

POS1535-HPR **THE RELATIONSHIP BETWEEN SCAPULAR STABILIZATION AND HAND FUNCTIONS IN CHILDREN WITH JUVENILE IDIOPATHIC ARTHRITIS**

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Background: Distal stabilization is an essential component for high quality proximal movement. In this regard, scapular stabilization is important for upper extremity and hand functions. Moreover, scapular stabilization might have a role as a support point for hand functions in patients with joint problems. However, the relationships between scapular stabilization and hand functions were not investigated in children with juvenile idiopathic arthritis (JIA).

Objectives: To investigate the relationship between scapular stabilization and hand function in children with JIA with wrist arthritis history (JIAWrist+), and children with JIA without wrist arthritis history (JIAWrist-).

Methods: A total of forty children (20 children for each group) were included in the study. Scapular stabilization was measured by using scapular muscle endurance test. General functional status, subjective hand functions, and objective hand functions were assessed by using Childhood Health Assessment Questionnaire (CHAQ), Duruöz Hand Index, and Purdue Pegboard Test, respectively.

Results: JIAWrist+ patients reported poorer hand functions compared to JIAWrist- patients. No significant differences were detected for other parameters. Scapular muscle endurance was moderately related to CHAQ Disability Index score, Purdue Pegboard Test (single hand score and assembly score) in JIAWrist+ patients, while there was only a significant relationship between scapular muscle endurance and Purdue Pegboard Test both hand score in JIAWrist- patients.

Table 1. Comparison of the Groups and Relationships between Scapular Muscle Endurance and Hand Functions

	JIAWrist+ (n:20)	JIAWrist- (n:20)	
	Median (IQR 25/75)	Median (IQR 25/75)	p*
Age (years)	14.0 (10.5/16.0)	12.5 (11.0/14.5)	0.512
Scapular Muscle Endurance (sec)	21.9 (10.7/35.8)	22.5 (15.8/50.8)	0.383
CHAQ Discomfort Index (score)	20.0 (7.5/48.2)	27.5 (10.0/50.0)	0.489
CHAQ Health Status Index (score)	45.0 (30.0/75.0)	45.0 (30.0/57.5)	0.558
CHAQ Disability Index (score)	0.8 (0.1/1.0)	0.3 (0.0/0.7)	0.104
Duruöz Hand Index (score)	5.5 (2.5/13.5)	0.5 (0.0/4.0)	0.006
Purdue Pegboard Test Single Hand (score)	15.2 (13.5/15.5)	15.2 (14.5/16.2)	0.981
Purdue Pegboard Test Both Hands (score)	11 (9.8/12.0)	11.0 (10.3/12.3)	1.000
Purdue Pegboard Test Assembly (score)	26.5 (23.0/28.5)	26.0 (23.5/29.0)	0.779
Relationships between Scapular Muscle Endurance and Hand Functions			
CHAQ Discomfort Index (score)	rho: -0.086, p: 0.718	rho: -0.174, p: 0.464	
CHAQ Health Status Index (score)	rho: 0.090, p: 0.706	rho: 0.005, p: 0.982	
CHAQ Disability Index (score)	rho: -0.560, p: 0.010	rho: -0.219, p: 0.353	
Duruöz Hand Index (score)	rho: -0.442, p: 0.051	rho: -0.158, p: 0.506	
Purdue Pegboard Test Single Hand (score)	rho: 0.503, p: 0.024	rho: 0.313, p: 0.179	
Purdue Pegboard Test Both Hands (score)	rho: 0.400, p: 0.081	rho: 0.459, p: 0.042	
Purdue Pegboard Test Assembly (score)	rho: 0.594, p: 0.006	rho: 0.218, p: 0.355	

*Mann-Whitney-U Test, p<0.05. CHAQ: Childhood Health Assessment Questionnaire, JIAWrist+: children with JIA with wrist arthritis history; JIAWrist-: children with JIA without wrist arthritis history, rho: Spearman's Rank Correlation

Conclusion: According to our results, scapular endurance was found more related to hand functions in wrist involved JIA patients. It seems that scapular stabilization contributes to hand functions differently related to joint involvement in JIA patients. It might be a beneficial strategy to work on scapular muscles in JIA patients with wrist involvement and poor hand functions.

Disclosure of Interests: None declared

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POS1536-HPR **THE RELATIONSHIP BETWEEN POSTURAL CHANGES AND TRUNK MUSCLE ENDURANCE IN CHILDREN WITH JUVENILE IDIOPATHIC ARTHRITIS**

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Background: Body posture is defined as relative biomechanical alignment of body's head, trunk, and extremities as well as position of the body in the space. Body posture might be altered due to different musculoskeletal pathologies. Juvenile Idiopathic Arthritis (JIA) is a chronic inflammatory disease characterized by musculoskeletal problems including bone and muscle geometry alterations which may lead a deteriorated posture. However, it is not known whether trunk muscle endurance is associated with body posture in children with JIA.

