

# Development of Take PART: A Computerized Tool to Assess Adolescent Functional Autonomy and Its Relationship with Quality of Life

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# Presentation Objectives

- Present the development process of the Take PART: Participation Activities Rating for Teenagers.
- Present the internal reliability and discriminant validity of the Take PART.
- Present the relationship between Take PART indicators and adolescents' quality of life.

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# Introduction

- Functional autonomy refers to an individual's ability to **independently select and carry out** tasks in daily life (American Psychological Association [APA], 2018).
- Adolescence represents a critical developmental phase between childhood and adulthood, where individuals move **from dependence to independence** (American Psychological Association [APA], 2002).
- During this period, the development of functional autonomy and active participation in community life become **central goals** (Clark et al., 2004).

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# The Take PART Development

- **The need for self-report assessments:** Existing questionnaires primarily rely on parent or teacher reports, leaving a gap in understanding adolescents' perspectives on their autonomy (Bedell, 2011; Coster et al., 2012).
- **The need for customized assessments:** Due to the diverse needs and activity levels that vary by age, gender, and different domains during adolescence, there is a need for a customized assessment tool. Take PART addresses this need through its modular design, enabling customization based on **age, gender, and life domains.**

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# Take PART: Idea And Content Development

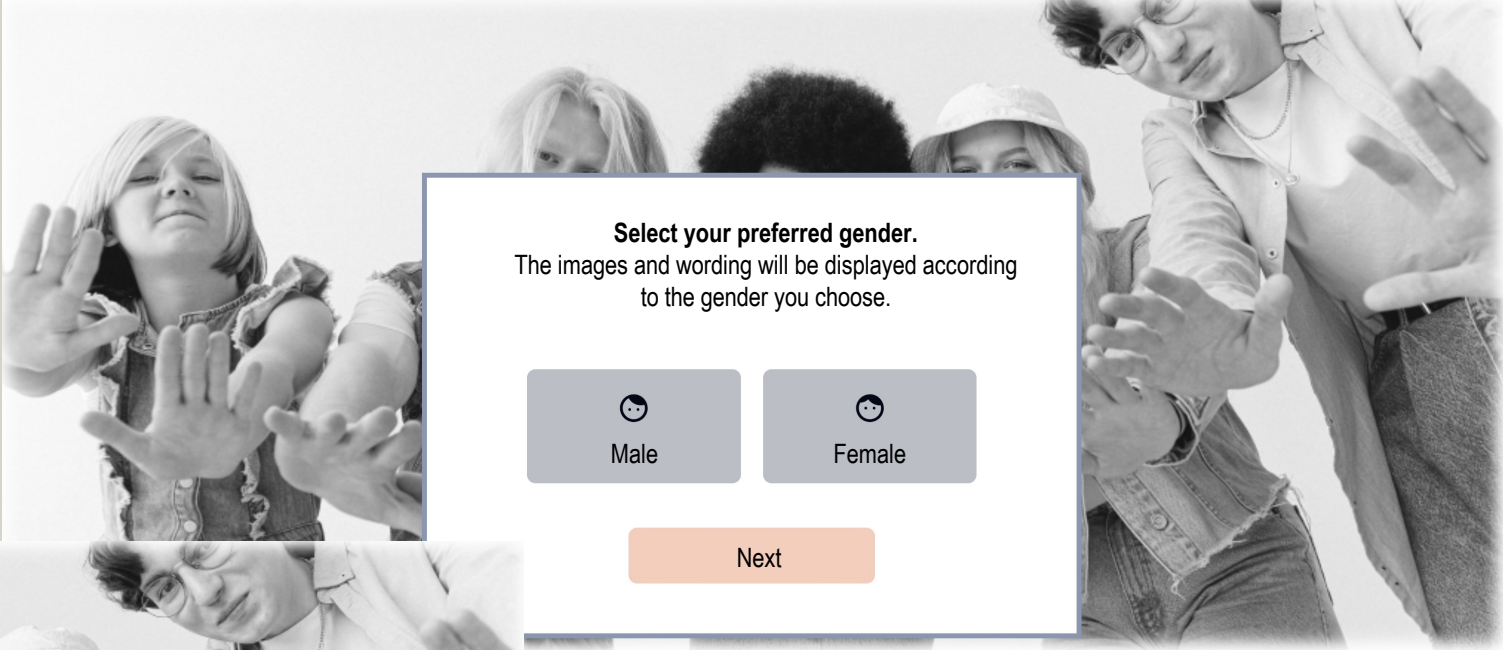
## Content Development Process

- User-centred, multi-phase development involving adolescents and professionals
- Item generation based on adolescents' self-reported daily activities (ages 12-18), tailored by age group and gender
- Items organized into five life domains reflecting real-life contexts, guided by the ICF-CY framework
- Expert review by occupational therapists to establish content validity (WHO, 2007).



## Take PART: Participation Activities Rating for Teenagers

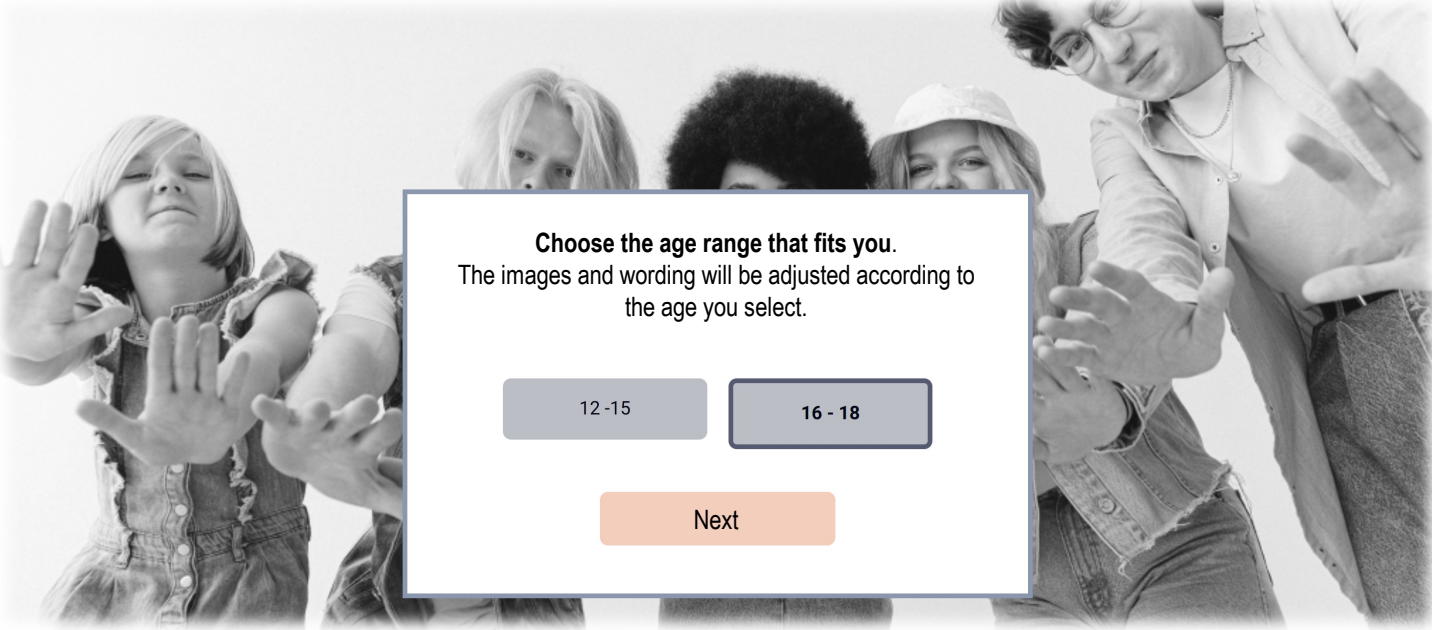
Merav Porat, Efrat Landes  
Dr. Liron Lamash, Dr. Yael Fogel



