The Utilization of Interval Throwing rograms in the Physical Therapy Setting

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Disclosures

I have no relevant financial disclosures

Publication

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he Utilization of Interval Throwing Programs in the Physica Therapy Setting: A Cross-Sectional Survey

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Human Kinetics
ORIGINAL RESEARCH RE

Background

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In MLB/collegiate/high school baseball, over 50% of injuries occur in the upper extremity

Rehabilitation practices can vary widely which could ultimately effect clinical outcomes and return-to-sport (RTS)

Interval throwing programs (ITP) are designed to minimize the chance of re-inju

- Gradual introduction of stressors
- Emphasis on mechanics/delivery
- Establishing proper warm-up criteria

We know the benefits and purpose of ITPs, but how often are they being used?

Purpose of study: *examine current physical therapy practice patterns during th RTS phases for the throwing athlete, determining if relationships exist between ITP prescription variance and therapist experience*

Study Design

- IRB-approved, cross-sectional observational study
  - Electronic survey sent via email
- 17 questions devised to assess PT experience and ITP prescription parameters
  - Years of practice
  - Setting/location
  - Possession of advanced certification (SCS, OCS)
  - % of orthopedic cases in total caseload
  - # of overhead-throwers seen per year
- Participants recruited via convenience sampling
  - Surrounding locale
  - State/national listings of orthopedic PT organizations

Years of Service	**N=**
<1	
1-5	
6-15	
>15	
Advanced Certifications	**N=**
SCS	
OCS	
Dual Certified	

Rankings-Based Questions

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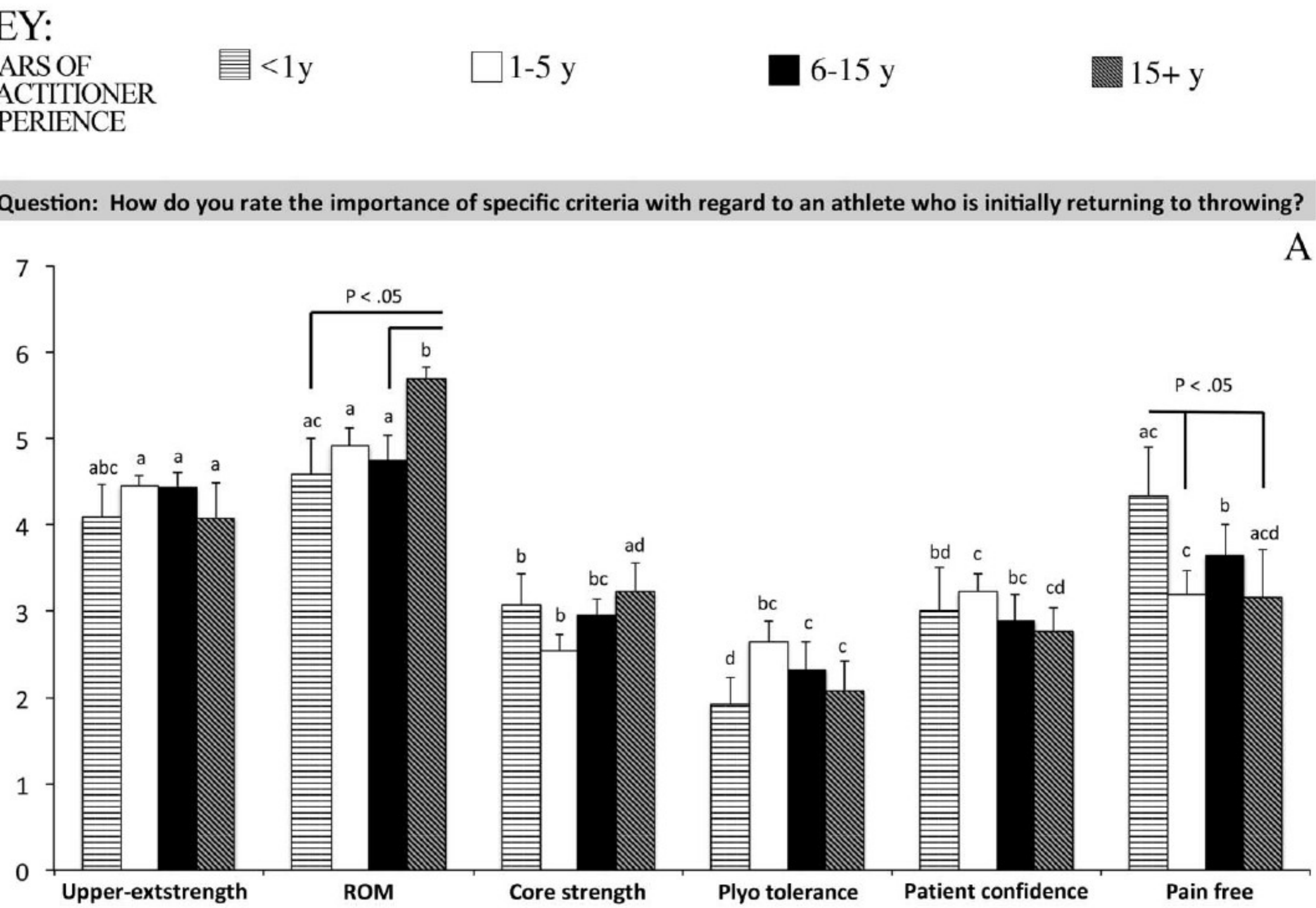
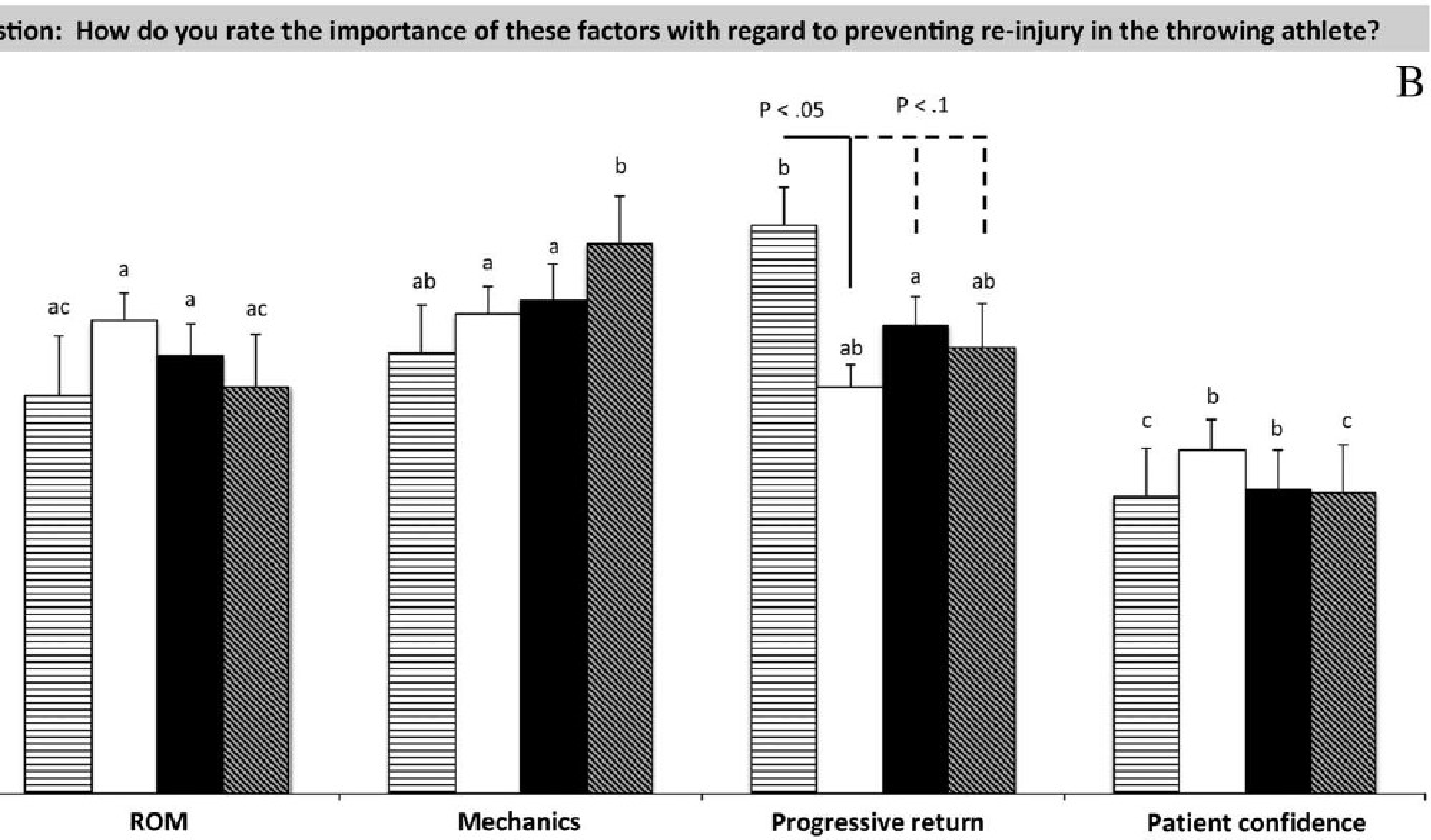


