Work Disability Functional Assessment Battery (WD-FAB) Data Collection

Final Data Summary and Final Report

Submitted to:

Social Security Administration

Office of Acquisition and Grants Division of Programs Contracts

1540 Robert M. Ball Building

6401 Security Blvd

Baltimore, Maryland 21235

Submitted by:

Westat

An Employee-Owned Research Corporation®

1600 Research Boulevard

Rockville, Maryland 20850-3129

(301) 251-1500

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Executive Summary

The objective of this study is to assess the feasibility of integrating the Work Disability Functional Assessment Battery (WD-FAB) into the Social Security Administration's medical Continuing Disability Review (CDR) process. The investigation is conducted through two surveys involving CDR beneficiaries. The first survey gathers general information and applies the WD-FAB tool. The second survey, conducted six months later, re-evaluates the same participants to detect any changes. The goal is to determine if integrating WD-FAB into the medical CDR process can provide insights into work disability assessment over time.

Survey 1 was conducted between July 2022 and January 2023 with 2,407 completes. The majority of Survey 1 respondents were female (59%), while 41 percent were male. Most Survey 1 respondents (86%) were over the age of 35, 44 percent were in the 35 – 54 age group, and 42 percent were 55 years old or order. Nearly one-third of Survey 1 respondents (32%) had a high school diploma as their highest level of education, while 24 percent had completed at least some college coursework. Over half of Survey 1 beneficiaries had a primary impairment that was physical (56%). Almost two-thirds (61%) of Survey 1 respondents received only SSI, 37 percent received only SSDI, and 3 percent received both SSI and SSDI. On average, Survey 1 respondents reported being on benefits for 4.4 years.

Data collection for Survey 2 took place between January and August 2023 with 1,604 completes. The majority of Survey 2 respondents were female (60%), over the age of 35 (89%), and White (68%) and not of Hispanic ethnicity (90%). Nearly one-third of Survey 2 respondents were never married (32%). One-third of Survey 2 respondents (33%) had a high school diploma as their highest level of education, while 25 percent had completed at least some college coursework.

In Survey 1, significant differences were found in WD-FAB domain scores among age groups, except for community mobility. Respondents under the age of 35 had notably higher scores in basic mobility, fine motor function, and upper body function compared to older age groups. In contrast, those aged 55 and above scored higher in cognition and communication, mood and emotions, resilience and sociability, and self-regulation. Additionally, WD-FAB domain scores differed significantly between male and female respondents in basic mobility and upper body function, with male respondents displaying higher functionality in these areas. Scores across predictive model score groups varied significantly for all WD-FAB domains except community mobility. Low-scored respondents exhibited better mental health domain functioning, whereas high-scored respondents excelled in three physical health domains: basic mobility, fine motor function, and upper body function. Moreover, differences in WD-FAB domain scores were observed between CDR diary groups. Medical improvement not expected (MINE) diary respondents displayed higher functioning across all six domains compared to medical improvement expected (MIE) and medical improvement possible (MIP) respondents. There were significant distinctions in WD-FAB domain scores between those with a primary mental health impairment and those with a primary physical health impairment. Those with a primary physical health impairment scored higher in all mental health domains and displayed better functioning in two physical health domains. Those employed in the past 2 years had higher functioning in all four domains compared to those who hadn't worked during that period.

In Survey 2, differences in WD-FAB domain scores were significant among age groups for all domains except community mobility and fine motor function. Respondents under the age of 35 showed notably higher functioning in basic mobility and upper body function, while those aged 55 and older demonstrated higher scores in cognition and communication, mood and emotions, resilience and sociability, and self-regulation compared to younger participants. Furthermore, WD-

FAB domain scores differed significantly between male and female respondents in the basic mobility and upper body function domains, with males displaying higher functionality. Across predictive model score groups, significant differences in WD-FAB domain scores were observed for all domains except mood and emotions. Low-scored respondents exhibited higher functioning in cognition and communication, resilience and sociability, and self-regulation domains, while high-scored respondents demonstrated better functioning across all four WD-FAB physical health domains: basic mobility, community mobility, fine motor function, and upper body function. In relation to CDR diary groups, WD-FAB domain scores varied significantly for all WD-FAB mental health domains (cognition and communication, mood and emotions, resilience and sociability, and self-regulation). MINE diary respondents displayed higher functioning across all four domains compared to MIE and MIP respondents. Once again, respondents with recent employment showed higher functioning scores across all four domains compared to those who hadn't worked in the past 2 years.

