

Racial Differences in Reporting Assistive Device Use in the United States: The Effects of Question Order

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Research Questions

- Does question order affect the reporting of assistive device use, generally?
- If so, does this effect vary by the race of the respondent?

Background: Research on Assistive Devices

- Focus of Previous Work on *Assistive Devices*
 - Factors and trends regarding device use
 - Effectiveness of equipment in disability reduction or service use reduction

Studies on Device Use

- Quantitative assessments of device use
- Descriptions of the different devices employed
- Some work has also included analysis of race differences in equipment use
 - Ignore qualitative differences in specific disabilities and their corresponding special equipment

Devices & Disability Reduction

- Generally, devices reduce reported disability and/or service use
- Qualitative differences in equipment use across specific impairments
- Race differences are either ignored entirely or treated as a control variable

Background: Research in Disability Measurement

- Work on ADL Measurement Focused in Two Areas:
 - Question Wording
 - Quantitative Differences in Disability Threshold

Data

- National Health and Nutrition Examination Survey (NHANES)--National Health Edidemiologic Followup Surveys (NHEFS)
- 1987 and 1992
- Analytic sample = 3,296 persons age 65+

Descriptive Statistics

- Age in years at baseline
(mean = 76.0, 65-91 range)
- Sex (male = 38.6%)
- Race (Black = 12.9%)
- About 30% (n=988) die between waves

Equipment Use Measurement in NHEFS

- Standard ADLs with Equipment Use
 - “Does subject have difficulty...?”
 - “Does subject have help from mech. Aid?”
- More Equipment Questions for 4 ADL
 - “Does subject use special devices...?”

Disability Prevalence by Wave

	<i>1987(n=3296)</i>	<i>1992(n=2308)</i>
Dressing	9.41	8.83
Bathing	8.19	6.61
Toileting	6.98	4.95
Walking (inside)	3.88	4.10
Bath Transfer	13.77	12.17
Walking (outside)	15.08	14.59

Disability Status for White Equipment Users (Preceding)

	1987		1992	
	<i>Impaired</i>	<i>N</i>	<i>Impaired</i>	<i>N</i>
Dressing	41.7	24	57.1	21
Bathing	24.2	356	27.1	377
Bath Transfer	40.5	356	37.9	377
Bath (either)	47.8	356	45.4	377
Toilet	31.0	113	35.4	113
Walking (in)	15.3	582	22.3	332
Walking (out)	32.3	582	50.9	332
Walking (either)	38.7	582	56.0	332

Disability Status for Black Equipment Users (Preceding)

	1987		1992	
	<i>Impaired</i>	<i>N</i>	<i>Impaired</i>	<i>N</i>
Dressing	33.3	6	40.0	5
Bathing	19.6	46	32.5	40
Bath (Transfer)	28.3	46	40.0	40
Bath (either)	34.8	46	42.5	40
Toilet	17.9	28	44.0	25
Walking (inside)	13.7	146	19.2	73
Walking (outside)	29.6	146	41.1	73
Walking (either)	37.0	146	48.0	73

Comparison of Two Equipment Questions for Whites

	<i>1987</i>				<i>1992</i>			
	<i>Before</i>	<i>After</i>	<i>Both</i>	<i>Either</i>	<i>Before</i>	<i>After</i>	<i>Both</i>	<i>Either</i>
Dress	24	9	5	28	21	5	2	24
Bath	356	97	74	379	377	81	63	395
Toilet	113	46	14	145	113	30	16	125
Walk	582	51	51	582	332	26	25	333

Comparison of Two Equipment Questions for Blacks

	<i>1987</i>				<i>1992</i>			
	<i>Before</i>	<i>After</i>	<i>Both</i>	<i>Either</i>	<i>Before</i>	<i>After</i>	<i>Both</i>	<i>Either</i>
Dress	6	1	0	7	5	2	2	5
Bath	46	10	4	52	40	12	7	45
Toilet	28	7	3	32	25	5	2	28
Walk	146	13	13	146	73	6	5	74

Odds of Equipment Use (Asked Before ADL), 1987

	<i>Dress</i>	<i>Bath</i>	<i>Toilet</i>	<i>Walk</i>
Age	1.05	1.12***	1.11***	1.09***
Female	1.15	2.04***	1.42	1.32**
Black	1.47	0.75	1.68*	2.17***
Dressing	5.47***			
Bathing		3.75***		
Toileting			4.24***	
Walking				16.07***

Odds of Equipment Use (Asked Before ADL), 1992

	<i>Dress</i>	<i>Bath</i>	<i>Toilet</i>	<i>Walk</i>
Age	1.00	1.05***	1.06***	1.09***
Female	1.31	2.00***	1.83**	1.17
Black	1.57	0.62*	1.44	1.91***
Dressing	11.06***			
Bathing		8.30***		
Toileting			12.41***	
Walking				7.85***

Conclusion

- Considerable variation in reporting device use depending on when questions are asked
- Combination of questions maximizes reported device use
- Race variation across types of equipment used is pronounced

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