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Research Summary – Physical Activity Scale for Individuals With Physical Disabilities (PASIPD) – Self Care and Daily Living

| Author Year<br>Research<br>Design<br>Setting<br>(country)   | Demographics and<br>Injury<br>Characteristics of<br>Sample  | Validity  | Reliability   | Responsiveness<br>Interpretability  |
|---|---|---|---|---|
| Washburn et al.<br>2002<br>Mail survey<br>Previous users<br>of rehabilitative<br>services<br>(Midwestern<br>university) | M=227, mean age=51<br>W=145, mean age= 48<br>80% spinal cord or<br>other locomotor<br>injuries<br>56 paraplegia, 38<br>quadriplegia, 30<br>cerebral palsy, 77<br>post-polio | <ul> <li><u>Pearson correlation</u><br/>between survey items<br/>and total PASIPD<br/>score:<br/>all statistically<br/>significant (P&lt;.05) and<br/>&gt;0.20 (range: r=0.20-<br/>0.67)</li> <li><u>Factor analysis</u> five<br/>latent factors:</li> <li>Home, lawn and<br/>garden repair</li> <li>Housework</li> <li>Vigorous sport and<br/>recreation</li> <li>Light sport and<br/>recreation</li> <li>Light sport and<br/>recreation</li> <li>Occupation and<br/>transportation</li> <li>(&gt;1 eigenvalues, &gt;0.4<br/>factor loading):</li> </ul> | Internal<br>Consistency:<br>Cronbach's alpha =<br>0.37- 0.65, indicating<br>low to moderate<br>internal consistency<br>within factors,<br>(P<.05) | Interpretability:<br>SEM, MDC, MCID,<br>normative &<br>published data:<br>Total and<br>Subcategory mean<br>(SD) scores for the<br>PASIPD: group =<br>locomoter/SCI<br>disability (n=260)<br>Total score: 19.8 (14.4)<br>Home<br>Repair/Gardening: 1.5<br>(3.4)<br>Housework: 2.5 (3.2)<br>Vigorous Sport: 2.4<br>(5.6)<br>Moderate Sport: 1.4<br>(2.9)<br>Occupation: 11.9 (10.2) |

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|   |   | Account for 63% of<br>variance<br><u>Group differentiation</u> :<br>scored differently<br>between groups by<br>age, physical activity<br>level, and self-rated<br>health status.         |  |  |
| de Groot et al.<br>2010<br>Cross-sectional<br>study<br>English Dutch<br>rehabilitation<br>centers with a<br>specialized SCI<br>unit | N=139<br>Mean age: 41.5 <u>+</u> 14.1<br>years<br>Age range: 18-65 years<br>73% male<br>68 paraplegic, 64%<br>complete lesion<br>Time since Injury: 705<br><u>+</u> 169 days<br>AIS A-D | PASIPD with the<br>Utrecht Activities List<br>(UAL)<br>r-0.51 (moderate)<br>PASIPD with<br>Subscales Mobility<br>Range and Social<br>Behaviour of SIP68<br>(SIPSOC)<br>r=0.47 (moderate) | Internal<br>Consistency:<br><u>Cronbach's alpha</u><br>α= 0.63 indicating<br>low internal<br>consistency |  |
| <u>Van Den Berg-</u><br><u>Emons et al.</u><br>2011   | N = 124 total patients<br>(cerebral palsy,<br>meningomyelocele, or<br>SCI)  | No significant<br>Spearman correlation<br>coefficients between<br>the PASIPD and   |  | Interpretability:<br>SEM, MDC, MCID,<br>normative &<br>published data: |

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| Cross-sectional<br>Participants'<br>home<br>environment   | N= 21 SCI patients<br>(14M, 7F)<br>Mean age: $40.7\pm14.3y$<br>Patients with SCI<br>Ambulatory status<br>(determined<br>according to the<br>classification of Hoffer<br>et al.):<br>1 = 0<br>2 = 0<br>3 = 5<br>4 = 16 | activity monitor<br>outcome measures<br>were found for SCI<br>patients:<br>Activity monitor<br>duration x PASIPD<br>duration<br>Spearman's p= 0.31<br>(P=.18)<br>Activity monitor<br>duration x PASIPD<br>intensity<br>Spearman's p=0.28<br>(P=.22)     |   | Mean (SD) PASIPD<br>intensity score for SCI<br>patients: 10.9 (12.0)<br>MET* hours/day<br>*MET = metabolic<br>equivalent |
| van der Ploeg et<br>al. 2007<br>Test-retest<br>study assessing<br>measurement<br>properties<br>Community –<br>former patients | N = 45 (18M, 27F)<br>participants, all<br>wheelchair non-<br>dependent<br>(stroke, spinal cord<br>injury, whiplash, and<br>neurological-,<br>orthopedic- or back<br>disorders)  | The criterion validity<br>Spearman correlation<br>was 0.30 when<br>compared to the<br>accelerometer.<br>The reported criterion<br>validity correlation of<br>the PASIPD (0.30) was<br>similar to that of<br>physical activity<br>questionnaires for the | <b>Test-retest, inter-<br/>rater, intra-rater:</b><br>The test-retest<br>reliability Spearman<br>correlation of the<br>PASIPD was 0.77<br>(P>0.05).<br>Mean Scores ± (SD) |  |

