

THE PARTICIPATION AND ACTIVITY LIMITATION SURVEY: METHODOLOGY AND CONSTRUCTION OF A DISABILITY INDEX

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Statistics Canada



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**LIVING IN OUR ENVIRONMENT:
The Promise of ICF**

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Presentation Outline

- PALS objectives and characteristics
- Target population
- Census disability filter questions
- PALS filter questions
- Severity scale derivation

PALS objectives and characteristics

- The Participation and Activity Limitation Survey is designed to identify:
 - Canadian adults and children with an activity limitation
 - The type and the severity of activity limitations that they experience
 - The difficulties and barriers that they may face in everyday life
- Sponsored by Human Resources and Social Development
- Post-Censal survey
- Major changes in the 2001 PALS survey methodology and content.

PALS objectives and characteristics

- Adults (15+) and Children (0-14) components
- About 45 minutes telephone interviews (Computer Assisted Telephone Interview)
- Proxy for children and exceptional cases for Adults (ex. Language barrier, absent for the duration of the survey, respondents from 15-17, prevented because of mental or physical condition)

PALS target population

Persons living in Canada who answer «yes» to at least one of the Census disability filter questions

- Includes:

- Adults and Children
- People living in the 10 provinces and the 3 territories (*NEW* in 2006)

- Excludes:

- Indian reserves
- Institutions and some collective dwellings

Census disability filter questions

ACTIVITIES OF DAILY LIVING		
<p>7 Does this person have any difficulty hearing, seeing, communicating, walking, climbing stairs, bending, learning or doing any similar activities?</p>	<p><input type="radio"/> Yes, sometimes</p> <p><input type="radio"/> Yes, often</p> <p><input type="radio"/> No</p>	<p><input type="radio"/> Yes, sometimes</p> <p><input type="radio"/> Yes, often</p> <p><input type="radio"/> No</p>
<p>8 Does a physical condition or mental condition or health problem reduce the amount or the kind of activity this person can do:</p> <p>(a) at home?</p>	<p><input type="radio"/> Yes, sometimes</p> <p><input type="radio"/> Yes, often</p> <p><input type="radio"/> No</p>	<p><input type="radio"/> Yes, sometimes</p> <p><input type="radio"/> Yes, often</p> <p><input type="radio"/> No</p>
<p>(b) at work or at school?</p>	<p><input type="radio"/> Yes, sometimes <input type="radio"/> No</p> <p><input type="radio"/> Yes, often <input type="radio"/> Not applicable</p>	<p><input type="radio"/> Yes, sometimes <input type="radio"/> No</p> <p><input type="radio"/> Yes, often <input type="radio"/> Not applicable</p>
<p>(c) in other activities, for example, transportation or leisure?</p>	<p><input type="radio"/> Yes, sometimes</p> <p><input type="radio"/> Yes, often</p> <p><input type="radio"/> No</p>	<p><input type="radio"/> Yes, sometimes</p> <p><input type="radio"/> Yes, often</p> <p><input type="radio"/> No</p>

PALS filter questions

Concept	Items Measured	Scale
Hearing (b230)	Conversation with one person	No difficulty (0)
	Conversation with 3 people	Some difficulty (1)
	Telephone conversation	A lot of difficulty (2) Cannot hear (3)
Seeing (b210)	Seeing ordinary newsprint	No difficulty (0)
	Seeing face 4m away	Some difficulty (1) A lot of difficulty (2) Cannot see (3)

PALS filter questions

Concept	Items Measured	Scale
Communication (d330)	Speaking	No difficulty (0) Some difficulty (1) A lot of difficulty (2) Cannot speak (3)
	Making self understood with family, friends, professionals or service providers and others	Completely (0) Partially (1) Not at all (2)

PALS filter questions

Concept	Items Measured	Scale
Mobility	Walking 0.5 km (d4500)	<u>Frequency</u> Never (0) Sometimes (1) Often/Always (2)
	Walking up and down stairs (d4551)	
	Carrying 5kg object 10m (d4301)	
	Standing in line (d4159)	<u>Intensity</u> No difficulty (0) Some difficulty (1) A lot of difficulty (2) Cannot do it (3)
	Moving room to room (d460)	

PALS filter questions

Concept	Items Measured	Scale
Agility	Bending down and picking up an object (d4101)	<u>Frequency</u> Never (0)
	Dressing and Undressing (d540)	Sometimes (1)
	Getting into and out of bed (d410)	Often/Always (2)
	Cutting toenails (d5204)	<u>Intensity</u>
	Use of fingers to grasp or handle object (d440)	No difficulty (0)
	Reaching in any direction (d4452)	Some difficulty (1)
	Cutting own food (d550)	A lot of difficulty (2) Cannot do it (3)

