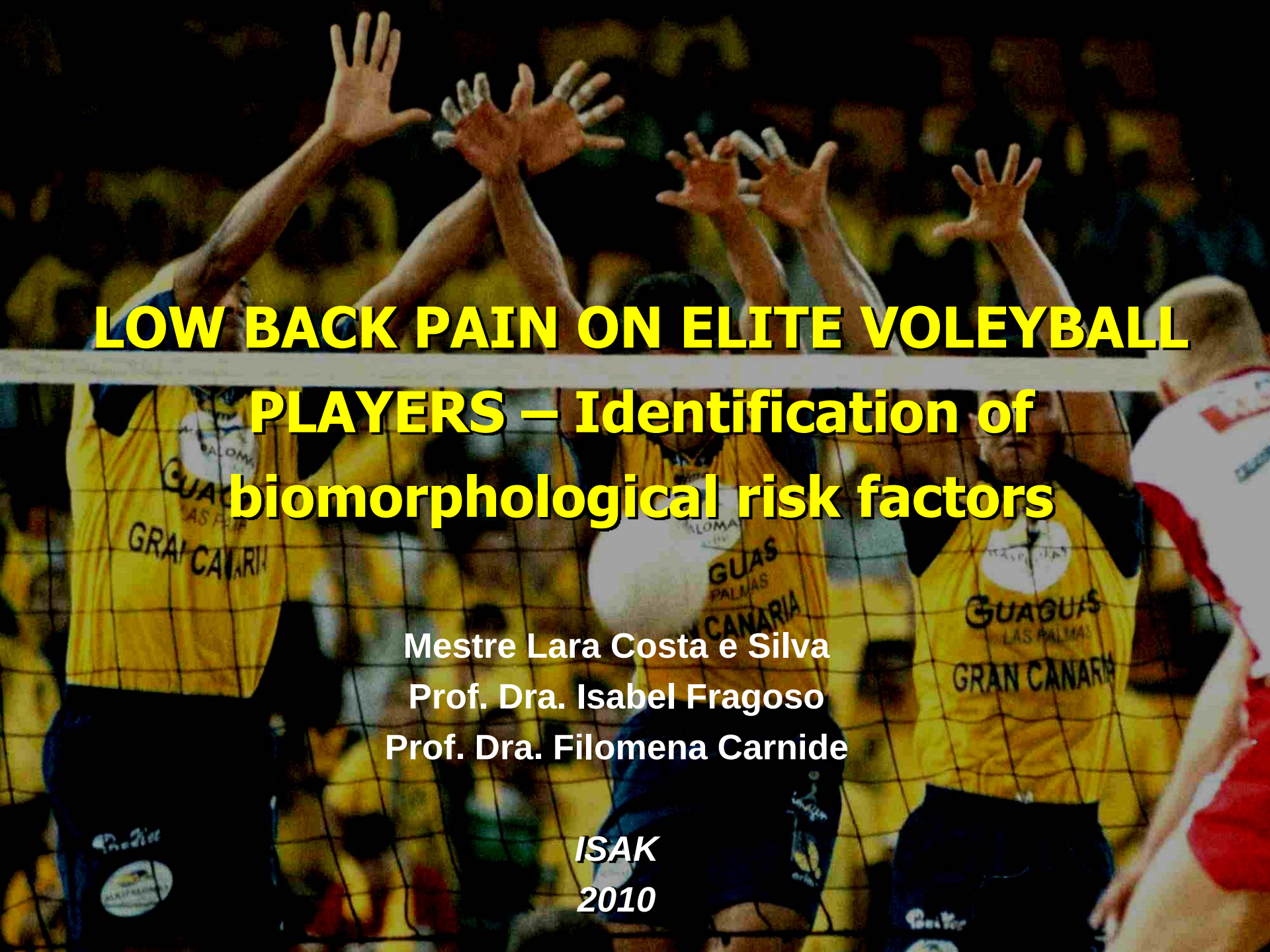

LOW BACK PAIN ON ELITE VOLEYBALL PLAYERS – Identification of biomorphological risk factors

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ISAK

2010

LOW BACK PAIN

- An important and common health problem of the so called industrialized society
  - Main cause of incapacity and absenteeism from work;
  - Repercussions: Social,
    Pshicological,
    Economical;
  - Volleyball- high risk → incidence
    → prevalence

(Aagaard, 1996; Ferreti et al, 1992; Silva, 2001)

LOW BACK PAIN ON VOLLEYBALL

LOW BACK PAIN
Athletes

≠

LOW BACK PAIN
Adult Population

Similar condition and consequences

(Micheli et al, 1995)

INTIMATELY CONNECTED to:

- morphological characteristics,
- technical gesture,
- age,
- other pathologies.

