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ASSESSING THE INFLUENCE OF ASSISTIVE TECHNOLOGY ON PEOPLE WITH SPINAL CORD INJURY USING A MEASURE OF PARTICIPATION

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ABSTRACT

ASSESSING THE INFLUENCE OF ASSITIVE TECHNOLOGY ON PEOPLE WITH SPINAL CORD INJURY USING A MEASURE OF PARTICIPATION

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The occurrence of a spinal cord injury (SCI) leads to an enormous change in an individual's lifestyle. Limitation related to mobility can become critical affecting ability to participate in nearly all activities of daily living (ADL) ¹. People with SCI rely on assistive technology (AT), especially wheelchair to facilitate the return to as many pre-injury activities as possible and serve as a resource tool for community living and participation ¹². The purpose of this study was to investigate the wheelchair and related factors that affect the participation of individuals with SCI in activities performed in three settings including home, community and transportation.

Seventy individuals with SCI who use wheelchairs for mobility participated in this study. A written survey, which recorded AT usage in daily activities, was distributed among individuals from Pittsburgh (Pitt) and Saint Louis (SL). The wheelchair was found to be the most limiting factor in activities performed in the home, community and transportation use. The second most limiting factor was physical impairment and environment. Significant differences were shown among individuals from Pitt and SL. A higher number of individuals from SL indicated pain, fatigue, wheelchair seating, social attitudes and self-concept as factors that limit their participation. In addition, significant differences were revealed in transportation use between individuals with paraplegia and tetraplegia. Pain was shown as a limiting factor for people with paraplegia, whereas, lack of equipment was indicated by people with tetraplegia.

AT and related factors impact participation of individuals with SCI. The wheelchair was the most common limiting factor, followed by physical impairment and physical environment. The wheelchair is most likely their most important mobility device while also the one that is most associated with barriers.

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family!!!

To accomplish great things...

We must not only act but also dream...

Not only plan but also believe.

Anatole France

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1. INTRODUCTION

The occurrence of a spinal cord injury (SCI) leads to an enormous change in an individual's lifestyle. Limitation related to mobility can become critical affecting ability to participate in nearly all activities of daily living (ADL) ¹. Quality of life (QOL) and perception of life satisfaction have also been shown to be affected ²⁻³. Hence, the focus of research has been to identify predictors of QOL to minimize the risk of poor life contentment ⁴⁻⁵⁻⁶. QOL associated with SCI is affected mainly by health³ and social factors^{4,5}. Treischmann et al ⁷ identified what a person with SCI has to do to avoid deterioration of his/her health. Initially, the person should be involved in self-care and health care activities. Secondly, he should maintain appropriate participation in productive activities. Participation is defined as the extent of a person's involvement in life situations in relation to impairments, activities, health condition and contextual factors⁸.

Assistive technology (AT) has been used by people with disabilities to facilitate the return to as many pre-injury activities as possible ⁹. People with SCI rely on AT, and especially their wheelchairs to engage in many of life's activities. Wheelchairs are used to enhance function, improve independence and enable a person to successfully live at home and in the community ⁹. The wheelchair may be perceived as a negative impact on an individual's life if does not enable him to fully participate in his social and community roles¹⁰. The wheelchair and seating system can be limitations or facilitors for participations dependent upon how well the seating and wheelchair meet the capacities of

the person. Research has shown that the successful use of AT is dependent upon two major factors: 1) process of service delivery ¹¹ and 2) environmental intervention ¹².

Regarding the service delivery, nineteen components of AT provision should be followed¹¹. The nineteen components are illustrated in table 1. The successful use of AT is dependent on this full range of services. How the devices are applied and the training techniques that are implemented affect outcomes, which ultimately impact a person's quality of life ¹¹.

Table 1. Illustrate nineteen components of AT provision.

Nineteen components of AT provision

- 1. Identify potential users
- 2. Establish needs and potential benefits of system
- 3. Select appropriate components of system from special and general market devices
- 4. Make necessary modifications
- 5. Assemble the system
- 6. Mount the system
- 7. Fit the system, including adjustments and initial customization
- 8. Select the most appropriate training materials and plan
- 9. Perform initial user training
- 10. Perform training for people in user's environment
- 11. Provide ongoing training
- 12. Be on-call for subsequent questions and needs
- 13. Provide ongoing preventative maintenance and replacement of components
- 14. Provide repairs
- 15. Update system when improvements are available
- 16. Periodically reevaluate the degree of integration of the initial system in user's life
- 17. Use updated data to refine or improve system
- 18. Provide a more appropriate system when needed by user
- 19. Provide more appropriate system when marketplace advances more appropriate products.

The combination of AT and environmental interventions have been used by people with disabilities as resource tools for community living and participation¹². Hoenig et al.¹³ concluded that individuals who lived in wheelchair accessible homes were more likely to use their wheelchairs. In addition, a new paradigm that considers the

environment and AT in the determination of disability has been proposed by Seelman and the International Classification of Functioning and Disability (ICIDH-2) ⁸⁻¹⁵. The central theme of this new approach to studying disability is that while medical indicators are necessary they are not sufficient for developing complete explanations of disability. In this document the environmental factors are considered as either facilitators or barriers to participation for persons with impairments or activity limitations. This new paradigm has a great potential for demonstrating the role of AT in affecting disability and ultimately, an individual's participation.

Little empirical work has been done to assess the effects of AT interventions on the lives of consumers. Research has focused on a narrow range of activities and ignored the role of assistive technology ⁴⁻⁵. Most of the literature on AT is focused around issues of design, consumer preferences, use, disuse, abandonment, cost and policy ¹⁶⁻¹⁷⁻¹⁸. What is not known is how AT and related factors of a physical disability affect overall participation. There is also a need for outcomes research in service provision and activities that support the AT service provision system ¹¹. Hence, the AT assessment of daily participation, as well as their provision, need to be considered in order to identify gaps in activity involvement by people with SCI. The survey used in this research was specially designed with participation as defined by the ICIDH-2 in mind ¹⁹.

1.1 Specific Aims and Hypothesis

The overall aim of this study was to investigate the wheelchair and related factors that affect the participation of individuals with SCI in activities performed in three settings including home, community and transportation use. The specific aims were:

Specific Aim 1: Determine wheelchair and related factors that individuals with SCI rank as the most limiting for participation in the three settings.

Specific Aim 2: Compare the perceived wheelchair and related limiting factors on participation between individuals with tetraplegia and paraplegia for activities in all three settings. It was hypothesized that the factors limiting participation for individuals with paraplegia were less than those with tetraplegia for activities in all three settings.

Specific Aim 3: Investigate if wheelchair users from Pittsburgh (Pitt) cite different primary limiting factors of participation when compared to wheelchair from Saint Louis (SL). It was hypothesized that the factors limiting participation for individuals from Pitt were different than those cited by the SL subjects in all three settings. Specifically, it was hypothesized that wheelchair and related factors would be less limiting for Pitt subjects when compared to SL subjects.

2. METHODS

2.1 Subjects

Seventy individuals with SCI who use wheelchairs for mobility provided written informed consent. All participants had to be discharged from rehabilitation for at least one year and had to live in a community setting. There were 55 men and 15 women with a mean age of 41 years (± STDV 10.75). The average time post injury was 14 years (± STDV 9.82). Twenty-nine individuals were tetraplegic, 38 paraplegic and 3 had no classified level. Fifty-four subjects used manual wheelchairs and 16 used power wheelchairs. Pitt had a total of 37 subjects participating in this study. There were 30 men and 7 women with mean age of 42 years (± STDV 11.33). The time post injury was 16 years (± STDV 9.13). Thirteen individuals were tetraplegic and 21 were paraplegic. Thirty-two were manual wheelchair user and 5 were power wheelchair user. SL had a total of 33 subjects. There were 25 men and 8 women with the mean age of 39 years (± STDV 9.86). The average time post injury was 12 years (± STDV 10.25). Sixteen were tetraplegic and 17 were paraplegic. Twenty-two used manual wheelchairs and 11 used power wheelchairs. The subject's demographic information is presented in table 2.

Table 2. Subject's demographic information

Study groups	Mean age + Stdv (years)	Average time post injury + Stdv (years)	Gender N (%)		J. J		Type of wheelchair N (%)	
		_	M	F	T	P	Manual	Power
All participants N=70	41 <u>+</u> 10.75	14 <u>+</u> 9.82	55 (77)	15 (21)	29(41)	38(54)	54 (77)	16 (23)
Pitt N=37	42 <u>+</u> 11.33	16 <u>+</u> 9.13	30 (81)	7 (18)	13(35)	21(56)	32 (87)	5 (13)
SL N=33	39 <u>+</u> 9.86	12 ± 10.25	25 (76)	8 (24)	16(49)	17(51)	22 (67)	11(33)

[#] Note: data on level of injury was unavailable for three subjects. T= tetraplegia; P=paraplegia.

2.2 Protocol

The Institutional Review Board (IRB) approval was obtained prior to initiation of the study. A written survey that recorded AT usage in daily activities was distributed among clients from Pitt and SL. Pitt subjects were recruited through research centers and through a comprehensive AT clinic that uses a client centered multi-disciplinary team approach. SL subjects were recruited from research centers and rehabilitation centers. In both locations subjects were recruited via flyer or approached by clinical study coordinators, who asked if they were interested in participating. A written informed consent was obtained from all subjects prior to engaging in the study.

2.3 Questionnaire

The questionnaire used in this study was a combination of two surveys: 1) Participation Survey/Mobility (PARTS/M) and, 2) Facilitators and Barriers Survey/Mobility (FABS/M). The PARTS/M and FABS/M are available in the appendix section. The PARTS/M is composed of 25 major life activities. Analysis of the PARTS/M surveys returned by 108 polio survivors showed internal consistency values for the Pevaluative scores range from .39 to .77 with most values over .65. All but two of the test-retest values were over .68 with 18 of 25 over .74. Comparison of the cross population similarities and differences are currently underway ²⁰.

The FABS/M consist of 191 items that probe the situational specificity of activity limitations, request information on the type of assistive technology used in activities, and ask the respondents to categorize aspects of their environments as barriers or facilitators to participation. The FABS/M values for internal consistency and test retest ranged from .73 to .97 with most being above .9. The PARTS/M and FABS/M have good

psychometric properties for the polio survivor sample. For this study, only activity performance limiting factors of the home, community and transportation, were analyzed. Subjects were asked five questions within each setting related to their perceived reason of functional limitations (see Table 2-6). Final subject responses were divided into two categories: 1) Participation limitations- defined as health-related factors that interfere with the ability to do activities (e.g. wheelchair, physical impairment, wheelchair seating, pain, fatigue and illness), and 2) Access limitations- defined as non health-related issues that interfere with the opportunity to participate in activities (e.g. wheelchair, physical environment, wheelchair seating, lack of assistance, lack of equipment, social attitudes, self-concept and family attitudes). The wheelchair and wheelchair seating were cited as participation limitations because they are used to compensate for health conditions (i.e. inability to walk). For example, manual wheelchairs for most individuals limit distance traveled, whereas power wheelchairs that do not go through gravel and sand limit participation in those environments. Therefore, if the device does not assist the person in an activity, the device limits the person's participation. Access limitations were cited as inability to obtain a suitable wheelchair. However, not having the equipment would result in even greater limitations to participation.

