

Disability Perceptions and Experiences in the State of Florida.

Results of a telephone survey of randomly selected Florida residents.

The Florida Office on Disability and Health and University of Florida Survey Research Center

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Introduction

On the 2000 US Census, more than 3.2 million Floridians, or 22.2% of the state's population, reported having a disability. As the population continues to age and older Americans move full-time or seasonally to our state, this number will likely rise. In order to serve the growing number of Floridians with disabilities, a well-organized, visible office – the Florida Office on Disability & Health, or FODH – was established at the University of Florida (UF) through a grant from the Centers for Disease Control & Prevention (CDC website <http://cdc.gov/ncbddd/dh/default.htm>).

The mission of FDOH is to maximize the health, well-being, participation, & quality of life, throughout the lifespan, of all Floridians & their families living with disability (web site at <http://fodh.phhp.ufl.edu/>). One primary activity for to support this mission is the increase epidemiologic capacity in Florida, and increase important data in support of FODH. Partners of the FODH provide recommendations and feedback about what data are needed. During strategic planning for FODH, Partners recommended collecting data on disability perceptions and experiences in Florida for support of future public awareness campaigns (FODH Strategic Plan (<http://fodh.phhp.ufl.edu/about/pdf/FODH%20Strategic%20Plan%20March%202009.pdf>)). During 2010, FODH supports a module of questions added to the Florida Behavioral Risk Factor Surveillance System (BRFSS), a random digit dialed survey of Floridians that is supported partly by the CDC. Because of the importance of selecting these questions, we partnered with the University of Florida Survey Research Center (UFSRC) to pilot test potential questions.

UFSRC conducts research on consumer perception and behavior, including a monthly Florida Consumer Confidence Index (FCCI). The UFSRC also provides various levels of survey assistance to research groups including designing the sample, wording of questions, conducting the survey, and analyzing the data. The UFSRC assisted the FDOH with a telephone survey of Florida residents assessing their attitudes toward people with disabilities. It was of particular interest to determine if the attitudes toward people with disabilities were different between those with and those without disabilities.

Methods

Measures.

A total of 11 questions were selected for testing. These were based on two existing surveys. Questions on perceptions are from the Modified Issues in Disability Scale (MIDS-T) (1). The MIDS was created to assess the attitudes of various groups towards people with disabilities and was designed with input from people with and without disabilities. Questions on experiences are from the Craig Hospital Inventory of Environmental Factors (CHIEF) (2, 3). The CHIEF was

designed to quantify the impact of the environment on participation among people with different types of disabilities.

To our knowledge, these questions have not been used on the BRFSS before in the methods we are applying to the Florida 2010 BRFSS. The CHIEF has been used as a telephone survey (3), though we are using only a small selection of the full questionnaire on the 2010 BRFSS. The CHIEF was used in the Colorado BRFSS as a state-added module and reported at the 2000 American Public Health Association (http://apha.confex.com/apha/128am/techprogram/session_2077.htm), but has not been reviewed and approved as a CDC supplemental module. Subsets of CHIEF questions can be combined to represent a score on disability attitudes, and we also investigated this possibility with the MIDS-T. In addition, UFSRC asked two questions regarding disability status that we used to define and contrast persons with disability and others to examine group differences in perceptions and experience. The Appendix lists these questions, as well as demographic questions useful for this report and to describe group differences. For descriptive results, response categories of questions were collapsed from five or six categories to two categories (see Table 1).

Survey participants.

A total of 514 Florida adults were surveyed in August 2009. The participants were selected by random digit dialing, with the inclusion criteria being a Florida resident 18 years or older being reached at his/her place of residence, and either English or Spanish speaking.

All respondents were classified as having a disability or not having a disability. Respondents who marked “Yes” for either Q6 or Q7, indicating that they had a health condition that made leaving the home or taking care of personal needs difficult, were classified as having a disability; all others were considered to not have a disability.

Statistical Methods.

SAS version 9.2 was used for descriptive statistical analysis. The frequency of affirmative and negative responses was calculated for all of the participants, and after stratifying by disability status. Significance for group differences were tested by the Rao-Scott chi square test and statistical significance was set as $p < 0.05$. Ninety-five percent confidence intervals for proportions were also calculated. Mean age was calculated with standard deviation and tested for group differences by a two-sample t-test.

