



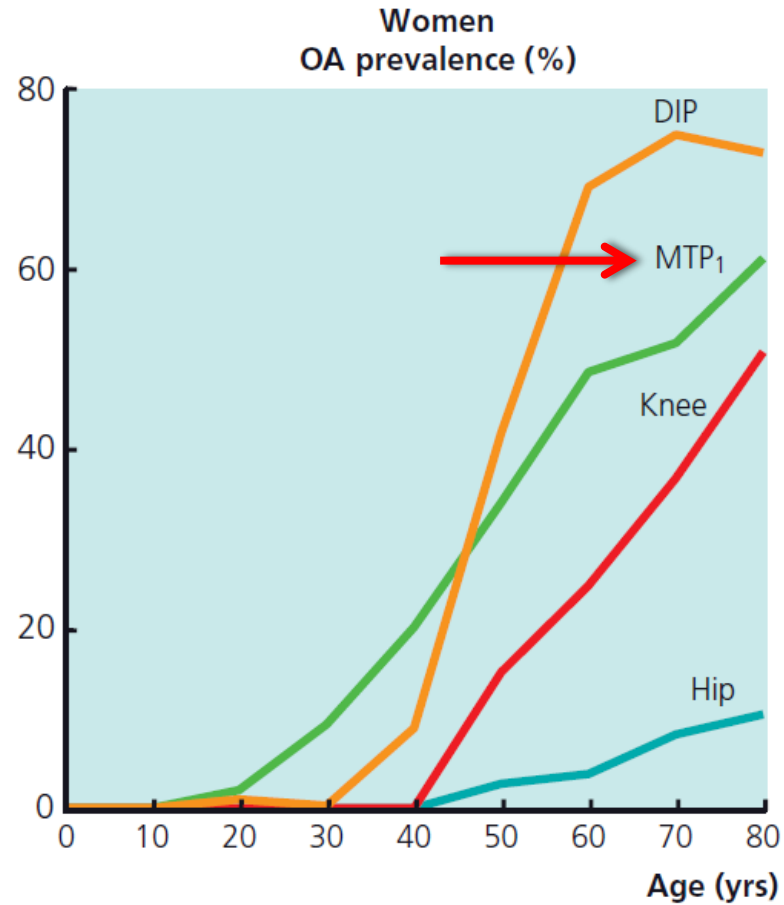
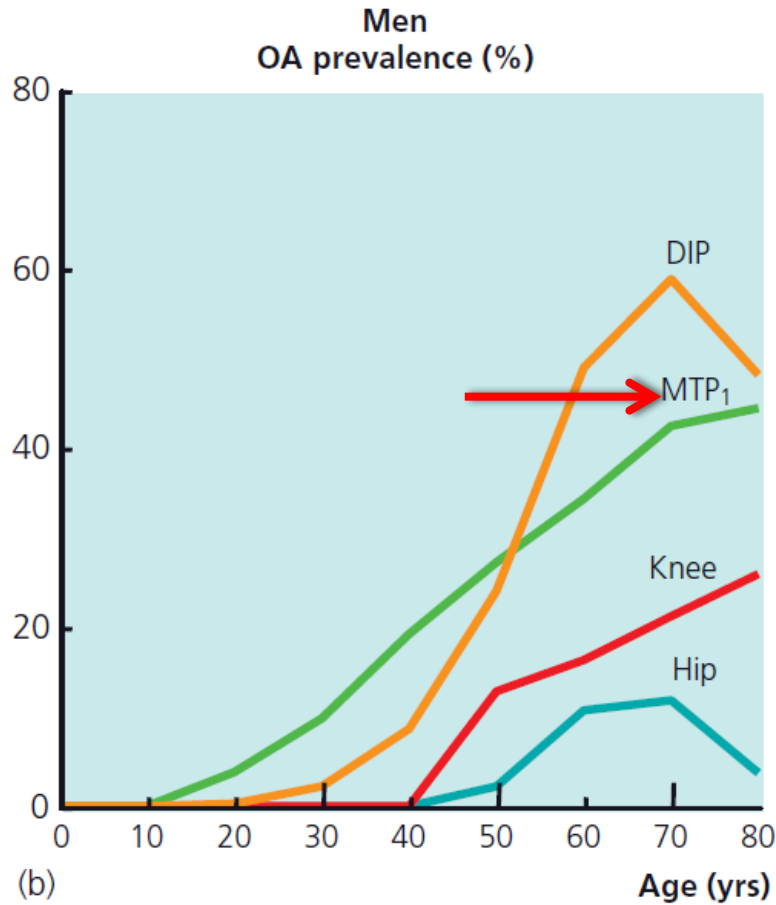
# Do occupational therapists prescribe different thumb orthoses? A national survey among Brazilian health professionals