2.4 Statistical Analysis

SPSS software (SPSS, Inc.) was used to calculate frequencies of perceived limitations. The frequency of perceived reasons for limitation in activities performed at home, community and transportation were used to calculate the percentage of time that each factor was perceived as a limitation. Percentages were reported for subjects with paraplegia and tetraplegia. The differences in the perceived reasons for limitation at the

Pitt and SL were examined for each task using a chi-square test or Fishers Exact if appropriate.

Differences between perceived reasons for limitations to complete a task for individuals with paraplegia and tetraplegia were analyzed using a chi-square test. To ensure groups between the two clinical settings were comparable, demographic characteristics (gender, injury level and type of wheelchair) were matched using a chi-square. The significance level was set a priori at < 0.05.

3. RESULTS

3.1 All Participant

<u>Participation limitations:</u> The wheelchair most often limited participation in each of the three settings (home, community and transportation) followed by (2) physical impairment, (3) wheelchair seating, (4) pain, (5) fatigue, and (6) illness. Tables 3, 4 and 5 illustrate the relative percentages of the participation limitation for all participants.

Table 3. Factors limiting participation in activities in the home.

Is your participation	% of	Study 1	Location	Level of injury		
in moving around your <i>home</i> limited by		Pitt %	SL %	Tetraplegia %	Paraplegia %	
Wheelchair	69	68	70	59	74	
Physical impairment	41	43	39	31	45	
Wheelchair seating	16	11	21	17	13	
Pain	11	5	18#	3	15	
Fatigue	6	3	9	3	5	
Illness	3	3	3	3	3	
No limitation (# p<0.01)	19	24	12	17	21	

Table 4. Factors limiting participation in activities in the community.

Is your participation in	% of	Study 1	Location	Level of injury		
leaving your home limited by	participants	Pitt %	SL %	Tetraplegia %	Paraplegia %	
Wheelchair	64	70	58	59	68	
Physical impairment	36	27	45	38	29	
Wheelchair seating	14	5	24*	10	16	
Pain	13	8	18	7	16	
Fatigue	11	8	15	7	13	
Illness	6	3	9	7	5	
No limitation (*p <0.05)	23	27	18	28	21	

Table 5. Factors limiting participation in using transportation.

Is your participation in	% of	Study Location		Level of injury	
using <i>transportation</i> limited by	participants	Pitt %	SL %	Tetraplegia %	Paraplegia %
Wheelchair	61	62	60	59	63
Physical impairment	39	35	42	34	37
Wheelchair seating	16	14	18	14	16
Pain	14	8	21	3	21*
Fatigue	9	3	15*	7	8
Illness	3	3	3	3	3
No limitation (* p<0.05)	20	21	8	24	18

Access limitation: Wheelchair most often limited access to the community, followed by (2) physical environment, (3) lack of assistance, (4) wheelchair seating, (5) social attitudes, (6) lack of equipment, (7) self-concept and (8) family attitudes. Wheelchair was also the most common cause for limited access to transportation use, followed by (2) physical environment, (3) limited finances, (4) wheelchair seating, (5) lack of assistance, (6) social attitudes, (7) lack of equipment and (8) self-concept (9) family attitudes. Tables 6 and 7 illustrate the relative percentages of access limitations for all respondents.

Table 6. Factors limiting access to the community.

Is your access to leaving	% of	Study I	Location	Level of injury		
your home to go out into the <i>community</i> limited by	participants	Pitt %	SL %	Tetraplegia %	Paraplegia %	
Wheelchair	53	57	49	45	60	
Physical environment	47	43	58	51	53	
Lack of assistance	19	16	21	14	18	
Wheelchair seating	14	5	24*	14	16	
Social attitudes	9	0	18*	10	8	
Lack equipment	7	8	6	7	8	
Self-concept	7	0	15*	3	10	
Family attitudes	1	0	3	14	16	
No limitation (*p<0.05)	14	16	12	14	18	

Table 7. Factors affecting access to using transportation.

Is your participation in	% of	Study	Location	Level of injury		
using <i>transportation</i> limited by	participants	Pitt %	SL %	Tetraplegia %	Paraplegia %	
Wheelchair	67	73	60	55	74	
Physical environment	41	32	51	41	42	
Limited finances	16	11	21	21	13	
Wheelchair seating	13	11	15	14	10	
Family attitudes	1	0	3	3	3	
Lack of assistance	9	10	6	7	5	
Social attitudes	7	0	5*	7	8	
Lack of equipment	3	3	3	7#	3	
Self-concept	3	0	6	3	3	
No limitation (* p<0.05; # p<0.01)	20	13	12	10	16	

3.3 Level of Injury

Ninety five percent (N=38) of individuals with paraplegia used manual wheelchairs. In addition, 55% (N=29) of individuals with tetraplegia used power wheelchairs.

<u>Participation limitation</u>: Significant differences were found regarding the level of injury. Individuals with paraplegia (21%) reported pain as a limiting factor for their transportation use significantly more than people with tetraplegia (3%).

<u>Access limitations:</u> Lack of equipment limiting transportation use was the only significant difference seen in the area of access limitations with a higher percentage of

individuals with tetraplegia (tetraplegia= 7% paraplegia= 3%) citing it as a limiting factor.

3.2 Study Location

Comparisons between Pitt (N=37) and SL (N=33) regarding gender, level of injury and type of wheelchair were performed. A borderline significant difference was found only with the type of wheelchair used (p<0.05). A greater number of subjects in Pitt (87%) used manual wheelchairs and a larger number of individuals from SL (33%) used power wheelchairs.

Participation limitation: Significant differences were shown between Pitt (N=37) and SL (N=33) with respect to activities performed at home (Table 3), limiting factors of leaving home (Table 4) and transportation (Table 5). For activities in the home, a higher percentage of SL participant (SL=18% Pitt=5%) indicated pain as a limiting factor. For leaving the home, a higher percentage of SL individuals (SL=24% Pitt=5%) reported wheelchair seating as a limiting factor; whereas for transportation, SL (SL=15% Pitt=3%) were more likely to report fatigue as a limiting factor.

<u>Access limitation:</u> Access limitation factors are shown in Tables 6 and 7. SL individuals were more likely to indicate that wheelchair seating (SL=24% Pitt=5%), social attitudes (SL=18% Pitt=0) and self-concept (SL=15% Pitt=0) were limiting factors. For factors affecting transportation, a greater number of participants from SL reported social attitudes (SL=15% Pitt=0) as a limiting factor.

4. DISCUSSION

The data indicates that the main cause for limited participation inside the home, leaving the home, and for transportation was the wheelchair. The use of a wheelchair that did not enable individuals with SCI to participate fully in their social and community roles appears to have made a considerable impact on their lives ¹⁶. However, the wheelchair is not only most likely their most important mobility device, but also the one that is most associated with barriers. According to Post et al.²¹, there are significant complaints about wheelchairs among individuals with SCI. Manual wheelchairs are often considered to be heavy and difficult to maneuver. The dimensions of the mobility device will determine how the wheelchair can negotiate through tight spaces. Similarly, Mann et al.¹⁰ found that 26% of the problems related to the physical characteristics of the wheelchair (too heavy to push and too wide to use inside the home). In a real sense, a wheelchair is an extension of the user's body. Therefore, it is critical that a wheelchair must match the user's current expectations, preferences, physical needs and functional requirements based on his or her interactions with the environment ²².

The second most limiting cause of decreased participation in the three settings was the physical environments and physical impairments. Problems in daily activities are viewed as a process of matching the person's capability, resulting from a physical impairment, to the most appropriate setting ²⁴. The physical environment determines the task performance and it can impact the individual's ability to live independently ²⁴. Richards et al.²⁵ reported that environmental access increases the likelihood that a person with SCI will engage in a variety of meaningful activities. Hanrison et al.²⁶ reported that ramps, wider doors, or wheelchair lifts were pointed out by individuals with SCI as

equipment that would make their homes completely accessible. People who had assistance available or who lived in wheelchair-accessible homes were more likely to use their wheelchairs. However, people with lower income levels were less likely to have their homes modified¹³. Dudgeon et al.²⁷ also illustrated the importance of having an accessible environment in a school setting. They highlighted that barriers within school environments do not directly affect academic achievements among students with SCI, but discourage socialization and community participation.

Our study findings indicate that wheelchair seating was the third main cause for limited participation in the three settings as well as the fourth access-limiting factor for leaving the home and for transportation use. Mann et al. 10 reported that 41% of wheelchair problems are related to the fit between the user and the wheelchair (e.g. uncomfortable to sit in). When comparing SL and Pitt, more SL participants reported wheelchair seating as a limiting participation factor in activities in the community. A larger number of individuals from SL cited pain and fatigue as limiting factors in activities in the home and transportation respectively. A number of possibilities may explain the differences in the results between the two locations. The type of technology might be appropriate at a given point in time, but later the AT may be obsolete for the individual and his particular needs. Therefore, the length of time a given technology is appropriate becomes an important factor to measure. It is important to keep in mind that most of the subjects were recruited during a seating assessment with the goal of improving or replacing current wheelchairs.

From a different prospective, the lack of specific training for wheelchair prescription and fitting by suppliers and clinicians may also have occurred. Experts indicated that most clinicians do not receive any specific training for prescribing wheelchairs ²⁸. Only a very small number of therapy or medical residency programs dedicate more than a few hours to training students in the proper selection and use of AT, especially wheelchairs ²⁸. Another possible reason is related to the lack of consideration of the user's opinion in the AT prescription process, his level of knowledge regarding the available technology and his insight into his own needs. A client's lack of practical experiences makes him unable to fully participate in choosing wheelchair features that best fit his needs ¹⁰. More active user and caregiver/family member participation in the prescription of AT is necessary to increase compliance and facilitate effective outcomes ¹⁷. Moreover, the lack of financial resources, fraud, and denials of prescribed equipment by third-party payers are also among the most frequent reasons why clients receive inadequate equipment ¹⁸.

A greater number of individuals with paraplegia reported pain as a transportation-limiting factor when compared with individuals with tetraplegia. This may be explained by the fact that 95% of the individuals with paraplegia were using manual wheelchairs, which require more effort to load and unload in and out of a vehicle. Another possible reason may be related to transfers in and out of the vehicle seat. Pain and injury of the upper extremities are experienced by as much as 70% of manual wheelchair users ³⁰ Pain represented a form of overuse syndrome related to wheelchair usage and transfers ³¹. Furthermore, exposure to vibrations and shock, resultant to the wheelchair rider, can also lead to neck and back pain ³². Individuals with tetraplegia indicated that the lack of

equipment is a limiting factor in transportation use. This may due to difficulties in transporting a power wheelchair in vehicle. Accessible transportation increases the likelihood that individuals with SCI will participate in the community ²¹.