To investigate the potential of combining questions into summary scales, we conducted an exploratory factor analysis on eight items relating to attitudes and disability (SPSS version 17.0) (4). Due to indistinguishable responses (i.e., “don’t know,” “refused,” or “not applicable” answers), 198 of the original 514 response sets were excluded leaving 316 (62.5%) cases for analysis. Prior to analysis, questions Q11 and Q12 of the MIDS-T (avoid questions on disability; PWD have more accidents) were reverse scored to maintain a similar hierarchal structure and all data were standardized to maintain scale consistency. The final response set was analyzed using

a principal components factor analysis with a varimax (orthogonal) rotation. Internal consistency of a potential scale was tested using Cronbach's alpha.

Results

A total of 514 adults completed the survey, with all but two of the selected demographic and disability perceptions questions (see Table 1) answered by over 90% of the respondents. The income question was only answered by 84% of the respondents and the automobile accident question (Q 12) was answered by 86% of the respondents. Descriptive results of the overall group and a comparison between those with and without disability are shown in the Table 1. The mean age of the respondents with a disability (63.0) was significantly higher ($p < 0.0001$) than the mean age of respondents without a disability (53.4). In general, there were some differences in both perceptions and experiences comparing people with and without disability. These tended to be in the direction of more "informed" answers among persons with disability. For example, it is not appropriate to take the arm of a person who is blind, and persons with disability are not more likely to experience an accident. Only 41.7% of respondents with a disability believed that using the words "see" or "look" were acceptable when talking with a blind person, compared with 70.2% of people without disabilities ($p < 0.0001$). Persons with disability were also more likely to report they had problems with attitudes or discrimination. People with disabilities were significantly more likely ($p=0.01$) than people without a disability to feel that they have been the victim of prejudice or discrimination (39.6% versus 23.8%). Because only 48 respondents were classified as having a disability, some marked differences did not reach statistical significance. A larger sample size with more respondents with disabilities would increase the power of these comparisons. Responses to the three CHIEF questions were skewed, and few individuals answered questions about how large a problem these attitudes were. The qualifying follow-up questions were therefore dropped from subsequent analysis and consideration.

Among the eight primary questions, four factors emerged with eigenvalues greater than 1.00 and accounted for approximately 66% of the variance (Table 2a). The selection and omission rules for item determination to a particular factor required an item to load 0.6 or higher on the selected factor and less than 0.4 on non-selected factors. Using this criteria, 1 item (Q 11, asking questions about a person's disability), did not sufficiently load on any one factor.

Three items, (questions Q14, Q15, and Q16) loaded on the first factor, which was labeled "Experienced Prejudice/Discrimination". Specifically, these items assessed one's experience with prejudice and discrimination at home (Q14), school or work (Q15), and overall experience (Q16). Table 2b provides more detail about these three items. Further analysis of this subscale revealed an acceptable level of Cronbach's alpha (0.652 Table 3). The remaining 3 factors loaded 2 or less items and therefore were not considered viable factors. Consequently, no further data analysis was performed on the remaining 3 factors.

In summary, items measuring disability perceptions may be used as individual indicators, but not as a summary measure. CHIEF questions can be combined as an arithmetic score with acceptable results, although the independent items may still be used for more specific information about disability attitudes and discrimination.

References

- (1) Makas E. In the midst: Modified Issues in Disability Scale testing. In G. Keiger, & S.C. Hey, eds., *The social organization of disability experiences* (pp. 109-114). Salem, OR: The Society for Disability Studies and Willamette University, 1991.
- (2) Whiteneck GG, Harrison-Felix CL, Mellick DC, Brooks CA, Charlifue SB, Gerhart KA. Quantifying environmental factors: A measure of physical, attitudinal, service, productivity, and policy barriers. *Arch Phys Med Rehabil* 2004;85:1324-35.
- (3) Ephraim PL, MacKenzie EJ, Wegener ST, Dillingham TR, Pezzin LE. Environmental barriers experienced by amputees: The Craig Hospital Inventory of Environmental Factors–Short Form. *Arch Phys Med Rehabil* 2006;87:328-33.
- (4) Statistical Package for the Social Sciences [computer program]. Version 17.0. Chicago, IL: IBM Company, 2010.

