

# **RESULTS OF THE COGNITIVE INTERVIEWING STUDY TO EXAMINE PROPOSED CAPACITY AND FUNCTIONING QUESTIONS OF THE MODEL DISABILITY SURVEY**

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This report presents findings of a cognitive interviewing study conducted to examine the performance of proposed questions for the World Health Organization's (WHO) Model Disability Survey (MDS). The aim of this study is to examine the constructs captured by each question as well as to make comparisons between functioning and capacity questions. Another goal of the study is to determine whether question ordering impacts respondent interpretation, thereby impacting the constructs captured by each question. The specific research questions for this study include:

1. What constructs are the functioning questions capturing?
  - a. Are respondents adding appraisal into their reasoning?
  - b. Are the functioning questions acting like performance or capacity?
  - c. Do 'problem' functioning questions act differently than 'difficulty' capacity questions?
2. Does question ordering impact the construct captured by the functioning questions? If, so in what ways?
3. What constructs are the broad environment questions capturing?
4. Does question ordering impact the construct captured by the broad environment questions? If, so in what ways?

While the overall cognitive interviewing study investigated the above research questions, this report presents a subset of those questions. The findings presented here pertain to 1) the examination of whether the functioning and capacity questions within the same domain capture different constructs (Research Questions 1b and 1c), and 2) the examination of whether section ordering, specifically the placement of health condition questions prior to the functioning section, impacts respondent interpretation of those functioning questions (Research Question 2). The specific domains examined in this study include walking 100 yards, self-care, pain, shortness of breath, depression, household tasks, and community participation.

## **SUMMARY OF FINDINGS**

Results of the study reveal that, for most domains, capacity and functioning questions significantly overlap. That is, respondents often interpreted the two questions similarly and, therefore, the constructs captured by both questions were the same. This was particularly true for depression, self-care and community participation. In some cases, respondents did consider aspects of functioning that went beyond capacity. For example, in the walking domain, a couple

respondents considered the use of their mobility aid when answering the functioning question, but did not when answering the capacity question.

While order largely did not impact most capacity questions, some of the functioning questions appeared to be significantly impacted. Specifically, in domains such as pain, breathing, cognition and household tasks, the lack of the health condition context increased unintended interpretations. For example, some respondents interpreted the pain functioning question as “do you like pain?”; for the household task domain, the functioning question was sometimes interpreted as “do you have a problem getting your cleaning done because you don’t like to do it?”

Results of this study suggest that section ordering must be carefully considered and that placement of the health condition section prior to the functioning section is optimal. Additionally, because functioning and capacity questions captured many of the same constructs and was repetitive to respondents, the analytic intent for both questions should be reconsidered.

## **METHODS**

### **Cognitive Interviewing**

The aim of a cognitive interviewing study is to investigate how well survey questions perform when asked of respondents, that is, if respondents understand the questions according to their intended design and if they can provide accurate answers based on that intent. As a qualitative method, the primary benefit of cognitive interviewing is that it provides rich, contextual insight into the ways in which respondents 1) interpret a question, 2) consider and weigh out relevant aspects of their lives and, finally, 3) formulate a response based on that consideration. As such, cognitive interviewing provides in-depth understanding of the ways in which a question operates, the kind of phenomena that it captures, and how it ultimately serves the scientific goal. Findings of a cognitive interviewing project typically lead to recommendations for improving a survey question, or results can be used in post-survey analysis to assist in data interpretation.

Traditionally, cognitive interviewing studies are performed by conducting in-depth, semi-structured interviews with a small sample of approximately twenty to forty respondents. The typical interview structure consists of respondents first answering the evaluated question and then answering a series of follow-up probe questions that reveal what respondents were thinking and their rationale for that specific response. In this regard, cognitive interviews unfold within a narrative format. Through this semi-structured design, various types of question-response problems, such as interpretive errors or recall accuracy, are uncovered—problems that often go unnoticed in traditional survey interviews. By asking respondents to provide textual verification and the process by which they formulated their answer, elusive errors are revealed.

As a qualitative method, the sample selection for a cognitive interviewing project is purposive. Respondents are not selected through a random process, but rather are selected for specific

characteristics such as gender or race or some other attribute that is relevant to the type of questions being examined. When studying questions designed to identify persons with disabilities, for example, the sample would likely consist of respondents with a previously known disability and, to discover potential causes of false positive or false negative reporting, some respondents with no known disability. Because of the small sample size, not all social and demographic groups are represented. Analysis of cognitive interviews does not produce generalizable findings in a statistical sense, but rather, provides an explicit understanding of response processes including patterns of interpretation.

As is the case for analyses of qualitative data, the general process for analyzing cognitive interview data involves synthesis and reduction—beginning with a large amount of textual data and ending with conclusions that are meaningful and serve the ultimate purpose of the study. For example, Miles and Huberman (1994) describe qualitative analysis as an interactive process of “data reduction (extracting its essence), data display (organizing its meaning) and drawing conclusions (explaining the findings)” (cited in Suter, 2012). For analysis of cognitive interviews, reduction and synthesis can be conceptualized within five incremental steps—conducting interviews, producing summaries, comparing across respondents, comparing across subgroups of respondents, and reaching conclusions. With each incremental step, a data reduction product is created. A description of each of these steps and the resulting reduction product is presented below:

- 1) Conducting interviews to produce interview text: collecting narratives from respondents that reveal how each respondent made sense of and went about answering a survey question,
- 2) Synthesizing interview text into summaries to produce detailed summaries: detailing how and why each respondent interpreted the question as well as how they formulated their answers, including events or experiences considered as well as any difficulties answering the question,
- 3) Comparing summaries across respondents to produce thematic schema: identifying and mapping common themes that detail phenomena captured and the process of formulating a response,
- 4) Comparing identified themes across subgroups to produce an advanced schema: identifying ways in which different types of respondents may process questions differently depending on their differing experiences and socio-cultural backgrounds,
- 5) Making conclusions to produce final study conclusions: determining and explaining the performance of a question as it functions within the context of respondents’ various experiences and socio-cultural locations.

Although these steps are described separately and in a linear fashion, in practice they are iterative; varying levels of analysis typically occur throughout the qualitative research process.

As each step is completed, data are reduced such that meaningful content is systematically extracted to produce a summary that details a question’s performance. In detailing a question’s performance, it is possible to understand the ways in which a question is interpreted by various groups of respondents, the processes that respondents utilize to formulate a response as well as any difficulties that respondents might experience when attempting to answer the question. It is the ultimate goal of a cognitive interviewing study to produce this conceptual understanding, and it is through data reduction that this type of understanding is possible.

While the two processes of data reduction and knowledge production may be heuristically separated, in reality the processes occur simultaneously. In reducing the cognitive interview data the analyst produces a more comprehensive understanding of a question's performance; as analysis is performed, understanding of the question response process becomes more complex and complete. In the beginning it is only possible to understand how each individual respondent makes sense of and answers the survey question. By the end, individual interpretations are understood as well as how those interpretations relate across groups and within the overall context of the question's performance.

### **WHO MDS Cognitive Interviewing Study**

The analytic purpose of this study was twofold: 1) to examine whether the functioning and capacity questions within the same domain capture different constructs, and 2) to examine whether section ordering, specifically the placement of health condition questions prior to the functioning section, impacts respondent interpretation of those functioning questions, thereby impacting the constructs captured by each question. In order to study ordering effects, two versions of the questionnaire were created using identical questions, but with different ordering of the sections. The orders of the two versions are presented below:

#### **Version A**

Broad Environment  
Assistive Devices/Aides  
Functioning  
Health Conditions  
Capacity

#### **Version B**

Health Conditions  
Capacity  
Assistive Devices/Aides  
Broad Environment  
Functioning

Because of the length of the questionnaire, not all questions proposed for the Model Disability Survey could be examined. Therefore, in order to study differences between capacity and functioning questions, both types of questions for each selected domain were included. For example, both capacity and functioning questions for the depression domain were selected. The domains in this study include walking 100 yards, self-care, depression, shortness of breath, pain, cognition, household tasks, and community participation.

Thirty face-to-face cognitive interviews were conducted in the NCHS Questionnaire Design Research Laboratory (QDRL) throughout June 2014. Fifteen respondents were placed in the sample examining the performance of Version A, while 16 respondents were placed in the sample examining Version B. Prior to the interview, respondents completed a demographic sheet as well as a consent for video-recording the interview. Once completed, the interviewer described the purpose of the study and how the interview would take place. Interviews lasted one hour, and \$40 in remuneration was provided to each respondent. During the interview, respondents were asked a survey item and were then asked to explain their answer. The types of follow-up questions asked by interviewers depended on respondents' interpretation of the questions as well as their health status and physical abilities. However, typical follow-up questions included, "How so?" and "Why do you say that?"