Our finding showed that wheelchair and related factors were less limiting for Pitt subjects when compared to SL subjects. The data also revealed that a greater number of individuals form Pitt used manual wheelchairs, whereas a higher number of people from SL used a power wheelchair. It is possible that the differences between the two sites are because of this difference in populations. Unfortunately our sample size is not large enough to allow us to control for this statistically. Other reasons that may explain the difference between the two sites include the presence of a specialized AT clinic in Pittsburgh. It is possible that such a clinic provided chairs better matched to the user and environment and this was responsible for the differences. In order to definitively determine if a specialized AT clinic makes a difference a controlled longitudinal study is needed. Another important finding indicated that a greater number of individuals from SL indicated social attitudes and self-concept as an obstacle to participation in the community and transportation use. It is difficult to understand why these differences exist; however Pierce et al.²⁹ showed that the public lack of understanding of the life of people with disabilities as well as the attitudes of others can have an impact on activities performance. Therefore, consideration of social attitudes is essential when AT is prescribed.

It was identified through this study that AT and related factors impact daily participation of individuals with SCI individuals. Unfortunately, we do not have any data

regarding the direct cause of those reported limiting factors. For futures studies, finding the cause of the problems of each factor identified in this study would be useful to lead to an understanding of the limitations that individuals with SCI face in daily routines. Measuring the length of time a given technology is appropriate would also be useful. Investigating not only the impact of seating intervention, but also environmental modifications and related factors on changes in daily participation of an individual with SCI are needed. It is important to keep in mind that an appropriate wheelchair and seating system have only a valuable impact on activities performance if environmental intervention is made.

This study is ongoing and surveys, administered after the individual receives a seating intervention, are being collected. Therefore, analyzing and comparing the results of both surveys (prior and post receiving the new wheelchair) would be useful to understand the impact of the seating intervention, and related factors on changes in the daily participation of an individual with SCI. Determining the changes in SCI individuals lives, pre and post intervention with AT, may provide essential information for the selection of AT that best fits life styles, justification for the purchase of AT for third-party payment, and formation of a data base. A database could be used to advocate for social policy change in support of the provision of AT. Furthermore, exploration into the experiences of people who use wheelchairs would deepen the understanding of the critical success factors involved in wheelchair prescription and ultimately lead to more positive outcomes.

Clinicians should look for evidence to support clinical practice. Keeping in mind the home and community environment, outcomes need to measure the function and quality of life that interventions provide to people with SCI. Hence, incorporating clinical practice supported by evidence and documenting actual long-term outcomes are important strategies for meeting the activity participation needs of a person with SCI. More research is needed to guide the clinical interventions used for improved participation of people with SCI. Critical to all clinicians and their clients is the incorporation of these research findings into routine clinical practice.

5. CONCLUSION

The outcome of AT use and related factors that affect participation in the home, community and transportation use were identified among wheelchair users. The wheelchair was the most common limiting factor, followed by physical impairment and physical environment. The wheelchair is most likely the most important mobility device, but also the one that is most associated with barriers. Moreover, the wheelchair may be the most empowering and limiting technology at the same time.

The wheelchair is an essential device, because it provides mobility. However, the wheelchair needs to match the user's current expectations, preferences, physical needs and functional requirements based on his or her interactions with the environment. Providing a wheelchair that fits well and is easy to operate without addressing environmental access may limit the potential benefits of the equipment. Similarly, an accessible environment is of no benefit if the equipment is difficult for the user to operate.

It is important to keep in mind that it is not an isolated factor that restricts a person with SCI from successfully participating in activities at home and in the community. It has been shown through this study that many factors determine the success of wheelchair mobility. An understanding of the factors that limit participation will help us better understands the effects disability has on functioning. It is important to identify the type and severity of activity limitations so that programs can be planned and developed which will assist in full participation in society.

APPENDIX A

Core survey YOU AND YOUR HEALTH

This interview is completely voluntary on your part. The questions will take about two hours of your time to answer. There are three sections to this interview. The first section includes questions about background information and health status; the second section involves participation in various activities; and the last section deals with the accessibility of your physical environment and support systems. Please select the answers most appropriate to you. Thank you for agreeing to participate.

1.	What is your gender?	\square Mc	ıle	\square Female	
2.	What is your birthdate?	_//	(MM/D	D/YY)	
3.	What is your race/ethnicity?	(Check all	that apply.)		
	White Black/African American Other (specify)			acific Islander n Indian/Alaskan Nati	ve
	Are you of Spanish/Hispanic <i>Yes</i> □	origin? <i>No</i>			
	\square	Separated Never bee	n married f an unmarrie	d couple	
6.	What is the highest grade or y	year of sch	ool you have	completed?	
	□ Never attended school or □ Grades 1 through 8 □ Grades 9 through 11 □ Grade 12 or GED (high a College 1 year to 3 years) □ College 4 years or more	school gra	duate)		
7.	Is your annual household inco	ome from a	ll sources:		
	☐ Less than \$10,000 ☐ \$10,000 to less than \$15, ☐ \$15,000 to less than \$20, ☐ \$20,000 to less than \$25, ☐ \$25,000 to less than \$35,	,000 ,000			

 \$35,000 to less than \$50,000 \$50,000 to \$75,000 or Over \$75,000 Don't know/Not sure 			
8. Which of the following benefits are you currentl Check all that apply.) □ SSI (Supplemental Security Income)	y receiving?		
☐ SSDI (disability benefits from Social Sect	ırity)		
☐ Medicare ☐ Medicaid ☐ Fo	ood Stamps	☐ Subsidized Ho	ousing
☐ Personal Care Assistance ☐ Meals on	Wheels		
☐ Other		□ None	
O. Do you have any of the following impairments?	Check all that	apply.)	
 □ Mobility impairment (difficulty model □ Visual impairment □ Hearing impairment □ Cognitive impairment (difficulty volume □ Mental health illness 		or arms)	
10. What level is your spinal cord injury?			
11. Are you a person with: \square <i>Paraplegia</i> \square <i>Qua</i>	adriplegia	☐ Don't know	
12. Is your injury: □ Complete □ Incomplete	\Box Don	't know	
13. When was the onset of your spinal cord injury	y?/	(month/ye	ear)
Do you have any of the following secondary condition	us? If Yes, how o	often do you exper	ience the condition?
Condition Check all that apply.)	How ofter	n do you experier	nce this condition?
□ 1. Pain	□Constantly	$\Box Off$ and on	\square Rarely
☐ 2. Osteoporosis	□Constantly	$\Box Off$ and on	\square Rarely
☐ 3. Spasticity	□Constantly	$\Box Off$ and on	\square Rarely
☐ 4. Upper Respiratory Infection	□Constantly	$\square Off$ and on	\square Rarely
☐ 5. Circulatory problems	□Constantly	$\Box Off$ and on	\square Rarely
☐ 6 Scoliosis	DConstantly	$\square Off$ and on	$\Box Paroh$

	T							
☐ 7. Weight problems	□Constantly	□Off and on	\square Rarely					
□ 8. Skin problems	□Constantly	□Off and on	□Rarely					
☐ 9. Depression	□ Constantly	□Off and on	\square Rarely					
☐ 10. Contractures – permanent limitation of joint movement	□ Constantly	□Off and on	□Rarely					
☐ 11. Bladder incontinence	□Constantly	□Off and on	\square Rarely					
☐ 12. Bowel incontinence	□Constantly	$\square Off$ and on	\square Rarely					
☐ 13. Stomach problems	□Constantly	$\square Off$ and on	□Rarely					
☐ 14. Urinary Tract Infection	□Constantly	$\square Off$ and on	□Rarely					
☐ 15. High Blood Pressure	□Constantly	$\square Off$ and on	□Rarely					
☐ 16. Phlebitis – inflammation of blood vessels	□Constantly	□Off and on	□Rarely					
☐ 17. Fingernail or toenail infections	□Constantly	□Off and on	□Rarely					
☐ 18. Fatigue	□Constantly	\square Off and on	\square Rarely					
☐ 19. None of these								
These next two questions are about your support needs and life satisfaction. 1. How often do you get the social and emotional support you need? Would you say								
□ Always □ Usually □ Sometimes □ Rarely □ Never								
2. In general, how satisfied are you with your life? W	Vould you say							
 □ Very satisfied □ Satisfied □ Dissatisfied □ Very dissatisfied 								

The following questions are about limitations you may have in your Daily life.

1. Are you limited impairment or h	in the kind or amount of work you could do because of any health problem?
	impairment or health problem, do you have any trouble learning, or concentrating?
3a. Do you use spec	cial equipment or help from others to get around?
	Yes (Continue.) No special equipment or help used (Go to Question 5)
3b. If you use spect do you use? (Cook of the cook of	**************************************
□ <i>A</i> □ <i>A</i> □ <i>A</i>	Across a small room About the length of a typical house About one or two city blocks About one mile More than one mile
equipment or help U A A	est distance you can walk by yourself, without any special lp from others? Unable to walk Across a small room About the length of a typical house About one or two city blocks About one mile

health problet C What is the M			•	Ţ.	fany impairment or
What is the M			No (Co to		
What is the M	■ Yes		No (Co to		
			100 (OO 10	question 9.)	
	Arthritical Back of Fractural Walking Lung/back of Hearing Eye/vis Heart part Stroke Hypertal Diabete Cancer Depres	s/rheum r neck p es, bone g proble reathing g proble sion problem problem ension/h es	nt or health natism problem e/joint injurem g problem em blem nigh blood	problem that li	mits your activities?
				п итией бесии.	se oj your major
ітрантені	or neaun	problem	n:		
	Weeks Months Years	S ►	How How	many weeks? many months?	
persons with	your PE	RSONA	-	•	± 0
	☐ Yes		No	☐ Not applic	cable
persons in he	andling yo	our ROl	UTINE nee	ds, such as ever	yday household chores,
	☐ Yes		No	☐ Not applic	cable
					· ·
1	1a. 🗖	Numbe	er of days:		☐ None
	For HOW LC impairment Because of an persons with or getting an doing necess During the part you to do you	□ Lung/b □ Hearing □ Eye/vis □ Heart p □ Stroke □ Hyperta □ Diabeta □ Cancer □ Depres □ Other in For HOW LONG have impairment or health □ Days □ Weeks □ Months □ Years □ Not app Because of any impairment persons with your PET or getting around the second of the secon	□ Lung/breathing □ Hearing proble □ Eye/vision pro □ Heart problem □ Stroke problem □ Hypertension/h □ Diabetes □ Cancer □ Depression/and □ Other impairm For HOW LONG have your actimpairment or health problem □ Days □ Weeks □ Months □ Years □ Not applicable Because of any impairment or persons with your PERSONAL or getting around the house? □ Yes □ Yes □ During the past 30 days, for a you to do your usual activitie	□ Lung/breathing problem □ Hearing problem □ Eye/vision problem □ Heart problem □ Stroke problem □ Hypertension/high blood □ Diabetes □ Cancer □ Depression/anxiety/emoti □ Other impairment/ problem For HOW LONG have your activities been impairment or health problem? □ Days □ Days □ How □ Weeks □ Months □ How □ Years □ Not applicable Because of any impairment or health problem around the house? □ Yes □ No Because of any impairment or health problem around the house? □ Yes □ No During the past 30 days, for about how if your to do your usual activities, such as such	□ Lung/breathing problem □ Hearing problem □ Eye/vision problem □ Heart problem □ Stroke problem □ Hypertension/high blood pressure □ Diabetes □ Cancer □ Depression/anxiety/emotional problem □ Other impairment/ problem □ Not application impairment or health problem? □ Days □ How many days? □ Weeks □ How many weeks? □ Months □ How many weeks? □ Months □ How many years? □ Not applicable Because of any impairment or health problem, do you new persons with your PERSONAL CARE needs, such as easy or getting around the house? □ Yes □ No □ Not application in handling your ROUTINE needs, such as every doing necessary business, shopping, or getting around for the past 30 days, for about how many days did Figure you to do your usual activities, such as self-care, work,