(Gal, 2001)

LOW BACK PAIN ON VOLLEYBALL

- Severity and extension of these complaints determine the athlete´s competitive capacity

(Sousa, 2003)

SAMPLE

- Federated Volleyball Athletes;
- More than 12 years old;
- All Registered Teams on Madeira Volleyball Association - Autonomous Region of Madeira

Competed -2005

- Regional
- District
- National

→ Championships

- 2 Weekly Trainings /2 Hours Each

SAMPLE

- Questionnaire - 301 Athletes

185 Female 116 Male	249 Without LBP 52 With LBP

- Questionnaire + Battery of Tests - 124 Athletes

83 Female 41 Male	83 Without LBP 41 With LBP

- Age

  Average - 17.49 Years

  Standart Deviation – 5.83

INSTRUMENTS

- Self Answer Questionnaire adapted to Volleyball and LBP

- 2 Anthropometric Cases:
  - 2 Anthropometers
  - 2 Large Sliding Calipers
  - 2 Skinfold Calipers
  - 2 Anthropometric Tapes

INSTRUMENTS

- 1 Stadiometer
- 1 Sitting Height Table
- 2 Skinfold Calipers
- 1 Acrylic Base
- 2 Make-Up Pencils
- 1 Weighting Scale
- 1 Chair
- 1 Matrisse

PROCEDURES

- Pre-test – Questionnaire;
- Questionnaire distributed during a training session to all present athletes;
- Answer Rate – 100%
- Anthropometric Tests – ISAK (2006)





DATA TREATMENT

- Descriptive and Exploratory Statistics;
- Multivariate Logistics Analysis;
- Level of Significance : $p \leq 0.05$;

Data Treatment Instrument: S.P.S.S. 14.0 for Windows.

RESULTS – Questionnaire

- LBP 2005 Prevalence → 17.3% (+++ 18 years)

- Causes:
  - Indirect Trauma – 55.8%
  - Overload/ Overuse - 34.6%

- Occurences:

  . During training sessions – 88.5%

  . During Competition- 11.5%

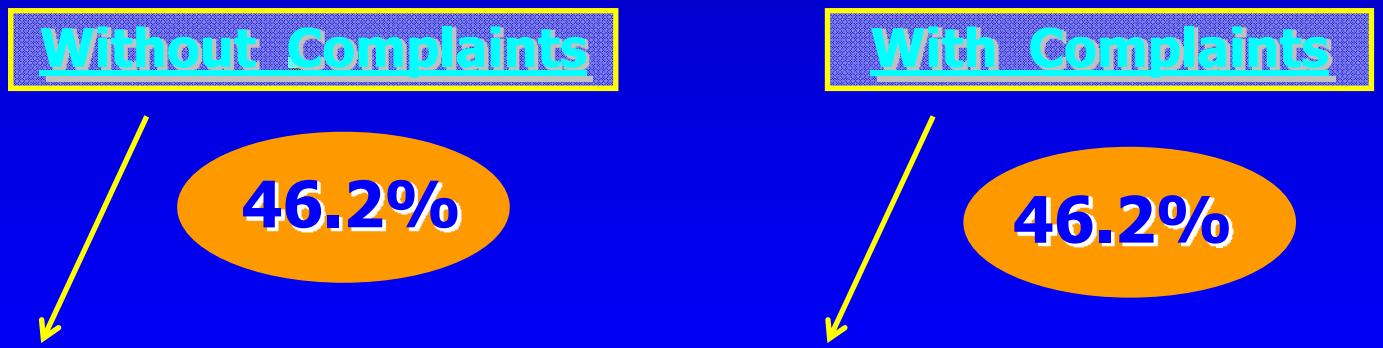
RESULTS - Questionnaire

- **Technical Gesture:**

  . Spike - 53.8%

  . Serve - 28.8%

- **LBP Condition:**



RESULTS
Questionnaire /Anthropometric Measures (AM)

- **Anthropometric Data:**
  - **Male sample presented higher average values**
    - **Weight**
    - **Stature**
    - **BMI**

RESULTS
Questionnaire /Anthropometric Measures (AM)