**Respondents.** The demographic breakdown of respondents appears in Table 1 below. Respondents were recruited through newspaper advertisements, flyers and by contacting previous respondents who met the criteria of this study. A screening process was employed over the telephone to determine the caller’s eligibility for participation. Because questions focused primarily on respondents’ abilities and physical conditions, particular effort was made to recruit individuals with a variety of health conditions.

**Table 1: Demographic summary of respondents**

<b>Race</b>	<u>Version A</u>	<u>Version B</u>	<b>Age</b>	<u>Version A</u>	<u>Version B</u>
Black	5	7	18 - 29	0	2
White	9	9	30 - 49	3	1
Asian	1	0	50 - 64	4	4
			65 and Over	8	9
<b>Ethnicity</b>			<b>Education</b>		
Hispanic	0	0	HS diploma	1	1
Non-Hispanic	15	16	Some college	4	4
<b>Gender</b>			College Degree	2	5
Female	9	6	Graduate Degree	8	6
Male	6	10			

**Method of analysis.** Analysis of interviews was performed in the manner described in the above description of cognitive interviewing methodology. After an interview was conducted, transcripts and summary notes were written for each question. Summary notes included the way in which a respondent interpreted and processed individual questions, what experiences or perceptions the respondent included as they formulated their answer, and any response difficulties experienced by the respondent. Transcripts were created from video-recordings of interviews, which also ensured the accuracy of summaries and soundness of study conclusions.

After all interviews and summaries were completed, interviews were compared to identify common patterns of interpretation and response difficulties for each question. Themes of the capacity questions were then compared to themes of the functioning question in the same domain. For example, themes identified in the depression capacity question were compared to themes identified in the depression functioning question. This analysis indicated whether the two types of questions capture the same phenomena. Additionally, individual respondents’ answers to both capacity and functioning questions within the same domain were examined for inconsistencies—for example, if a respondent answered ‘no problem’ walking a 100 yards to the functioning question, but then reported having ‘some difficulty’ walking when asked the capacity question. Each case of inconsistency was investigated to determine why the respondent would answer a particular way to the one of the questions but differently to the other question. This type of analysis supports the theme analysis, also illustrating how the two types of question perform differently.

To examine potential ordering effects, themes identified in a specific question were compared to the same question in the other version. For example, themes identified in the Version A pain functioning question were compared to themes identified in the Version B pain functioning question.

A data entry and analysis software application (Q-Notes) was used to conduct analysis. Q-Notes, developed by the QDRL, ensures systematic and transparent analysis across all cognitive interviews as well as provides an audit trail depicting the way in which findings are generated from the raw interview data.

Because of time limitations, not all questions were asked of all respondents. Additionally, some of the narrative explanations were less complete than others. Findings of this study are based on complete narratives; incomplete cases were excluded.

The final section of this report is organized by domain, comparing how the functioning and capacity questions within a specific domain perform. Comparisons between the two questionnaire versions (Version A and Version B) are also presented by domain.

## FINDINGS BY DOMAIN

### WALKING 100 YARDS

Capacity:				
Do you have difficulty walking 100 yards on level ground, that would be about the length of one football field or one city block [if uses aid: without the use of your aid]?				
No Difficulty				
Some Difficulty				
A lot of Difficulty				
Cannot Do at All				
Functioning:				
Using show card X, how much of a problem is walking a short distance such as a 100m for you?				
No Problem				Extreme Problem
0	1	2	3	4

The tables below show how respondents answered both the capacity and functioning walking questions. Table 2 presents respondents' answers from Version A—the version in which respondents first received the environment section followed by the functioning questions and

then the capacity questions. Table 3 presents respondents' answers from Version B—the version in which respondents first received the health conditions section followed by the capacity questions and then the functioning questions.

**Table 2. Version A Walking Capacity by Functioning**

Functioning: How much of a problem...	Capacity: Do you have difficulty....			
	No Difficulty	Some	A lot	Cannot Do
0 No Problem	<b>5</b>	<b>1</b>		
1	<b>1</b>			
2		<b>1</b>		
3			<b>2</b>	
4 Extreme				

**Table 3. Version B Walking Capacity by Functioning**

Functioning: How much of a problem...	Capacity: Do you have difficulty....			
	No Difficulty	Some	A lot	Cannot Do
0 No Problem	<b>10</b>		<b>1</b>	
1				<b>1</b>
2		<b>1</b>		
3		<b>1</b>		
4 Extreme				

For Versions A and B, responses to both the capacity and functioning questions were primarily consistent. Indeed, for most respondents, these two questions were repetitive; more than a few respondents noted that the questions were asking about the exact same thing and referred to their previous answer when explaining their response.

As both tables do indicate, there were a few respondents whose answers were not entirely consistent. For the respondent in Table 1 (Version A), who answered 'no difficulty' and '1,' there is no particular reason why he answered the two questions differently: he interpreted the questions exactly the same and knew the correct conceptualization of 100 yards. It appears that he simply assessed his condition differently for the two questions. The same is true for the respondent in Table 2 who answered 'some difficulty' to the capacity question but 'no problem' to the functioning question.

In Table 3 (Version B), three respondents' answers did not consistently align. One respondent (the one answering 'some difficulty' and '3') did so because she interpreted the two sets of

response categories differently. For both questions she explained her answer as “because I need to stop and rest.” For the capacity question, however, ‘needing to stop’ warranted ‘some’ while for the functioning question, this explanation warranted a ‘3.’ The inconsistent answers for the remaining two respondents in Table 2 (‘a lot’ / ‘0’ and ‘Cannot Do’ / ‘1’) are due to the fact that the respondents did not count their mobility device in the capacity question, but did so in the functioning question.

Regarding assistive devices, there was no evidence to suggest that respondents incorrectly included their aid in the capacity question or discounted their aid in the functioning question. There is, however, little data related to this—particularly for the functioning question, in part, because it is not explicitly stated in the question.

In terms of the specific activity that respondents considered when forming an answer, there was very little difference between the two questions. In both sets of the capacity and functioning questions, almost all respondents considered their ability to walk on a flat surface. For some physically active respondents, they explained their answer (‘no difficulty’/‘no problem’) as being able to walk or even run longer than 100m distances. While all respondents considered walking on a flat surface for the capacity question, there were several respondents who considered other activities when answering the functioning question. One woman thought of walking up steps to get out of her apartment, and three respondents considered getting out, for example, going shopping. Finally, one respondent, when forming his answer to the functioning question, did consider walking on a flat surface but he also discussed walking across a crowded room where he might be bumped and could lose his balance.

In considering the cause of respondents’ difficulty walking, both questions also performed similarly. For both the functioning and capacity questions, the causes included: fatigue, being out of shape, having pain, or having a problem with their legs or feet. For almost all respondents, the order of the sections did not impact conceptualizations of cause. However, when answering Version A of the functioning question, one respondent explained that someone who lived in a dangerous neighborhood could experience difficulty walking 100 yards. For this respondent, it appears that context did impact his interpretation since he did not necessarily understand the question within the context of health.

In forming their responses, the most problematic component pertained to respondents’ conceptualization of 100 yards. For the capacity question, respondents experienced no difficulty because the question provides the examples of a football field and a city block. Respondents did, however, experience difficulty when forming answers to the functioning question because no such examples were included. When first asked the functioning question, for example, a woman answered that she did not know the distance. However, when answering the capacity question, she easily answered explaining that her son used to be in football and she would run up and down the football field. Even when asked Version B of the questionnaire, where the capacity question came first, a full third of respondents indicated that they were unable to conceptualize 100 yards; by the time they were asked the functioning question, they had already forgotten that 100 yards was the same as a football field or one city block.



In sum, the questions performed essentially the same in that respondents primarily considered the same type of activity and cause of the difficulty/problem. In only a few cases, when answering the functioning question, respondents considered activities occurring within a particular environment (i.e. 'walking up steps,' 'going out of the home'). The ordering of the sections appeared to impact interpretation of the functioning question in that one respondent considered walking in a dangerous neighborhood. The extent to which this order may impact the measured construct within a survey sample is unclear, although it is understandable that respondents would consider dangerous neighborhoods when functioning questions occur prior to health condition questions. It is also reasonable to believe that respondents living in dangerous areas and are prevented from walking in their neighborhoods would more likely interpret the question within the context of crime as opposed to health.