Table 1: Demographic descriptors and percentage of respondents who answered affirmatively to questions on disability perceptions and experiences stratified by disability status. Ninety-five percent confidence intervals for proportions are included.

		Disability Status *		Overall	
		Yes (n=48)	No (n=466)	(n=514)	Missing data +
Sample Demographics					
Gender % women		64.6 (51.0, 78.2)	53.4 (48.9, 58.0)	54.5 (50.2, 58.8)	None
Mean age (\pm standard deviation) #		63.0 (+/- 16.3)	55.9 (+/- 17.4)	56.6 (+/-17.4)	17 (3.3)
Race ethnicity - % non-Hispanic white		56.2 (42.2, 70.3)	72.7 (68.7, 76.8)	71.2 (67.3, 75.1)	3 (0.6%)
Education status – years of education	% less than high school graduation (0-11 years)	16.7 (6.1, 27.2)	4.1 (2.3, 5.9)	5.3 (3.3, 7.2)	1 (0.2 %)
	% high school graduate (12 years)	25.0 (12.7, 37.3)	21.5 (17.7, 25.2)	21.8 (18.2, 25.4)	
	% college (13 + years)	58.3 (44.3, 72.3)	74.2 (70.3, 78.2)	72.8 (68.9, 76.6)	
Household income	% under \$20,000	31.2 (18.1, 44.4)	11.8 (8.9, 14.7)	13.6 (10.6, 16.6)	85 (16.5%)
	% \$20,000 - \$49,999	33.3 (20.0, 46.7)	28.1 (24.0, 32.2)	28.6 (24.7, 32.5)	
	% \$50,000-\$99,999	10.4 (1.7, 19.1)	26.8 (22.8, 30.9)	25.3 (21.5, 29.1)	
	% \$100,000 or more	8.3 (0.5, 16.2)	16.7 (13.3, 20.1)	16.0 (12.8, 19.1)	
Questions 9, 10, 11, and 12: Respondents who strongly agree, agree, or somewhat agree.					
Q9. OK to use words "see"/"look" with a blind person #		41.7 (27.7, 55.7)	70.2 (66.0, 74.3)	67.5 (63.4, 71.6)	14 (2.7%)
Q10. Easier for a blind person to take your arm while walking		66.7 (53.3, 80.0)	77.0 (73.2, 80.9)	76.1 (72.4, 79.8)	41 (8.0%)
Q11. Avoid asking people about their disabilities		35.4 (21.8, 49.0)	38.6 (34.2, 43.1)	38.3 (34.1, 42.5)	20 (3.9%)
Q12. Drivers with disabilities have more accidents		16.7 (6.1, 27.2)	21.9 (18.1, 25.7)	21.4 (17.8, 25.0)	73 (14.2%)
Question 13: Respondents who have had some, quite a bit, or a great deal of contact with people with disability.					
Q13. Contact with people who have disabilities		77.1 (65.2, 89.0)	76.4 (72.5, 80.3)	76.5 (72.8, 80.1)	1 (0.2%)

Table 1: (continued)

	Disability Status *		Overall	
	Yes (n=48)	No (n=466)	(n=514)	Missing data +
Questions 14, 15, and 16: Respondents for whom attitudes of others have been a problem in the past year.				
Q14. People's attitudes toward you a problem at home	41.7 (27.7, 55.7)	27.9 (23.8, 32.0)	29.2 (25.2, 33.1)	7 (1.4%)
If yes, % who say it was a "big problem"	25.0 (5.8, 44.2)	20.8 (13.7, 27.8)	21.3 (14.7, 28.0)	4 (2.7%)
Q15. People's attitudes to you a problem at school/work	33.3 (16.4, 50.3)	27.3 (22.8, 31.9)	27.8 (23.4, 32.2)	7 (1.7%)
If yes, % who say it was a "big problem"	50.0 (18.5, 81.5)	13.7 (6.9, 20.5)	17.0 (9.9, 24.0)	1 (0.9%)
Q16. Experience prejudice or discrimination #	39.6 (25.7, 53.5)	23.8 (19.9, 27.7)	25.3 (21.5, 29.1)	8 (1.6%)
If yes, % who say it was a "big problem"	42.1 (19.6, 64.6)	10.8 (5.0, 16.7)	15.4 (9.1, 21.7)	1 (0.8%)

