

Assistance to Participate
Scale (APS) for children
with disabilities
participation in play and
leisure information
booklet.

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This information booklet is designed to describe the Assistance to Participate Scale (APS) for professionals interested in implementing the use of this scale in research or clinical practice. This booklet will describe the purpose, scale mechanics, design, and scoring related to the scale. The actual scale items and scoring response items are provided. Professionals are invited to use the APS freely. However, this scale must not be altered in any way during administration or scoring. The authors request forwarding of any feedback or details about the use of this scale to the first author: Helen.Bourke-Taylor@med.monash.edu.au.

PURPOSE:

The APS measures the assistance that a school aged child with a disability requires to participate in play and leisure activities at home and in the community, from the primary caregiver's perspective. The APS provides professionals with a brief psychometrically sound tool that measures the amount of caregiver assistance provided to a child with a disability to participate in play and recreation. The APS may be used as an outcome measure and to evaluate and predict the amount and type of additional assistance families need to facilitate their child's participation in an important aspect of the child's daily life and development: play and recreation. The APS was designed for mothers/caregivers of school aged children with disabilities, aged 5 through 18 years.

DESIGN OF SCALE:

A mixed method instrument design model was applied to the research that developed the APS. An initial qualitative study generated items (Bourke-Taylor, Howie & Law, 2010), and quantitative data were collected from 152 mothers of a school aged child with a disability in Victoria, Australia. Eight items were included in the APS as representative of the general types of play and leisure activities that children with disabilities participate. The mother's descriptions of the assistance that she provided in types of activities (i.e. indoor play, outdoor play, watching television) were included within the response items. Respondents are asked to rate the level of assistance that they typically provided to their child using a five point Likert response scale (*1 = Unable to participate; 2 = Participates with my assistance at all stages of the activity; 3 = Participates after I have set him/her up and help at times during the activity; 4 = Participates with my supervision only; 5 = Participates independently*). See Appendix for instructions for completing the scale, scale items and response schedule.

SCORING THE APS:

Three separate scores are calculated for the APS: APS-Home alone; APS-Community social and APS-Total. APS-Home alone subscale score is calculated by summing responses to items 1 through 4. APS-Community social subscale score is calculated by summing responses to items 5 through 8. APS-Total score is calculated by summing the APS-Home alone and APS-Community social subscale scores. A higher score on an item, subscale or total score indicates that less assistance is required for the child to participate in the activity described by the item(s). A lower score indicates that the mother offered more assistance, or that the child was unable to participate, indicating a higher level of care due to more severe disability. To convert to an interval scale, refer to table 1. Identify the raw score value in columns 1, 3 or 5

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and read across to determine the matched Rasch converted equivalent. These Rasch-converted scores have been rescaled to range from 0 to 100.

PSYCHOMETRIC EVALUATION OF THE SCALE:

Factor analysis supported two different dimensions within the scale as well as unidimensionality. Both the subscales and total scale showed excellent internal consistency (APS-Home alone: Cronbach alpha = 0.85, APS-Community social: Cronbach alpha = 0.83, Total APS: Cronbach alpha = 0.88). The correlation between the two subscales was strong indicating the scales were related, but not identical. Initial tests of normality on the eight item scale revealed a negatively skewed distribution (-0.226) and kurtosis (-0.800); a non significant Kolmogorov-Smirnov statistic ($p = 0.007$); a non linear Q-Q plot; and a Detrended Normal Q-Q plot that showed evidence of clustering. The APS was not deemed to be normally distributed in the initial evaluation of the scale using the sample ($N = 152$). The mean total score was 26.8 and standard deviation of 7.8 (range: 8 to 40). Investigations into the construct validity of the scale indicated that the APS differentiated between children who required more supervision or adult intervention to participate in other daily tasks, and that the APS is a tool that measures caregiver assistance during play and leisure that is consistent with the child's need for assistance across other daily activities (Bourke-Taylor, Law, Howie & Pallant, 2009).

Rasch Analysis provided further support for the psychometric properties of the 8-item APS. The scale showed good overall fit to the Rasch model, supporting its measurement properties, with no misfitting items and no evidence of differential item functioning. The scale was found to be unidimensional with good internal consistency. Further, Rasch analysis of the APS again revealed two correlated components, reflecting home-based and community-based play activities. Both subscales and the total APS scale showed good internal consistency. This resulted in no alteration of the scale, although interval scoring is now available (Bourke-Taylor & Pallant, 2013).

References

- Bourke-Taylor, H. M., Howie, L., & Law, M. (2010). Impact of caring for a school aged child with a disability: Understanding mothers' perspectives. *Australian Occupational Therapy Journal*, 57(2), 127-136.
- Bourke-Taylor, H. M., Law, M., Howie, L., & Pallant, J. F. (2009). Development of the Assistance to Participate Scale (APS) for children's play and leisure activities. *Child: Care, Health and Development*, 35(5), 738-745.
- Bourke-Taylor, H. M., & Pallant, J. F. (2013) The Assistance to Participate Scale to measure play and leisure support for children with developmental disability: Update following rasch analysis. *Child: Care, Health and Development*, *In press*.

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Appendix: Scale items and response schedule

Please note, any reproduction of this scale must occur verbatim, including the instructions.

ASSISTANCE TO PARTICIPATE SCALE

The following questions are about activities that many children and teenagers participate in at some time. What is of interest is how much assistance you provide in order for your child to participate in the task at hand. Lots of different parents have described the types of assistance that their child needs. For the following activities, consider which category of assistance your child usually requires. Select that option by ticking the box.

Activity	Unable to participate	Participates with my assistance at all stages of the activity	Participates after I have set him/her up and help at times during the activity	Participates with my supervision only	Participates independently
1. Watching television	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
2. Listening to music	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
3. Playing with a toy/activity alone inside the house	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
4. Playing alone around the outside of your house (parent home)	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
5. Sharing time with a friend within your home	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
6. Sharing time with a friend at the friends home	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
7. Spending time at a playground or outdoor recreation area	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
8. Attending an organized recreational club (Ballet, soccer, scouts etc.)	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5

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Table 1: Conversion of raw APS scores to Rasch-converted (0 to 100) scores (see Bourke-Taylor & Pallant, 2013 for detail)

<i>Raw</i>	Rasch converted	<i>Raw</i>	Rasch converted	<i>Raw</i>	Rasch converted
<i>8</i>	0	<i>19</i>	46	<i>30</i>	61
<i>9</i>	12	<i>20</i>	48	<i>31</i>	62
<i>10</i>	20	<i>21</i>	49	<i>32</i>	64
<i>11</i>	25	<i>22</i>	50	<i>33</i>	66
<i>12</i>	29	<i>23</i>	52	<i>34</i>	67
<i>13</i>	32	<i>24</i>	53	<i>35</i>	69
<i>14</i>	35	<i>25</i>	54	<i>36</i>	72
<i>15</i>	38	<i>26</i>	56	<i>37</i>	75
<i>16</i>	40	<i>27</i>	57	<i>38</i>	80
<i>17</i>	42	<i>28</i>	58	<i>39</i>	88
<i>18</i>	44	<i>29</i>	60	<i>40</i>	100

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