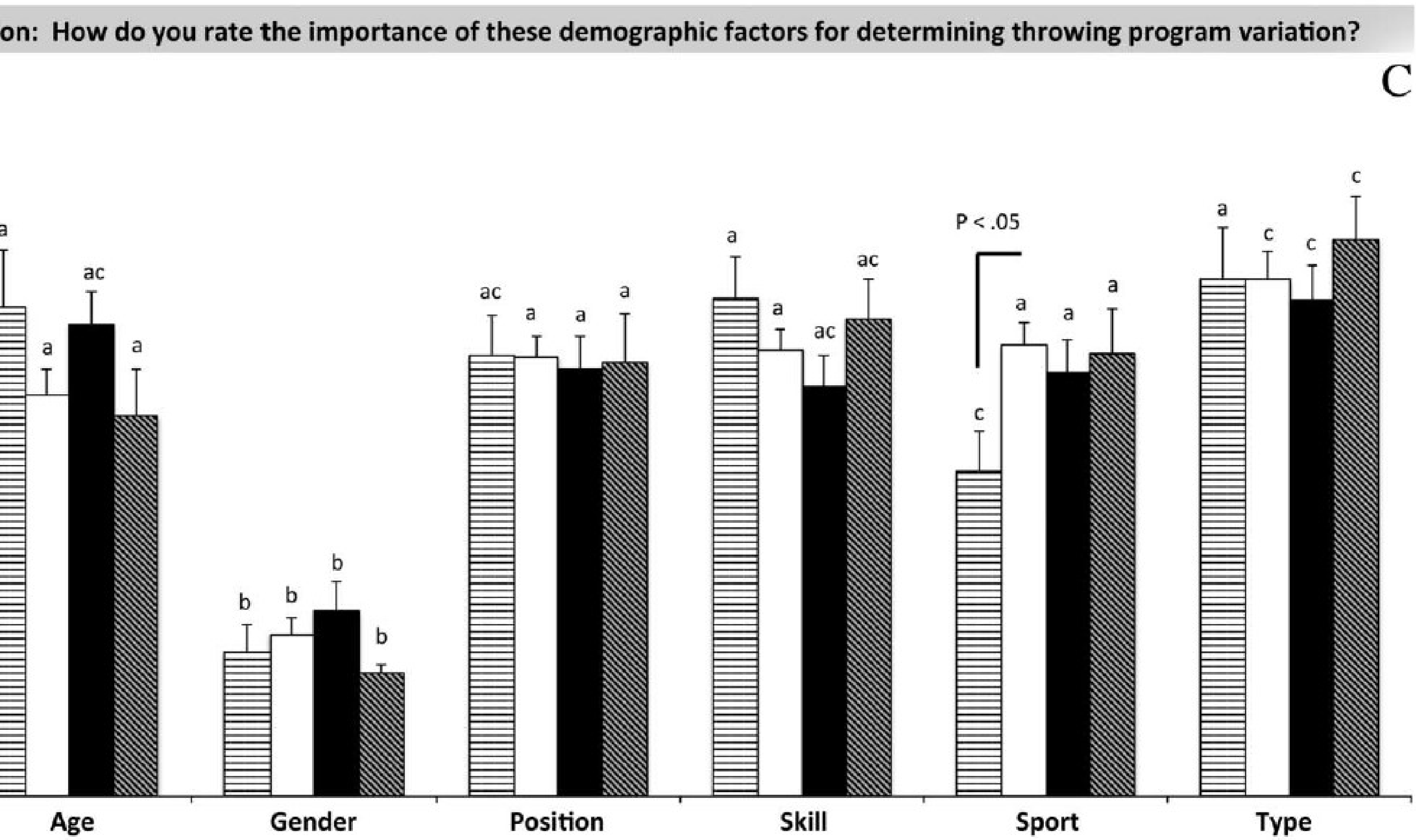
– Most-experienced group (>
yrs) valued adequate ROM
most important criteria to
initiate ITP
  - Least-experienced group (
years) valued pain (p<.05)