PALS filter questions

Concepts	Items Measured	Scale
Pain (d280)	Amount or kind of activities reduced because of pain/discomfort	<u>Frequency</u> Never (0) Sometimes (1) Often/Always (2)
Learning (d130 - d159)	Amount or kind of activities reduced because of learning difficulty or disability	<u>Number of activities prevented from doing*</u>
Confusion / Memory (b144)	Amount or kind of activities reduced because of periods of confusion or difficulty remembering things	None (0) A few (1) Many (2) Most (3)

*At home, at work, at school and in other areas such as transportation or leisure

PALS filter questions

Concepts	Items Measured	Scale
Developmental disability or disorder	Amount or kind of activities reduced because of a developmental disability or disorder	<u>Frequency</u> Never (0) Sometimes (1) Often/Always (2)
Emotional / Psychological / Psychiatric conditions	Amount or kind of activities reduced because of any emotional, psychological or psychiatric conditions	<u>Number of activities prevented from doing*</u> None (0) A few (1) Many (2) Most (3)

*At home, at work, at school and in other areas such as transportation or leisure

Severity Scale derivation

- 1) Assigned a score to each item measured.

Examples:

$$S_{\text{Speaking}} = 0, 1, 2 \text{ or } 3$$

$$S_{\text{Understood}} = 1 + ((U_{\text{family}} + U_{\text{friends}} + U_{\text{services}} + U_{\text{other}}) / 4)$$

$$S_{\text{Walking}} = S_{\text{Freq}} * S_{\text{Intensity}}$$

$$S_{\text{PainLim}} = 1 + (S_{\text{Freq}} * S_{\text{NbActPrevented}})$$

$$= 1 + (S_{\text{Freq}} * (P_{\text{Home}} + P_{\text{Sch}} + P_{\text{Wk}} + P_{\text{Oth}}) / 4)$$

PALS filter questions

Concept	Items Measured	Scale
Communication (d330)	Speaking	No difficulty (0) Some difficulty (1) A lot of difficulty (2) Cannot speak (3)
	Making self understood with family, friends, professionals or service providers and others	Completely (0) Partially (1) Not at all (2)

PALS filter questions

Concept	Items Measured	Scale
Mobility	Walking 0.5 km (d4500)	<u>Frequency</u> Never (0) Sometimes (1) Often/Always (2)
	Walking up and down stairs (d4551)	
	Carrying 5kg object 10m (d4301)	
	Standing in line (d4159)	<u>Intensity</u> No difficulty (0) Some difficulty (1) A lot of difficulty (2) Cannot do it (3)
	Moving room to room (d460)	

Severity Scale derivation

- 2) Assigned a score between 0 and 1 to each type of disability.

Example:

$$S_{\text{COMM}} = (S_{\text{Speaking}} + S_{\text{Understood}}) / (3 + (1 + 2))$$

$$S_{\text{MOB}} = (S_{\text{Walking}} + S_{\text{Stair}} + S_{\text{Carry}} + S_{\text{Stand}} + S_{\text{Moving}}) / (2 * 3 * 5)$$

$$S_{\text{PAIN}} = S_{\text{PainLim}} / (1 + (2 * 3))$$

Severity Scale derivation

3) Calculated the overall score

$$SI = \frac{1}{9} \left(S_{HEAR} + S_{SEE} + S_{COMM} + S_{MOBI} + S_{AGIL} + S_{PAIN} + I_{DEVE} S_{LEAR} + S_{MEMO} + S_{DEVE} + S_{PSYC} \right)$$

$$\text{where } I_{DEVE} = \begin{cases} 0 & \text{if } S_{DEVE} \neq 0 \\ 1 & \text{if } S_{DEVE} = 0 \end{cases}$$

$$\text{Or } SI = \frac{1}{10} S_{FILTER}$$

Severity Scale derivation

4) Created classes

“Least severe” $S_{TOT} < 1/9$

“Most severe” $1/9 \leq S_{TOT} \leq 1$

Class1: “Mild” $S_{TOT} < 1/18$

Class2: “Moderate” $1/18 \leq S_{TOT} < 1/9$

Class3: “Severe” $1/9 \leq S_{TOT} < 2/9$

Class4: “Very Severe” $2/9 \leq S_{TOT} \leq 1$

Questions?

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