Objectives: To investigate the relationship between postural changes and trunk muscle endurance in children with JIA.

Methods: Thirty-four children (eighteen female, sixteen male) were included in the study. Postural changes were assessed by a three-dimensional evaluation system (PosturePrint System, Biotonix, Canada). The system provides Posture Index (PI) score which is a composite score from three postural regions including head, ribcage, and pelvis. Higher PI scores indicate a more deteriorated posture. Biering-Sørensen Test (BST), Flexor Endurance Test (FET), Lateral Endurance Test (LET) were used to assess trunk muscle endurance, and Static Scapular Endurance Test (SSET) were used to assess scapular muscle endurance. Spearman Rank Correlation test was employed to determine the possible relationships.

Results: Enthesitis related arthritis was the most common JIA subtype in the study (38.2%) followed by oligoarthritis (26.5%), polyarthritis (20.6%), and systemic arthritis (14.7%). Significant negative correlations were detected between SSET and PI-head score (rho= -0.467, p=0.005), SSET and PI-ribcage score (rho= -0.381, p=0.026); FET and PI-head score (rho= -0.469, p=0.005); LET and PI-head score (rho= -0.441, p=0.009).

Table 1. Demographics, muscle endurance and Posture Index scores of children

Variable	Median (IQR 25 th /75 th)
Age (years)	12.0 (10.0/14.0)
Height (cm)	145.50 (140.00/158.25)
Weight (kg)	42.75 (33.00/49.50)
Body mass index (kg/m ²)	19.17 (16.09/21.42)
Biering-Sørensen Test (sec)	49.70 (28.42/80-78)
Flexor Endurance Test (sec)	38.91 (30.59/60.19)
Lateral Endurance Test (sec)	32.52 (19.99/59.68)
Static Scapular Endurance Test (sec)	23.19 (15.93/44.74)
Posture Index-Head (score)	7.0 (5.0/8.0)
Posture Index-Ribcage (score)	5.0 (4.0/6.0)
Posture Index-Pelvis (score)	6.0 (3.0/8.0)

IQR: Interquartile range

Conclusion: These results indicated that postural displacements of head and ribcage are linked with decreased trunk and scapular muscle endurance in children with JIA. Exercise and physical activity programs targeting muscle endurance may result improvements in posture in these children.

Disclosure of Interests: None declared

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POS1537-HPR **PERCEIVED BARRIERS AND FACILITATORS TO PHYSICAL ACTIVITY AND ITS ASSOCIATED FACTORS IN PATIENTS WITH AXIAL SPONDYLOARTHRITIS**

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Background: Physical activity is a core treatment method in the management of axial spondyloarthritis (axSpA). Barriers to physical activity including high disease activity, symptoms such as pain, stiffness and fatigue and lack of time have been reported in qualitative and quantitative studies in patients with axial spondyloarthritis (axSpA). Inflammatory Arthritis Facilitators and Barriers (IFAB) questionnaire has been developed to assess perceived barriers and facilitators to physical activity in patients with inflammatory arthritis. Identifying barriers and facilitators to physical activity using a rheumatic-specific tool may help to plan better patient management strategies in clinical practice.

Objectives: To determine barriers and facilitators of physical activity in patients with axSpA and explore associations between perceived barriers and facilitators to physical activity and education level, disease duration, functional status, anxiety, depression.

Methods: Between September and December 2021, 93 patients with axSpA were included in this study. Besides demographic and clinical variables, patients completed the IFAB questionnaire to determine the perceived barriers and facilitators to physical activity or exercise. Also, anxiety and depression status was determined with Hospital Anxiety and Depression

Scale (HADS) and functionality was measured with Health Assessment Questionnaire (HAQ). Physical activity level was assessed using the International Physical Activity Questionnaire Short-Form (IPAQ-SF). Multiple linear regression analysis was used to investigate the association of HADS score, HAQ score, disease duration, educational status and the IFAB score.

Results: Of the 102 patients included, 93 were analyzed, 46 % were women. The mean age was 44.81 ± 10.71 and the mean disease duration was 6.91 ± 6.92 months. According to the IPAQ-SF scores, 47.3 % of the patients were inactive, 49.5 % were moderately active and 3.2 % were active. The mean IFAB score was 4.61 ± 22.22 , and 26 % of patients' score was below -5. One level increase in educational status resulted in an increase of 3.55 ± 1.77 points in the IFAB score and a one-point increase in HADS-Depression score lead to a 2.00 ± 0.57 decrease in the IFAB score.

Conclusion: In this axSPA population, 26 % scored below -5, indicating significant barriers and a need for a physical activity intervention. IFAB score was independently associated with education status and level of depression. Our results may propose that a comprehensive physical activity program should be designed considering psychological factors and should be prepared according to the educational status of the patients.

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Table 1. Characteristics of the included patients.

