

# Involvement in physical activities among children and youth with juvenile idiopathic arthritis



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## BACKGROUND

- Children with juvenile idiopathic arthritis (JIA) must contend with joint swelling, pain and limited mobility (1), which may contribute to decreasing participation in age-appropriate physical activities (2).
- Children and youth with arthritis may report poorer athletic competency compared to their healthy peers leading to fewer active pursuits (3). This increases the risk for adopting a sedentary lifestyle(4), which may lead to poor cardiovascular endurance, lower bone density and decreased muscle strength (5).
- Participation in physical activities is critical for developing life skills, promoting healthy and fit lifestyles, fostering friendships, increasing self-worth (5).
- Despite recent research examining the positive effects of prescribed exercise programs in the JIA population (6-10), little is known on the effects of habitual physical activity and its determinants.

## OBJECTIVES

To describe physical activities among children and youth with JIA, as well as identify potential disease-related predictors of diversity, intensity and enjoyment of involvement.

## METHODS

- Sample:**
- 107 children/youth with JIA actively followed at the Montreal Children's Hospital and their parents
  - Participants understood/spoke English or French

- Study Design:**
- Cross-sectional
  - Self-report questionnaires & telephone interviews completed by children/youth and parents

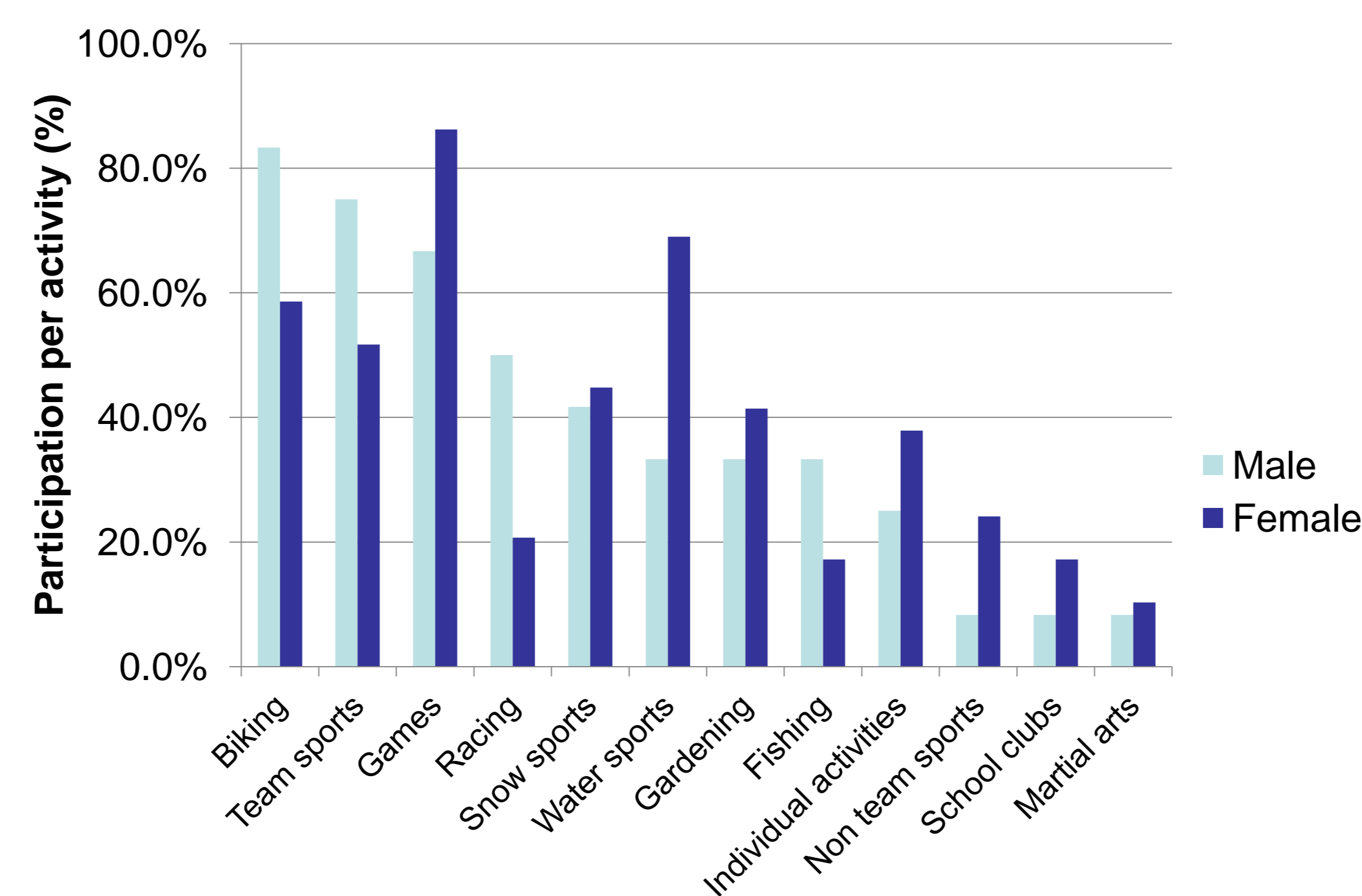
- Main outcome measure:**
- Children Assessment of Participation & Enjoyment (CAPE)**
  - Involvement in voluntary activities outside of school
    - Diversity (how many)
    - Intensity (how often)
    - Enjoyment (how much fun)
  - 5 Domains: Recreation, social, **active physical**, skill-based, self-improvement

