

ACADEMY OF SPINAL CORD INJURY PROFESSIONALS

Female Veterans with SCI/D and their mobility devices



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Background

With the growing number of females entering the armed forces, there has been an increase in the number of female Veterans with spinal cord injury and diseases (SCI/D) requiring mobility devices. Currently, there is limited research exploring whether mobility devices meet their needs in terms of comfort, fit and design.

The objective of this study was to characterize female Veterans using mobility devices and determine if the devices met their daily needs.

Methods

A twenty-item online survey was sent to female Veterans who used received mobility devices in the past five years from the Veterans Health Administration. Respondents answered questions regarding their experiences in obtaining and using mobility devices for their daily needs. Approximately 4078 female Veterans were identified and sent invitations to complete the survey. A total of 700 female Veterans completed the survey, however only 593 contained sufficient data for analysis.

Results

Of the 593 respondents, 101 identified themselves as having SCI/D. Most of the respondents were between 50-79 years old, 45% were married, and 44% lived in the suburbs. Most used manual and/or power wheelchairs. Close to half of the female Veterans (47%) indicated the devices were not designed with female users in mind.

Table 1. Patient Demographics and Characteristics

Characteristics	N	Percentage
Age		
18-29	2	2.00%
30-39	4	4.00%
40-49	13	12.90%
50-59	35	34.70%
60-69	33	32.70%
70-79	12	11.90%
80+	2	2.00%
Gender Identity		
Female	97	96.00%
Transgender: Male to Female	2	2.00%
Missing	2	2.00%
Marital Status		
Never Married (Single)	19	18.80%
Married	46	45.50%
Divorced	25	24.80%
Separated	1	1.00%
Widow	9	8.90%
Other	1	1.00%
Location of Home		
Urban (City Setting)	27	26.70%
Suburban (Outside City Limits)	44	43.60%
Rural	29	28.70%
Highly Rural (i.e. <7 people living within a square mile)	1	1.00%
Current Living Situation		
Own Home	78	77.20%
Rent	16	15.80%
Assistive Living	2	2.00%
Nursing Home/Facility	4	4.00%
Missing	1	1.00%
Highest Degree Attained		
High School/GED	15	14.90%
Associate Degree or Some College	33	32.70%
Bachelor's Degree	28	27.70%
Advanced Degree	21	20.80%
Missing	4	4.00%
Employment		
Full Time	7	6.90%
Part Time	5	5.00%
Retired	29	28.70%
Disabled	58	57.40%
Not Applicable/Unemployed	2	2.00%
Total	101	100.00%

Table 3. Veterans' experiences with evaluating, procuring, and follow-up after attaining mobility devices

Item	Evaluation Process					Total (N)	N/A
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree		
My needs were accurately identified	5.00%	8.80%	7.50%	23.80%	55.50%	80	21
I felt comfortable providing input into decision-making process	12.50%	5.00%	5.00%	20.00%	57.50%	80	21
I was able to try out different devices	23.80%	23.80%	18.80%	13.80%	20.00%	80	21
There were several options available	27.90%	19.80%	22.10%	11.60%	18.60%	86	15
The devices were designed with women in mind	18.60%	27.90%	43.00%	7.00%	3.50%	86	15
Item	Procurement Process					Total (N)	N/A
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree		
I received the device in a reasonable time	9.30%	9.30%	11.60%	34.90%	34.90%	86	15
I received a device customized to my preferences	5.80%	10.50%	9.30%	32.60%	41.90%	86	15
I received enough education and training	5.80%	4.70%	14.00%	34.90%	40.70%	86	15
I felt comfortable asking for help on how to use the device	3.50%	7.00%	16.30%	25.60%	47.70%	86	15
I received enough information about how to maintain and repair the device	12.80%	17.40%	27.90%	15.10%	26.70%	86	15
The VA was able to accommodate all my needs for obtaining the device	8.10%	5.80%	4.70%	27.90%	53.50%	86	15
Item	Follow-Up Process					Total (N)	N/A
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree		
I am able to talk to someone when I have questions about the device	7.00%	4.70%	19.80%	25.60%	43.00%	86	15
I am able to conduct routine maintenance on my own or with outside resources	9.30%	10.50%	12.80%	27.90%	39.50%	86	15
I am able to get my device fixed quickly	15.10%	12.80%	27.90%	22.10%	22.10%	86	15

Table 2. Disability Reporting and Mobility Devices

Characteristics	N	Percentage
Type of Disability		
SCI Paraplegia	76	75.20%
SCI Tetraplegia	26	25.70%
Multiple Sclerosis	14	13.90%
Stroke	6	5.90%
Amputation	3	3.00%
Neuromuscular/Osteoarthritis/Rheumatoid Arthritis	37	36.60%
Other Neuromuscular/Congenital Disease	20	19.80%
Medical Condition	10	9.90%
Number of Disabilities Identified		
Single Disability Categories	49	48.50%
Multiple Disability Categories	52	51.50%
Type of Primary Mobility Device Used		
Cane	9	8.90%
Crutch/Crutches	1	1.00%
Walker	12	11.90%
Leg or Foot Brace/Orthotic	8	7.90%
Manual Wheelchair	35	34.70%
Power Wheelchair	34	33.70%
Scooter	2	2.00%
Number of Devices Used		
Singular Device	70	69.30%
Multiple Devices	31	30.70%
Total	101	100.00%

Table 4. Unmet Needs Assessment

Unmet Needs				
Does your mobility device meet your needs with respect to...	Yes	No	Total (N)	N/A
Employment/Job	80.00%	20.00%	20	67
Childcare Needs	75.00%	25.00%	12	74
Social Activities	82.50%	17.50%	80	7
Leisure Activities	76.90%	23.10%	78	8
Travel (for business or leisure) Activities	79.20%	20.80%	77	9
Public Transportation	69.00%	31.00%	42	45
Basic Self-Care (bathing, dressing, hygiene) Activities	94.30%	5.70%	70	17
Driving Activities	91.90%	8.10%	62	25
Housework (cleaning, cooking) Activities	75.70%	24.30%	70	16

*Respondents only answered these questions of the need was relevant to their daily living, so the total # that responded varies across questions.

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Results cont.

Respondents also evaluated the process of acquiring their devices and then how easy it was to repair devices and perform maintenance for long-term management and care of these devices. Finally, when asked if their devices met a variety of daily needs including employment, childcare needs, social and leisure activities, travel, basic self-care, driving, and household chores, the majority of participants stated their mobility devices did meet their daily needs. However about 20-25% felt their devices did not meet their needs for these daily activities.

Discussion

Almost half of the respondents felt their devices were not designed with women in mind and further customization was needed to improve their comfort and use. The effects of mobility devices on various activities of daily living varied by the category of activity. Not all activities were relevant to all respondents.

Limitations of the study included survey response rate. Only 18% of female Veterans responded limiting generalizability to the greater SCI/D population, in addition to the fact that this is a VA specific population. The data was also self-reported which can introduce bias given no way to verify the responses.

Conclusion

Female Veterans with SCI/D have not been studied as frequently as their male counterparts. In this study, we examined experiences with obtaining and using mobility devices in this population. This study found that women felt that their needs for comfort and fit were not always considered. Some Improvements with the provision process, including assessment, fitting, and training may be warranted. The design process for devices also needs to be more inclusive of females. Providers should be mindful of the barriers that women face in using these devices for their daily activities.

The views and opinions expressed here are those of the authors and do not reflect the views and opinions of the federal government.