Characteristics	Mean \pm SD (Median)
Age (years)	44.81 \pm 10.71 (47)
Time since diagnosis (years)	6.95 \pm 6.95 (5)
BMI (kg/m ²)	27.17 \pm 4.75 (27)
BASDAI	4.49 \pm 2.22 (4.5)
HAQ	0.35 \pm 0.36 (0.25)
HADS-anxiety	7.89 \pm 5.44 (7)
HADS-depression	6.76 \pm 4.78 (6)
IFAB-total score	4.61 \pm 22.22 (5)

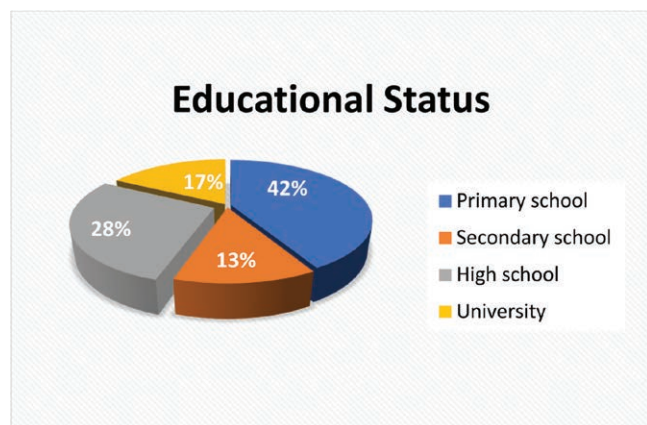


Figure 1. Educational status of the included patients.

Disclosure of Interests: None declared

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POS1538-HPR INVESTIGATION OF BALANCE FUNCTIONS IN INDIVIDUALS WITH NEURO-BEHÇET: A PILOT STUDY

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Background: Behçet's disease is a vasculitis, causing multisystem inflammation and resulting in oral and genital ulcers and eye and skin lesions (1). A proportion of patients also have neurological involvement, termed Neuro-behçet's disease (2). We think about that Neuro-behçet's disease can impact balance functions in

patients due to neurological involvement. However, there is no study investigating the balance functions in patients with Neuro-behçet.

Objectives: To investigate the balance functions in individual with Neuro-behçet's disease.

Methods: In this study 8 Neuro-behçet patients with a mean age of 38.37 ± 16.96 who were followed in the PAU Rheumatology outpatient clinic and diagnosed by a rheumatologist according to the criteria of the International Behçet Study Group and 8 healthy control with a mean age of 42.62 ± 13.94 with similar demographic characteristics were included. Exclusion criteria for the study were age <18 years old, having any disease which mimics BD (including systemic lupus erythematosus, vasculitis of central nervous system). Demographic data of the participants were recorded. Then, balance functions were evaluated with a balance board (Sensamove MaxiBoard, NL) in Neuro-behçet and control groups. This assessment included static balance, proprioception, and reaction. Results were analyzed with Mann Whitney U Test.

Results: Participants were similar in terms of age and gender ($p > 0.05$). Neuro-behçet group showed a significant decrease in static balance in all directions except the right side compared to the control group ($p < 0.05$). A significant decrease was observed in the right and left reaction times in Neuro-behçet group compared to control group ($p < 0.05$). There was no significant difference between the two groups in proprioception assesment ($p > 0.05$).

Conclusion: This results show that patients with Neuro-behçet may experience disturbances in static balance and reaction time. Balance and reaction exercises should be included in rehabilitation. Further research is needed on the effect of balance functions and the effectiveness of balance exercises in Neuro-behçet's disease.

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POS1539-HPR EXPLORING TASK-SHIFTING IN HAND OSTEOARTHRITIS CARE FROM THE PERSPECTIVE OF THE SERVICE USER.

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Background: The demand for and provision of health care is in constant change. People live longer and have more complex health requirements, challenging the functioning of the health care system in responding adequately to present and future needs. For persons with hand osteoarthritis (HOA), access to recommended treatment is poor (1) and what can be offered in primary health care is not optimal. A reorganization of the workforce through task-shifting can be a solution where the aim is to use existing human resources in health in more efficient ways. Through task-shifting, tasks and knowledge can be shifted between health professionals, between levels of the health care system, and from health professionals to service users, changing the current division of labor (2).

Objectives: The aim of this study is to gain a broader understanding of the distribution of tasks among health professionals and service users in HOA care from the perspective of service users to guide future task-shifting initiatives.

Methods: In-depth interviews with 21 service users with HOA were conducted, including 15 women and six men from 47 to 86 years of age. All had received services from primary and specialized health care services. A theme based semi-structured interview guide was used. All interviews were audio-recorded and subsequently transcribed verbatim. Reflexive thematic analysis was used to generate codes and develop three main themes.

Results: *Tasks by different professionals:* service users describe general practitioners (GPs) as entry points to health service provision. Contact is initiated with