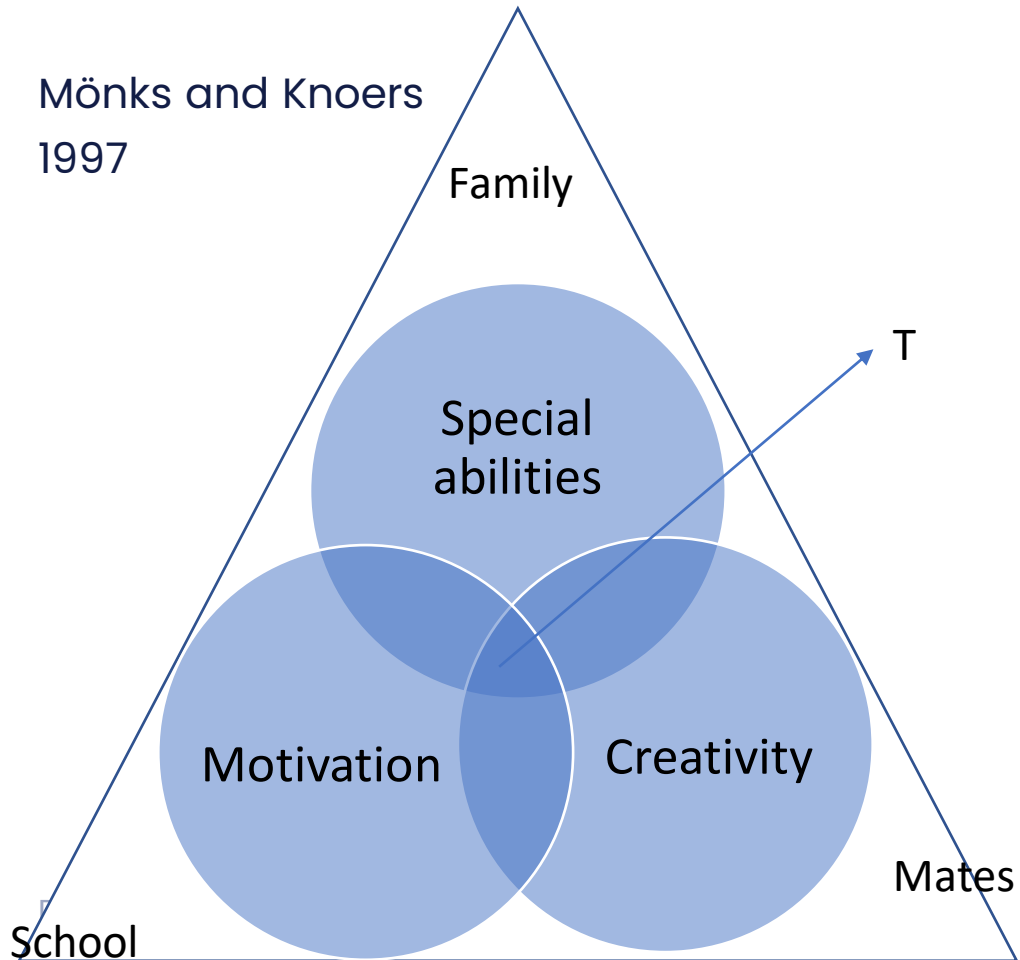
Czeizel (2004)