Rankings-Based Questions



- In preventing re-in
  the least experien
  group (<1yr) value
  progressive RTS (p
  higher than the ne
  experience group (
  5yr)
  - Trend continued
    the other groups
    (approaching p<

Rankings-Based Questions



– In determining
variation of ITP,
least-experienc
group valued <u>sp</u>
<u>specificity</u> *less*
any of the othe
groups (p<.05)

Degree-Based Questions

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Y.
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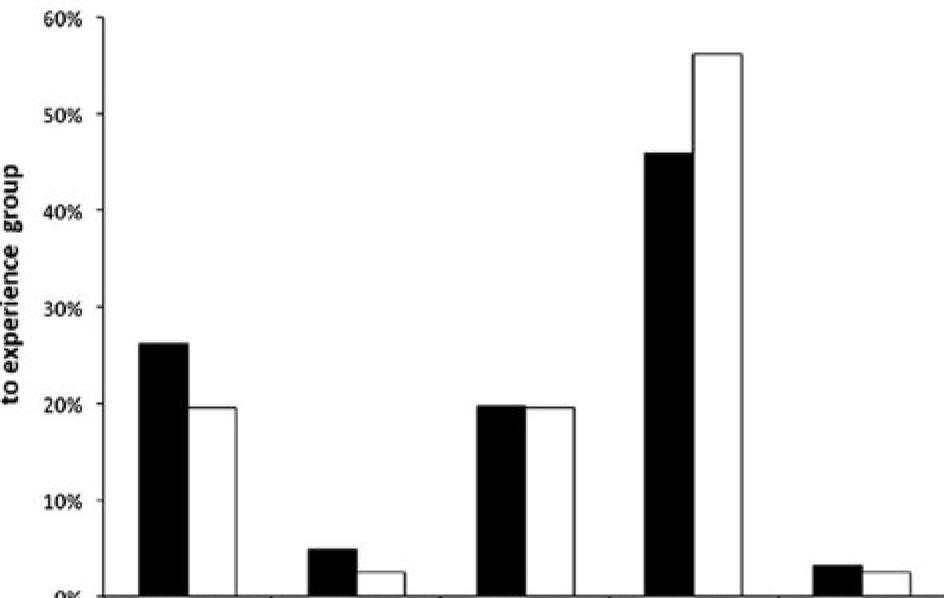
RIENCE

0–5 y   6+ y

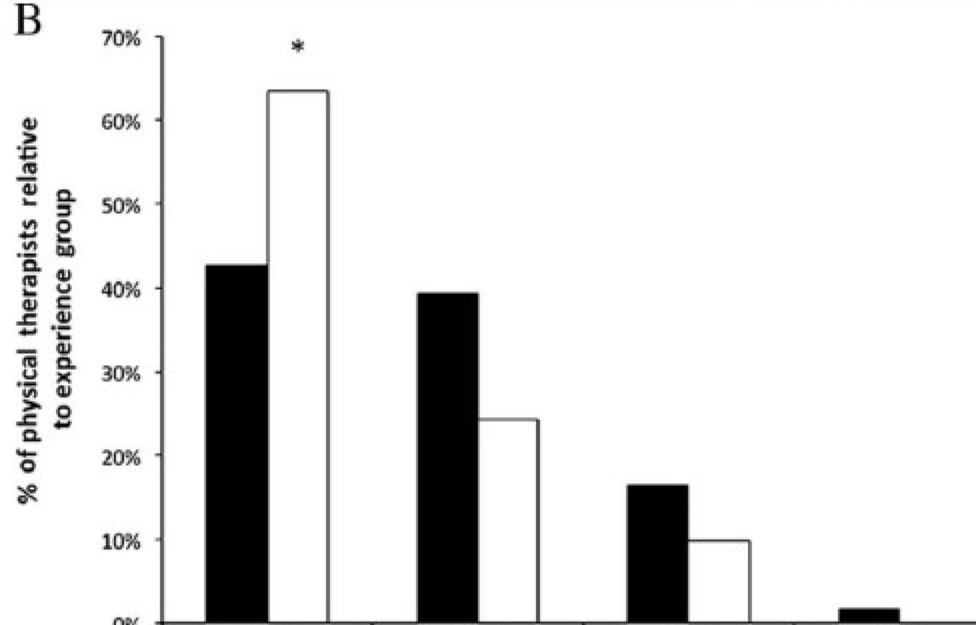
tion: What do you think the most important factor is for a successful return to throwing?



	PT CONFIDENCE	POS PSYCHOSOC.	ADEQUATE OBJ	MECHANICS	MD CLEAR
■ 0-5 YR	26.2%	4.9%	19.7%	45.9%	3.3%
□ 6+ YR	19.5%	2.4%	19.5%	56.1%	2.4%

Question: With throwing athletes, how often do you incorporate a structured interval throwing program in your rehabilitat