**Select your preferred gender.**  
The images and wording will be displayed according to the gender you choose.

Male  Female

Next



**Choose the age range that fits you.**  
The images and wording will be adjusted according to the age you select.

12 - 15  16 - 18

Next



Choose the life domains you would like to rate

Academics and  
School Environment

Daily activities at  
home and community

Self-care

Leisure, play, and  
social participation

Work and  
Volunteering

Next



# Maintaining personal hygiene

showering, washing hair, soaping the body, drying off



I find it difficult to perform well and independently



I can perform well and independently

How important is it to you to improve performance / become more independent in performing it?

Extremely Important

Very Important

Moderately Important

Slightly Important

Not Important

Skip ↻

Next →



## Menstrual Hygiene

Use of menstrual hygiene products, frequent changing and bathing



I find it difficult to perform well and independently



I can perform well and independently

How important is it to you to improve performance / become more independent in performing it?

Extremely  
Important

Very  
Important

Moderately  
Important

Slightly  
Important

Not  
Important

Skip ↻

Next →



## Managing Medications and Personal Equipment

Contact lenses, pills, inhalers, diabetes pumps, etc.



I find it difficult to perform well and independently



I can perform well and independently

How important is it to you to improve performance / become more independent in performing it?

Extremely Important

Very Important

Moderately Important

Slightly Important

Not Important

Skip ↻

Next →



## Intimate Relationships

Romantic relationships and sexual safety



I find it difficult to perform well and independently



I can perform well and independently

How important is it to you to improve performance / become more independent in performing it?

Extremely Important

Very Important

Moderately Important

Slightly Important

Not Important

Skip ↻

Next →



## Driving

Theory learning, driving lessons, driving, refueling



I find it difficult to perform well and independently



I can perform well and independently

How important is it to you to improve performance / become more independent in performing it?

Extremely Important

Very Important

Moderately Important

Slightly Important

Not Important

Skip ↻

Next →

## Rating Summary: Academic Activities and School Environment

In the table below, you will find a summary of your ratings for each item in this area.  
You can check the boxes next to the activities you most want to improve.

Items	Performance perception	Desire for improvement
<input type="checkbox"/> Classroom Organization Organizing required materials, placement, and collection	4	1
<input type="checkbox"/> Class Participation Engaging in discussion, contributing to dialogue, or answering questions	5	1
<input type="checkbox"/> Completion of Classroom Tasks Completing assignments, exercises, and independent learning	3	2
<input type="checkbox"/> Writing in Class Copying from the board, handwriting, or typing	1	5
<input type="checkbox"/> Teaching in Class Presenting a topic or leading a discussion in front of the class	3	4

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# Take PART: Technological Development

**User Interface Design- three distinct working environments:**

1. **User Environment** → The interactive interface through which adolescents complete the assessment.
2. **Examinee Dashboard** → Centralized view of assessment results for all assigned adolescents.
3. **Admin/Developer Environment** → System management of users, content, and assessment settings.

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# Internal Consistency of The Take PART

93 adolescents with and without TD, aged 12-18 years ( $M = 15.18$ ,  $SD = 2.70$ )

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		Cronbach's $\alpha$
<b>All items</b>	Performance perception	.97
	Desire for improvement	.99
<b>Life domains</b>	Performance perception	.84 - .90
	Desire for improvement	.92 - .97

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# Discriminative Validity of The Take PART

**Participants:** 93 TD adolescents aged 12-18 years ( $M = 15.18$ ,  $SD = 2.70$ )

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	TD ( $n = 58$ )			NDD and CHC ( $n = 35$ )	
<b>Age</b>	14.84 ( $\pm 2.93$ )			15.73 ( $\pm 2.22$ )	
<b>Gender</b>	Male	Female	Non-Binary	Male	Female
	20 (34.5%)	37 (64%)	1 (1.5%)	21 (60%)	14 (40%)