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# Thumb Osteoarthritis

Age-specific OA prevalence (%)



# Orthotics for Thumb OA

- *“First line of treatment”* (Wajon & Ada, 2005)
- **Evidence = orthoses can significantly reduce pain**
- **EULAR Guideline** – *“Splints for thumb base OA and orthoses to prevent/correct lateral angulation and flexion deformity are recommended”* (Zhang et al., 2007)



# Is there a better orthosis?

- *“There is **moderate evidence that orthoses can improve hand function** at long-term follow-up.”*

Bertozzi et al., 2015

- *“Orthoses can **reduce pain** in patients with TMC joint OA (...) [however] different length, make, and material of orthoses worn for varied time periods made **comparison impossible**.”*

Spaans et al., 2015

- *“Splints significantly reduce hand pain. (...) **there is no consensus concerning the design of splints**.”*

Kjeken et al., 2011

- *“patients who received a splint obtained some pain relief from it. We found **no evidence that one type of splint was more effective (...)** than another.”*

Egan & Brousseau, 2007

# Objectives

- To provide a current perspective on the use of orthotic devices, identifying the practice patterns, challenges and barriers to its implementation
- To determine the preferences in orthotic designs and selected models prescribed by health professionals for the management of OA of the CMC joint.

# Methods

- Electronic questionnaire - Google Docs® platform
- 42 questions
- Questions regarding:
  - Professional formation and experience
  - Orthotic designs preferred
  - Materials used
  - Barriers



# Methods – Orthotic Selection

*Literature Review*



INTERNATIONAL  
SOCIETY FOR PROSTHETICS  
AND ORTHOTICS

## **Differences in orthotic design for thumb osteoarthritis and its impact on functional outcomes: A scoping review**

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1–13

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# Methods - Questionnaire

## Órtese dorsal para articulações CMC e MF do Polegar



23. **Descrita por: Poole, J.U. & Pellegrini, V.D. - Arthritis of the Thumb Basal Joint Complex - Journal of Hand Therapy, 2000 \***

*Mark only one oval.*

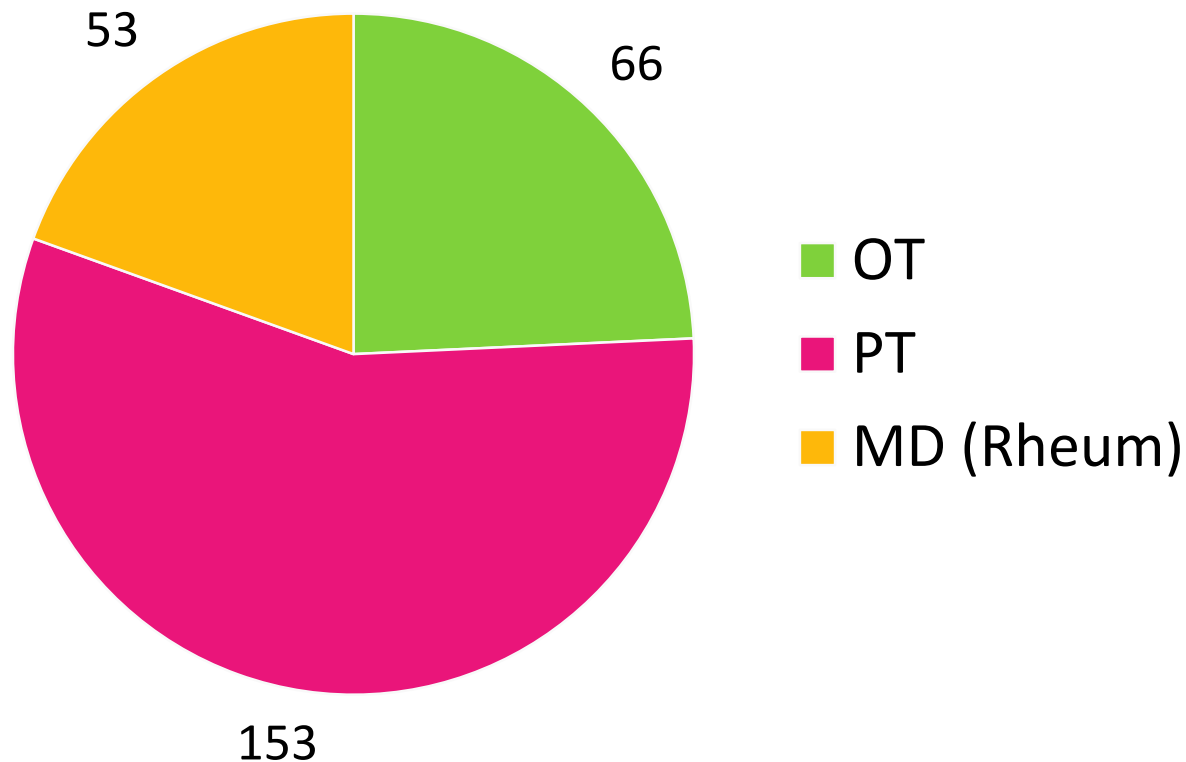
- Confecciono ou indico
- Não confecciono nem indico