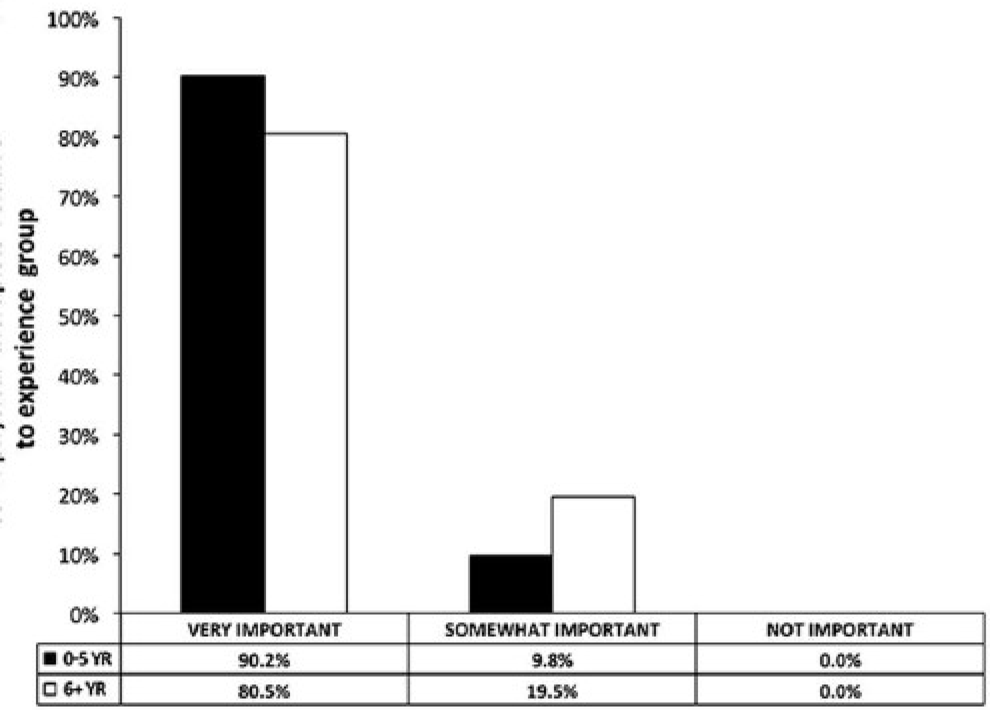
B



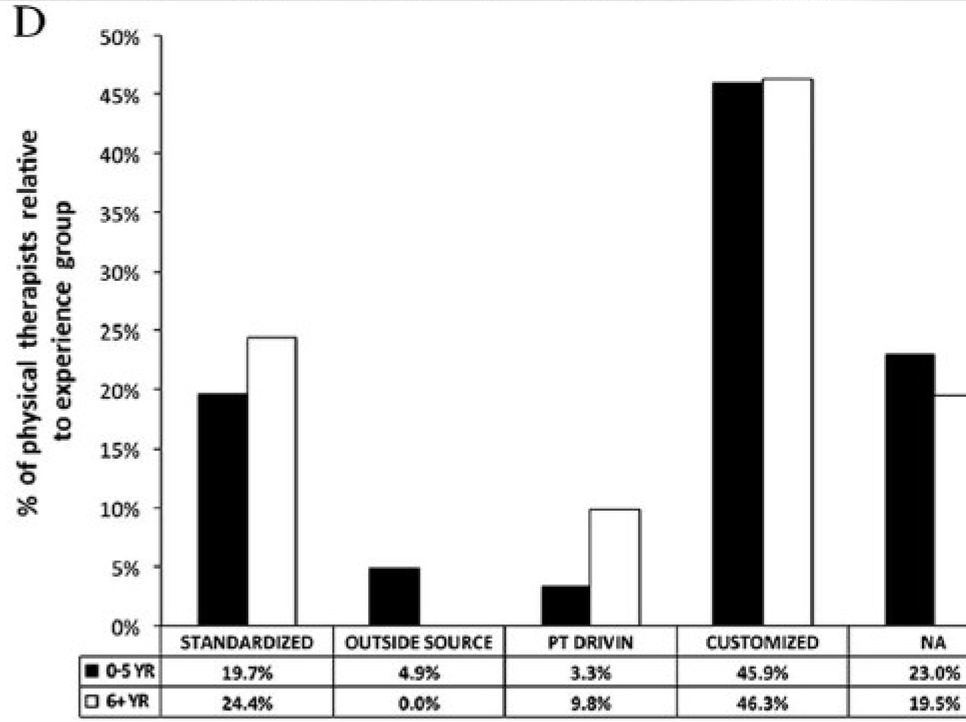
	ALWAYS	OFTEN	RARELY	NEVER
■ 0-5 YR	42.6%	39.3%	16.4%	1.6%
□ 6+ YR	63.4%	24.4%	9.8%	0.0%

Degree-Based Questions

n: How important are interval throwing programs for an athlete returning to a throwing sport?

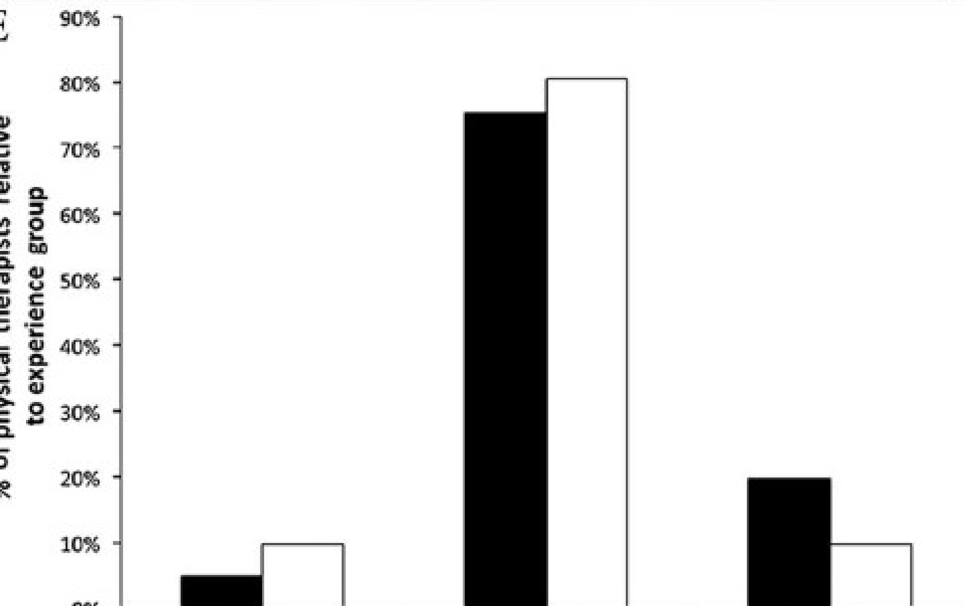


Question: If implemented in your clinic, how are interval throwing programs structured?



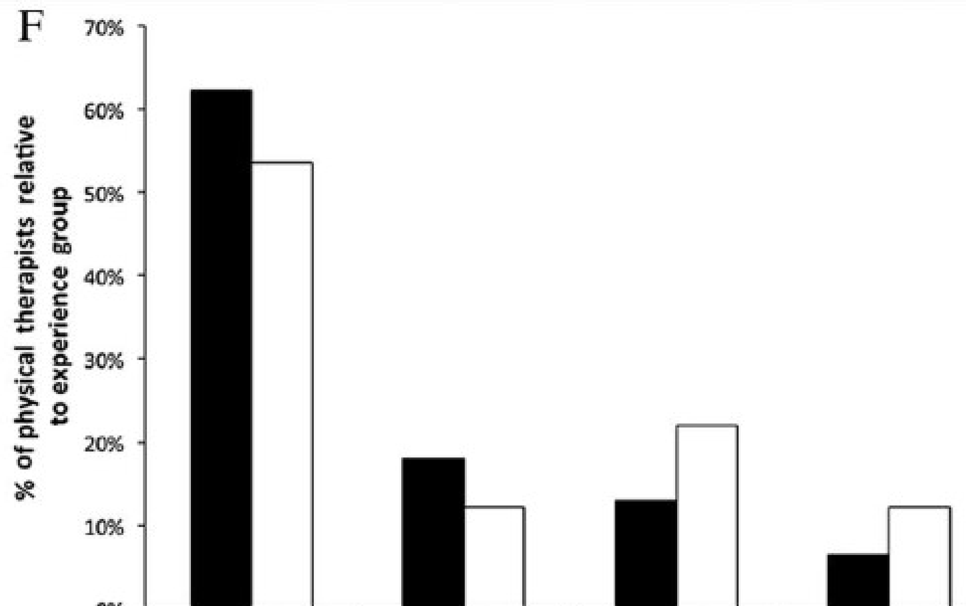
Degree-Based Questions

Question: With regard to throwing volume, how is the amount of throws controlled?