**Data Analysis:**  
 Descriptive statistics, t-test, multiple linear regression models

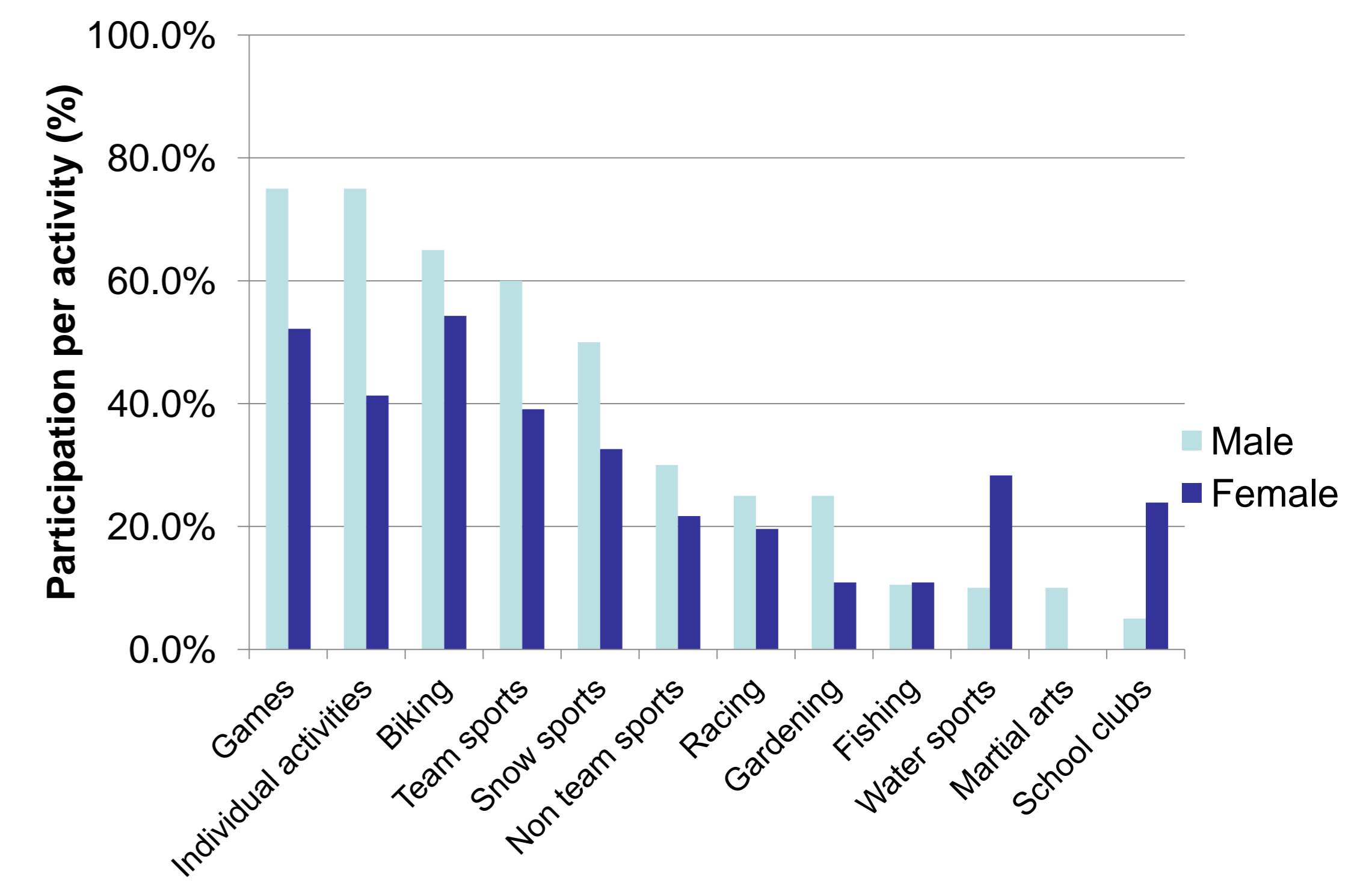
## RESULTS

Socio-demographic characteristics	Disease-related characteristics
<ul style="list-style-type: none"> <li>Mean age of children = 12.8 ± 2.7 years; range 8.2 - 17.8</li> <li>75 (70.1%) were female</li> <li>62.2% of families had a household income &gt; 75 000 