1. Overview

The Social Security Administration (SSA) conducts medical Continuing Disability Reviews (CDR) to determine continued eligibility of program benefits for Social Security Disability Insurance (SSDI) and Supplemental Security Income (SSI) beneficiaries (Kearny, 2005/2006). Medical diary designations based on the likelihood of medical improvement determine when beneficiaries undergo a medical CDR. Beneficiaries with a designation of medical improvement not expected (MINE) typically receive a CDR five to seven years after the most recent disability determination. Those classified as medical improvement possible (MIP) receive a review every three years. SSA reviews beneficiaries designated as medical improvement expected (MIE) every six to 18 months. In the last decade, the Work Disability Functional Assessment Battery (WD-FAB) was developed as a self-reported assessment measuring whole person-functioning at the activity level for eight work-related functional domains: Basic Mobility, Upper Body Function, Fine Motor Function, Community Mobility, Communication and Cognition, Resilience and Sociability, Self- Regulation, and Mood and Emotion (Jette et. al., 2019).

The primary objective of this study is to determine the viability and practicality of integrating the WD-FAB into the medical CDR process. To achieve this objective, the study employed two distinct surveys with beneficiaries who are going through the CDR process. The initial survey (Survey 1) involved collecting general information and the application of the WD-FAB tool. Subsequently, the second survey was conducted six months after the baseline assessment. The same group of individuals who participated in the initial survey were re-evaluated during this follow-up assessment. The purpose of this second assessment was to identify any changes, developments, or shifts that may have occurred over the six-month period. In essence, the study aims to determine whether the integration of the WD-FAB into the medical CDR process can yield valuable insights into the assessment of work disability over time.

1.1 Continuing Disability Review Process

The CDR process includes two levels of review for medical CDRs: (1) a mailer questionnaire (Form SSA-455 (10-2011)), and (2) a full medical review. SSA uses statistical models incorporating demographic and programmatic variables such as age, medical condition, and previous CDR results to determine the level of review assigned for each beneficiary. SSA classifies model scores into one of three categories (high, medium, and low) based on likelihood of final cessation of benefits after all appeals. Beneficiaries with high scores have a higher likelihood of cessation and undergo a full medical review. Those with medium scores have a lower likelihood of cessation and about 70 percent with medium scores receive a mailer questionnaire to initiate their CDR. The remaining 30 percent with medium scores receive a full medical review. Beneficiaries with low model scores receive a mailer questionnaire (Social Security Administration, 2016a).

The mailer questionnaire includes seven self-report questions concerning the beneficiary's work status, work capacity, health, and treatment compliance. Nearly 70 percent of all CDRs include mailers, and only 2.5 percent of completed mailers result in a full medical review, with the remaining 97.5 percent resulting in deferral (Social Security Administration, 2016b). Under a full medical review, SSA obtains sufficient medical evidence to determine if a beneficiary experienced medical improvement, and thus, has the ability to engage in substantial gainful activity (SGA).

1.2   Work Disability Functional Assessment Battery (WD-FAB)

SSA, the National Institute of Health (NIH), and Boston University (BU) worked in collaboration to develop the WD-FAB to provide complementary information on function in SSA's disability adjudication process. Using Item Response Theory (IRT) and Computer Adaptive Testing (CAT) methods, the WD-FAB creates functional profiles of claimants to the SSA work disability program (Ni et al, 2013; Marfeo et al, 2013b).

CAT methodology uses a computer interface for administration that rapidly tailors questions to the unique ability level of each claimant, allowing for fewer items to be administered, while providing an assessment that is accurate, precise, comprehensive, and efficient. CAT software, like a clinician, tailors an assessment to the respondent by asking only the most informative questions, based on a person's response to previous questions, thus, fewer questions, in total, are needed to achieve an accurate and precise assessment. The CAT program is designed with an expected level of performance given the respondent's age and gender. Within a domain, as questions are posed and the respondent answers, the CAT matches the response to an expected ability level for the domain. Subsequent questions pose either more difficult or easier ability levels. Based on responses to these subsequent questions, the CAT algorithms hone in on a consistent (stable) level of performance for that individual. An individual's ability level within a domain is expected (average) or unexpected (above or below average) based on norms developed for the domain on large samples of the US population. How far below the expected level of performance tells us how much difficulty the individual has performing activities in the domain. Above average performance is considered a strength for the individual in the domain.