# Methods - Participants

- PTs and Ots registered in the Federal and State Councils of Physiotherapy and Occupational Therapy, and the Brazilian Hand Therapy Society
- Rheumatologists inscribed in the Brazilian Rheumatology Association
- Invitation messages sent through national and regional professional association mailing lists.

# Results - Participants

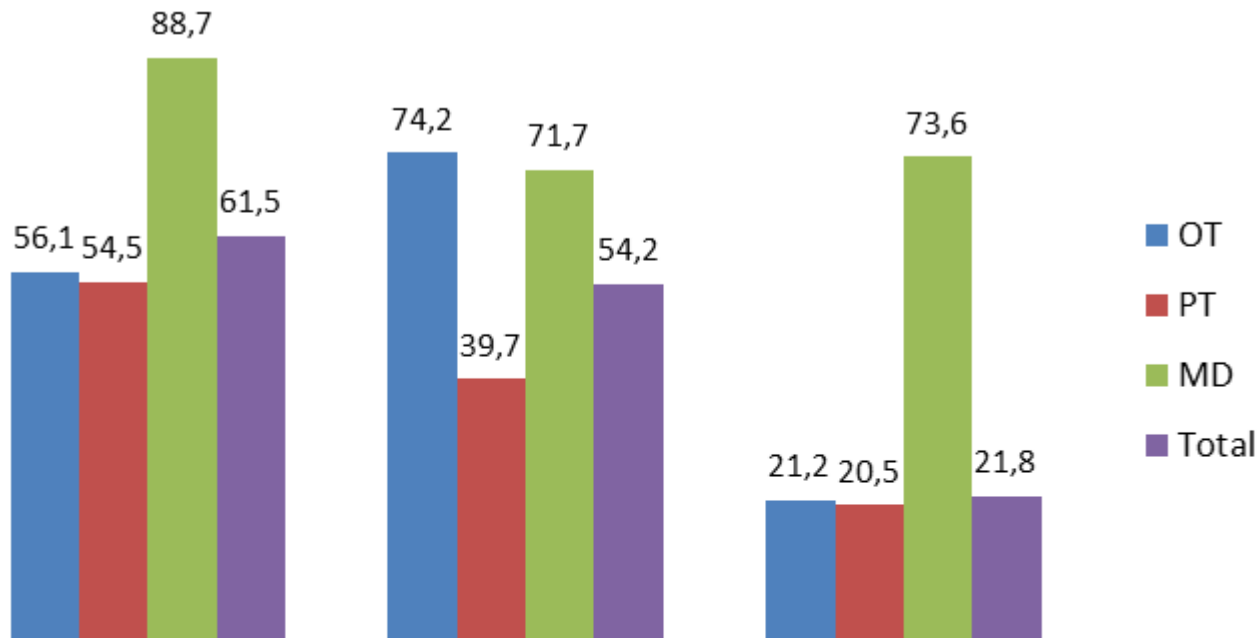
- 275 participants completed the questionnaire



# Results – Orthotics Prescription

	<b>OT</b>	<b>PT</b>	<b>MD</b>	<b>TOTAL</b>	
	<b>n (%)</b>	<b>n (%)</b>	<b>n (%)</b>	<b>n (%)</b>	<b>p*</b>
<b>Orthotics Use</b>					
Prescribed orthoses	<b>55 (83.3)</b>	84 (54.9)	<b>52 (98.1)</b>	191 (69.4)	<0.001
<b>Joints Included in Orthosis</b>					
Wrist, CMC and MCP	43 (22.5)	77 (40.3)	48 (25.1)	168 (87.9)	<0.001
CMC and MCP	50 (26.2)	67 (35.1)	48 (25.1)	165 (86.4)	<0.001
CMC	23 (12)	23 (12)	14 (7.3)	60 (31.4)	0.003