* Disability is classified based on answering yes to one or both of the following:

Because of a health condition that has lasted for 6 or more months, do you have any difficulty going outside the home alone, for example, to shop or visit a doctor's office?

Because of a health condition that has lasted for 6 or more months, do you have any difficulty taking care of personal needs such as bathing, dressing, or getting around inside the home?

+ Questions refused or not answered (not skipped due to skip patterns) raw count and % missing

$p < 0.05$

Table 2a. Factor among 8 items measuring disability attitudes and perceptions (n=316)

	Factor 1	Factor 2	Factor 3	Factor 4
Blind – use see/look (Q9)	-0.010	-0.066	0.912	0.136
Blind - take arm (Q10)	0.077	0.102	0.136	0.859
Avoid questions about disabilities (Q11)	0.119	0.372	0.498	-0.503
People with disabilities have more auto accidents (Q12)	0.020	0.703	0.046	-0.101
How much contact with people with disabilities (Q13)	-0.104	0.759	-0.057	0.170
Attitudes problem at home (Q14)	0.765	-0.079	0.156	0.109
Attitudes problem at school/work (Q15)	0.833	0.097	-0.046	0.119
Prejudice/discrimination (Q16)	0.689	-0.087	-0.054	-0.183

Table 2b. Distribution of CHIEF items

Distribution: Attitudes problem at home (Q14)		
	Frequency	Percent
Daily	11	3.5
Weekly	22	7.0
Monthly	21	6.6
Less than monthly	42	13.3
Never	220	69.6
Distribution: Attitudes problem at school/work (Q15)		
	Frequency	Percent
Daily	14	4.4
Weekly	12	3.8
Monthly	32	10.1
Less than monthly	41	13.0
Never	217	68.7
Distribution: Prejudice/discrimination (Q16)		
	Frequency	Percent
Daily	8	2.5
Weekly	12	3.8
Monthly	23	7.3
Less than monthly	45	14.2
Never	228	72.2

Table 2c. CHIEF Experienced Prejudice / Discrimination three-item scale

Mean (standard deviation)		13.26 (± 2.43)
Minimum - maximum		3.00-15.00
Score distribution	Frequency	Percent
3	2	0.6
4	2	0.6
5	1	0.3
6	2	0.6
7	7	2.2
8	5	1.6
9	7	2.2
10	15	4.7
11	15	4.7
12	31	9.8
13	36	11.4
14	43	13.6
15	150	47.5
Total	316	100.0

Cronbach's Alpha for 3 Item Scale = 0.652 (Acceptable)

Appendix: Florida Consumer Confidence Index (FCCI) Survey August 2009

Survey questions not addressed in this analysis are not shown, but the order of questions was maintained. The appendix numbering does not reflect the questionnaire number in the FCSS for August.

Demographic Questions

Q1. Gender

- 1 Male
- 2 Female

Q2. What is your age?

(18-110)

Q3. Are you of Spanish or Hispanic origin?

- 1 Yes
- 2 No

Q4. What race do you consider yourself?

- 1 White (Caucasian)
- 2 Black (African-American)
- 3 Asian or Pacific Islander
- 4 American Indian or Alaska native
- 5 Other
- 6 Multi-racial or mixed race

Q5. What is the highest grade of school or year in college you yourself completed?

- | | |
|----------------|--------------------------|
| 0 None..... | 11 High School |
| 1 Elementary | 12 High School |
| 2 Elementary | 13 College |
| 3 Elementary | 14 College |
| 4 Elementary | 15 College |
| 5 Elementary | 16 College |
| 6 Elementary | 17 Some Graduate School |
| 7 Elementary | 18 Graduate/Prof. Degree |
| 8 Elementary | |
| 9 High School | |
| 10 High School | |

Q6. Because of a health condition that has lasted for 6 or more months, do you have any difficulty going outside the home alone, for example, to shop or visit a doctor's office?