The demonstrated advantages of CAT instruments compared to more traditional testing methods are: reduced respondent burden without sacrificing accuracy or precision, minimization of ceiling and floor effects, client-specific confidence intervals, monitoring of data quality in real time, and lower data collection costs. Because functional outcomes have been shown to have a clear hierarchical structure, gains in precision and efficiency of score estimation are superior to traditional fixed forms of functional assessment, thus transforming the ways in which outcomes can be assessed and monitored.

1.3   Pilot Study to Assess Use of the WD-FAB in the CDR Process

SSA is interested in incorporating the WD-FAB into the CDR business process as a way to provide complementary information on beneficiaries' functioning. The first step was to pilot test the use of the WD-FAB in this setting. Because the CDR process evaluates beneficiary work-related functioning over time, it was critical that the pilot test examine administration of the WD-FAB over time and establish baselines for significant change in WD-FAB scores in the beneficiary population. Hence, the primary objectives for the WD-FAB Pilot activities include assessing the feasibility of integrating the WD-FAB into the CDR business process, examining relationships between single administrations of the WD-FAB and the CDR process, and exploring relationships between change in WD-FAB data and the CDR process.

Westat conducted the data collection activities for the Pilot Study. SSA provided Westat with a sample list of beneficiaries who were due for a medical CDR. Westat recruited beneficiaries to participate in two surveys conducted six months apart. The first survey was fielded from July 2022 to January 2023. The second survey opened in January 2023 to August 2023. A total of 2,407 beneficiaries completed Survey 1 and of those, 1,604 also completed Survey 2. Westat prepared a weighted data access file for each survey, non-response bias analysis and associated weights, and this data summary report, to facilitate further analysis.

Together with the NIH, SSA will compare the change in WD-FAB scores, as well as point-in-time scores, to measures from the medical CDR process, such as responses to questions from the CDR mailer as collected via the Westat surveys – rather than collected from the mailer itself – and CDR predictive model scores. The initial decision of the CDR full medical review will be used as the outcome of the analyses.

The findings from this pilot study will only provide preliminary evidence of the use and usefulness of the WD-FAB in the medical CDR process. The study is intended to provide evidence and estimates that will inform the design of a subsequent large-scale study that can better assess the contribution of the WD-FAB to the CDR business process.

2. Methodology

2.1 Population and Sampling Frame

The target population for this study included SSI and SSDI beneficiaries with medical CDR diaries due in the first quarter of Fiscal Year 2022. This timeframe was selected in order to maximize the likelihood of observing change in WD-FAB scores. At the end of the study, SSA intends to otain full medical review outcomes for at least 1,000 beneficiaries who completed Surveys 1 and 2. Change in WD-FAB scores, as well as point-in-time scores, will be compared to measures that are collected as part of the normal CDR process.

Westat received the initial sample file from SSA on June 7, 2022. The following variables were included in the sample frame for each beneficiary.

- Social security number (SSN)

- First and last name

- Date of birth

- Gender

- Years on benefits

- Months on benefits

- Diary description (MIE, MIP, and MINE)

- Predictive score description (likelihood of benefits cessation—high, medium, or low)

- Claim type (SSI/SSDI)

- Impairment code

- Impairment type (mental or physical)

- Phone number

- Address

2.2 Sample Stratification and Selection

SSA selected a stratified random sample of beneficiaries due for a medical CDR diary in the first quarter of Fiscal Year 2022. The pool of potential beneficiaries was stratified by:

- Predictive model score (high, medium, low),

- Diary type (MIE, MIP, MINE), and

- Age (less than 50 and greater than 50).

SSA screened out beneficiaries who previously had a full medical review or CDR deferral (i.e., beneficiaries whose diary dates had come due previously). Once these individuals were screened out, the remaining pool of beneficiaries was sent to Westat for study recruitment. Westat received a main sample (N=4,000) and reserve sample (N=2,460) as part of the initial sample file (N=6,460).

Soon after Westat received the SSA sample file, SSA learned that 204[1] of the beneficiaries included in the sample file were no longer up for a medical continuing disability review, due to miscellaneous administration reasons. Westat removed these cases from the sample and coded them "out of scope". This brought the total initial sample down to 6,256.

2.3   Additional Sample

Westat fully worked both the main and reserve initial samples. After 19 weeks in the field, a total of 1,147 from the 6,256 beneficiaries in the initial sample completed Survey 1. Westat worked with SSA to obtain an additional sample file. The additional sample file provided to Westat in late December 2022 contained approximately 10,000 beneficiaries. Westat worked the additional sample file only until the Survey 1 complete target was met. See Table 2-1 for a breakdown of the Survey 1 samples.