12.	2. During the past 30 days, for about how many days have you felt SAD, BLUE DEPRESSED?				
	12a.	☐ Number of days:	□ None		
<i>13</i> .	During the past TENSE, or ANX	30 days, for about how many days have IOUS?	you felt WORRIED,		
	13a.	☐ Number of days:	□ None		
14.	C 1	30 days, for about how many days have EST or SLEEP?	you felt you did NOT		
	14a.	☐ Number of days:	□ None		
15.	0 1	30 days, for about how many days have D FULL OF ENERGY?	you felt VERY		
	15a.	☐ Number of days:	□ None		

PARTICIPATION SURVEY / ASSISTIVE TECHNOLOGY

The first part of the survey is completed. The next section asks about **participation in major life activities**. This part consists of 13 different areas of major life activities, and the questions are similar in each area. Please answer the questions using the framework of a **typical day in the past 4 weeks**. A **typical day** is neither your worst day nor your best day but represents most of your days during the past 4 weeks.

The following definitions may help you answer these survey questions:

Choice means having the opportunity to select freely from a number of available options concerning when, where, how, how often, and with whom you participate in an activity.

Help from another person refers to either paid help (such as a paid attendant) or unpaid help (such as from a family member or friend).

Access limitations may be anything that keeps you from participating in activities (such as people's attitudes, your self-concept, physical factors in the environment, or lack of special equipment).

Adaptations are changes made to rooms or buildings, such as lowered shelves or widened doors, or the use of special devices, such as a raised toilet, hand-held shower, grab bars, a ramp, or a modified cutting board to secure food. Adaptations could also include choosing to purchase such things as a portable phone instead of a stationary phone, a long-handled shoehorn instead of a short one, or a refrigerator with a freezer on the side or bottom instead of on the top.

Accommodations are ways of changing your environment to make activities easier to do. Some examples are placing items within reach, arranging furniture so that you can move around more easily, scheduling preparation time for activities, or calling ahead to check on accessibility.

Special equipment is equipment made especially for people with disabilities, including, but *Not Limited* to, a wheelchair, scooter, walker, cane, crutches, orthotic or prosthetic device, reacher, communication board, sliding board, adapted vehicle, lift, or an accessible *Parking* permit. Also included would be a catheter for bladder management.

GROOMING: The following questions are about grooming. Grooming includes shaving, combing and brushing hair, applying makeup, brushing teeth, etc.

	1. How frequently do you groom? □ 2 or 3 times a week □ Once a	day $\Box 2$ - 3 times a day \Box More than 3 times a day
	2. How much time do you require □ <i>Less than 10 minutes</i> □ <i>10</i>	for grooming on a typical day? to 20 minutes
		g limited by (Check all that apply.) ment Pain Fatigue Wheelchair Not limited
	disabilities? (Choice includes h	ice do you have compared to others without ow often, when, where and how you groom.) oice Little choice No choice
	5. How satisfied are you with your □ Very satisfied □ Satisfied	
	<u>-</u>	Derson do you require for grooming? ☐ A moderate amount ☐ A great deal
		you with grooming? (Check all that apply.) ant Other □ Friends □ People I hire
	groom?	nodations, adaptations, or special equipment to Some of the time \(\square Most \) of the time
9.	9. If you use accommodations , and do you use? (<i>Check all that app</i>	aptations, or special equipment to groom, what ly.)
I	□ N/A □ Dressing table □ Electric shaver □ Electric toothbr □ Grab bars □ Lift □ Long-handled e □ Wheelchair - ma	☐ Specialized bathroom equipment ☐ Special seat/chair quipment ☐ Lowered shelves/counters unual ☐ Wheelchair - power
cle	MEAL PREPARATION and Coleaning after the meal is finished. 1. In a typical day, how much time	LEAN-UP: The following questions involve meal preparation and

 2. Is your participation in meal preparation limited by □ Illness □ A physical impairment □ Pain □ I □ Wheelchair seating □ Other 	Fatigue
 3. For meal preparation and clean-up, how much choice do others without disabilities? (Choice includes when, what, where and with whom yo □ A lot of choice □ Some choice □ Little choice 	u prepare meals.)
4. How satisfied are you with your participation in meal property satisfied □ Satisfied □ Somewhat satisfied □	
 5. How much help from another person do you need to pre (Check all that apply.) □ None □ Just a little □ A moderate amount 	epare/clean up? □ A great deal
If you use assistance, who helps you to prepare and clean u (Check all that apply.) □ No one □ Family/Significant Other □ Friends	
 7. How often do you use accommodations, adaptations, or to prepare and clean up? ☐ Never ☐ A little of the time ☐ Some of the time ☐ Mo 	
8. If you use accommodations, adaptations, or special equipreparation, what do you use? (Check all that apply.) (N/A	ipment for meal ☐ Scooter ☐ Special seat/chair ☐ Specialized kitchen equipment ☐ Universal cuff ☐ Reacher/grab stick/grabber ☐ Walker ☐ Wheelchair – power ☐ Other

BLADDER CARE: The next questions involve emptying your bladder, which includes getting to a bathroom, adjusting clothing, using accommodations, or using special equipment.

1.	How much time do you require for bladder care on a typical day? ☐ Less than 30 minutes ☐ 30 to 60 minutes ☐ More than 60 minutes						
	Is your particip (Check all the Illness	hat apply.) A physical i	mpairment	☐ Pain	☐ Fatig	ue	ted by ☐ Wheelchair ☐ Not limited
3.	For manageme others without place.)	disabilities?	(Choice incl	ludes when	n, where a	nd how	v care takes
4.	How satisfied a ☐ Very satisfi						Dissatisfied
5.	 Do problems associated with bladder care affect your participation in Daily activities, such as attending a movie, going shopping, or working? □ No, not at all □ Once in a while □ Sometimes □ Most of the time 						
6.	. How much help from another person do you require for bladder care? ☐ None ☐ Just a little ☐ A moderate amount ☐ A great deal						
7.	. If you use assistance, who helps you with bladder care? (Check all that apply.) □ No one □ Family/Significant Other □ Friends □ People I hire						
8.	 How often do you use accommodations, adaptations, or special equipment for bladder care? □Never □A little of the time □Some of the time □Most of the time □All of the time 						
9.	. If you use accommodations, adaptations, or special equipment for bladder care, what do you use? (Check all that apply.)						
	(((((☐ Accessibl☐ Urinal/be☐ Catheter	dpan/potty ch overnight bags iir - manual	air		Raise Show	cation tic/prosthetic device d toilet er chair lchair - power

MOVING AROUND INSIDE YOUR HOME: The following questions are about moving around inside your home. This includes getting out of bed, getting out of a chair, going from room to room or getting to another floor, such as the basement.

1. How many waking hours each day do you spend in the following rooms of your home?					
Living room	□Less than 1 □1 to 4 □More than 4 □Not applicable to my home				
Dining room	□Less than 1 □1 to 4 □More than 4 □Not applicable to my home				
Kitchen	□Less than 1 □1 to 4 □More than 4 □Not applicable to my home				
Bathroom	□Less than 1 □1 to 4 □More than 4 □Not applicable to my home				
Bedroom	□Less than 1 □1 to 4 □More than 4 □Not applicable to my home				
Study	□Less than 1 □1 to 4 □More than 4 □Not applicable to my home				
Basement	□Less than 1 □1 to 4 □More than 4 □Not applicable to my home				
Other (specify)	□Less than 1 □1 to 4 □More than 4 □Not applicable to my home				
Is your participation in moving around your home limited by (Check all that apply.) Illness A physical impairment Pain Fatigue Wheelchair Wheelchair seating Other					
□ No, not at all □ Once in a while □ Sometimes □ Most of the time					
6. How much help from another person do you need to move around your home? ☐ None ☐ Just a little ☐ A moderate amount ☐ A great deal					
 7. If you use assistance, who helps you move around your home? (Check all that apply.) □ No one □ Family/Significant Other □ Friends □ People I hire 					

MOVING AROUND INSIDE YOUR HOME (continued)

8. How often do you use accommodations, adaptations, or special equipment to move around your home? □Never □A little of the time □Some of the time □Most of the time □All of the time				
9. If you use accommodations, adaptyour home, what do you use? (otations, or special equipment to move around Check all that apply.)			
□N/A	□ Walker			
□ Lift	☐ Orthotic/prosthetic device			
☐ Wheelchair - manual	☐ Wheelchair - power			
☐ Wheelchair seating	☐ Widened doors			
☐ Other				
☐ Cane				
□ Scooter				
☐ Crutches				
☐ Special seat or chair				
☐ Grab bars				
□ Ramp				
☐ Hand rails				

LEAVING YOUR HOME: The following questions are about leaving your home to go into the community (such as to go shopping or to the doctor). This includes getting into a vehicle.

1. He	ow frequently do you leave	your home?	
	□Never →	☐ I choose not to do this	☐ I am unable to do this
		(Go to question 3 on next p	age.)
	☐ Once or twice a month	(Continue)	
	☐ Once or twice a week	(Continue)	
	☐ Once or twice a day	(Continue)	
	☐ 3 or more times a day	(Continue)	

2. For the following activities you do outside your home, please indicate how often you do each activity and how long it takes you to prepare to do them.