- **Multivariate Logistics Analysis:**

Age + Female Gender + AM ⟺ LBP

Abdominal Skinfold – Risk · 1.2/ mm fold

Age – Risk · 1.3/ year

Age + Male Gender + AM ⟺ LBP

Age – Risk · 1.4/ year

RESULTS
Questionnaire /Anthropometric Measures (AM)

- Age Range 15/16 + Gender + AM ⟷ LBP

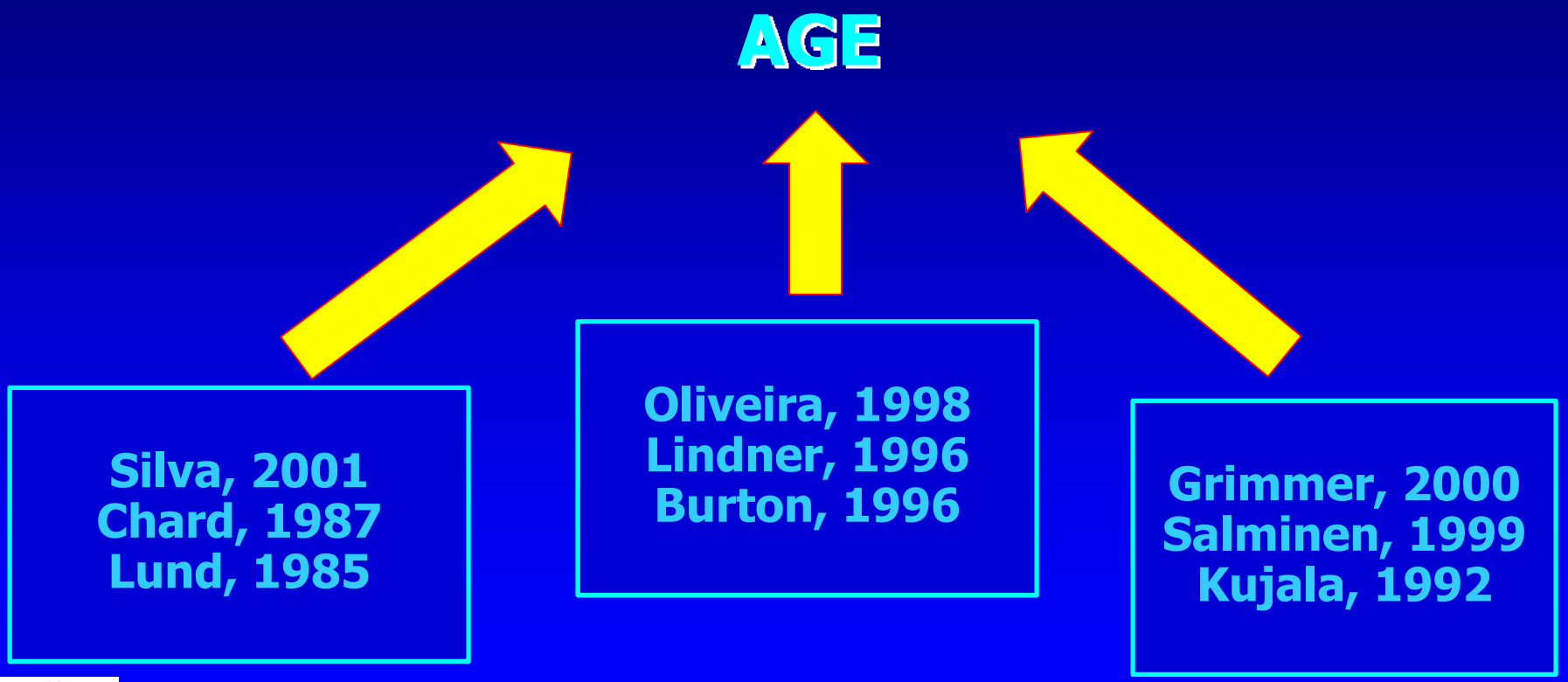
  Bicipital Skinfold – Risk · 1.6/ mm fold

- Age Range ≥18 + Gender + AM ⟷ LBP

  Age – Risk · 1.2/ year

DISCUSSION
Anthropometric Characteristics

- **Risk Factors**



DISCUSSION
Anthropometric Characteristics

- Risk Factors

ABDOMINAL SKINFOLD

Hen, 1997
Lean, 1998
Toda, 2000
Hicks, 2005

BICIPITAL SKINFOLD

No specific literature support


Thank you !