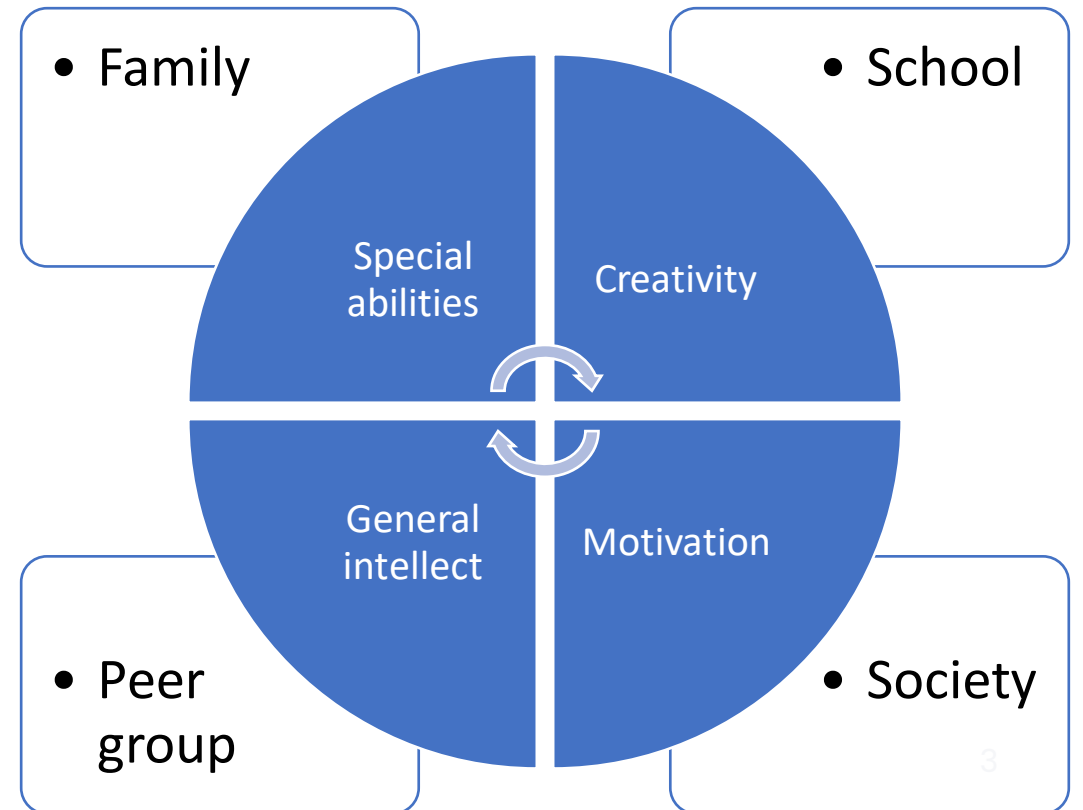


# Talent models

Mönks and Knoers  
1997



Czeizel 2x4 factors model



## Selection- who is the talent?-definition

- ✓ different opinions
- ✓ Sport-specific aspects
- ✓ Competitive/professional sports suppose special talents
- ✓ Only few researches deal with definition of sport-specific sport talents



## Selection- who is the talent? - definition

### 1. Sport talent is, who

- ✓ Inherited adequate biological bases and musculoskeletal structure for sport-specific needs
- ✓ These bases can be developed by trainings to reach the longterm prominent efficiency
- ✓ And has special anthropometric, physical, coordinating, conditional, and psychic abilities (without these they can't reach above average performance (Révész, 2008))

### 2. Sport talent is, who can reach the same performance-development with less work or who reach bigger development with same work as the others (Nádori, 1985)





## Selection

1. Natural selection
2. Indirect selection
3. Result-based selection
4. Scientific selection
  - ✓ Exact, reliable
  - ✓ Scientific methods
  - ✓ Diagnostic and longitudinal trials



## Selection- who is the talent?-management

- ✓ Different methods
- ✓ Different protocols of surveys
- ✓ Analysis of the results
- ✓ Analysis of the performance at competitions
- ✓ System in youth sport
- ✓ Key of success is TEAMWORK (parents, coach, school, club)
- ✓ Facilities, equipment, etc.