Community Activities	How often do you do the activity?	(Please answer corresponding follow-up question)
Shopping for groceries	□Never →	☐ I choose not to do this activity ☐ I am unable to do this activity
	☐Less than once a month ☐1-2 times a month ☐1-2 times a week ☐More than twice a week	Preparation time Under 10 minutes 10-20 minutes More than 20 minutes
Shopping for clothes	□Never →	☐ I choose not to do this activity☐ I am unable to do this activity
	☐ Less than once a month ☐ 1-2 times a month ☐ 1-2 times a week ☐ More than twice a week	Preparation time ☐Under 10 minutes ☐10-20 minutes ☐More than 20 minutes
Going to the pharmacy	□Never →	☐ I choose not to do this activity ☐ I am unable to do this activity
	□Less than once a month □1-2 times a month □1-2 times a week □More than twice a week	Preparation time Under 10 minutes 10-20 minutes More than 20 minutes
Going to the bank	□Never →	☐ I choose not to do this activity ☐ I am unable to do this activity
	☐ Less than once a month ☐ 1-2 times a month ☐ 1-2 times a week ☐ More than twice a week	Preparation time Under 10 minutes 10-20 minutes More than 20 minutes

LEAVING YOUR H	HOME (continued)					
Community	How often do you do the activity?	(Please answer corresponding follow-up				
Activities		question)				
		☐ I choose not to do this activity				
Going to the	□Never	☐ I am unable to do this activity				
doctor's office						
	□Less than once a month	Preparation time				
	□1-2 times a month	□Under 10 minutes				
	□1-2 times a week	□10-20 minutes				
	☐More than twice a week	☐More than 20 minutes				
		☐ I choose not to do this activity				
Going to the post	□Never	☐ I am unable to do this activity				
office						
	□Less than once a month	Preparation time				
	□1-2 times a month	☐Under 10 minutes				
	□1-2 times a week	□10-20 minutes				
	☐More than twice a week	☐More than 20 minutes				
		☐ I choose not to do this activity				
Going to the	□Never	☐ I am unable to do this activity				
friend's home						
	□Less than once a month	Preparation time				
	□1-2 times a month	□Under 10 minutes				
	□1-2 times a week	□10-20 minutes				
	☐More than twice a week	☐More than 20 minutes				
		☐ I choose not to do this activity				
Other (specify)	□Never →	☐ I am unable to do this activity				
	□Less than once a month	Preparation time				
	□1-2 times a month	□Under 10 minutes				
	□1-2 times a week	□10-20 minutes				
	☐More than twice a week	☐More than 20 minutes				
2 In wayn a again to 1	ossino vom homo to ao ost into the communi	to limited by				
-	eaving your home to go out into the communi	ty limited by				
(Check all that	the environment \square Social attitudes \square Fa	mily attitudes				
2		neelchair seating				
*		S				
Lack of special equ	uipment	ui!				
(specify)						
□ Not limited						
= NOT HIRIEG						
4. Is your participation in leaving your home limited by (Check all that apply.)						
	nysical impairment Pain Fatigue					
☐ Wheelchair seating		- N. T. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.				

TRANSPORTATION:	The	following	questions	involve	accessing	and	using	different	forms	of
transportation.										

1. How **frequently** do you use transportation?

□Never	→	□ I choc	se not to	do this	□ I am	unable	to do this
		(Go to q	uestion 3	on next	page)		
☐ Once o	r twi	ce a mon	th				
☐ Once o	r twi	ce a weel	k				
☐ Once o	r twi	ce a day					
☐ More t	han t	wice a do	ay				

2. Which of the following types of **transportation do you use** and how do they **influence your participation** in activities?

Please check all forms of transportation that you use	Overall, how does this type of transportation influence your Participation in activities?
Own car/van (not adapted)	□Helps a lot □Helps some □No effect □Limits some □Limits a lot
☐Own adapted car/van	□Helps a lot □Helps some □No effect □Limits some □Limits a lot
□Buses	□Helps a lot □Helps some □No effect □Limits some □Limits a lot
□Taxis	□Helps a lot □Helps some □No effect □Limits some □Limits a lot
□Airlines	□Helps a lot □Helps some □No effect □Limits some □Limits a lot
□Light rail / subway	□Helps a lot □Helps some □No effect □Limits some □Limits a lot

Special services: Paratransit (such as Call-A-Ride)	□Helps a lot □Helps some □No effect □Limits some □Limits a lot
□Adapted taxi	\square Helps a lot \square Helps some \square No effect \square Limits some \square Limits a lot
□Adapted rental car/van	□Helps a lot □Helps some □No effect □Limits some □Limits a lot
□Other	□Helps a lot □Helps some □No effect □Limits some □Limits a lot
□ Physical facto □ Self-concept □ Wheelchair	(continued) of using transportation limited by (Check all that apply_) ors in the environment □ Social attitudes □ Family attitudes □ Lack of assistance □ Limited finances □ Wheelchair seating all equipment → What equipment would be helpful?
☐ Other (specif☐ Not limited	iv)
☐ Illness ☐	ation in using transportation limited by (Check all that apply_) ☐ A physical impairment ☐ Pain ☐ Fatigue ☐ Wheelchair eating ☐ Other ☐ Not limited
without disabilities transportation.)	do you have about using transportation, compared to others? (Choice includes when, where, how and with whom you use \$\to\$ Some choice \$\to\$ Little choice \$\to\$ No choice
6. How satisfied are your Very satisfied	you with your participation in using transportation? □ Satisfied □ Somewhat satisfied □ Dissatisfied
-	it for you to use transportation? Somewhat important □Somewhat unimportant □Not important
-	om another person do you need when using transportation? a little $\square A$ moderate amount $\square A$ great deal
(Check all that app	ee, who helps you to use transportation? lly.) mily/Significant Other
when using transp	use accommodations, adaptations, or special equipment portation? the time \(\subseteq \text{Some of the time } \subseteq Most of the time \subseteq All of the time

☐ Ada ☐ Can ☐ Cru ☐ Doo ☐ Whe	essible parking permit pted vehicle Ramp Scooter
1.	How often do you take a vacation?
	□ Never → □ I choose not to do this □ I am unable to do this □ Less than once a year □ Once or twice a year □ More than twice a year
2.	Is your access to vacations limited by (Check all that apply.) □ Physical factors in the environment □ Social attitudes □ Family attitudes □ Self-concept □ Limited finances □ Lack of assistance □ Wheelchair □ Wheelchair seating □ Lack of special equipment → What equipment would be helpful?
	☐ Other (specify)
3.	Is your participation in taking a vacation limited by (<i>Check all that apply_</i>) ☐ <i>Illness</i> ☐ <i>A physical impairment</i> ☐ <i>Pain</i> ☐ <i>Fatigue</i> ☐ <i>Wheelchair</i> ☐ <i>Wheelchai seating</i> ☐ <i>Other</i> ☐ <i>Not limited</i>
4.	When taking a vacation, how much choice do you have compared to others without disabilities? (Choice includes how, where, when and how often you take a vacation.) • A lot of choice • Some choice • Little choice • No choice
5.	How satisfied are you with your participation in taking a vacation? □ Very satisfied □ Satisfied □ Somewhat satisfied □ Dissatisfied
6.	How important is it for you to take a vacation? • Very important • Somewhat important • Somewhat unimportant • Not important
7.	If you haven't taken a vacation in the last year, would you like to? □Yes □No
	IF YOU TAKE VACATIONS:
8.	How much time do you need to prepare for a vacation? (This might include arranging airline seating or accessible lodging.) □ Under 1 hour □ 1 to 3 hours □ More than 3 hours

11. If you use **accommodations, adaptations, or special equipment** when using transportation, what do you use? (*Check all that apply*.)

TAKING A VACATION (continued)

9. How m	uch help from another person do yo	ou need to take a vacation?
\square None	☐ Just a little ☐ A moderate a	amount 🚨 A great deal
		S
l0. If you ι	use assistance, who helps you with ta	king a vacation?
_	ll that apply <u>.</u>)	\mathcal{E}
`	\square Family/Significant Other \square	Friends • People I hire
		= reopte rime
11. How of	ten do you use accommodations, ad	antations or special equipment
for a vac	•	aptations, or special equipment
		P \square Most of the time \square All of the time
□ Never □	A titue of the time \(\begin{aligned} \begin{aligned} a	· \(\textit{Most of the time \(\textit{Att of the time}\)
12 If you uso	accommodations, adaptations, or s	nogial aguinment to take a
•	what do you use? (Check all that ap	
vacation, v	viiai do you use! (Check aii ihai ap	ριγ.)
$\square N/A$	☐ Accessible parking permit	□ Ramp
□ 1V/A		□ Scooter
	☐ Adapted vehicle ☐ Cane	
		□ Special chair
	☐ Crutches	□ Walker
	□ Lift	☐ Orthotic/Prosthetic device
	□ Wheelchair - manual	☐ Wheelchair - power
	☐ Wheelchair seating	□ Vehicle
	☐ Other	

WORKING INSIDE YOUR HOME: The following questions refer to working inside your home. This topic includes washing dishes, doing laundry, cleaning house, or making repairs.

1. How frequently do you participate in housework or home maintenance activities? ☐ Never ☐ I choose not to do this ☐ I am unable to do this			
☐ 1 to 2 times a week ☐ 3 to 4 times a week ☐ 5 or more times a week			
 2. Is your participation in housework or home maintenance limited by (Check all that apply.) □ Illness □ A physical impairment □ Pain □ Fatigue □ Wheelchair □ Wheelchair seating □ Other □ Not limited 			
 Wheelchair seating □ Other □ Not limited 3. To participate in housework or home maintenance activities, how much choice do you have compared to others without disabilities? (Choice includes how often, when, how and by whom these activities are completed.) □ A lot of choice □ Some choice □ Little choice □ No choice 			
4. How satisfied are you with your participation in housework or home maintenance? □ Very satisfied □ Satisfied □ Somewhat satisfied □ Dissatisfied			
5. How important is it for you to participate in housework or home maintenance? □ <i>Very important</i> □ <i>Somewhat important</i> □ <i>Somewhat unimportant</i> □ <i>Not important</i>			
IF YOU PARTICIPATE IN HOUSEWORK OR HOME MAINTENANCE ACTIVITIES:			
6. How much help from another person do you require? □ None □ Just a little □ A moderate amount □ A great deal			
7. If you use assistance, who helps you with housework or home maintenance? (Check all that apply.) □ No one □ Family/Significant Other □ Friends □ People I hire			
8. How often do you use accommodations , adaptations , or special equipment for housework or home maintenance activities? □ Never □ A little of the time □ Some of the time □ Most of the time □ All of the time			
 9. If you use accommodations, adaptations, or special equipment for housework or home maintenance activities, what do you use? (Check all that apply.) □ N/A □ Cane □ Scooter □ Walker □ Computer 			

■ Stair glide
☐ Wheelchair - power
☐ Crutches
☐ Special seat/chair
☐ Wheelchair - manual
☐ Lowered shelves/counters
☐ Reacher/grab stick/grabber
☐ <i>Orthotic/prosthetic device</i>
☐ <i>Urinal/bedpan/potty chair</i>
☐ Wheelchair seating
□ Other

LEISURE ACTIVITIES: The following questions are about leisure activities, such as spectator sports, playing cards and going to movies.

1. For the following leisure activities, please indicate **how often** you do them and **how long** it takes you to **prepare** to do them.