## SELF-CARE

Capacity:				
Do you have difficulty with self-care, such as washing all over or dressing?				
No Difficulty				
Some Difficulty				
A lot of Difficulty				
Cannot Do at All				
Functioning:				
How much of a problem is being cleaned and dressed?				
No Problem				Extreme Problem
0	1	2	3	4

Respondents were remarkably consistent when answering the self-care capacity and functioning questions. In fact, across the whole sample, four respondents indicated that, or questioned whether, the two questions were asking the exact same thing. The following two tables cross respondents' answers to the self-care capacity and functioning questions, showing the responses within the Version A and 2 sub-samples, respectively.

**Table 4: Version A Self-Care Capacity by Functioning**

Functioning: How much of a problem...?	Capacity: Do you have difficulty....			
	No Difficulty	Some	A Lot	Cannot Do
0 No Problem	<b>9</b>	<b>2</b>		
1	<b>2</b>			
2				
3				
4 Extreme Problem				

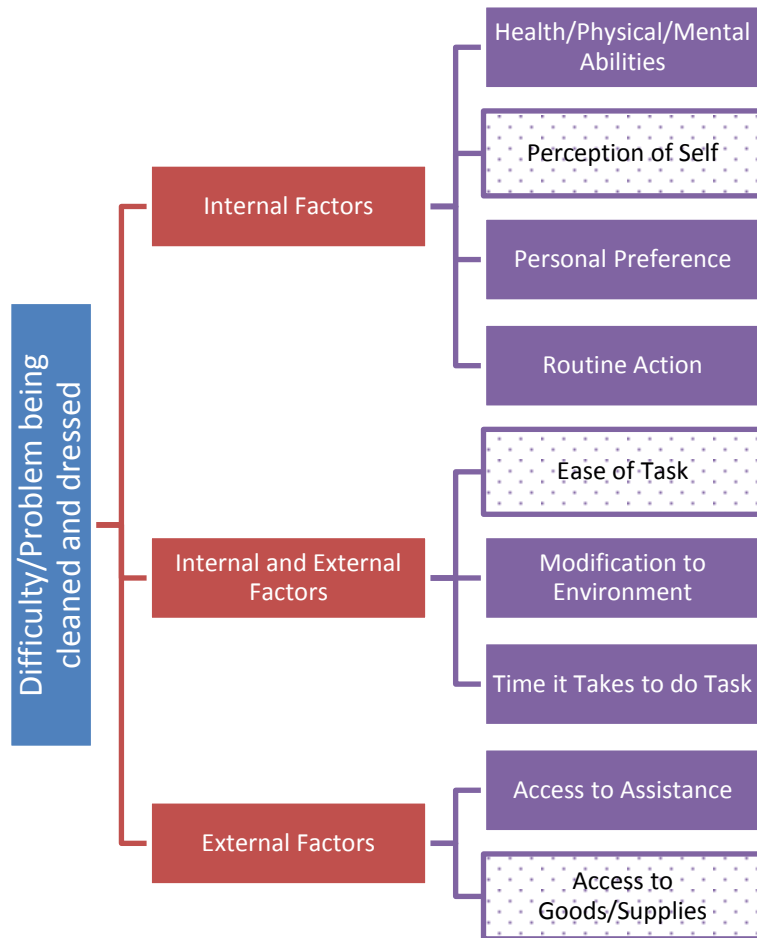
**Table 5: Version B Self-Care Capacity by Functioning**

Functioning: How much of a problem...?	Capacity: Do you have difficulty....			
	No Difficulty	Some	A Lot	Cannot Do
0 No Problem	<b>13</b>			
1				
2		<b>1</b>		
3				
4 Extreme Problem			<b>1</b>	

Beyond the way they simply answered the two questions, the schemas that respondents used—across both versions of the questionnaire—were nearly identical; almost every respondent across

both sub-samples thought about personal hygiene and physically dressing themselves. A few respondents also considered ancillary constructs—specifically housecleaning and clothing care (i.e. ironing and laundry), but they always did so in concert with either hygiene or dressing (with the exception of one respondent, who only thought about housecleaning and laundry). Respondents approached the capacity question by considering the effects of internal and external factors on their proclivity to be clean and dressed. When determining if they had ‘difficulty,’ some respondents thought about what they could or wanted to do—internal factors—while others thought about the limitations (or lack thereof) that their environment imposed on them—external factors. Some other respondents explicitly considered both internal and external factors, considering how for instance the length of time it takes them to clean or dress was dependent on their personal abilities or desires interacting with their social or physical environment.

**Figure 1: Self-Care Capacity and Functioning Response Schema**



Respondents answered the self-care functioning question in a very similar way. While there are a few more patterns of interpretations—with respondents giving more emphasis on external factors, such as access to cleaning supplies, soap, and water—the basic framework of the scheme is congruent. The figure above shows the general schema respondents used to answer both

questions. The factors that are not filled solid in the figure emerged only in the functioning questions.

Consistency across the two questions was evident not only at the sample level, but at the respondent level as well, that is, respondents tended to employ the same patterns of interpretation when answering the functioning question as they did the capacity question.

For instance, one respondent who received the Version B questionnaire considered access to (and the potential use of) an aide when answering the capacity and the functioning questions. Explaining his ‘no difficulty’ answer to the capacity question, the respondent noted that he was thinking that:

It means that I can do it myself. Nobody comes to help me with anything...I was thinking of somebody coming in and assisting me. I’m a very independent person.

Likewise, when answering the functioning question, this respondent explained his ‘no problem’ answer by saying that he did not have a problem because a problem meant that:

...you need assistance in and out of the shower and getting your clothes, putting on the right clothes for the weather.

Another respondent who answered ‘a lot of difficulty’ to the capacity question and ‘extreme problem’ in the functioning question conceptualized both her ‘difficulty’ and ‘problem’ to be functions of the time it takes her to perform her self-care tasks. In both questions, she also thought about the assistance she receives from her psychiatric aide who visits her a few times a week.

There is some variation to this trend. While most respondents who considered internal factors (such as their health and physical or mental abilities) in the capacity question continued to only focus on these internal factors while answering the functioning question, a number did include external or environmental factors in their response to the functioning question. For instance, one respondent focused only on her physical ability while answering the capacity question—saying “As far as physical capacity, I don’t have difficulty when I’m doing those things...[like] flexibility problems.” However, when answering the functioning self-care question, she instead considered her environment and access to goods and services: “I have access to everything to be clean and dressed well enough. It’s not like I have to iron my clothes every day.”

A few respondents did consider assistive devices and modifications (including the assistance of aides) when answering *both* the capacity and functioning question. For example, one respondent who received Version B explicitly mentioned the modifications made to his house when explaining his ‘no difficulty’ answer to the capacity question:

Can I put on shirts, undergarments, shoes...the answer is yes. I dressed myself today; I showered today. We have made adjustment in our home for me to do things safely. Out bathroom is equipped with grab bars. I have a plastic shower seat that I use. So we’ve made adjustment as needed for me to take care of myself.

This gentleman went on to use the same reasoning while answering the functioning question later in the questionnaire, adding that his Velcro shoes help him get dressed.

Overall, the respondents understood and approached the two questions in very similar manners and answered them in almost identical ways. Perhaps the best illustration of this congruence is how one respondent who received Version A explained why he answered 'no problem' in the functioning question by using the answer category from the capacity question:

[It's not a problem because] I assume it meant getting up, showering, dressing myself. I do that...It's not a difficulty.

## PAIN

### Capacity:

In the past 3 months, how often did you have pain? Would you say...

- Never
- Some Days
- Most Days
- Everyday

Thinking about the last time you had pain, how much pain did you have? Would you say...

- A little
- A lot
- Somewhere in between

### Functioning:

Using the scale on show card X, how much of a problem is having pain for you?

No Problem					Extreme Problem
0	1	2	3	4	

Two survey questions used together serve as the capacity measure for pain. The rationale for the use of two questions instead of one question is to simplify the cognitive processes required by respondents to construct an answer. Unlike the other domains, pain is a particularly complex phenomenon with a myriad of aspects (e.g. characterizations of pain, variability, the role of medication, pain threshold and interference with daily activities). Breaking the measure into two critical dimensions—pain frequency and pain intensity—allows the respondent to focus on specific aspects, thereby improving their ability to provide more accurate responses. The response process was also simplified by stipulating a time frame and a specific episode to consider. In analyzing the resulting survey data, responses from the two questions would be combined so that respondents can be placed on a pain continuum which reflects a broader portrayal of pain experience. Respondents, for example, reporting ‘a lot’ of pain ‘every day’ would be characterized as having severe pain while, at the other end of the continuum, those experiencing ‘little’ pain on ‘some days’ would be characterized as having minor pain.