	TIME	NUMBER	SYMPTOMS
■ 0-5 YR	4.9%	75.4%	19.7%
□ 6+ YR	9.8%	80.5%	9.8%

Question: What percentage of overhead throwing patients do you follow-up with after discharge via phone, email, etc.



	0-25%	25-50%	50-75%	75-100%
■ 0-5 YR	62.3%	18.0%	13.1%	6.6%
□ 6+ YR	53.7%	12.2%	22.0%	12.2%

Results & Statistics

- Advanced certifications; ranking-based questions
  – No significant differences in ranking of readiness criteria (ROM)
  – No significant differences in ranking factors to prevent re-injury
  – No significant differences in ITP variation (type of injury)
- Advanced certifications: degree-based questions
  – Similar to years of experience, significant difference in how often ITPs are prescribed
    - 81.3% of those with advanced cert indicated they "ALWAYS" incorporate a structured IT
    - 37.1% of those without advanced cert

Advanced Certifications

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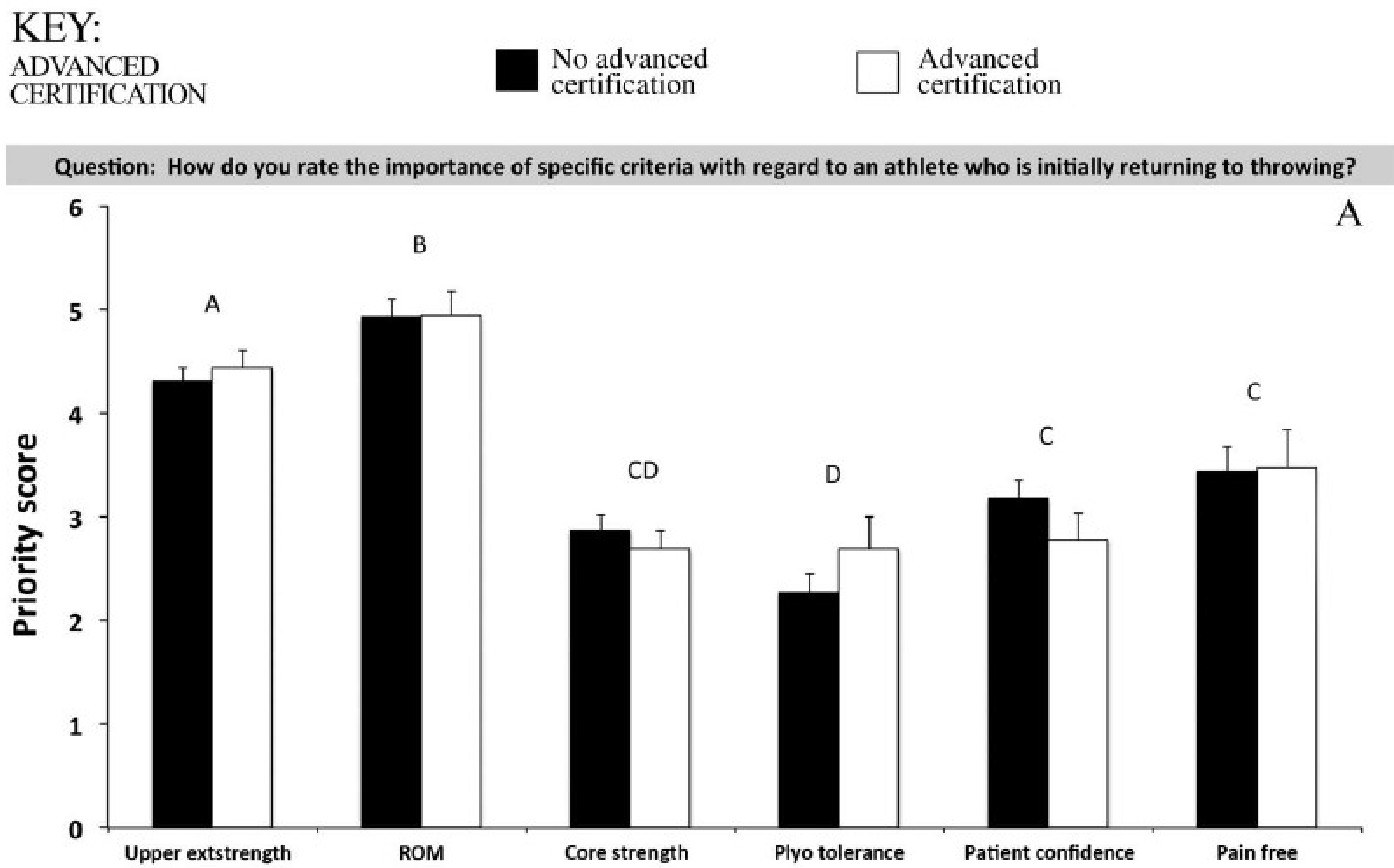