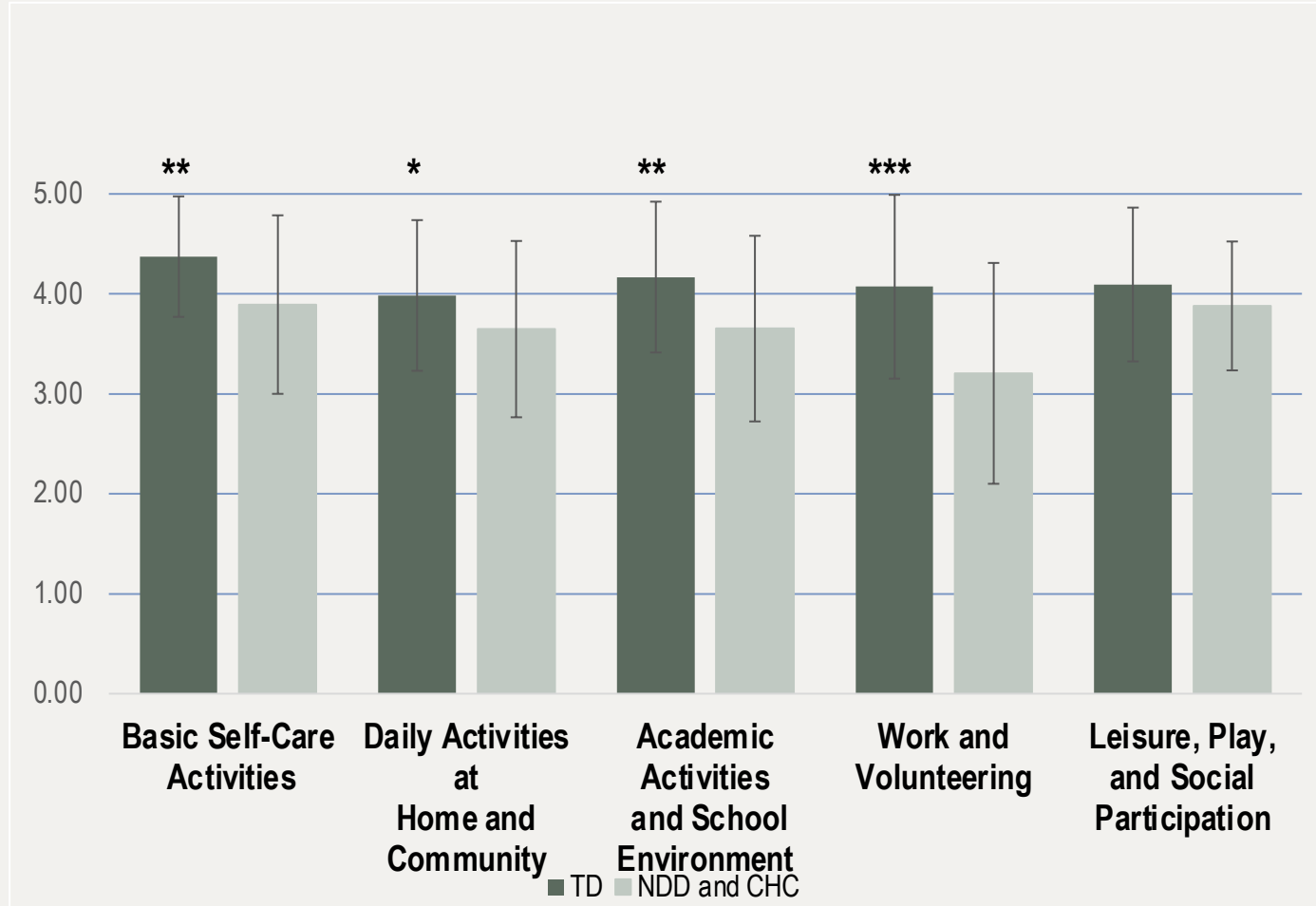
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TD= Typical development; NDD= Neurodevelopmental disorders; CHC= chronic health condition

# Discriminative Validity of The Take PART

## Performance level

- A significant difference between groups in total score,  $t(85) = 2.79, p < .01, d = .65$ .
- A significant difference between groups in categories,  $F(5,74) = 3.65, p < .01, \eta^2 = .20$ .



\* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$

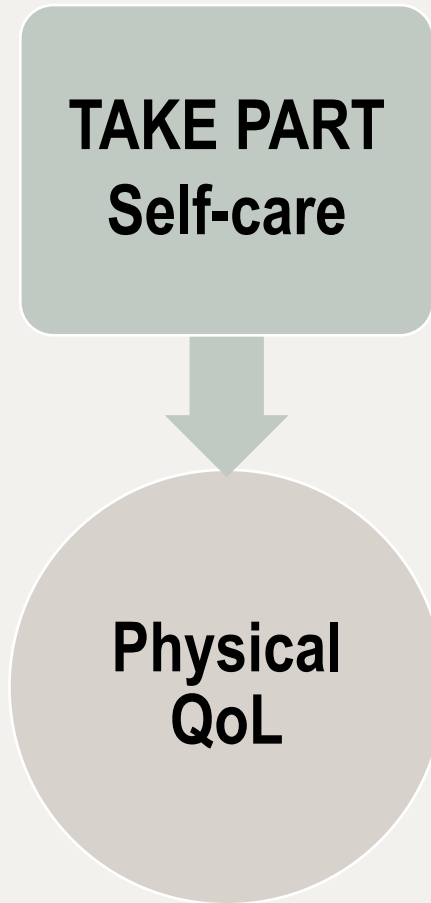
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# Correlations With Adolescents' Quality of Life

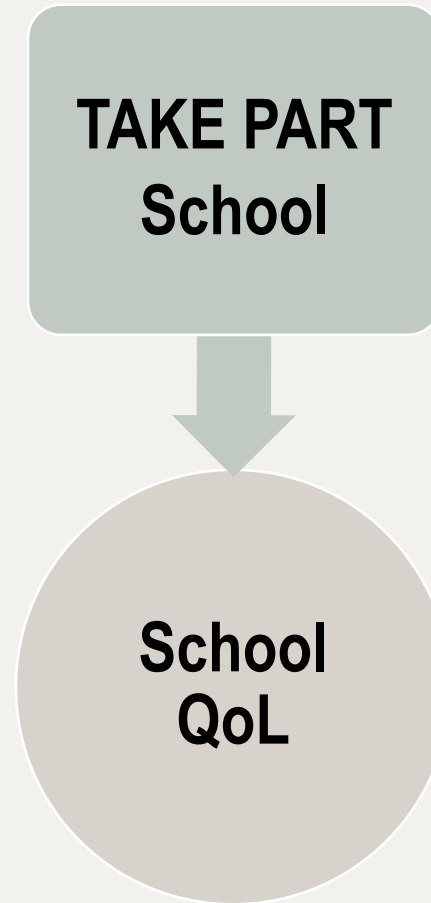
- **Pediatric Quality of Life Inventory (PedsQL)**- assessing health-related Quality of Life in children and adolescents.
- Includes 23 items across four functional domains: physical, emotional, social, and school functioning.
- Items are rated on a 5-point Likert scale and transformed to a 0–100 score, with higher scores indicating better quality of life.

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# Correlations With Adolescents' Quality of Life