The tables below show how respondents answered the two capacity questions. Table 6 presents respondents’ answers from Version A—the version in which respondents first received the environment section followed by the functioning section and then the capacity section. Table 7 presents respondents’ answers from Version B—the version in which respondents first received the health conditions section followed by the capacity section and then the functioning section.

**Table 6. Capacity: Frequency by Intensity—Version A**

Thinking about the last time you had pain, how much pain did you have?	In the past 3 months, how often did you have pain?				
		Never	Some Days	Most Days	Every Day
	(Skipped)	4			
	A Little		3		1
	In Between		2		1
A Lot					

**Table 7. Capacity: Frequency by Pain—Version B**

Thinking about the last time you had pain, how much pain did you have?	In the past 3 months, how often did you have pain?				
		Never	Some Days	Most Days	Every Day
	(Skipped)	2			
	A Little		5	1	1
	In Between		3	1	1
A Lot		1			

Although respondents were asked to consider only frequency and intensity, respondents considered a range of dimensions pertaining to their pain experiences. This is consistent with previous cognitive interviewing studies which examined the pain capacity questions. The dimensions respondents considered include 1) the cause of their pain, 2) the specific sensation of the feeling, 3) the variability of their pain, 4) the longevity of the pain-causing condition, 5) their use of medication, and 6) the amount of disruption to their daily activities. The causes that respondents cited included chronic conditions, injuries and sickness. In forming their answer, respondents considered these various dimensions to formulate an interpretation as to what constituted ‘pain,’ helping them to determine what types of experiences to count and not to count. Importantly, these two questions, although asking about two specific dimensions, actually incorporate numerous dimensions that are relevant to and portray respondents’ pain experiences. Regardless of the order (whether or not respondents received Version A or Version B), the questions performed similarly in terms of cause and characteristics considered; they did not appear to be impacted by context effects.

To compare the performance of the capacity questions to the performance of the functioning question, single continuum variables from the cross tabulations of frequency and intensity were

created. The generated continuum variable consists of 5 categories<sup>1</sup> where respondents reporting ‘never’ are assigned the value=0 (no pain) and those with ‘a lot’ of pain ‘everyday’ are assigned the value=4 (extreme pain). Table 8 illustrates how individual cells were assigned.

**Table 8. Capacity Continuum Categories**

Thinking about the last time you had pain, how much pain did you have?	In the past 3 months, how often did you have pain?					
		Never	Some Days	Most Days	Every Day	
	(Skipped)	Continuum=0				
	A Little		Continuum=1	Continuum=2	Continuum=2	
	In Between		Continuum=2	Continuum=3	Continuum=3	
	A Lot		Continuum=3	Continuum=4	Continuum=4	

Table 9 presents the number of respondents within each of the continuum categories for both versions of the questionnaire. As indicated by Table 9 as well as the previous tables, respondents reported pain experiences along the continuum, although no respondent reported what would be considered extreme pain.

**Table 9. Capacity: Pain Experience Continuum**

	Version A	Version B
0	4	2
1	4	5
2	2	5
3	1	3
4	0	0

Tables 10 and 11 compare respondents’ answers from the capacity questions to the functioning question. Table 10 presents responses from Version A of the questionnaire in which the functioning question is preceded by the environment questions (without the health condition context). Table 11 presents responses from Version B of the questionnaire which begins with the health condition and capacity questions. Results of these comparisons reveal that question ordering impacts the relationships between the measures.

<sup>1</sup> Five categories were used specifically for this study so that a one-to-one comparison could be made with the functioning question. The Washington Group does not stipulate that five categories should be used.



**Table 10. Version A Capacity Pain Continuum by Pain Functioning**

Functioning: How much of a problem...	Capacity Pain Continuum: Frequency and Intensity				
	0	1	2	3	4
0 No Problem	2	1	1		
1	1	1			
2		1			
3			1	1	
4 Extreme	1	1			

**Table 11. Version B Capacity Pain Continuum by Pain Functioning**

Functioning: How much of a problem...	Capacity Pain Continuum: Frequency and Intensity				
	0	1	2	3	4
0 No Problem	2	3	4		
1		2	1		
2				1	
3				2	
4 Extreme					

As can be observed in the two tables, respondents' answers to the functioning and capacity questions are much more consistent in the version of the questionnaire that begins with the health condition section. In this version (Table 11/Version B), respondents answers align with relative and reasonable consistency. In the other version (Table 10/Version A), there are concerning relationships. For example, it does not make sense that a respondent reports little or no pain, but then reports having an extreme problem with pain. It is also curious that respondents report no problems with pain, yet at the same time indicate having pain. Examining these inconsistencies indicates how and why the capacity and functioning measures perform differently.

In many cases, respondents considered the same dimensions of pain when answering the functioning question as they did when answering the capacity questions. This explains the relative consistency in Version B, and indicates that (at least for those cases) the two measures capture the same construct. Inconsistencies, however, indicate differences in the performance of the two questions, and indicate that (for those cases) the questions are not capturing the same construct. Three causes for the inconsistencies are identified and explained below:

Inconsistent Consideration of Impact. Respondents often described whether or not their pain impacted their activities; consideration of impact was typically cited in the rationale respondents provided when explaining their answers for both capacity and functioning questions. In a couple cases, however, respondents considered impact when answering the functioning question, but did not consider impact when answering the capacity questions. These cases occurred in both versions of the questionnaire, with respondents reporting no problem to the functioning question—because it didn't hinder their activities—and reporting 'a little' or 'some' pain when asked the capacity question. Of note, this difference occurred only in a couple of cases and, for the most part, respondents considered the same phenomena for both questions.

Inconsistent Inclusion of Types of Pain. In a couple other cases where respondents answered 'no problem' to the functioning question but reported 'a little' or 'some' pain in the capacity question, respondents considered fewer types of pain in the functioning question. This was primarily due to the fact that the capacity question asks respondents to consider the past three months. In thinking specifically about this time period, these respondents were able to recall episodes of pain that they did not recall when asked the functioning question. For example, one respondent considered only pain in his hip when answering the functioning question, but when asked the capacity question he remembered that his problem with kidney stones had flared up.

Interpretation of 'Problem'. The most extreme inconsistencies in Version A are related to some respondents' interpretation of 'problem,' interpreting the question as asking: How much do you like pain? These respondents had little to no experiences of pain to report (hence scoring 0 or 1 on the capacity continuum), but reporting that they had a '3' or '4 extreme problem' with pain. As one respondent explains:

Well I don't have pain. When a pain occurs it's an extreme problem a number 4. And the fear of... I've had something occur once in a while. It's not a part of my life but it's a part of my fears.

Another respondent who answered 'extreme' to the functioning question explained that she hates pain so much that she often takes "Alka-Seltzer" to avoid a potential stomach ache. She said that she always keeps the medicine in her purse (even showed the interviewer the bottle), and stated that when she was eating her lunch at a restaurant prior to the interview she "popped two...I just love them...."

Finally, another respondent stated that he didn't have pain (answering 'never' to the capacity question), but also felt that he needed to answer '1' to the functioning question. He explained:

No I don't have a problem with that. I'm going to put 1. You just never know... I may go out and hit my arm on something. I might stub my toe. You just never know when pain is going to pop up. Anything might occur.

It is important to note that this type of interpretation did not occur in Version B where health conditions provided a context for understanding the functioning question as 'having pain.'

In sum, for Version B of the questionnaire, where health conditions provided a context for the functioning question, the capacity and functioning questions captured essentially the same constructs. For a few respondents, this was not the case; respondents may have considered different types of pain or considered impact when forming their answer to one of the questions but not the other. For Version A of the questionnaire, where the health condition section does not provide a context, an additional interpretation of the functioning question was evidenced. This interpretation involved respondents understanding the question as ‘how much do you like pain?’ and ‘do you think you will ever experience pain?’