Leisure Activities	How often do you do the activity		Preparation time (in minutes)
Dine out	□ Never •	☐Less than once a month ☐1-2 times a month ☐1-2 times a week ☐More than twice a week	□ <i>Under 10</i> □ <i>10-20</i> □ <i>More than 20</i>
Attend movies	□ Never •	☐ Less than once a month ☐ 1-2 times a month ☐ 1-2 times a week ☐ More than twice a week	□ <i>Under 10</i> □ <i>10-20</i> □ <i>More than 20</i>
Attend concerts	□ Never •	☐Less than once a month ☐1-2 times a month ☐1-2 times a week ☐More than twice a week	□ <i>Under 10</i> □ <i>10-20</i> □ <i>More than 20</i>
Play cards	□ Never •	☐ Less than once a month ☐ 1-2 times a month ☐ 1-2 times a week ☐ More than twice a week	□ <i>Under 10</i> □ <i>10-20</i> □ <i>More than 20</i>
Play board games	□ Never •	☐Less than once a month ☐1-2 times a month ☐1-2 times a week ☐More than twice a week	□ <i>Under 10</i> □ <i>10-20</i> □ <i>More than 20</i>
Watch sports	□ Never •	☐ Less than once a month ☐ 1-2 times a month ☐ 1-2 times a week ☐ More than twice a week	□ <i>Under 10</i> □ <i>10-20</i> □ <i>More than 20</i>
Read	□ Never •	☐ Less than once a month ☐ 1-2 times a month ☐ 1-2 times a week ☐ More than twice a week	□ <i>Under 10</i> □ <i>10-20</i> □ <i>More than 20</i>
Hobby (specify)	□ Never •	☐Less than once a month ☐1-2 times a month ☐1-2 times a week ☐More than twice a week	□ <i>Under 10</i> □ <i>10-20</i> □ <i>More than 20</i>
Other (specify)	Never	☐Less than once a month ☐1-2 times a month ☐1-2 times a week ☐More than twice a week	□ <i>Under 10</i> □ <i>10-20</i> □ <i>More than 20</i>

2. Is your access to leisure activities limited by (Check all that apply.) □ Physical factors in the environment □ Social attitudes □ Family attitudes □ Self-concept □ Limited finances □ Lack of assistance □ Wheelchair □ Wheelchair □ Wheelchair seating □ Lack of special equipment → What equipment would be helpful?
☐ Other (specify) ☐ Not limited
3. Is your participation in leisure activities limited by (<i>Check all that apply</i> .) ☐ <i>Illness</i> ☐ <i>A physical impairment</i> ☐ <i>Pain</i> ☐ <i>Fatigue</i> ☐ <i>Wheelchair</i> ☐ <i>Wheelchair seating</i> ☐ <i>Other</i> ☐ <i>Not limited</i>
 4. To participate in leisure activities, how much choice do you have compared to others without disabilities? (Choice includes how, where, when, how often, and with whom you participate in leisure activities.) □ A lot of choice □ Some choice □ Little choice □ No choice
5. How satisfied are you with your participation in leisure activities? □ Very satisfied □ Satisfied □ Somewhat satisfied □ Dissatisfied
6. How important is it for you to participate in leisure activities? □ Very important □ Somewhat important □ Somewhat unimportant □ Not important
IF YOU PARTICIPATE IN LEISURE ACTIVITIES:
7. How much help from another person do you need to participate? • None • Just a little • A moderate amount • A great deal
8. If you use assistance, who helps you with leisure activities? (Check all that apply.) □ No one □ Family/Significant Other □ Friends □ People I hire
 9. How often do you use accommodations, adaptations, or special equipment to do leisure activities? □Never □A little of the time □Some of the time □Most of the time □All of the time
10. If you use accommodations , adaptations , or special equipment to do leisure activities, what do you use? (<i>Check all that apply</i> .)
□ N/A □ Card holder □ Scooter □ Computer (adaptive)

□ Remote control
□ Computer (regular)
□ Wheelchair - manual
☐ Wheelchair - power
□ Wheelchair seating
□ Other
ACTIVE RECREATION: The following questions are about active recreational activities, such as a tear
sport or camping.
1. How often do you participate in this type of activity?
\square Never \longrightarrow \square I choose not to do this \square I am unable to do this
(Go to question 4)
\square Less than once a month (Continue)
$\square 1$ -2 times a month (Continue)
$\Box 1$ -2 times a week (Continue)
☐ More than twice a week (Continue)
2. If you participate in active recreation, what is one activity that you participate
in the most?
2. How long does it take you to proper to do this activity?
3. How long does it take you to prepare to do this activity? $\square Under 10 \text{ minutes}$ $\square 10-20 \text{ minutes}$ $\square More than 20 \text{ minutes}$
Under 10 minutes 410-20 minutes 410-20 minutes
4. Is your access to active recreational activities limited by
(Check all that apply.)
☐ Physical factors in the environment
□ Lack of assistance
□ Social attitudes
☐ Family attitudes
☐ Limited finances
☐ Lack of organized accessible teams
□ Self-concept
☐ Wheelchair
☐ Wheelchair seating
☐ Lack of special equipment → What equipment would be helpful?
□ <i>Other (specify)</i>
□ Not limited
5 In view month in attention in active manner time 1 - timit - 1 - 1 - 1 - 1
5. Is your participation in active recreational activities limited by
(Check all that apply.)
☐ Illness ☐ A physical impairment ☐ Pain ☐ Fatigue ☐ Wheelchair
☐ Wheelchair seating ☐ Other ☐ Not limited

compared to others without disabilities? (Choice includes how, where, when, how often, and with whom you participate in activities.)
\square A lot of choice \square Some choice \square Little choice \square No choice
7. How satisfied are you with your participation in active recreational activities? □ Very satisfied □ Satisfied □ Somewhat satisfied □ Dissatisfied
8. How important is it for you to participate in active recreational activities? □ Very important □ Somewhat important □ Somewhat unimportant □ Not important
IF YOU PARTICIPATE IN ACTIVE RECREATIONAL ACTIVITIES:
9. How much help from another person do you need to participate? □ None □ Just a little □ A moderate amount □ A great deal
10. If you use assistance, who helps you with active recreational activities? (Check all that apply.)
 □ No one □ Family/Significant Other □ Friends □ People I hire 11. How often do you use accommodations, adaptations, or special equipment
for active recreational activities? \square Never \square A little of the time \square Some of the time \square Most of the time \square All of the time
12. If you use accommodations, adaptations, or special equipment to do active recreational activities, what do you use? (<i>Check all that apply</i> .)
\square N/A \square $Scooter$
□ Wheelchair seating
□ Wheelchair - power □ Wheelchair - manual
■ w neetchair - manuat □ Other

SOCIALIZING: The next questions are about socializing with people. This includes visiting with friends or family at home, at the homes of others, or at social events.

1.	How frequently do you socialize		
	Less than once a week		
	□ 3 to 4 times a week	☐ Daily or al	most aatty
2.	Is your access to social activities Physical factors in the envi. Social attitudes Family attitudes Self-concept Lack of assistance Limited finances Lack of companion(s) Wheelchair Wheelchair seating Lack of special equipment	ronment	
	☐ Other (specify) ☐ Not limited		
	Is your participation in social action in social actions and the social actions are actions. It is a social action as a social action and the social actions are actions. It is a social action as a social action action action action action. It is a social action action action action action action action action action. It is a social action action. It is a social action	ent 📮 Pain	a □ Fatigue □ Wheelchair
4.	When socializing, how much cho disabilities? (Choice includes ho socialize.) □ A lot of choice □ Some choi	w often, when	, how and with whom you
5.	How satisfied are you with your □ Very satisfied □ Satisfied		
	How important is it for you to p □ Very important □ Somewhat imp	-	cial activities? newhat unimportant □Not important
	How much help from another p □ <i>None</i> □ <i>Just a little</i> □	erson do you t A moderate an	
	If you use assistance, who helps No one Family/Significant	•	
9. □	to socialize?		tations, or special equipment ☐ Most of the time ☐ All of the time
10.	If you use accommodations , ad what do you use? (<i>Check all that Dhia N/A</i> Accessible parking Adapted vehicle	at apply.)	special equipment to socialize, ☐ Orthotic/prosthetic device ☐ Scooter

☐ Adapted telephone	□ Walker	
☐ Cane/crutches	☐ Wheelchair seating	
□ Computer	☐ Wheelchair — manual	
☐ Hearing aid	☐ Wheelchair - power	
□ Lift	☐ Other	

RELIGIOUS ACTIVITIES: The following questions are about participation in religious activities. This topic includes attending *Weekly* religious services or classes or singing in a choir.

1. How much time do you spend on participation in religious activities? □ None → □ I choose not to do this □ I am unable to do this □ I to 5 hours a week □ More than 5 hours a week
2. Is your access to religious activities limited by (<i>Check all that apply</i> .) ☐ <i>Physical factors in the environment</i> ☐ <i>Social attitudes</i> ☐ <i>Family attitudes</i> ☐ <i>Self-concept</i>
☐ Lack of assistance ☐ Wheelchair ☐ Wheelchair seating ☐ Lack of special equipment → What equipment would be helpful?
□ Other (specify) □ Not limited
3. Is your participation in religious activities limited by (<i>Check all that apply</i> .) □ <i>Illness</i> □ <i>A physical impairment</i> □ <i>Pain</i> □ <i>Fatigue</i> □ <i>Wheelchair</i> □ <i>Wheelchair</i> □ <i>Not limited</i>
4. How much choice do you have about participating in religious activities compared to others without disabilities? (Choice includes when, where, how and with whom.) □ A lot of choice □ Some choice □ Little choice □ No choice
5. How satisfied are you with your participation in religious activities? □ Very satisfied □ Satisfied □ Somewhat satisfied □ Dissatisfied
6. How important is it for you to participate in religious activities? □ Very important □ Somewhat important □ Somewhat unimportant □ Not important
IF YOU PARTICIPATE IN RELIGIOUS ACTIVITIES:
7. How much help from another person do you require? □ None □ Just a little □ A moderate amount □ A great deal
8. If you use assistance, who helps you participate in religious activities? (<i>Check all that apply</i> .)
□ No one □ Family/Significant Other □ Friends □ People I hire
9. How often do you use accommodations , adaptations , or special equipment to participate in religious activities? □ Never □ A little of the time □ Some of the time □ Most of the time □ All of the time

in religious activities, what do you use? (<i>Check all that apply</i> .)
\square N/A
□ Elevator
□ Scooter
□ Grab bars
☐ Vehicle (not adapted)
☐ Handrails
□ Walker
☐ Level threshold
□ Wheelchair seating
□ Lift
☐ Wheelchair - manual
☐ Pedal for car
☐ Wheelchair - power
\square Ramp
□ Widened
□ Other
 Are you currently employed? □ Yes □ No Is your access to employment limited by (Check all that apply.) □ Physical factors in the environment □ Social attitudes □ Family attitudes □ Self-concept □ Lack of assistance □ Wheelchair □ Wheelchair seating □ Lack of special equipment → What equipment would be helpful?
□ Other (specify) □ Not limited
3. Is your participation in employment limited by (<i>Check all that apply</i> .) ☐ Illness ☐ A physical impairment ☐ Pain ☐ Fatigue ☐ Wheelchair ☐ Wheelchair ☐ Seating ☐ Other ☐ Not limited
 4. How much choice do you have about employment compared to others without disabilities? (Choice includes when, where, how much and how you work.) □ A lot of choice □ Some choice □ Little choice □ No choice
5. How satisfied are you with your participation in work? ☐ Very satisfied ☐ Satisfied ☐ Somewhat satisfied ☐ Dissatisfied
6. How important is it for you to work? □Very important □Somewhat important □Somewhat unimportant □Not important