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|---|--|---|---|------------------------------------|
| of 3 Dutch<br>rehabilitation<br>centers                   | Mean age ± SD (y) 47 ±<br>12                               | general population. A<br>review reported<br>correlations between<br>questionnaires and<br>accelerometers from<br>0.14 to 0.53 (median<br>approximately 0.30). | First PASIPD - 74.9 ±<br>58.8<br>Second PASIPD - 65.1<br>± 44.6 - |                                    |

Research Summary – Physical Activity Scale for Individuals With Physical Disabilities (PASIPD) – Self Care and Daily Living - Cross-cultural Validation Studies

| Author Year<br>Research<br>Design<br>Setting<br>(country)   | Demographics and<br>Injury<br>Characteristics of<br>Sample  | Validity  | Reliability  | Responsiveness<br>Interpretability |
|---|---|---|--|------------------------------------|
| Köce et al. 2022<br>Cultural<br>adaptation,<br>examination of<br>the<br>psychometric<br>properties of<br>the PASIPD<br>Turkish-version<br>Spinal Cord<br>Injury<br>Association of<br>Turkey and<br>other<br>associations<br>connected to<br>Hüsnü Ayı k<br>Special Care<br>Center | 47 participants with<br>SCI<br>Mean ( $\pm$ SD) age 43.98<br>$\pm$ 13.50<br>Gender: 26F, 21M<br>Reason of injury:<br>Traumatic (n = 34) and<br>non-traumatic (n = 13)<br>AIS level: A (n = 26), B<br>(n = 6), C (n = 13), and D<br>(n = 2)<br>Level of injury: C5-C6<br>(n = 6), C7-C8 (n = 5),<br>T1-T12 (n = 22), L1-L5 (n<br>= 14)<br>Clinical type:<br>Paraplegia (n = 37),<br>tetraplegia (n = 10) | Factor structure and<br>construct validity:<br>PASIPD was explained<br>by three factors. The<br>ratio of explaining the<br>total variance of these<br>3 factors was<br>determined as 51.66%.<br>Convergent validity<br>of the Turkish<br>Version of PASIPD:<br>PASIPD was explained<br>by three factors. The<br>ratio of explaining the<br>total variance of these<br>3 factors was<br>determined as 51.66%.<br>FIM ( <i>r</i> = 0.307, <i>p</i> =<br>0.040) and CHART-SF<br>were moderately<br>positively correlated<br>with PASIPD total<br>score. The correlation<br>between the total | The Cronbach's<br>alpha coefficient<br>(internal<br>consistency) of the<br>whole scale was<br>found to be 0.725.<br>The ICC coefficient<br>for the test-retest<br>reliability of the<br>Turkish version of<br>PASIPD was found<br>to be 0.851. |                                    |

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|--|--|--|---|------------------------------------|
|  |  | score of PASIPD and<br>NHP was <i>r</i> = 0.443 ( <i>p</i> =<br>0.002).  |   |                                    |
|  |  | Criterion validity of<br>the Turkish Version<br>of PASIPD:<br>20 Meters Propulsion<br>(r = -0.404, p = 0.005)<br>and Slalom Tests $(r = -$<br>0.305, p = 0.037) were<br>highly negative and<br>6min Push Propulsion<br>(r = 0.456, p = 0.001)<br>were moderately<br>positive with PASIPD<br>total score. |   |                                    |
| Mat Rosly et al.<br>2019<br>Mail survey<br>(PASIPD<br>Malaysian<br>adaptation)<br>Malaysia | N= 250 (124 Bahasa<br>Malaysia, 126 English)<br>Mean age: 42.6 <u>+</u> 14.4<br>years<br>177 Males, 73 Females<br>Time since injury: 13.2<br><u>+</u> 11.4 years<br>Traumatic Injury | <b>Construct validity:</b><br>Factor analysis<br>extracted four main<br>dimensions for<br>physical activity; factor<br>1 (heavy housework,<br>home repair, lawn<br>work and gardening),<br>factor 2 (sports and<br>recreation) factor 3  | InternalConsistency:Cronbach's alphaα= 0.68 indicatinglow internalconsistencyTest-retest, Inter-rater, Intra-rater: |                                    |

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|---|--|---|--|------------------------------------|
|   |  | (light housework and<br>caring for another<br>person) and factor 4<br>(leisure and<br>occupational<br>activities) that<br>accounted for 64% of<br>the physical activities'<br>total variance. | Test-retest reliability<br>overall<br>ICC=0.87 |                                    |