Can\$</li> </ul>	<ul style="list-style-type: none"> <li>Mean pain score (VAS) 2.4 (range 0.0 - 9.0); 52.8% had pain</li> <li>37.3% had active disease (i.e. at least one active joint count)</li> <li>49.9% had disease for ≥ 5 years; Mean(SD) = 5.3 (4.1) years</li> </ul>

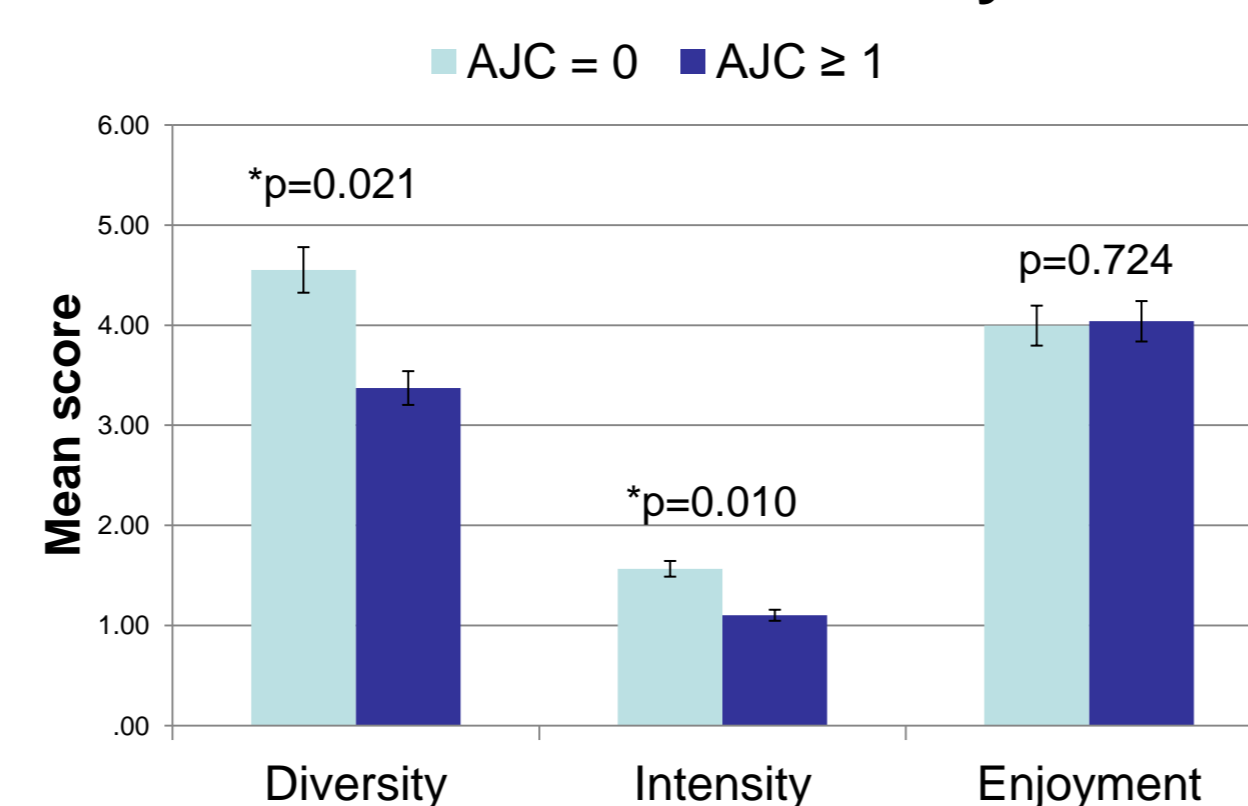
Percentage participation in active physical activities (CAPE) by sex for ages 8-11 years