Table 2-1. Survey 1 samples	
Initial sample (main and reserve) sent to Westat	6,460
Beneficiaries no longer eligible	(204)
Total initial sample fielded	6,256
Additional sample sent to Westat	10,000
Total Survey 1 sample fielded/mailed	16,256

2.4   Instruments

2.4.1   Screeners

Screeners were administered before Survey 1 and Survey 2. Screeners were originally planned to be conducted via telephone only, but throughout the field period, we learned that a multi-mode approach was more successful.

Survey 1 screener (see Appendix A) was more comprehensive, as it was intended to assess study eligibility. Eligible respondents must be at least 18 years of age, able to understand English, and provide informed consent. Screening for competency to provide consent was easiest through interviewer administration. Hence, our initial screening protocol required that we conduct the screener by telephone first, then offering the survey in other modes (telephone or web).

Survey 2 screener (see Appendix B) was much shorter and simply confirmed that we had the correct person, collected consent, reviewed the Privacy Statement, and confirmed/collected address to mail incentive payment.

2.4.2   Survey Questions

Survey 1 and 2 questions were mostly identical. Both surveys contained the same classification questions and the WD-FAB. The follow-up questions were different. Below is a summary of questions administered for both Survey 1 and Survey 2:

- **Classification questions** (see Appendix C), comprised of:
  - Demographic questions (age, gender, race, ethnicity, marital status, highest level of education completed),

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[1]   SSA identified 207 SSNs not to be included, but three were not included in the original sample sent to Westat. Therefore, Westat excluded the 204 that were included.

- Questions on general health, mental health status, and work-limiting conditions,

- Veterans RAND 12 Item Health Survey (VR-12),

- 4-item set of Healthy Days core questions (CDC HRQOL – 4) included in the state-based Behavioral Risk Factor Surveillance System, and

- Questions from Form SSA-455.

- **WD-FAB** (see Appendix D), included CAT administered survey across eight domains: Basic Mobility, Upper Body Function, Fine Motor Function, Community Mobility, Communication and Cognition, Resilience and Sociability, Self-Regulation, and Mood and Emotion; and

- **Follow-up questions:**

  - Survey 1 follow-up questions (see Appendix E) included a brief set of follow-up questions to solicit feedback on the WD-FAB. These questions asked about ease of use, clarity of instructions, and perceived burden.

  - Survey 2 follow-up questions (see Appendix F) included 52 effort and symptom validity questions to examine endorsement of certain symptoms related to function.

Westat programmed the classification questions and Survey 1 and 2 follow-up questions using Westat proprietary SurveyBuilder software. We worked closely with Northwestern University to obtain the programming code for the WD-FAB.

3. Communication and Data Collection

3.1 Respondent Communication Materials

Survey 1 and 2 respondent communication materials were developed in collaboration with SSA and were reviewed and approved by SSA's Office of Privacy and Disclosure (OPD), Office of General Counsel (OGC), and the Office of Management and Budget (OMB). OMB approval was received on November 1, 2021. Participant recruitment for the WD-FAB data collection included a multi-mode strategy.

3.1.1 Survey 1 Materials: Initial Sample

Westat initiated contact by mailing a study invitation package to all sampled beneficiaries. The Survey 1 invitation mailing package for the initial sample included the following items:

1. **Study invitation letter** explaining the study, how they were selected, that we will call them soon or they could call the inbound toll-free number to schedule a call back, what participation involves, the incentives they will receive after completion of each survey, and who to contact for more information. Invitation letters were sent before beneficiaries were contacted for Survey 1 (see Appendix G) and again before their Survey 2 (see Appendix H) window opened 6 months later.

Survey 1 Letter Covered:

- a brief description of the study, including Survey 1 and 2
- primary questionnaire topics and approximate length for each survey
- importance of study and participation
- risks and benefits of participation
- $50 incentive for Survey 1 and the $75 incentive for Survey 2
- promise of confidentiality and voluntary nature of participation
- promise that information used for research purposes only
- promise that participation will not affect benefit status
- toll-free number for respondents
- SSA's logo and the SSA official signatory to increase perceived legitimacy of the study

2. **Study consent form** explaining the study purpose, participation activities, risks and benefits of participation, rights, and contact information for the Westat Institutional Review Board (IRB) for questions about rights as study participants.[2] See Appendix I for the study consent form.

3.1.2 Survey 1 Materials: Additional Sample

The Survey 1 study invitation package for the additional sample (N=10,000) included a revised version of the invitation letter (see Appendix J) and the original consent form (see Appendix I). The invitation letter provided a survey website link and unique PIN to complete the screener and survey online only; it did not mention that someone from Westat would call them.