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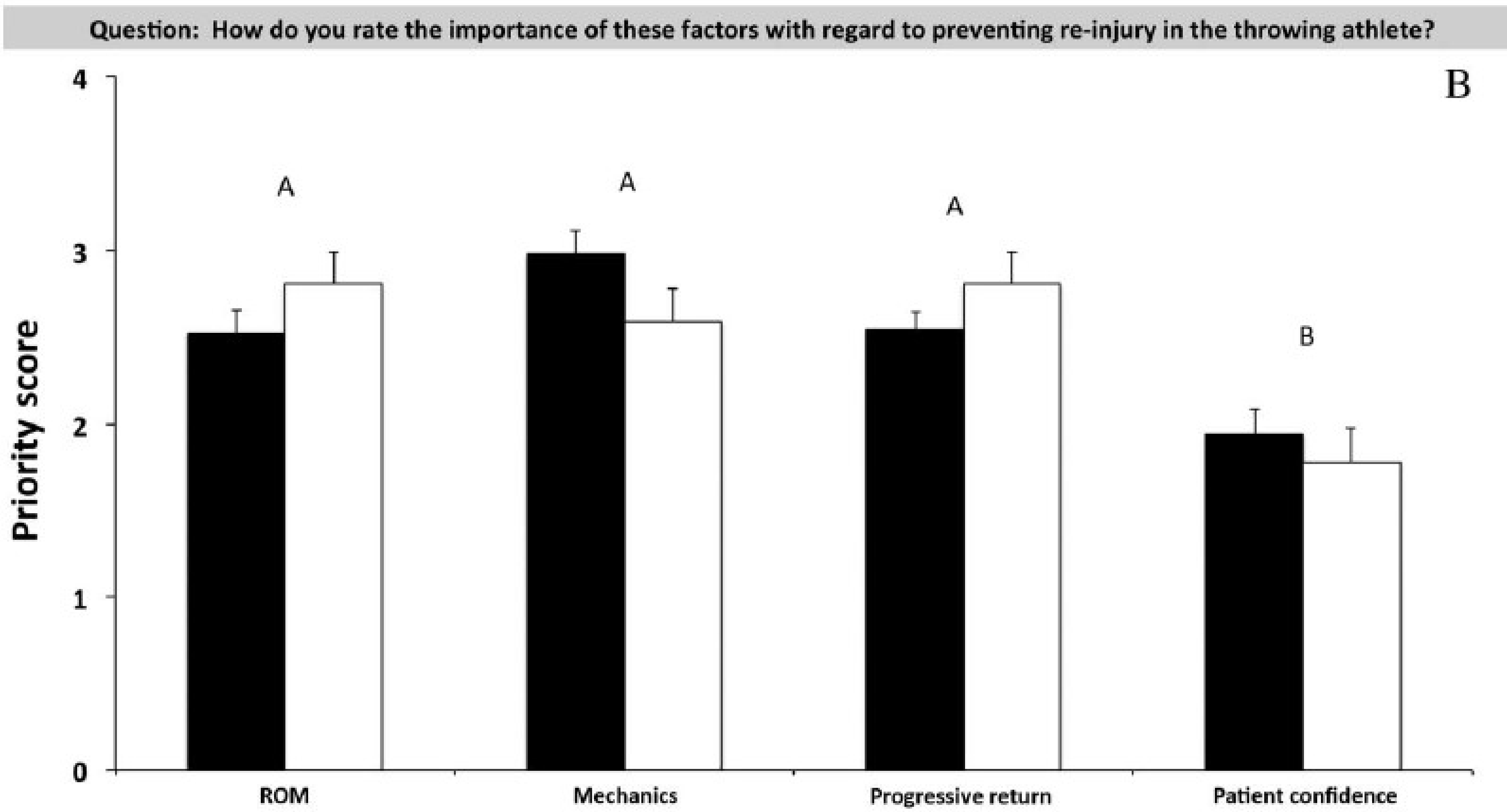

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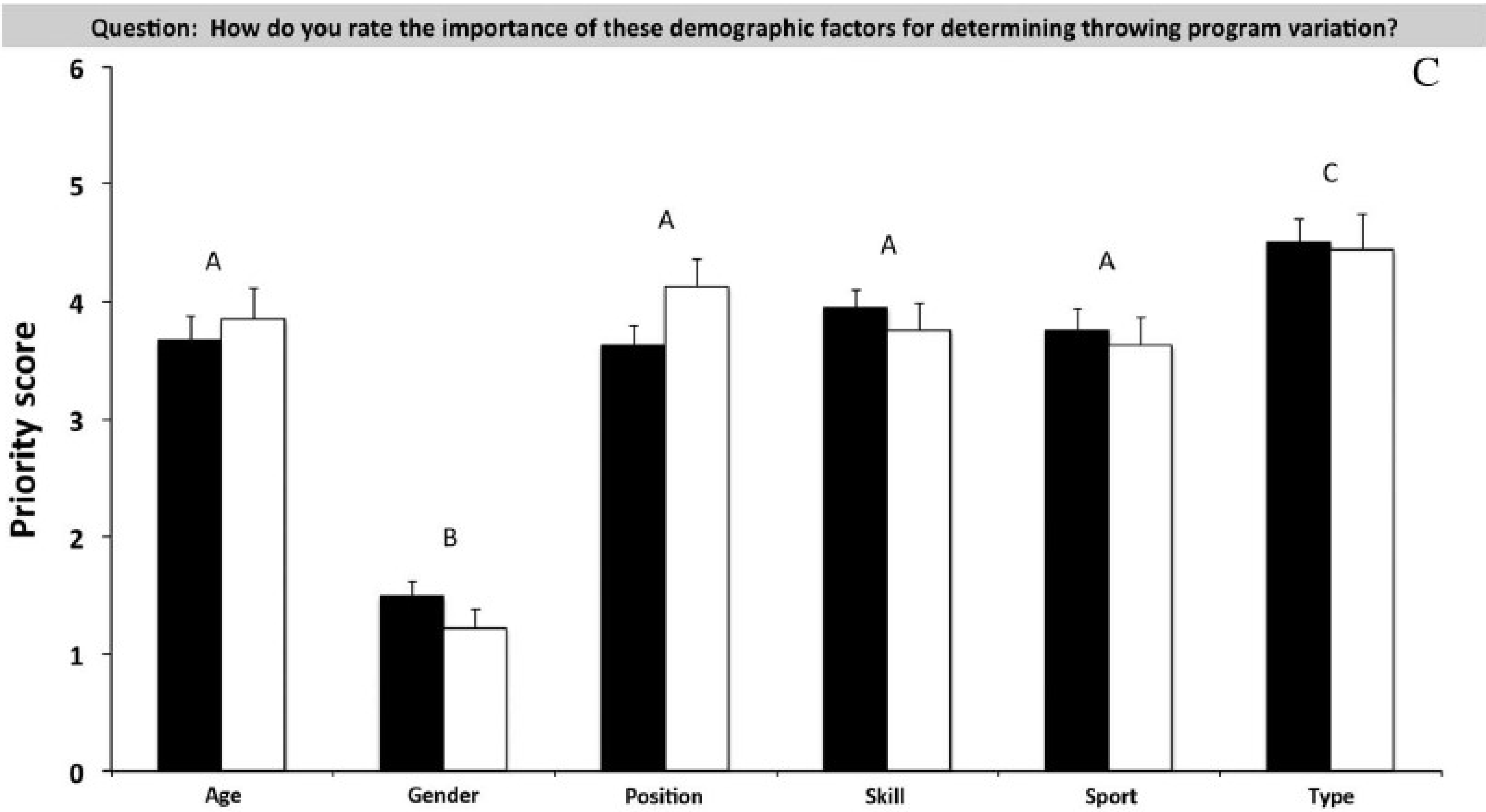

