

# State of the Science: Health, Wellness and Disability

## PRESENTATION BRIEF

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**Title of Presentation:** Health-Related Quality of Life: do the questions on surveys mean the same thing to people with and without disabilities?

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### I. Introduction

Health related quality of life (HRQOL) is an increasingly important measure of the public's health. Questions that ask about various components of HRQOL are used to monitor the health of Americans. These questions also are used to look for differences, or health disparities, between people based on such circumstances as their age, gender, geography, disability, etc. The Centers for Disease Control and Prevention use four questions on the Behavioral Risk Factor Surveillance System (BRFSS) telephone survey to ask about general health status, and number of days in the past 30 in which physical health was not good, mental health was not good, or health limited the respondent's usual activities. Five additional healthy days questions are used by some states to address pain, stress, depression, sleep, and vitality. Previous research, such as Dr. Horner-Johnson's earlier work, has found that these questions can be grouped into two components or "factors:" physical health and mental health. Other research has shown that people with chronic conditions, or people with disability, may answer questions differently based on their experiences. We were concerned that among people with disability, the scale might not measure HRQOL in the same as it does for the general public. These differences might be because of "response shift", or a difference in the way people interpret the meaning of "health" compared to disability.

### II. Research Objectives

Our objective was to investigate if the individual questions used on the BRFSS combine together in the same groups of items for people with disability compared to other people in the general population. Differences might contribute to the evidence that people with disabilities define, classify, and interpret their HRQOL differently and suggest we need to consider these experiences when measuring and reporting HRQOL.

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## III. Methods

The BRFSS is an ongoing random-digit dialed telephone survey of non-institutionalized civilian adults ( $\geq 18$  years of age) in the entire USA that is designed to assess risk and protective behaviors. Our analyses included BRFSS data from the states and territories that used all nine HRQOL questions in 2001 and/or 2002. Eighteen states and the District of Columbia used the entire set in one or both years. The resulting combined sample size for both years of people who answered all questions was 79,739. People are classified as having disability if they answer “yes” to one or both of the following questions: 1) Are you limited in any way in any activities because of physical, mental, or emotional problems? 2) Do you now have any health problem that requires you to use special equipment, such as a cane, a wheelchair, a special bed, or a special telephone? Statistical procedures known as confirmatory factor analysis examined the question groups separately in people with disability and without disability.

## IV. Results

Disability status was related to poorer physical and mental health, even when controlling for demographic and socioeconomic differences between people with and without disabilities. In general, the groups of survey items summarizing mental health and physical health were the same for both people with and with disabilities. However, a question asking about vitality (days felt very healthy and full of energy) was more strongly linked to physical health for people with disability, and the same item was more strongly linked to mental health for people without disability.

## V. Conclusions

While summary scales of questions on HRQOL seem to be similar for people with and without disabilities, their answers about vitality appear to differ. This item appears to be more associated with physical well-being among people with disabilities, and with mental well-being among people without disabilities.

## VI. Implications

The results of this study suggest that while HRQOL and its contributing items (vitality, pain, mental health, etc.) are similar between people with and without disabilities, there are some aspects that are different. This may be related to the theory of “response shift” but this study was not able to directly ask survey respondents about their interpretation of the meaning of HRQOL. If we wish to measure and report on the HRQOL of Americans, we may need to closely examine whether typical survey questions confuse “health” and “disability” and we may need to use questions that are “neutral” about functions, especially physical functions. The difference in one survey item in this study, one that measures vitality, is one clue that the meaning of HRQOL is not the same for people with and without disabilities.