IF YOU ARE EMPLOYED:

7. a. What type of work do you do? b. In a typical week, how many hours do you work?			
☐ Less than 10 ☐ 11 to 30 ☐ 31 to 40 ☐ M	More than 40		
8. How much help from another person do you require None			
9. If you use assistance, who helps you with participating in work? (<i>Check all that apply.</i>)			
☐ No one ☐ Family/Significant Other ☐ Frien	ds People I hire		
10. How often do you use accommodations , adaptations or special equipment to participate in work? □ Never □ A little of the time □ Some of the time □ Most of the time □ All of the time			
11. If you use accommodations, adaptations, or special equipment to participate in work, what do you use? (<i>Check all that apply</i> .)			
\square N/A \square Accessible parking permit	\Box Lift		
\square Adaptive computer equipment	☐ Orthotic/Prosthetic device		
☐ Adapted vehicle	\square Scooter		
□ Cane	□ Walker		
\square Computer	Wheeelchair seating		
\Box Crutches	☐ Wheelchair – power		
☐ Hearing aid	☐ Wheelchair – manual		
☐ Other			

FACILITATORS AND BARRIERS SURVEY / ASSISTIVE TECHNOLOGY

The last section of the survey relates to your environment and includes sections about:

- **⋄**The accessibility of buildings within your home and community environments
- **♦**Mobility devices you use
- **H**ealth benefits
- **Social support**
- **❖**The services and attitudes of people

You will note that the questions ask how the accessibility of your environment influences your participation. By participation we mean not only what you do, but how independently you do it, how much choice you have, and how satisfied you are. In this section, accessibility refers to your ability to go into and move around inside the various places listed. Accessibility can involve doorway size, the weight of doors, the direction a door opens or how fast it closes; convenient location of ramps, if applicable; availability of elevators or escalators; the size of restrooms; the location of furniture in a room, etc. All these things can affect accessibility.

The first group of questions relates to the accessibility of buildings.

1. How does the accessibility of **your residence** influence your participation in *Daily*

activities?	9?	•		
	□Helps a lot □Helps some □Ho	as no effect □Limits some □Lin	iits a lot	
What about your residence limits you ? (<i>Check all that apply</i> .)				
Not Limited	□Entrance □Bathroom □Kitchen dassistance	□Lack of personal finances	□Parking	□Lack of personal
•	☐ Lack of special equipment → What equipmen	t would be helpful?		
	□Other			
	es the accessibility of your place of employment inflation in working?	uence your		
	□Helps a lot □Helps some □Has no o	effect	lot □ Not employ	ed
What abou	out your place of employment limits you? (Check	all that apply.)		
Not Limited	□ Entrance □ Workstation □ Lack of child care □ Lack of personal assistant	□Bathroom □Parking ce □Lack of transportation	3	
4	☐ Lack of special equipment → What equipmen	v 1		

3. How do shoppin	es the accessibility of your grocery store influence your participation in g?
	□Helps a lot □Helps some □Has no effect □Limits some □Limits a lot □Do not shop for groceries ***********************************
What ab	oout your grocery store limits you? (Check all that apply.)
Not Limited	□ Entrance □ Lack of personal finances □ Parking □ Lack of child care □ Accessibility of shelves and freezers □ Lack of scooter/wheelchair at the store □ Lack of special equipment → What equipment would be helpful?
	□ <i>Other</i>
health ca	es the accessibility of your doctor's office influence your participation in are? Helps a lot
influenc	es the accessibility of your religious institution or place of worship be your participation in religious activities? Helps a lot
	□ <i>Other</i>

6. How do	es the accessibility of restaurants influence your participation in dining out?
	□Helps a lot □Helps some □Has no effect □Limits some □Limits a lot □Do not go to restaurants
What al	oout restaurants limits you ? (<i>Check all that apply</i> .)
Not Limited	□ Entrance □ Lack of personal finances □ Parking □ Lack of personal assistance □ Lack of child care □ Lack of transportation □ Tables too close together □ Height of counters, tables, and booths □ Lack of special equipment → What equipment would be helpful?
	□ <i>Other</i>
7. How do to mov	nes the accessibility of movie theaters influence your participation in going vies?
	□Helps a lot □Helps some □Has no effect □Limits some □Limits a lot □Do not go to movie theaters
What at	oout movie theaters limits you? (Check all that apply.)
□ Not Limited •	□ Entrance □ Stadium seating □ Lack of personal finances □ Parking □ Lack of child care □ Lack of personal assistance □ Lack of transportation □ Lack of special equipment → What equipment would be helpful?
	□Other
9 Hayy da	as the accessibility of shamping malls influence your portionation in
shoppin Helps	ses the accessibility of shopping malls influence your participation in ag? a lot
vv nat at	oou shopping mans minus you: (Check an mai appry.)
Not Limited	□ Entrance □ Lack of personal finances □ Parking □ Lack of personal assistance □ Lack of child care □ Lack of transportation □ Lack of special equipment → What equipment would be helpful?
	□ <i>Other</i>

9. How do	oes the accessibili	ty of clothing stores influence your participation in
shoppi	ing for clothes?	
□Helps a	a lot □Helps son	ne 🖫 Has no effect 🖫 Limits some 🖫 Limits a lot
1	1	Do not go to clothing stores
	•	
What al		res limits you? (Check all that apply.)
vv iiai ai	bout clothing sto	es mints you! (Check an that appry.)
	□ Entrance	\Box Lack of personal finances \Box Parking
Not	☐ Lack of trans	
Limited	Lack of perso	nal assistance
Ψ	☐ Lack of speci	al equipment → What equipment would be helpful?
	□ Other	
		lity of public parks and recreation areas influence your
partic	cipation in outdoo	r activities, such as picnicking?
	□ Helps a	lot □Helps some □Has no effect □Limits some □Limits a lot
	_	□Do not go to parks or recreation areas
	•	·
What	t about public par	ks limits you? (Check all that apply.)
	□Lack of pavea	
Not	0 1	puns
	□Picnic areas	
Limited	□ Parking	
•		nal finances \Box Lack of transportation
	□Lack of child	care
	☐ Lack of speci	al equipment → What equipment would be helpful?
	□ Other	
	L Oiner	
II. How a	accessible are the	following types of transportation ?
(Please ch	eck all the follow	ving that you use, then mark the response that is closest to your own experienc
regarding a	accessibility of ea	ch.)
2 2	,	
☐Your ow	n car/van	
		Not accossible Decomputat accossible Dyom accossible
(not ada	apieu)	□Not accessible □Somewhat accessible □Very accessible
		□Don't know □Not applicable
□Your ow	-	
car/van		□Not accessible □Somewhat accessible □Very accessible
		□Don't know □Not applicable
□Buses		
— Duses		□Not accessible □Somewhat accessible □Very accessible
		•
		□Don't know □Not applicable
□Taxis		

	□Don't know □Not applicable	
□Airlines	□Not accessible □Somewhat accessible □Very accessible □Don't know □Not applicable	
□Light rail/subway	□Not accessible □Somewhat accessible □Very accessible □Don't know □Not applicable	
Special services: □Paratransit (such as Call-A-Ride)	□Not accessible □Somewhat accessible □Very accessible □Don't know □Not applicable	
□Adapted taxi	□Not accessible □Somewhat accessible □Very accessible □Don't know □Not applicable	
□Adapted rental car/van	□Not accessible □Somewhat accessible □Very accessible □Don't know □Not applicable	
□Other ———	□Not accessible □Somewhat accessible □Very accessible □Don't know □Not applicable	
and carry out activitie	relate to your HOME environment and to devices that may influence how you ess. Please mark the choice that is closest to your experience. your home, do the following influence your participation in activities? \[\textstyle Yes \] \[\textstyle Yes \] \[\textstyle How much? \textstyle Help a lot \textstyle Help some \textstyle Limit some \textstyle Limit a lot \] \[\textstyle How often? \textstyle Daily \textstyle Weekly \textstyle Monthly \textstyle Less than monthly \]	
2 Dames		
2. Ramps □No Ψ	☐ Yes How much? ☐ Help a lot ☐ Help some ☐ Limit some ☐ Limit a lot How often? ☐ Daily ☐ Weekly ☐ Monthly ☐ Less than monthly	V
3. Doors		
$\square No$		
1 //0	☐ Yes How much? ☐ Help a lot ☐ Help some ☐ Limit some ☐ Limit a lot How often? ☐ Daily ☐ Weekly ☐ Monthly ☐ Less than monthly	,
	How much? □ <i>Help a lot</i> □ <i>Help some</i> □ <i>Limit some</i> □ <i>Limit a lot</i>	V

5. Hardwood	□Yes
floors	How much? Help a lot Help some Limit some Limit a lot
□No •	How often? □ Daily □ Weekly □ Monthly □ Less than monthly
•	
6. Handrails □ <i>No</i>	Uses Walle a let Dillala same Dilimit same Dilimit a let
■No ■	How much? □Help a lot □Help some □Limit some □Limit a lot How often? □Daily □Weekly □Monthly □Less than monthly
V	110W Often: abatty areenty attoining aless than monthly
7. Adapted	$\square Yes$
computer	How much? □ <i>Helps a lot</i> □ <i>Helps some</i> □ <i>Limits some</i> □ <i>Limits a lot</i>
□No	How often? $\square Daily$ $\square Weekly$ $\square Monthly$ $\square Less than monthly$
•	
8. Room	□Yes
temperatures	How much? □Help a lot □Help some □Limit some □Limit a lot
□No ■	How often? □ Daily □ Weekly □ Monthly □ Less than monthly
•	
ž –	relate to your COMMUNITY environment and to devices that may influence how you move
	and carry out activities. Please mark the choice that is closest to your experience.
1. Curb cuts	your community, do the following influence your participation in activities?
	How much? \square Help a lot \square Help some \square Limit some \square Limit a lot
•	How often? $\square Daily$ $\square Weekly$ $\square Monthly$ $\square Less than monthly$
2. Ramps	$\square Yes$
□No	How much? □Help a lot □Help some □Limit some □Limit a lot
•	How often? □Daily □Weekly □Monthly □Less than monthly
-	
3. Elevators	□Yes
□No •	How much? □Help a lot □Help some □Limit some □Limit a lot How often? □Daily □Weekly □Monthly □Less than monthly
	How often? □Daily □Weekly □Monthly □Less than monthly
4 171	
4. Flat terrain	□Yes
□No •	How much? □Helps a lot □Helps some □Limits some □Limits a lot How often? □Daily □Weekly □Monthly □Less than monthly
—	110W Officer: aDulty arreemy autonimy aless than monthly
5.0 1.6	
5. Gravel surfaces	Uyes How much? Ducks a lot. Ducks some District a come. District a lot.
□No •	How much? □Help a lot □Help some □Limit some □Limit a lot How often? □Daily □Weekly □Monthly □Less than monthly
▼	How often: \(\text{\ti}\text{\texi}\tint{\text{\text{\tex{\text{\texi}\text{\text{\text{\text{\texi}\text{\texi}\tint{\text{\texit{\text{\text{\text{\texi}\tint{\text{\texi}\text{\
(D 1 C	
6. Paved surfaces	How much? Help a lot Help some Ulimit some Ulimit a lot
1 1/1//	THE THE THE THE COLUMN THE PROPERTY OF THE PRO