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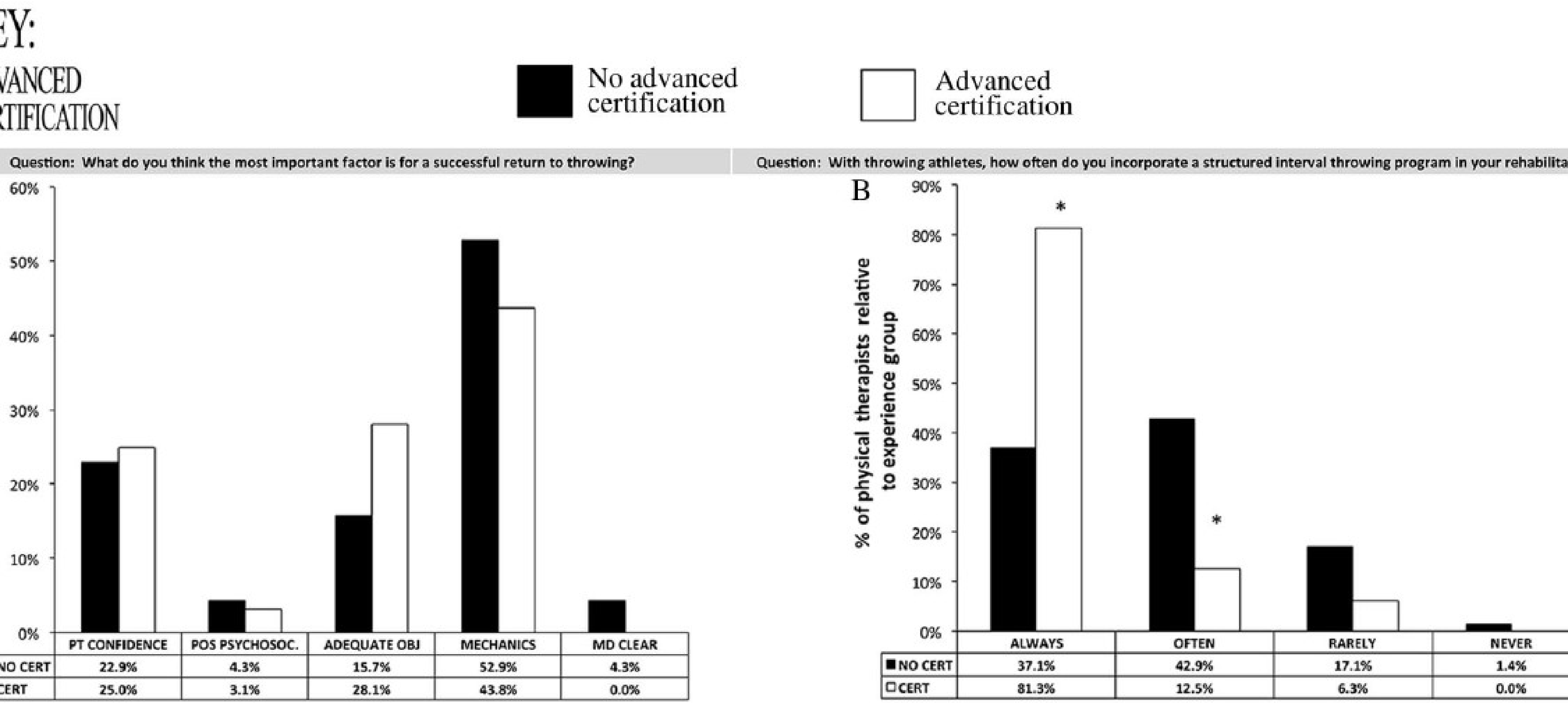

	PT CONFIDENCE	POS PSYCHOSOC.	ADEQUATE OBJ	MECHANICS	MD CLEAR
NO CERT	22.9%	4.3%	15.7%	52.9%	4.3%
CERT	25.0%	3.1%	28.1%	43.8%	0.0%

	ALWAYS	OFTEN	RARELY	NEVER
■ NO CERT	37.1%	42.9%	17.1%	1.4%
□ CERT	81.3%	12.5%	6.3%	0.0%

Advanced Certifications

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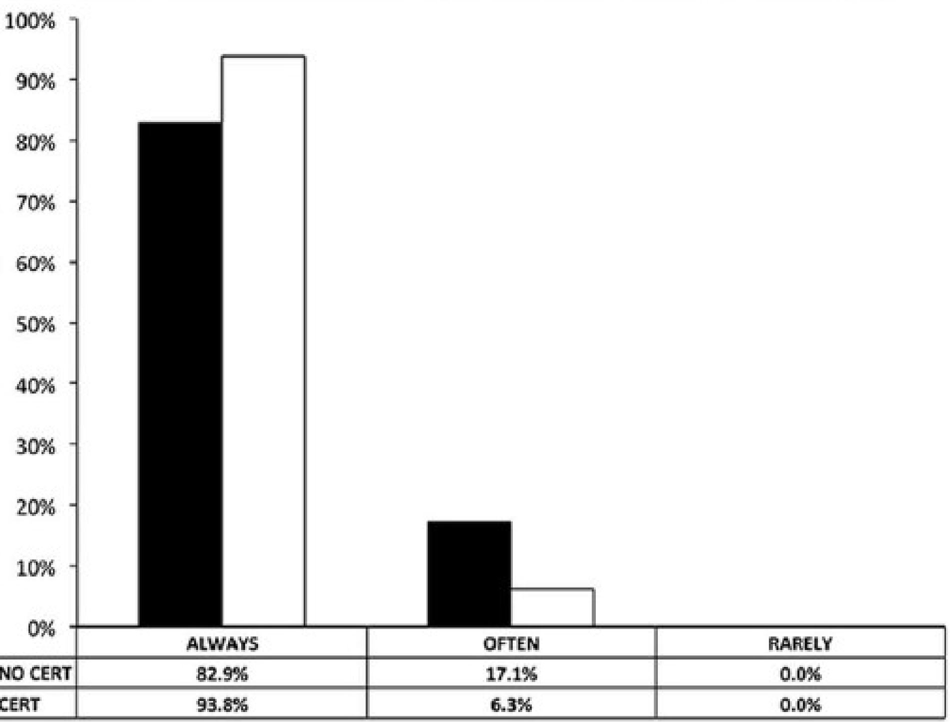