# Results – Orthotics Prescription



Forearm-based

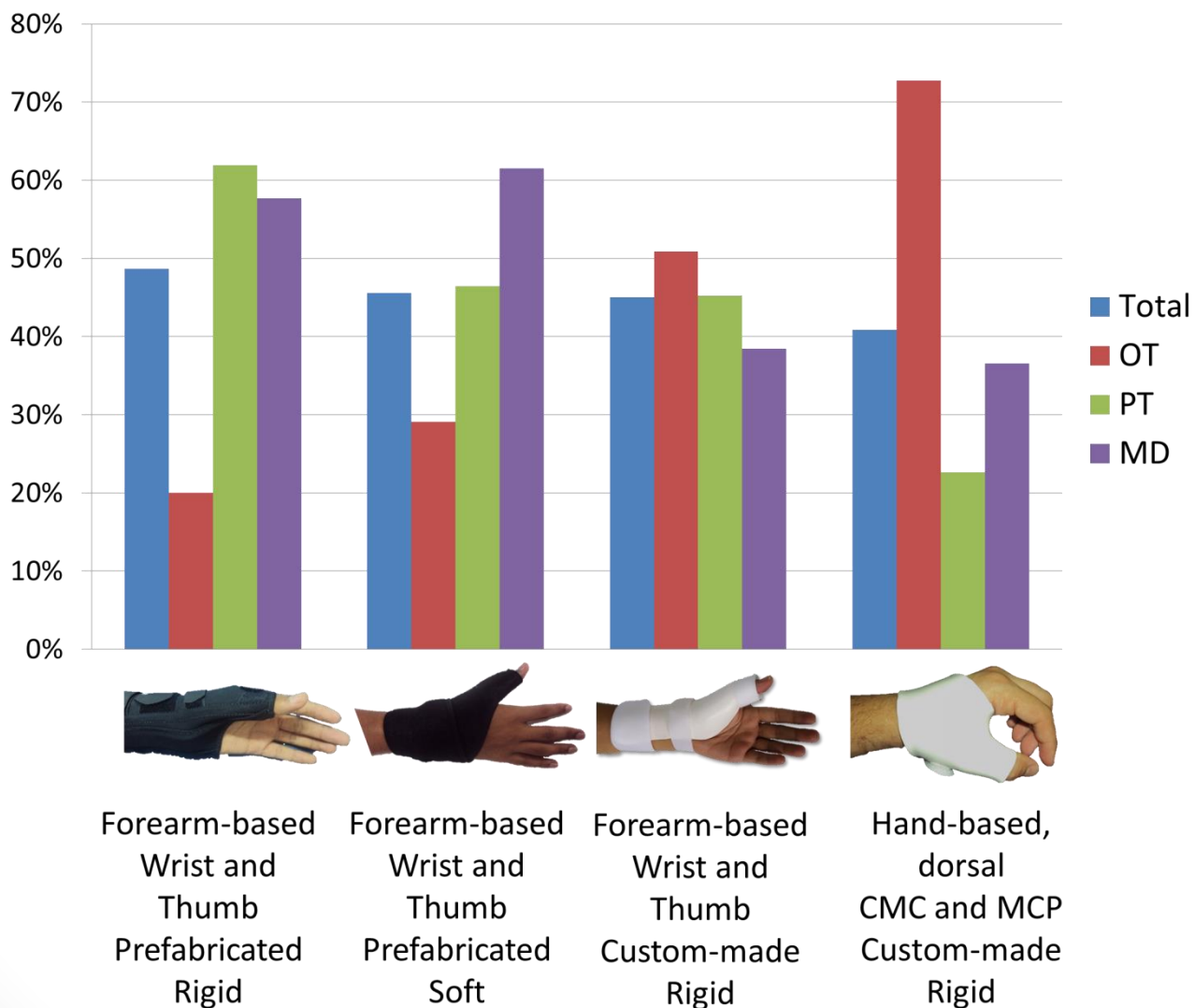


Hand-based



Thumb-based

# Results – Orthotics Prescription



# Results – Materials of Choice

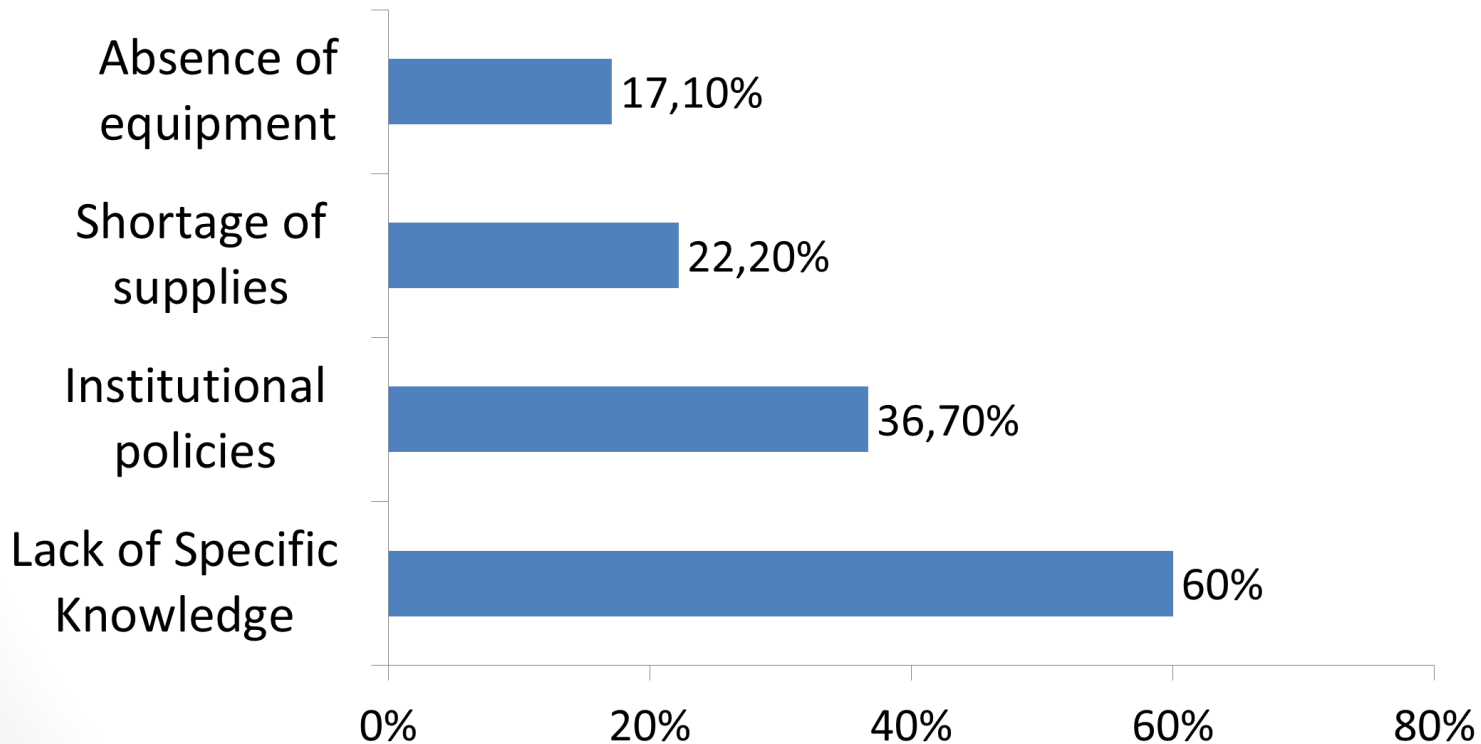
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	OT	PT	MD	TOTAL	
	n (%)	n (%)	n (%)	n (%)	p*
Low-Temp. Thermoplastics	46 (24.1)	19 (10)	16 (8.4)	81 (42.4)	<0.001
Neoprene	13 (6.8)	28 (14.6)	21 (11)	62 (32.5)	0.172
High-Temp. Thermoplastics	9 (4.7)	31 (16.2)	22 (11.5)	62 (32.5)	0.008
Other Materials	5 (2.6)	21 (11)	6 (3.1)	32 (16.7)	0.456
I Don't Know	1 (0.5)	28 (14.6)	15 (7.8)	44 (23.7)	<0,001

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# Results - Barriers

## Challenges and Barriers for Orthotic Interventions





# Discussion

- Multiple Designs
  - Possible absence of clinical reasoning (Kjeken et al. 2011);
  - Challenging positioning of the CMC joint required (Beasley, 2012)
- Use of orthotics
  - Brazil: 69.4% -- NA: 87.8% (O'Brien & McGaha, 2014)
  - Few prefabricated designs; practice not aligned to the best evidence - Political and economic features (Sneed, 2004)

# Study Limitations

- Some prefabricated models could not be included, due to its unavailability to Brazilian professionals.
- Absence of consensus among participants could be influenced by the nonexistence of studies comparing different orthotic approaches
- Response rate below the expected for a national survey

# Conclusion

- Significant differences in orthotic prescription between professional classes in Brazil
- Overall preference for long, forearm-based orthoses
- Orthotic devices that stabilized only CMC joint were less prescribed by all respondents
- Major barrier for orthotic intervention in CMC OA: Lack of specific knowledge.