## SHORTNESS OF BREATH

Capacity:  
 How much difficulty do you have with shortness of breath because of your health?  
 No Difficulty  
 Some Difficulty  
 A lot of Difficulty  
 Cannot Do at All

Functioning:  
 Using show card X, how much of a problem do you have with shortness of breath?  
 No Problem Extreme Problem  
 0 1 2 3 4

Respondents' answers to the two questions about shortness of breath were again highly consistent with one another, as seen below in Tables 12 and 13, across both questionnaire Versions 1 and 2 (respectively).<sup>2</sup>

**Table 12. Version A Shortness of Breath Capacity by Functioning**

Functioning: How much of a problem...?	Capacity: Do you have difficulty....			
	No Difficulty	Some	A Lot	Cannot Do
0 No Problem	6	1		
1	2	1		
2		1		
3				
4 Extreme Problem				

**Table 13. Version B Shortness of Breath Capacity by Functioning**

Functioning: How much of a problem...?	Capacity: Do you have difficulty....			
	No Difficulty	Some	A Lot	Cannot Do
0 No Problem	10			
1		2		
2		2		
3		1		
4 Extreme Problem				

Across both of the questionnaires, there appears to be a basic agreement between the response to the functioning question and the response to the capacity question. Individuals who do not follow this trend help illustrate the framing effects between the two different versions. For instance, two respondents in Table 12 (Version A) answered '1' to the problem question, but 'no

<sup>2</sup> Unlike other capacity questions in this questionnaire, the capacity shortness of breath question is not a Washington Group question.

difficulty' to the capacity question. When answering the functioning question both of these respondents explained that there is always something that could make them out of breath, such as exercise or climbing a number of stairs, and thus did not believe that the negative answer category—'no problem'—could be accurate. However, after receiving the framing provided by the health condition questions, when these two answered the capacity question they considered only whether or not they had a medical or health issue that impacted their breathing.

The respondent in Table 12 who answered 'no problem' to the functioning question and 'some difficulty' to the capacity question appeared to interpret the capacity question not about breathing at all, but rather about his general health—he focused on the fact that he was close to malnourished and had bowel issues. This clear misinterpretation may have more to do with the fact that the respondent focused his attention on the final phrase in the capacity question text ('...because of your health') than the framing effect.

The clearest example of a context effect in the Version B questionnaire is found with the respondent in Table 13 who answered 'some difficulty' when receiving the capacity question and then '3' on the functioning question's problem scale. When explaining her answer to the capacity question, the respondent mentioned that because she was obese, actions such as climbing into her boyfriend's SUV or even walking from the living room to her kitchen would leave her out of breath. She was not thinking about the impact of this shortness of breath on her life; rather she was answering the question solely on the fact that she did indeed have difficulty breathing from time-to-time. However, after next completing the environment section, this respondent answered '3' to the functioning question and explained that she was thinking about the impact her breathing issues had on her life:

When I exert myself...I just have to catch my breath. Just change my schedule to catch my breath.

Across both questions, and both questionnaires, the respondents employed one of two pathways to arrive at their response: a Heuristic Pathway and a Judgment Pathway.

The Heuristic Pathway is the simpler of the two, and within it a respondent simply makes a snap judgment about the question, normally thinking strictly about a diagnosis of a breathing-related disease or a health issue that would cause breathing problems. If a respondent had an issue or diagnosis, they would report using an affirmative category. If they did not have an issue or diagnosis they would report using either 'no difficulty' or 'no problem,' depending on the question. None of the respondents who employed this pathway considered the impact of shortness of breath or breathing issues on their life; rather they all simply reported on a presence or absence of breathing problems (even in the functioning question).

The Judgment Pathway required the respondents to first determine what construct or constructs upon which they would base their judgment. There was a large amount of variation of the interpretation of this construct in both sub-samples. The following table shows the various interpretations of the construct for both the capacity and the functioning question, respectively.

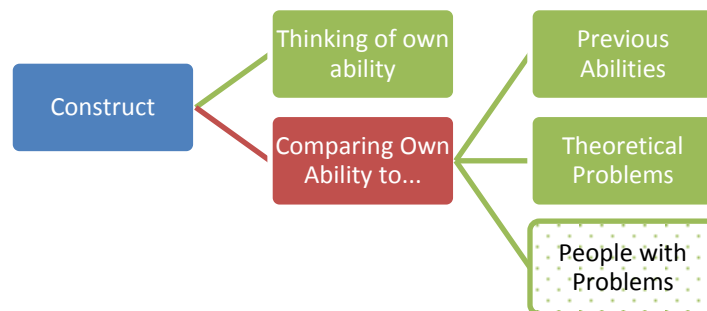
**Table 14. Constructs Present in Capacity/Functioning, Version A/Version B**

	Present in Capacity Question		Present in Functioning Question	
	Version A	Version B	Version A	Version B
Exercise		•	•	•
Not Exercise	•	•	•	•
Walking	•	•	•	•
Climbing Stairs	•	•	•	•
Breathing	•	•	•	•
Eating		•		•
Carrying Things				•
Exerting Self				•
High Altitude			•	
Hiking			•	
Household Tasks			•	•
Lying Down			•	

As has been seen in other questions, the functioning question clearly has a wider interpretation than the capacity question. However, there is not much noticeable difference between the amount of variation observed in the respondents' interpretations of the Version A's construct as compared to Version B.

Where there is a noticeable context effect between the two questionnaires is in the next step of the response pathway, where the respondents had to judge their breathing based on whatever activity they were thinking about. There were four different patterns of judgment the respondents employed, shown in the figure below, three of which were observed in both the capacity and functioning questions. In three of these patterns the respondent compares his or her abilities against someone else or their previous abilities, and in one the respondent only considers his or her own abilities. As again indicated by the non-solid fill in the figure below, respondents only compared themselves to people they personally knew with problems in the functioning question, and did not in the capacity question.

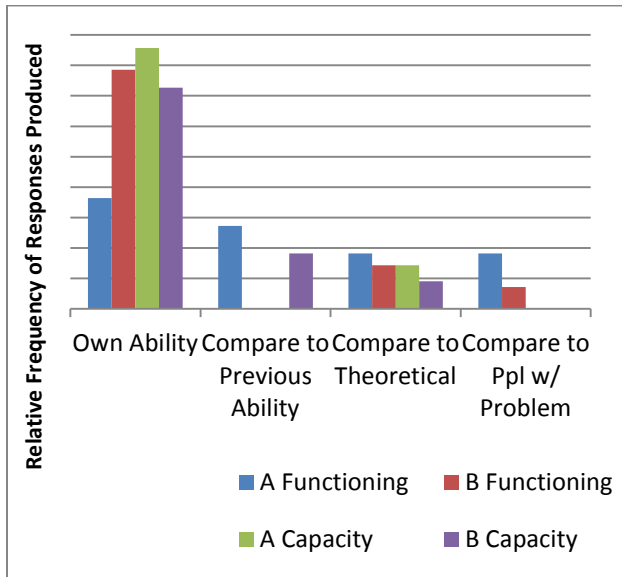
**Figure 2: Breathing Capacity and Functioning Judgment Schema**



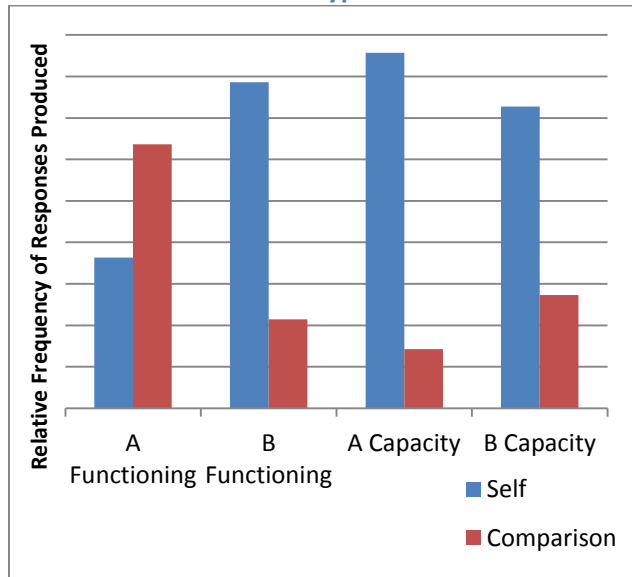
That more patterns of interpretation emerged during the functioning question follows the wider interpretation of the constructs mentioned previously—it is a far less focused question than the capacity one. This trend holds across both Versions A and B. Interestingly however, the tendency of the respondents to employ these patterns of judgment does show a distinct context

effect. Respondents who received Version A were far less prone to only consider their own abilities when answering the function question than they were when answering the Version A capacity question, or than respondents who received Version B were when answering either question.