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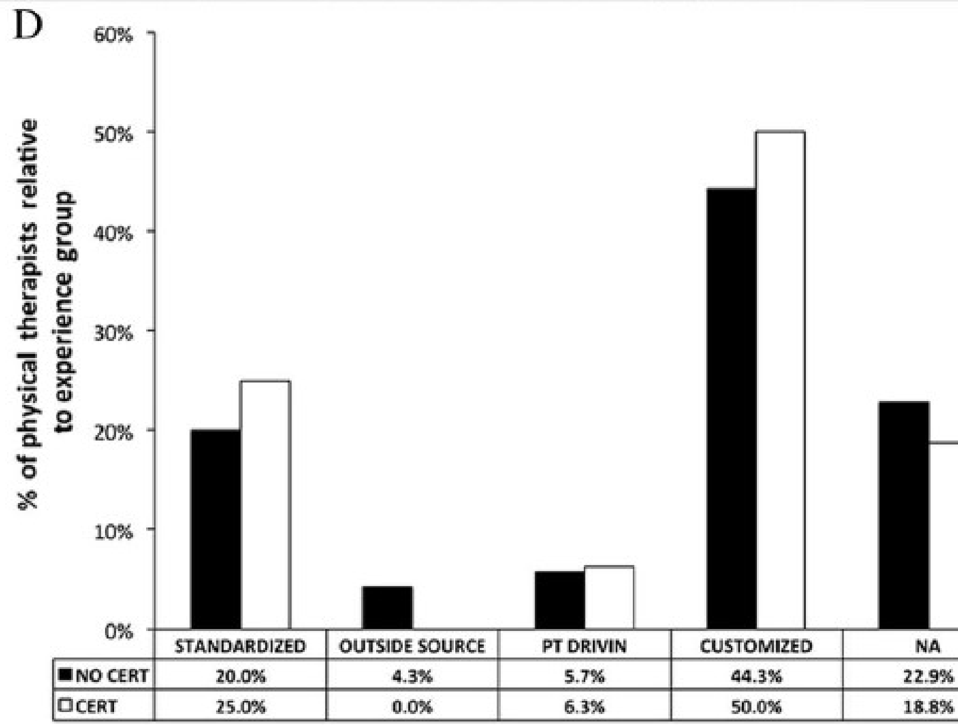

Advanced Certifications

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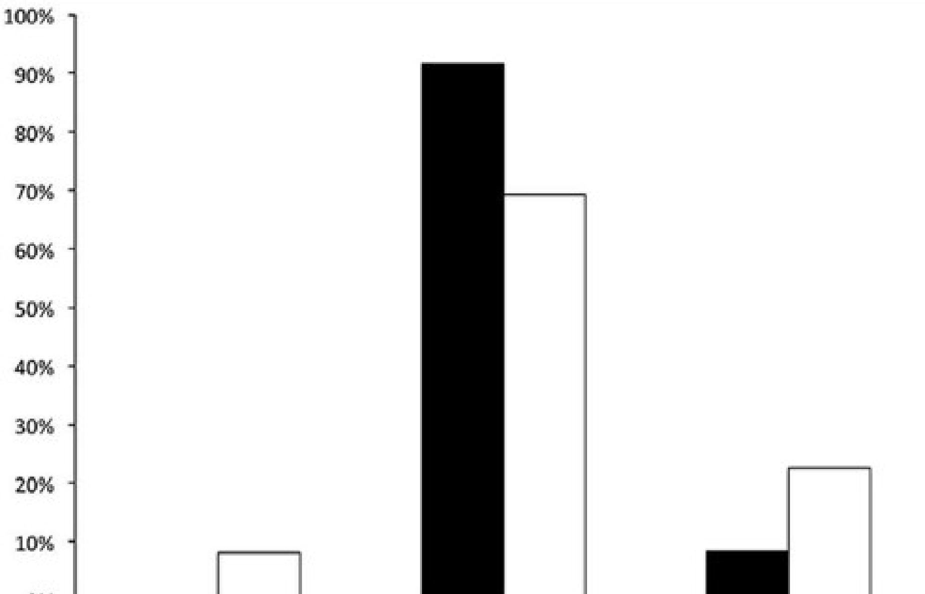
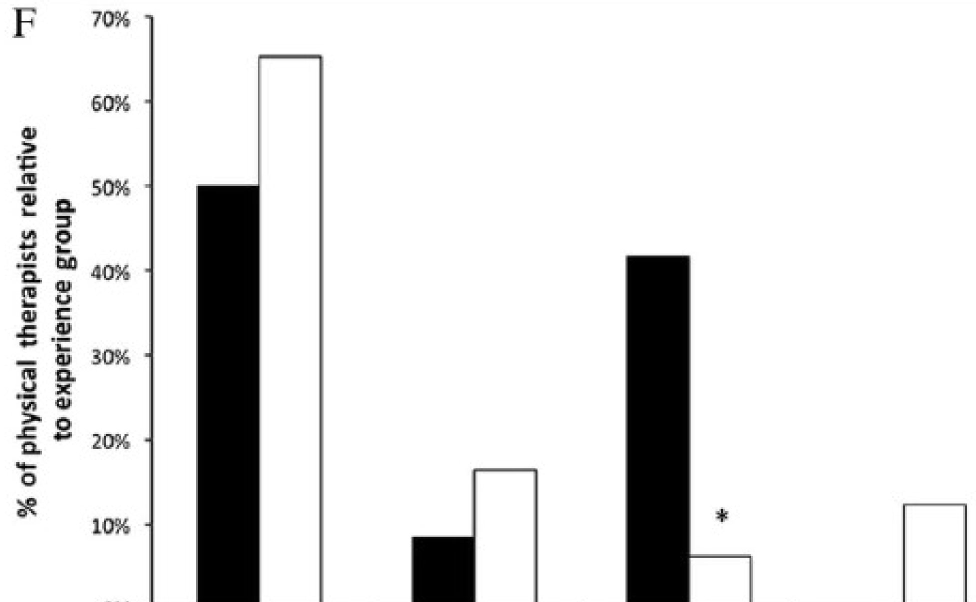
Question: With regard to throwing volume, how is the amount of throws controlled?



	TIME	NUMBER	SYMPTOMS
NO CERT	0.0%	91.7%	8.3%
CERT	8.2%	69.4%	22.4%

Question: What percentage of overhead throwing patients do you follow-up with after discharge via phone, email, etc



	0-25%	25-50%	50-75%	75-100%
■ NO CERT	50.0%	8.3%	41.7%	0.0%
□ CERT	65.3%	16.3%	6.1%	12.2%

Limitations

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- Survey conducted among convenience sample
- No geographical homogeneity
- Response bias
- Type of thrower (baseball, softball, football, javelin) and level (high school, college, recreational, professional) were not accounted for

Discussion & Conclusions

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With a given experience level, PTs are likely to differ in their opinion on return to throwing

- Different prioritization in prescription parameters
- Variable prescription frequency

This study helps identify gaps in current PT approaches to RTS with the throwing athlete

Further research should identify areas of improvement in PT education as well as appropriate ITP prescription parameters to optimize care and treatment for this population

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