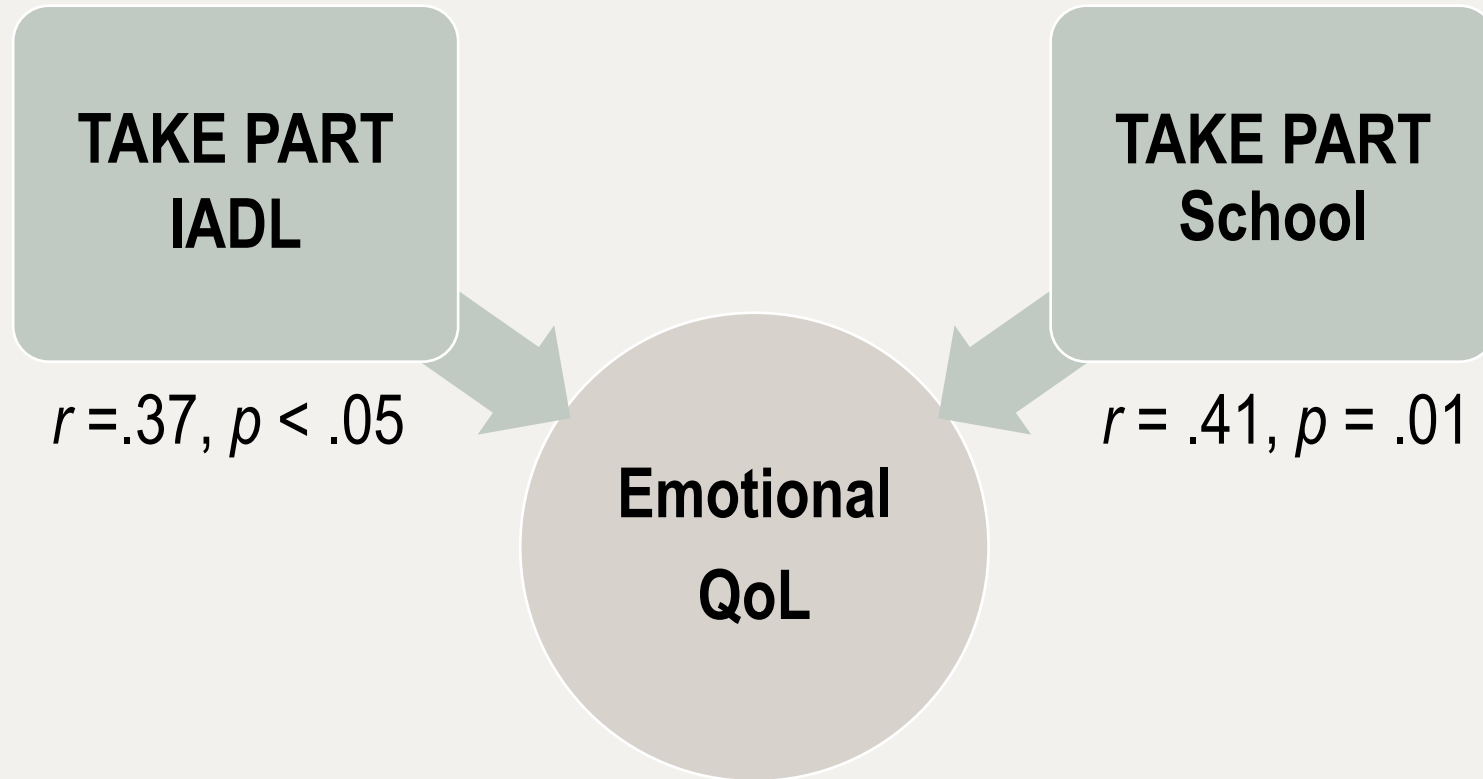
$r = .36, p < .05$



$r = .35, p < .05$

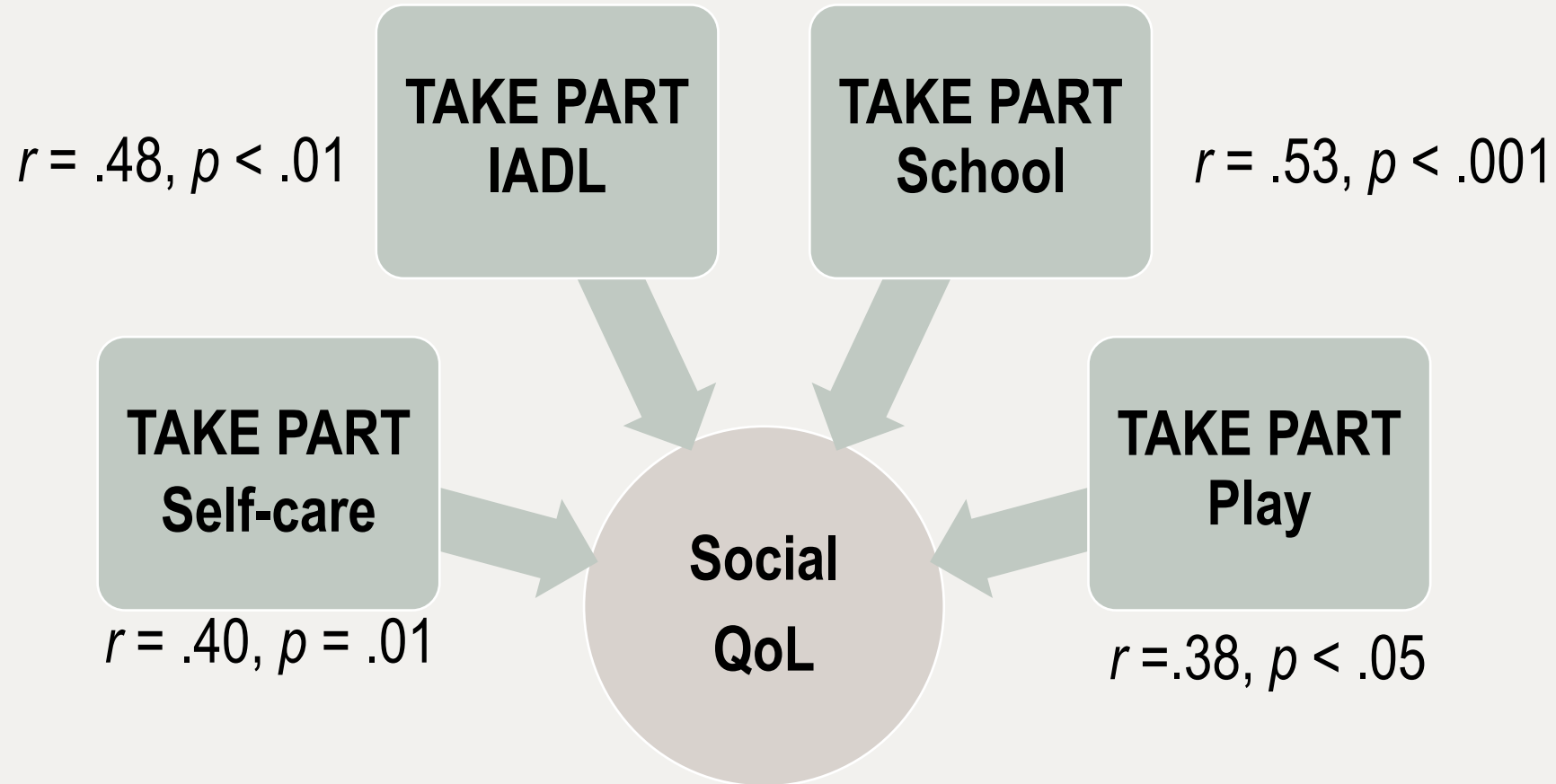
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# Correlations With Adolescents' Quality of Life



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# Correlations With Adolescents' Quality of Life



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# Implications For Clinical Practice

- Functional autonomy contributes to adolescents' sense of competence and well-being.
- QoL indicators help validate the ecological relevance of the Take PART tool.
- Results suggest that interventions targeting autonomy may also enhance emotional and social functioning.
- Take PART can support therapists in setting goals that align with the adolescent's subjective experience.

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# Conclusions

- The development of the Take PART was a response to clinical needs and research.
- The modular design of the Take PART offers flexibility, allowing for a personalized experience for users. This customization can potentially enhance user engagement and increase motivation to address functional challenges.
- The Take PART demonstrated high reliability and usability among adolescents and clinicians, ensuring its effectiveness in real-world applications.



**THANK YOU FOR TAKING PART IN OUR SYMPOSIUM**

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# References

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