## Definition

- ✓ Height estimate
- ✓ Body composition
- ✓ Somatotype
- ✓ Biological maturity
- ✓ PHV

And based on the results

- ✓ Sport recommendation
- ✓ Loading possibilities



# International standards of measurements



**ISAK FULL PROFORMA**

Name 1 \_\_\_\_\_

Name 2 \_\_\_\_\_

Country \_\_\_\_\_

Ethnicity and Sex (male=1, female=2) \_\_\_\_\_

Sport \_\_\_\_\_

Date of Measurement \_\_\_\_\_

Date of Birth \_\_\_\_\_

Dominant extr.: RGT  LFT

Comments: \_\_\_\_\_

				3rd measure?		ms/med	
Body mass	TTS						
Stretch stature	TTM						
Sitting height							
Arm Span							
Troiceps cf	TR						
Subscapular cf	LPR						
Biceps cf	BR						
Iliac Crest cf	CSR						
Supraepinale cf	HR						
Abdominal cf	COR						
Front. Thigh cf	MSR						
Medial Calf cf							
Head girth							
Neck girth							
Arm girth relaxed	FK						
Arm girth flexed, tensed (max)	FFK						
Forearm girth (max, relaxed)	AKK						
Wrist girth (min. distal styloid)	CUK						
Palm girth	KZK						
Chest girth (mesosternale)	MKK						
Waist girth (min.)							
Guteal girth (max.)							
Thigh girth (1 cm dist. glut. line)	COK						
Thigh girth (mid tro-tb lat)							
Calf girth (max.)	ASK						
Ankle girth (min.)	BOK						
Acromiale-radiale							
Radiale-styloid							
Midstyloid-claclyion							
Iliospinale ht							
Trochanterion ht							
Trochanterion-tibiale laterale							
Tibiale laterale ht							
Tibiale mediale-ephyllon tibiale							
Biacromial breadth	VAS						
A-P Abdominal depth							
Biliacristal breadth	CRS						
Foot length (ak-pt)							
Foot width							
Hand 1-5 finger's dist. (max. stretched)							
Transverse chest breadth	MKS						
A-P Chest depth	MMK						
Humerus breadth (bicipondylar)	HUS						
Bi-styloid							
Ankle breadth							
Femur breadth (bicipondylar)	TDS						