**Chart 1: Judgment Frequency Version and Type**



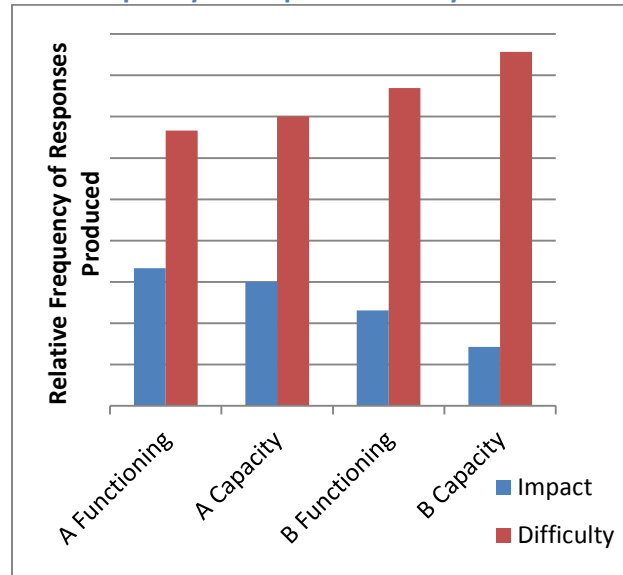
**Chart 2: Collapsed Judgment Frequency Version and Type**



This difference becomes even more pronounced when the three ‘comparison’ patterns of judgment are collapsed, as seen in the second chart above. The difference between the Version A functioning question and the other three conditions is, of course, the fact that it alone is not framed by the Health Condition section.

The final decision point for both the shortness of breath capacity and functioning questions is the response based on the individual pattern of judgment. Across both questions, respondents formulated their answer to the survey’s answer category in one of two ways. They either reported based on a presence or absence of problems—an ‘in the skin’ difficulty—or they reported based on whether or not a breathing issue impacted their life. It would be expected that questions framed by the Health Conditions section is more likely to produce responses that take health and physical and mental abilities into account. The data suggest that this is indeed the case, with Version B’s capacity question producing the highest relative amount of difficulty-based responses, and Version A’s functioning producing the lowest relative number of difficulty-based responses:

Chart 3: Frequency of Response Basis by Version and Type



In sum, as seen previously in the Pain question set, Version B and its framing of *both* the capacity and functioning questions by the Health Conditions Section led the respondent to more clearly distinguish their responses between physical and/or mental capacity and a problem's impact on their life. This differentiation does not stem from the interpretation of the activity the respondents considered, but rather from how they judge their abilities to perform those activities. In Version A, however, this distinction between the two question types was not as clear, and respondents tended to interpret and respond to them in exactly the same way.



## DEPRESSION

### Capacity:

How often do you feel depressed? Would you say...

Never

Some Days

Most Days

Everyday

Thinking about the last time you felt depressed, how depressed did you feel? Would you say...

A little

A lot

Somewhere in between

### Functioning:

Using the scale on show card X, how much of a problem do you have with feeling sad, low or depressed?

No Problem

0

1

2

3

Extreme Problem

4

Like the capacity measure for pain, two survey questions used together serve as the capacity measure for depression. As is the rationale for pain, using two instead of one question simplifies the cognitive processes required by respondents to construct answers. Breaking the measure into two critical dimensions—frequency and intensity—allows the respondent to focus on specific dimensions. In analyzing resulting survey data, responses from the two questions would be combined so that respondents can be placed on a depression continuum. Like the pain measure, respondents reporting ‘a lot’ of depression ‘everyday’ would be characterized as having more severe depression while, at the other end of the continuum, those experiencing a ‘little’ depression on ‘some days’ would be characterized as having less serious depression.

The tables below show how respondents answered the two capacity questions in this cognitive interviewing study. Table 15 presents respondents’ answers from Version A—the version in which respondents first received the environment section followed by the functioning section and then the capacity section. Table 16 presents respondents’ answers from Version B—the version in which respondents first received the health conditions section followed by the capacity section and then the functioning section.

**Table 15. Capacity: Frequency by Intensity—Version A**

Thinking about the last time you felt depressed, how depressed did you feel	How often do you feel depressed?			
	Never	Some Days	Most Days	Every Day
(Skipped)	2			
A Little		5		
In Between		1	1	1
A Lot		1		

**Table 16. Capacity: Frequency by Intensity—Version B**

Thinking about the last time you felt depressed, how depressed did you feel	How often do you feel depressed?			
	Never	Some Days	Most Days	Every Day
(Skipped)	7			
A Little		3		
In Between		2	2	
A Lot				1

In forming their answer to the frequency question, respondents exclusively considered the regularity of ‘feeling of sad’ episodes. Many respondents conceptualized this, as well as the intensity question, as a mental health question (regardless of version) and so reported the episodes of sadness related to such a condition. While some respondents were not officially diagnosed with depression, some suspected that they might have the condition and included those occurrences. Other respondents interpreted ‘feeling depressed’ more broadly, stating that they did not have a mental health condition, but that they felt depressed because of 1) job loss, 2) illness, or 3) family problems. In these cases, respondents included these types of episodes because feelings related to these situations fell within their interpretation of ‘feeling depressed.’ In a few cases, respondents reported having feelings of depression but also explained that this was normal and that everyone has these feelings. There was little data to explain how respondents formed their answer to the intensity question. However, previous studies indicate that respondents form level of intensity by considering whether they are able to ‘shake off the feelings’ by getting their mind on other things or whether their daily lives are hindered by the feelings.

To compare the performance of the capacity questions to the performance of the functioning question, single continuum variables from the cross tabulations of frequency and intensity were created for both versions of the questionnaire. The generated continuum variable consists of 5

categories<sup>3</sup> where respondents reporting ‘never’ are assigned the value=0 (no depression) and those with ‘a lot’ of depression ‘everyday’ are assigned the value=4 (extreme depression). Table 18 illustrates how individual cells were assigned.

**Table 17. Capacity Continuum Categories**

Thinking about the last time you felt depressed, how depressed did you feel	How often do you feel depressed?				
		Never	Some Days	Most Days	Every Day
	(Skipped)	Continuum=0			
	A Little		Continuum=1	Continuum=2	Continuum=2
	In Between		Continuum=2	Continuum=3	Continuum=3
A Lot		Continuum=3	Continuum=4	Continuum=4	

Table 18 presents the number of respondents within each of the continuum categories for both versions of the questionnaire. As indicated by Table 18 as well as the previous tables, respondents reported depression along the continuum with one respondent reporting extreme depression in Version B.

**Table 18. Capacity: Depression Experience Continuum**

	Version A	Version B
0	2	7
1	5	3
2	1	2
3	3	2
4	0	1

Tables 19 and 20 compare respondents’ answers to the capacity questions to those of the functioning question. Table 19 presents responses from Version A of the questionnaire in which the functioning question is preceded by the environment questions (without the health condition context). Table 20 presents responses from Version B of the questionnaire which begins with the health condition and capacity questions.

<sup>3</sup> Five categories were used specifically for this study so that a one-to-one comparison could be made with the functioning question. The Washington Group does not stipulate that five categories should be used.

**Table 19. Version A Capacity Depression Continuum by Depression Functioning**

Functioning: How much of a problem...	Capacity Depression Continuum: Frequency and Intensity				
	0	1	2	3	4
0 No Problem	2				
1		3	1		
2		2			
3		1		2	
4 Extreme				1	

**Table 20. Version B Capacity Depression Continuum by Depression Functioning**

Functioning: How much of a problem...	Capacity Depression Continuum: Frequency and Intensity				
	0	1	2	3	4
0 No Problem	6				
1		1			
2	1	1	2	1	
3					
4 Extreme				1	

As seen in Table 19 and 20, respondents’ answers between the capacity and functioning questions are primarily consistent;<sup>4</sup> all but one of the cases (in Version B) exactly aligned or were off by only one cell. Those respondents who did not squarely align explained their answers to both questions by citing the same issues.<sup>5</sup> For example the woman who was assigned ‘2’ for the capacity questions and reported ‘3’ for the functioning question, explained in both of the questions that her depression was because she had lost her job. In a couple of these cases, respondents waived when answering the functioning questions (e.g. “it could be a 2 or a 3”) indicating that a difference by one cell is a relatively negligible difference. Not surprisingly, many respondents noted that these questions were repetitive. For example, one respondent stated: “That’s the same as the other... You’re repeating the question and asking if they’re the same. Trying to trick me to see.” Examination of the various phenomena that respondents considered across both the functioning and capacity questions indicate that questions are, in fact, capturing the same constructs: the presence and extent of feelings of sadness due to 1) a mental health condition, 2) job loss, 3) illness, 4) family problems, and 5) normal sadness.

In sum, the capacity and the functioning questions capture the same phenomena: the presence and extent of experiences of sadness due to several causes, but primarily a mental health

<sup>4</sup> The respondent in Version B who answered ‘a lot’ and ‘everyday’ to the capacity questions, and who was given the value=4 on the continuum spectrum, does not appear in this table because she was not administered the functioning question.

<sup>5</sup> There is no data for the most inconsistent case (Version B; functioning=2/capacity=0) so no explanation is provided.

condition. The ordering of the sections appeared to make no difference in the interpretations of either type of question.

## COGNITION

### Capacity:

Do you have difficulty remembering or concentrating? Would you say...