•	How often? □D	aily	\square Weekly	\neg \square Month	ıly 🗆	Less than monthly
7.Summer weather	□Yes					
		1 1 .		□17 · · · ·	-	3r
(heat and humidity)	How much? □Ho	1	1			
$\square No$	How often? □Da	ily	⊔ Weekly	$\square Monthly$	∟ Less th	han monthly
Ψ						
8. Winter weather	$\square Yes$					
(ice and snow)	How much? □Ho	elps a lot	□Helps s	some L limits	s some 📮	L imits a lot
$\square No$	How often? □D	aily	□ Weekly	$\neg \square Mont$	hly [□ Less than monthly
•		•	-	During the sea	ison)	•
				<u> </u>	/	
9. Rain	□Yes					
$\square No$	How much? □Ho	elns a lot	□Holne o	oma 📶 imits	s soma [Uimits a lot
1	How often? $\Box D$		□Weekly			Less than monthly
—	110w often: $\Box D$	ıııy	u w eeki)	/ LIVIONI	niy 4	Less than monthly
10 01-						
10. Crowds	□Yes		- xx 1	-		
$\square No$	How much? □H		-			
•	How often? □D		\square Weekly			Less than monthly
The following	items relate to your	WORK	or SCHO	OL environn	nent.	
Do you work?	$\square Yes \square \ No$	Do y	you attend	school?	Yes 💷 1	Vo
If you have ans	wered "No" to both o	uestions.	nlease sk	in to next pag	e.	
	ND attend school, p					ased on where you
spend the most	_		School	onowing que	outons o	asea on where you
	e choice that is closes			2		
	ool, do the following	-	-		ativiti aa?	•
At work or sem	boi, do the following	iiiiiueiice	your part	icipation in a	cuvines?	
D						
. Ramps	□Yes	1	. 1			
$\square No$	How much? □ <i>Help</i> d					
	How often? $\square Daily$	$\square \mathcal{W}$	⁷ eekly	$\square Monthly$	$\Box Less$	s than monthly
Elevatora	□Yes					1
2. Elevators		1 🗀 🗥	-1 ··-	□1 2 14		:4 1-4
No	How much? □ <i>Help</i> d		-	□Limit some		
•	How often? $\square Daily$	$\square N$	⁷ eekly	$\square Monthly$	L Less	s than monthly
Floor surfaces	□Yes					
Floor surfaces		1 ,	r 1	□1. · · ·		
No	How much? □ Help a		-	□Limit some		
•	How often? $\square Daily$	11 <i>M</i>	⁷ eekly	$\square Monthly$	L Less	s than monthly
Distances						
. Distances	□Yes	1.4 🗆 🗆	Tal	□1 2		:4 14
between rooms	How much? □ <i>Help a</i>		-	□Limit some		
No	How often? $\square Daily$	∟ <i>W</i>	⁷ eekly	$\square Monthly$	L Less	s than monthly

cafeteria No	Н	If es flow much? $\Box H$ flow often? $\Box H$	-	ot □Helps s □Weekly	some □Limits some		ts a lot than mor	ıthly	
Mobility 1	Devices								
		e following qu wheelchair, a			bility devices you i or a scooter.	ıse. Mob	ility devi	ices coul	d
ت `	Yes (Coo	oility device? ntinue below.\ lity device: M		,	Health Benefits on a CHAIR	next page	.)		
a. How often do you home, at work or community?					b. How does it in participation i	•			
	Never	Sometimes	Often	Always		Helps a lot	Helps some	Limits some	Limits a lot
Home					Home				
Work/School					Work/School				
Community					Community				
Name of mobility device: POWER WHEELCHAIR MAKE: YEAR PURCHASED a. How often do you use this device at b. How does it influence your									
home, at work or community?					participation i				
	Never	Sometimes	Often	Always		Helps a lot	Helps some	Limits some	Limits a lot
Home					Home				
Work/School					Work/School				
Community					Community				

MAKE:									
YEAR F	PURCHA	SED	_						
a. How often do home, at work community	k or schoo	his device at ol, and in your			b. How does i		-	s?	
Community	Never	Sometimes	Often	Always		Helps a lot	Helps some	Limit s some	Lim s a l
Home					Home				
Work/School					Work/School				
Community					Community				
	I have N	nce or benefits O insurance of the contract of the contract or insurance of the contract of t	r benefit		ext page.)				
a.	Is this be ⊒ <i>A privat</i>	enefit		overnment) plan	know			
-	oays for th	nis benefit? (<i>C</i> loyer □Gov	heck all ernment						
	nany year <i>ir or less</i>	rs have you ha □2 to 5			More than 10				
				•	access to health ca $Limits\ some$ $\Box L$				

Name of mobility device: SCOOTER

	2. Name of benefit	t or insurance)				
	a. Is this benef □A private pla		ic (governmen	nt) plan 🛭	⊒Don't know		
	b. Who pays for this b Self DEmployer	*		• /			
	c. How many years ha □1 year or less	-		□More tha	ın 10		
	d. To what extent does □ <i>Helps a lot</i> □ <i>Helps</i>		•			a lot	
	Agencies and Organiz	zations					
	The following question may provide assistance		ther types of b	venefits, as	well as agenc	ies and organ	ization
followi	you receive any of the ing? k all that apply.)		ent does this n in daily acti		uence your		
□No ↓	□SSI (Supplemental Security Income)	Helps a lot □	Helps some □	No effect □	Limits some	Limits a lot	
	SSDI (Social Security Disability Insurance)	Helps a lot □	Helps some □	No effect □	Limits some	Limits a lot	
	□Worker's Compensation	Helps a lot	Helps some	No effect □	Limits some	Limits a lot	
	2. The Department of jobs. Do you use				le find and m	aintain	
⊒No	□Yes - How do the	se services inf	fluence your a	iccess to we			
V	□Help a lot □Help	some □No	effect \(\sigma Li	mit some	\Box Limit a lot		

□No **□**

Services and Attitudes

The next questions deal with personal support and the services of people. Please mark how both the services and the attitudes of these people influence your participation in activities.

1.	How often do you go to a doctor's office?
□Never	□Rarely □Once or twice a year □Once or twice a month
•	□Once or twice a week □More than twice a week

	How does the <u>care</u> you receive influence your participation in <i>Daily</i> activities?
	\square Helps a lot \square Helps some \square No effect \square Limits some \square Limits a lot

	How do the <u>attitudes</u> of doctors influence your use of health care services?
	\square Help a lot \square Help some \square No effect \square Limit some \square Limit a lot
2.	How often do you see a therapist? (For this question, therapists include
	occupational therapists, physical therapists, recreational therapists, and speech
	therapists.)
□Never	\square Rarely \square Once or twice a year \square Once or twice a month
4	□Once or twice a week □More than twice a week

	How does the therapy you receive influence your participation in <i>Daily</i>
	Activities?
	□Helps a lot □Helps some □No effect □Limits some □Limits a lot
	How do the <u>attitudes</u> of therapists influence your use of therapy services?
	\square Help a lot \square Help some \square No effect \square Limit some \square Limit a lot
	arteip a tot arteip some and effect alimit some alimit a tot
3.	How often do you use the services of paid personal attendants?
□Never	□Rarely □Once or twice a year □Once or twice a month
lack lack lack	\square Once or twice a week \square More than twice a week

	How does the personal assistance you receive influence your participation in
	Daily activities?
	□Helps a lot □Helps some □No effect □Limits some □Limits a lot

	How do the <u>attitudes</u> of personal attendants influence your use of
	Personal attendant services?
	□Help a lot □Help some □No effect □Limit some □Limit a lot

$\square Never$	\square Rarely \square Once or twice a year \square Once or twice a month	
lack	\square Once or twice a week \square More than twice a week	

	How does their <u>help</u> influence your participation in <i>Daily</i> activities?	
	\square Helps a lot \square Helps some \square No effect \square Limits some \square Limits a lot	

	How do their <u>attitudes</u> influence your participation in <i>Daily</i> activities?	
	\square Help a lot \square Help some \square No effect \square Limit some \square Limit a lot	
4	How often do you ask for help from family members ?	
••	The worten do you don't for help from running members.	
5.	How often do you ask for help from friends?	
□Never	□Rarely □Once or twice a year □Once or twice a month	
lack	\square Once or twice a week \square More than twice a week	

	How does their <u>help</u> influence your participation in <i>Daily</i> activities?	
	\square Helps a lot \square Helps some \square No effect \square Limits some \square Limits a lot	

	How do their attitudes influence your participation in <i>Daily</i> activities?	
	□Help a lot □Help some □No effect □Limit some □Limit a lot	
	1 00	-
6.	How often do you ask for help from peers?	
□Never	\square Rarely \square Once or twice a year \square Once or twice a month	
•	\square Once or twice a week \square More than twice a week	

	How does their <u>help</u> influence your participation in <i>Daily</i> activities?	
	\square Helps a lot \square Helps some \square No effect \square Limits some \square Limits a lot	

	How do their <u>attitudes</u> influence your participation in <i>Daily</i> activities?	
	\square Help a lot \square Help some \square No effect \square Limit some \square Limit a lot	
7.	How often do you ask for help from store clerks?	
□Never	□Rarely □Once or twice a year □Once or twice a month	
T	□Once or twice a week □More than twice a week	
•	**************************************	
	How do their services influence your participation in shopping?	
	□Helps a lot □Helps some □No effect □Limits some □Limits a lot	
	How do their <u>attitudes</u> influence your participation in shopping?	
	□Help a lot □Help some □No effect □Limit some □Limit a lot	

	8.	How often do	you ask for help from strangers?									
□Never		$\square Rarely$	\square Once or twice a year \square Once or twice a month									
lack		□Once or twi	Once or twice a week									
		*****	**********									
		How does t	heir <u>assistance</u> influence your participation in <i>Daily</i> activities?									
		□Helps a lot	$\square Helps$ some $\square No$ effect $\square Limits$ some $\square Limits$ a lot									
		*****	>>>>>>>									
		How do the	eir <u>attitudes</u> influence your participation in <i>Daily</i> activities?									
		□Help a lot	□Help some □No effect □Limit some □Limit a lot									
		_										
	9.	How often do	you use a special equipment repair service?									
□Never		□ Rarely	☐Once or twice a year ☐Once or twice a month									
lack		•	ice a week									
		*****	>>>>>>									
		How do the	eir services influence your participation in Daily activities?									
			\square Helps some \square No effect \square Limits some \square Limits a lot									
			>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>									
		How do the	e <u>attitudes</u> of equipment repair personnel influence your									
			in Daily activities?									
			□Help some □No effect □Limit some □Limit a lot									
		1										
		Who assi	isted in completing this survey? (Check all that apply.)									
			☐ Participant ☐ Paid personal attendant									
			☐ Family member ☐ Interviewer									
			\Box Friend \Box Other									

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