Percentage participation in active physical activities (CAPE) by sex for ages 12-18 years

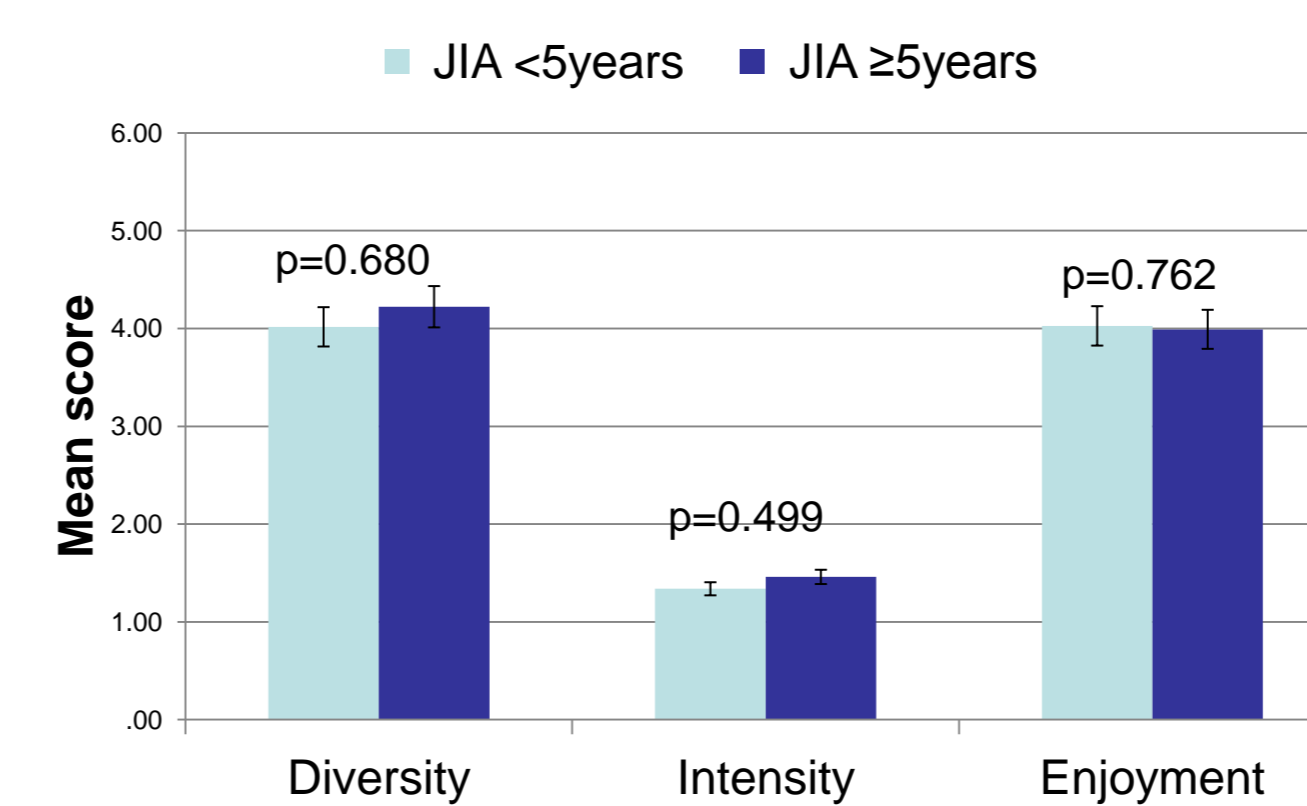


Mean physical activity scores (CAPE) by disease activity



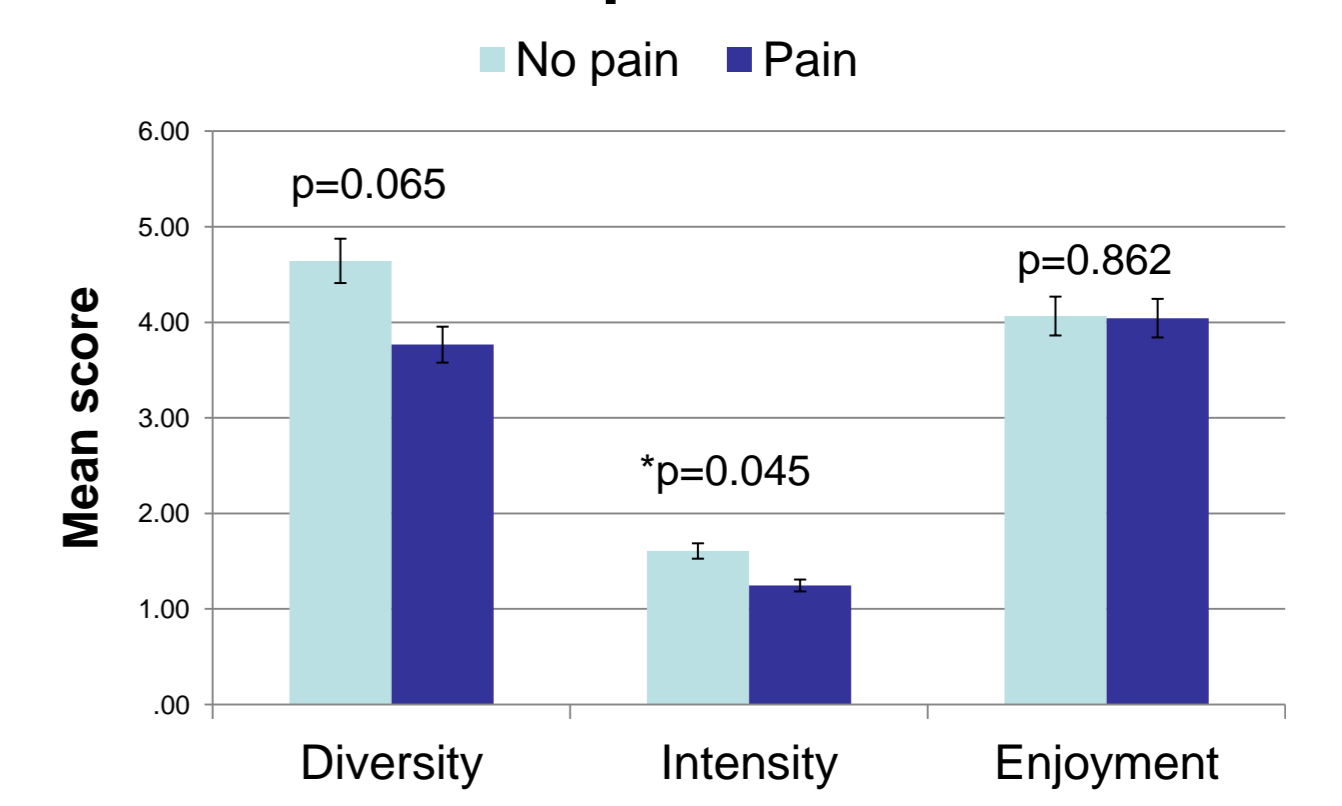
\*Pairs of means significantly different by disease activity at p<0.05  
 \*\*Disease activity showed no significant association with physical activity when entered in multiple linear regression models.

Mean physical activity scores (CAPE) by disease duration



\*Pairs of means significantly different by disease duration at p<0.05  
 \*\*Disease duration showed no significant association with physical activity when entered in multiple linear regression models.

Mean physical activity scores (CAPE) by pain



\*Pairs of means significantly different by pain at p<0.05  
 \*\*Pain showed no significant association with physical activity when entered in multiple linear regression models.

## DISCUSSION AND CONCLUSION

- Greater disease activity and pain may dissuade children and youth with arthritis from participating in more active pursuits, which places them at greater risk for adopting sedentary lifestyles.
- In addition to disease-related determinants personal and contextual factors may also play an important role in explaining involvement in physical activities.
- The identification of both intrinsic and extrinsic determinants of physical activity in children and youth with arthritis may allow healthcare professionals to assess children's health needs with more precision and favour a healthier lifestyle.

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