No Difficulty

Some Difficulty

A lot of Difficulty

Cannot Do at All

Thinking about the last time you felt depressed, how depressed did you feel? Would you say...

A little

A lot

Somewhere in between

### Functioning:

Using the scale on show card X, how much of a problem is remembering to do the important things in your day to day life?

No Problem

0

1

2

3

Extreme Problem

4

The cognition questions—functioning asking about remembering important things, and capacity asking about memory and concentration—are similar to many of the other domains in terms of their response schemas and context effects. By comparing the respondents' answers to the functioning and capacity questions, it is clear that respondents generally answered the questions in the same way—indicating again that they interpret them as similar, if not congruent, questions:

**Table 21. Version A: Remembering/Concentrating Capacity by Remembering Functioning**

Functioning: How much of a problem...?	Capacity: Do you have difficulty....			
	No Difficulty	Some	A Lot	Cannot Do
0 No Problem	2	2	1	
1	1	1		
2		2		
3			2	
4 Extreme Problem				

**Table 22. Version B: Remembering/Concentrating Capacity by Remembering Functioning**

Functioning: How much of a problem...?	Capacity: Do you have difficulty....			
	No Difficulty	Some	A Lot	Cannot Do
0 No Problem	<b>8</b>	<b>2</b>		
1		<b>1</b>		
2		<b>1</b>		
3		<b>1</b>		
4 Extreme Problem				

The few exceptions to this pattern are instructive. For instance, across both Tables 21 and 22 above, the four respondents who answered ‘some difficulty’ to the capacity question and ‘no problem’ to the functioning question were considering different core constructs across the questions. The question text in the capacity question asks about both memory and concentration, and these respondents focused on their ability to concentrate or remember. For instance, one respondent who received the Version B questionnaire explained her ‘some difficulty’ answer by saying:

Remembering I have some difficulty. Concentrating I can do...Concentrating is really focusing and paying sharp attention so I get something done or do remember. Remembering is... remembering names if I concentrate I can remember them better. Just doing things without thinking... Or I can say what on earth did I do on Sunday and then it comes back. I think that’s just my stage in life...

The functioning question, on the other hand asks about problems “remembering the important things in your life.” After considering just her abilities in the capacity question, this respondent went on to answer ‘no problem’ to the functioning question, explaining that she had no problem remember to do the things she felt were important, such as sending emails and remembering to go to her and her husband’s appointments. This difference in core construct was noticeable in other cases as well. For example, the respondent in Table 22 who answered ‘1’ on the problem scale, but ‘no difficulty’ to the capacity question explained that he was thinking about once forgetting to lock his house (which led to a burglary) when answering the functioning question. However, he understood the capacity question to be asking whether or not he had a health-related memory or concentrating issue. As he did not, he answered using the negative answer category.

The schemas behind these survey responses are very similar to the ones seen previously with the breathing questions as well. Respondents either answered the question immediately based on a heuristic, or entered a judgment pathway where they conceptualized an action and judged their ability to do that action. Those who followed the judgment pathway again first had to decide what specific tasks or items they were considering when thinking about memory or concentration. As seen throughout the questionnaire, the functioning question had a much wider set of construct interpretations:

**Table 23. Constructs Present in Capacity/Functioning, Version A/Version B**

	Present in Functioning Question		Present in Capacity Question	
	Version A	Version B	Version A	Version B
<b>Appointments</b>	•	•		
<b>Bills</b>	•	•		
<b>Car Maintenance</b>	•	•		
<b>Communicating w/ Others</b>	•	•		
<b>HH Tasks</b>		•		•
<b>Important Dates</b>		•		•
<b>Lists</b>		•	•	
<b>Locking Door</b>	•			
<b>Names</b>				•
<b>Recent Conversations</b>			•	•
<b>Take Medication</b>	•			•
<b>Work</b>	•	•	•	•

Much like seen previously in the breathing questions, there are a few patterns of judgment the respondents employed to determine whether or not they had problems with memory or difficulty with memory or concentration. In addition to the heuristic pathway, respondents based their judgment on:

- Considering their normal actions
- Considering their motivation
- Considering their health or age

**Chart 4: Judgment Frequency Version and Type**

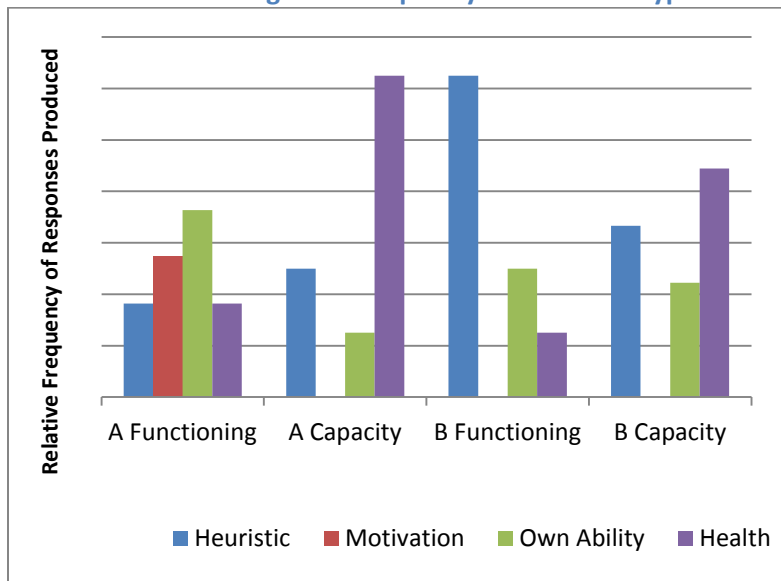
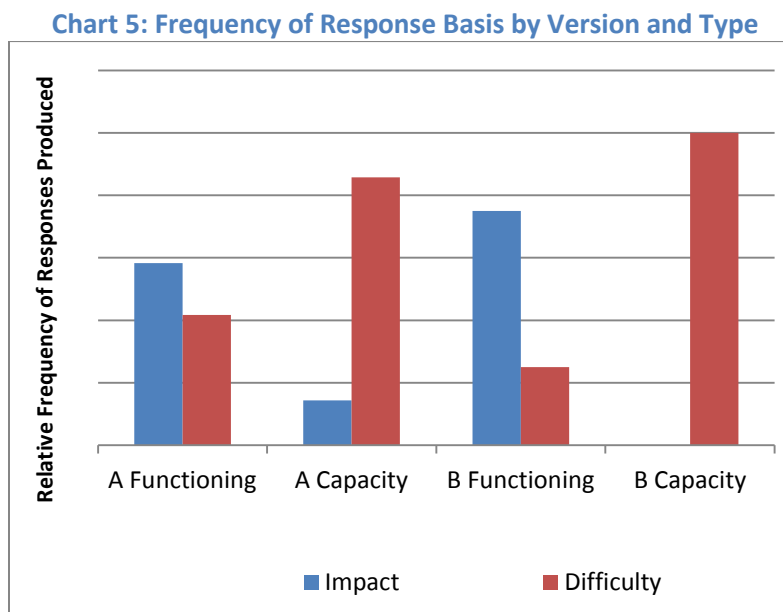




Chart 4 above shows the relative frequency of these three patterns of judgment (along with the relative frequency of the heuristic pathway):

The lack of framing by either the health condition questions or (in the case of Version B’s functioning question, the capacity questions themselves) leads to a much broader set of patterns of judgment for Version A’s functioning questions as compared to the other three test conditions. Finally, after the respondents committed to a pattern of judgment, they then had to formulate their answer to the survey question based on this pattern. Like what was observed in the breathing questions previously, the respondents arrived at this answer in one of two ways: by thinking about their ‘in-the-skin’ difficulty or by considering the impact a cognition problem has or could have on their life.



The Chart 4 above illustrates a clear differentiation between the functioning questions—where more people consider the impact on their lives—and the capacity questions—where nearly all the respondents consider their in-the-skin physical and mental difficulties.

Overall, the power of the Health Condition Section’s framing was clear again, with the one test condition (Version A, function question) producing a mix of responses through a variety of response patterns. The two questions also captured distinct constructs, with respondents generally thinking more about in-the-skin difficulties with the capacity question, and the potential or actual problems memory loss would have on their lives in the functioning question. Given that these questions’ face validity is different—with the capacity question exploring memory *and concentration*, while the functioning explores just a sub-set of memory (i.e. important things—the ability to combine or compare them analytically in their current form should be explored in much more detail.

## HOUSEHOLD TASKS

### Capacity:

How much difficulty do you have doing household tasks because of your health? Would you say...

No Difficulty

Some Difficulty

A lot of Difficulty

Cannot Do at All

### Functioning:

Using the scale on show card X, how much of a problem do you have with getting your household tasks done?