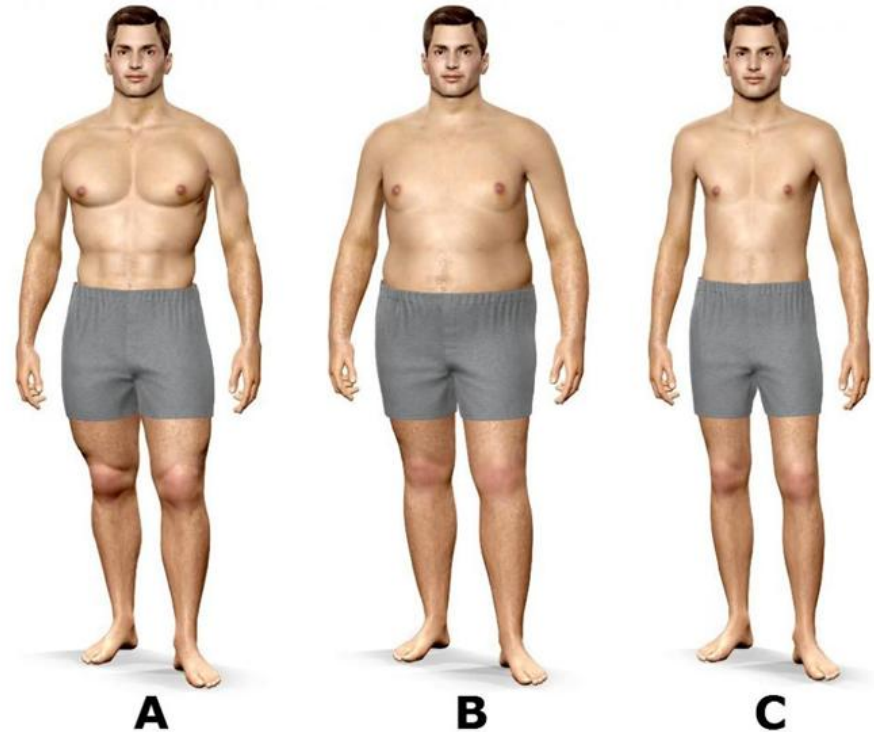


## Somatotypes

-**endomorphia** (photo B): relative fatness

-**mezomorpha** (photo A):  
musculoskeletal relative  
robustness

- **ectomorpha** (photo C):  
relative thinness



## Somatotypes

Strictly described sequence: endo-mezo-ecto

value	
0,5-2,5	small
2,6-5,4	middle
5,5-7	high
7-	very high



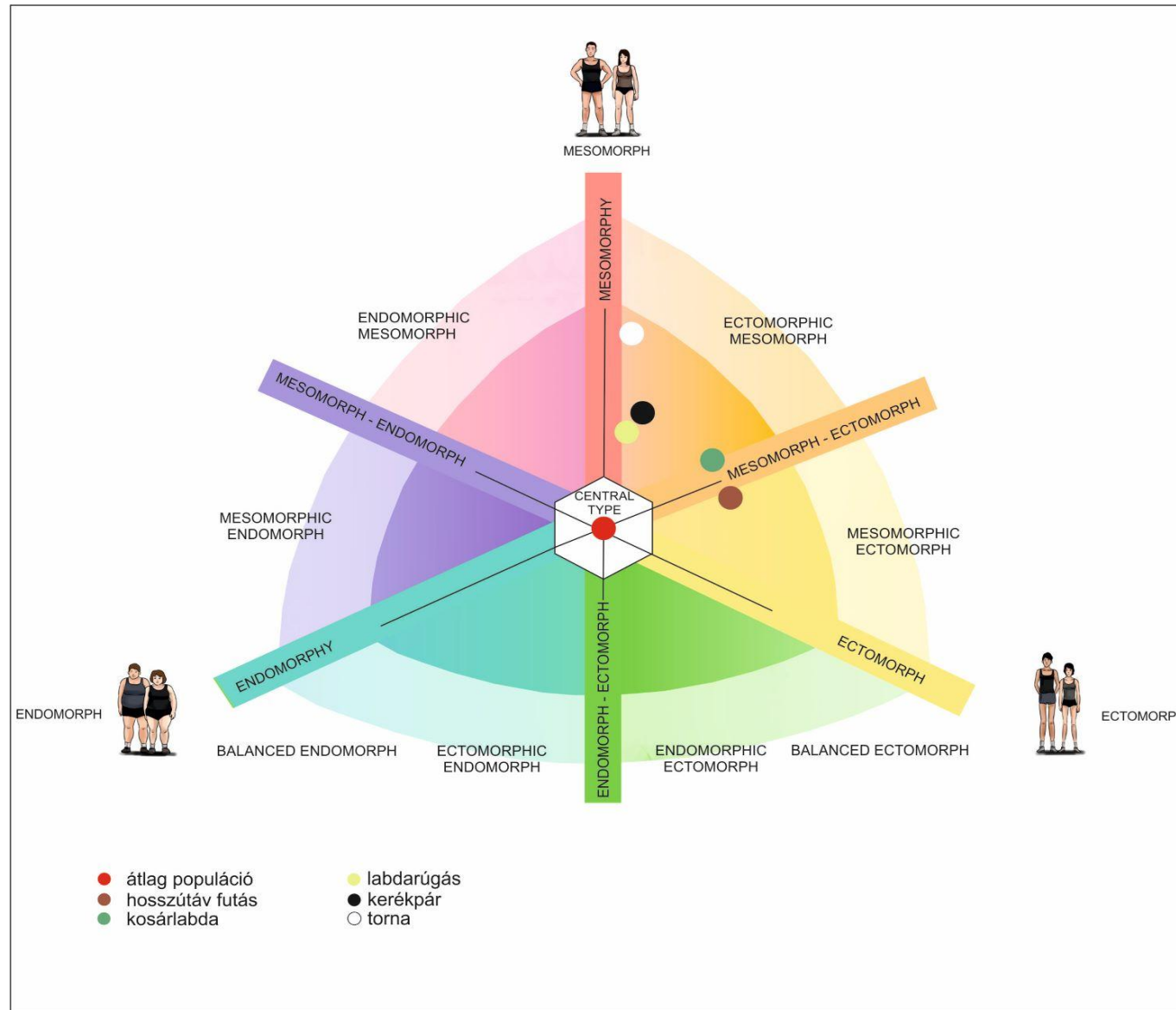


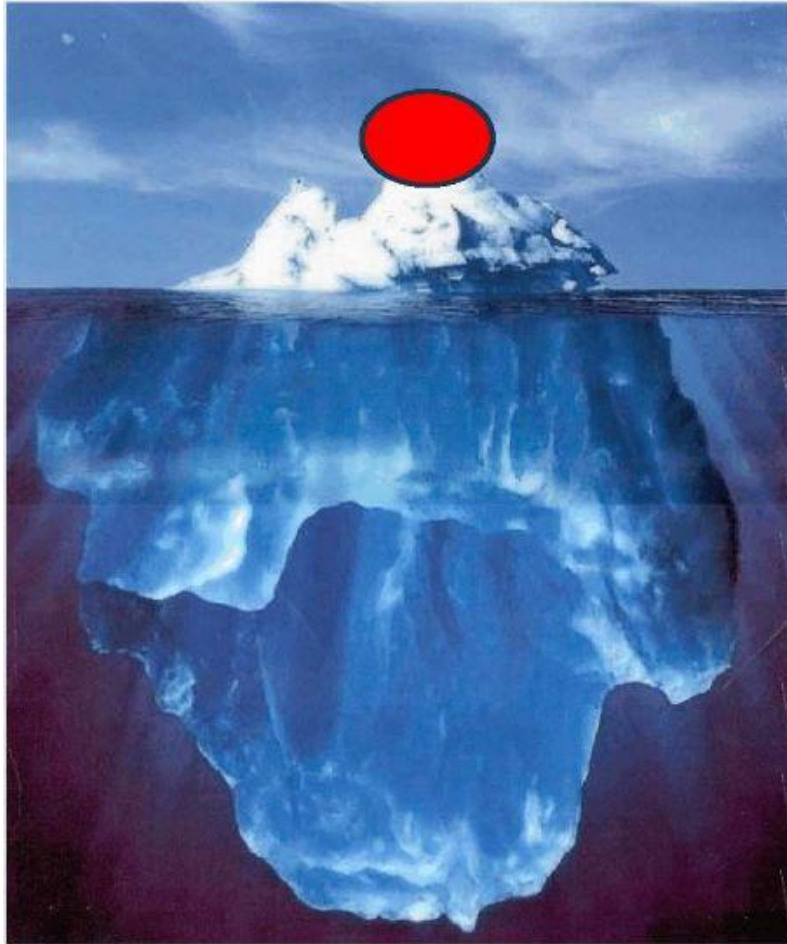
## Somatotype of Hungarian professional athletes

•Basketball	2,0 – 5,5 – 3,1
•Boxing (+75 kg):	2,2 – 6,1 – 2,1
•Canoe	2,1 – 5,7 – 2,3
•Fencing	2,8 – 5,2 – 2,0
•Gymnastic	1,4 – 5,8 – 2,8
•Judo (71-86kg)	3,0 – 6,0 – 1,7
•Böde Dániel	3,4 – 6,7 – 1,2
•Dzsudzsák Balázs	2,6 – 4,3 – 1,9



# Somatochart





UNIVERSITY OF PÉCS  
MEDICAL SCHOOL

**Thanks for attention!**



**SPORTMED**

University of Pécs Medical School  
Sports Medicine Center