- 1 Yes
- 2 No

Q7. Because of a health condition that has lasted for 6 or more months, do you have any difficulty taking care of personal needs such as bathing, dressing, or getting around inside the home?

- 1 Yes
- 2 No

Q8. Family's household income from all sources. (Before Taxes)

- 1 less than \$10,000
- 2 \$10,000 to \$19,999
- 3 \$20,000 to \$29,999
- 4 \$30,000 to \$39,999
- 5 \$40,000 to \$49,999
- 6 \$50,000 to \$59,999
- 7 \$60,000 to \$79,999
- 8 \$80,000 to \$99,999
- 9 \$100,000 to \$150,000
- 10 Over \$150,000

Disability Perceptions Questions (from the Modified Issues in Disability Scale)

The purpose of these questions is to gather information from a wide range of people on disability-related issues. Some people will have had a great deal of contact with these issues, others will have had virtually no contact. Please indicate, using the scale provided, your opinion on each of the questions that follow. Although some of these items may appear to be factual, there are really no "right" or "wrong" answers. We are simply looking for your opinion (i.e., whether you personally agree or disagree with each statement).

Q9. If you are talking to a blind person, it is all right to use words such as "see" or "look" in a conversation.

1. Strongly disagree
2. Disagree
3. Somewhat disagree
4. Somewhat agree
5. Agree
6. Strongly agree

Q10. If you are walking with a blind person, it is easier for her/him to take your arm than for you to take her/his arm.

1. Strongly disagree
2. Disagree
3. Somewhat disagree
4. Somewhat agree
5. Agree
6. Strongly agree

Q11. You should avoid asking people who have disabilities questions about their disabilities.

1. Strongly disagree
2. Disagree
3. Somewhat disagree
4. Somewhat agree
5. Agree
6. Strongly agree

Q12. Drivers with physical disabilities have more automobile accidents than drivers without disabilities.

1. Strongly disagree
2. Disagree
3. Somewhat disagree
4. Somewhat agree
5. Agree
6. Strongly agree

Q13. Overall, how much contact would you say you have had with people who have disabilities?

1. No contact
2. Very little contact
3. Some contact
4. Quite a bit of contact
5. A great deal of contact

Disability Experiences Questions (from the CHIEF social environment questions)

Being an active, productive member of society includes participating in such things as working, going to school, taking care of your home, and being involved with family and friends in social, recreational and civic activities in the community. Many factors can help or improve a person's participation in these activities while other factors can act as barriers and limit participation.

First, please tell me how often each of the following has been a barrier to your own participation in the activities that matter to you. Think about the past year, and tell me whether each item on the list I will read has been a problem **daily, weekly, monthly, less than monthly, or never**. If the item occurs, then answer the question as to how big a problem the item is with regard to your participation in the activities that matter to you. (Note: if a question asks specifically about **school or work** and you neither work nor attend school, **answer that it is not applicable**.)

Q14. In the past 12 months, how often have other people's attitudes toward you been a problem at home?

1. Daily
2. Weekly
3. Monthly
4. Less than Monthly
5. Never

14.b. *Ask only if Q14 is not answered as "never"* When this problem occurs has it been a big problem or a little problem?

- a. Big problem
- b. Little problem

Q15. In the past 12 months, how often have other people's attitudes toward you been a problem at school or work?

- 1. Daily
- 2. Weekly
- 3. Monthly
- 4. Less than Monthly
- 5. Never
- 6. Not applicable

15.b. *Ask only if Q15 is not answered as "never"* When this problem occurs has it been a big problem or a little problem?

- a. Big problem
- b. Little problem

Q16. In the past 12 months, how often did you experience prejudice or discrimination?

- 1. Daily
- 2. Weekly
- 3. Monthly
- 4. Less than Monthly
- 5. Never

16.b. *Ask only if Q15 is not answered as "never"* When this problem occurs has it been a big problem or a little problem?

- a. Big problem
- b. Little problem