No Problem

0

1

2

3

Extreme Problem

4

The tables below show how respondents answered both the capacity and functioning household task questions.<sup>6</sup> Table 24 presents respondents' answers from Version A—the version in which respondents first received the environment section followed by the functioning questions and then the capacity questions. Table 25 presents respondents' answers from Version B—the version in which respondents first received the health conditions section followed by the capacity questions and then the functioning questions.

**Table 24. Version A: Household Capacity by Household Functioning**

Functioning: How much of a problem...	Capacity: Do you have difficulty....			
	No Difficulty	Some	A lot	Cannot Do
0 No Problem	6			
1	1	2		
2		1		
3	1	1		
4 Extreme				

<sup>6</sup> Unlike other capacity questions in this questionnaire, the capacity household task question is not a Washington Group question.

**Table 25. Version A: Household Capacity by Household Functioning**

Functioning: How much of a problem...	Capacity: Do you have difficulty....			
	No Difficulty	Some	A lot	Cannot Do
0 No Problem	7	2	1	
1	1	1		
2				
3	1			
4 Extreme				

As seen in both tables, there is considerable overlap between the two questions. Indeed, many respondents saw the two questions as being repetitive; more than a few respondents noted that the questions were asking about the exact same thing and referred to their previous answer when responding to second the question.

There are, however, some curious inconsistencies observed in both tables. For example, it does not make sense that respondents would report ‘no difficulty’ when answering the capacity question, but also report having a problem when answering the functioning question. It is also noteworthy that three respondents reported ‘some’ or ‘a lot’ or difficulty, but then reported having ‘no problem.’ Examining both the consistencies and inconsistencies indicates how and why the capacity and functioning measures perform differently.

For both versions of the questionnaire, respondents conceptualized ‘household tasks’ for the capacity as well as the functioning question similarly. Those tasks included: cooking, cleaning, laundry, house repairs and lawn work. All of these tasks involved physical movement; no one considered intellectual tasks such as paying bills. However, the reasons that respondents cited for their problem/difficulty differed. For the capacity question, almost all respondents indicated that either a physical or mental disability impacted their ability to perform household tasks (e.g., being unable to mop a floor because of arthritis or because of severe depression). One respondent, however, gave the reason that she was too busy, and another stated that he does ‘not see the need,’ particularly because his wife does almost all of the work. Both of these respondents interpreted the question as asking specifically about the task of cleaning and not such things as home repair or lawn work.

For the functioning questions, while some respondents did explain their problem as being related to a disability, others cited 1) laziness, 2) not liking to do housework and 3) being too busy. In two cases, respondents explained that someone may have a problem doing household tasks if they did not have cleaning supplies. The fact that some respondents considered different reasons for not doing household tasks when answering the two questions explains some of the inconsistent responses. It is the primary reason why respondents reported having no difficulty with household tasks but then reported having a problem. Question ordering appeared to have a relatively large impact on the causes respondents cited for having problems with housework. While one-third of respondents receiving Version A (with the health condition section framing the context) cited non-disability reasons, a full two-thirds of respondents cited non-disability

reasons when asked Version B of the questionnaire (when the functioning section preceded the health condition section.)

The final reason which explains inconsistent responses pertains to the use of an aide. In Version B of the questionnaire, all three respondents who had an aide did not include the help of their aide when answering the capacity question, but did include the help of their aide when answering the functioning question. For example, one woman who reported having some difficulty cleaning because she has difficulty bending and is afraid of falling, stated that she had ‘no problem’ with household tasks because “I am blessed with friends and neighbors.” In Version A, there was only one respondent who required the help of an aide for household tasks. For both questions, the respondent considered this help: she answered ‘no difficulty’ to the capacity question and ‘no problem’ to the functioning question.

In sum, for the most part, the capacity and functioning questions capture the same phenomena. Respondents’ answers to both questions are based on their understanding of ‘household task’ and the reason as to why they do not do the task. The ordering of sections did not appear to impact the capacity question; however, in Version A of the questionnaire, respondents were much more likely to consider non-disability causes. In regard to whether or not respondents considered the help of an aide, only 4 respondents in the entire study required the use of such help. Therefore, it is difficult to make definitive conclusions. However, in Version B of the questionnaire all respondents correctly considered the help of an aide; this was not true for Version A of the questionnaire.

## COMMUNITY PARTICIPATION

### Capacity:

Because of your health, how much difficulty do you have with joining community activities? Would you say...

No Difficulty

Some Difficulty

A lot of Difficulty

Cannot Do at All

### Functioning:

Using the scale on show card X, how much of a problem do you have with joining community activities...?

No Problem

0

1

2

3

Extreme Problem

4

By and large, respondents understood the community capacity question and the community functioning question as asking the exact same thing.<sup>7</sup> Tables 26 and 27 show the respondents' survey responses for each of the two questions, for the Version A and Version B questionnaire, respectively.

**Table 26. Version A: Community Capacity by Community Functioning**

Functioning: How much of a problem...?	Capacity: Do you have difficulty....			
	No Difficulty	Some	A Lot	Cannot Do
0 No Problem	<b>6</b>	<b>1</b>		
1	<b>1</b>	<b>2</b>		
2		<b>1</b>		
3		<b>2</b>		
4 Extreme Problem				

<sup>7</sup> Unlike other capacity questions in this questionnaire, the capacity community participation question is not a Washington Group question.

**Table 27: Version A: Community Capacity by Community Functioning**

Functioning: How much of a problem...?	Capacity: Do you have difficulty...			
	No Difficulty	Some	A Lot	Cannot Do
0 No Problem	<b>8</b>			
1	<b>1</b>			
2	<b>1</b>		<b>1</b>	
3			<b>1</b>	
4 Extreme Problem				

The two respondents whose survey responses conceptually varied between the functioning and capacity questions in Version A—the one who answered ‘no problem’ to the functioning question and ‘some difficulty’ to the capacity question and the one who answered in the opposite way—both employed similar logic when explaining. In both these two cases, the respondent understood the functioning question to be asking about whether or not they did in fact participate in community activities; while they both understood the capacity question to be asking whether or not they physically or mentally *could* participate.

In the two cases where respondents only answered ‘some difficulty’ to the capacity question after answering ‘4 extreme problem’ to the functioning question, the respondents both appeared to simply change their conceptualization of the scale from one question to another. In both cases, the respondents were thinking about how they did not enjoy or have motivation to participate in community activities in both the functioning and capacity question. So even though they were thinking about the exact same thing across the two questions, they changed their answer for no discernible reason.

In Version B, the only respondent whose survey responses differed between the capacity and the functioning questions was the one who answered ‘no difficulty’ to the capacity question and then later answered ‘1’ on the problem scale in the functioning question. Interestingly, she used the same logic to explain both of these answers—the fact that she usually did not *want* to go out—even though her survey responses are slightly divergent.

In fact, across both sub-samples, most respondents employed two basic patterns of judgment to determine their survey responses: they either thought about whether or not they did in fact participate in community activities, or whether or not they liked to (or were motivated to) participate in community activities. Basically, respondents understood both the capacity and functioning question to be asking: “Do you participate in community activities or not?” This inherent binary explains the lack of consistent noted above with the respondents who answered ‘some’ to the capacity question and ‘4’ to the problem question.

While throughout most of the domains presented in this report, the functioning questions tended to have a wider spread of interpretations around the core construct than the capacity questions did, this is not the case with the community participation questions. Rather, there was relatively no difference between either the different question types (or across the two questionnaire versions) in the variety of the types or community activities about which the respondents considered:

**Table 2: Constructs Present in Capacity/Functioning, Version A/Version B**

	Present in Functioning Question		Present in Capacity Question	
	Version A	Version B	Version A	Version B
<b>Active in Neighborhood/Town</b>	•	•	•	•
<b>Arts Events</b>	•	•	•	•
<b>Civil Organization</b>	•	•	•	•
<b>Community Center</b>	•	•		•
<b>Dances</b>	•	•		•
<b>Farmers Market</b>		•		•
<b>Festivals</b>	•	•	•	•
<b>Hang out with Friends</b>			•	•
<b>Horse Race</b>	•			
<b>Politics</b>	•		•	•
<b>Religious Organization</b>	•	•	•	•
<b>Volunteering</b>	•	•	•	•

This lack of divergence across the test conditions further indicates that the respondents did not perceive any difference between the capacity and functioning community participation questions. Furthermore, it does not appear that the additional health framing of Version B over Version A had much impact on how the respondents answered the community participation questions. This follows the idea that the respondents did not understand the capacity question to be any more health related than the functioning question in the first place.