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[2] The study consent form was sent only once before Survey 1.

3.1.3   Survey 2 Materials

The Survey 2 mailing included a letter alerting Survey 1 respondents that it was time to complete Survey 2. The letter included the option to complete Survey 2 screener on the web, whereas Survey 1 letter did not have that option.

Survey 2 Letter Covered:

- a reminder about the study
- notification that it is time for Survey 2
- the $75 incentive for completing Survey 2
- survey website and unique PIN to access Survey 2
- reminder that participation is voluntary, and will not affect benefits
- toll-free number for respondents
- SSA's logo and the SSA official signatory to increase perceived legitimacy of the study

3.2   Recruitment and Screening

3.2.1   Survey 1

Following the mailing of the study invitation package, Westat called beneficiaries to conduct a short screener (see Appendix A) to ensure participants were eligible for the study.

Using a standardized script, interviewers:

- Briefly described the study, what study participation entailed, and the importance of participation.

- Informed respondents about the promised incentive of $125 they will receive if selected and complete each of the surveys.

- Collected contact information, including home address, preferred telephone numbers, and email addresses.

- Obtained permission for the study to send reminders via text message for respondents with cell phones.

- Collected verbal informed consent to participate in the study.

- Read the Privacy Act Statement to the respondent.

A total of 2,997 Survey 1 screeners were completed: 987 via telephone and 2,010 via web.

3.2.2   Survey 2

Following the mailing of the Survey 2 letter, Survey 1 completers were asked to complete Survey 2 screener (see Appendix B), which was an abbreviated version of the Survey 1 screener. Given the success with the Survey 1 web screener, the Survey 2 screener was set up for both telephone and web administration from the start of Survey 2. The Survey 2 screener confirmed that we had the correct person, collected consent, reviewed the Privacy Act Statement, and confirmed/collected address to mail incentive payment.

A total of 1,677 Survey 2 screeners were completed: 469 via telephone and 1,208 via web.

3.2.3   Additional Sample

The additional sample was only offered the web mode option for both screener and survey completion for both Survey 1 and 2. However, we did accommodate individual requests made to the study Help Desk for the telephone survey option.

3.3   Survey Procedures

3.3.1   Interviewer Training

Similar to our strategy for participant recruitment, we used a multi-mode protocol for both surveys that included both web and computer assisted telephone interviewing (CATI) data collection options. Westat trained 28 telephone interviewers in July 2022 for the WD-FAB study. Survey 1 training consisted of a 3-part series.

1. The first included self-paced modules reviewing respondent communication materials, study FAQs, contact procedures, strategies for gaining cooperation, completing problem sheets, and a comprehensive review of Survey 1 questions.

2. The second was a live, instructor-led WebEx session allowing trainees to practice administering Survey 1. Other topics covered during the live lecture included contact procedures and the distress protocol, in the event a respondent became distressed during the interview.

3. The final training component included paired role-plays, giving each trainee the opportunity to play the role of respondent and interviewer in four different scenarios. Six months later, the same interviewers conducted Survey 2; therefore, an abbreviated training was utilized.

Survey 2 training consisted of two parts.

1. The self-paced module included respondent communication materials and study FAQs.

2. The instructor-led WebEx session allowed trainees to participate in a review of Survey 2.

3.3.2   Survey Modes

At the close of the screener, respondents were given the option of completing the survey online themselves or over the telephone with an interviewer. If the respondent wanted to complete the survey over the telephone immediately following the screener, the interviewer went right into the survey questions. For those who opted to complete the survey over the telephone with an interviewer at another time, the interviewer scheduled an appointment to call the respondent back.

For those who opted to complete the online survey, the interviewer collected an email address for the respondent. The respondent then received an email with the survey website link, unique access code, and instructions for logging on. Westat followed-up with respondents who opted for the web survey but did not complete the survey within 7 days. After day 7, respondents who had started but did not complete the web survey were required to start the survey from the beginning. This is to ensure that respondents complete the entire survey (specifically the WD-FAB) at a consistent level of functioning, which we assume can be achieved within a 7-day period. Westat interviewers conducted phone calls to web survey non-respondents if they did not complete the web survey within the allotted 7 days. Interviewers reminded participants that their survey was not complete. The goal of the call was for interviewers to complete the survey with the respondent on the phone.

If the respondent preferred to complete the survey online, Westat sent them a new email with their unique survey access code to start the survey from the beginning.

Both Westat interviewers and respondents who completed the surveys via the web accessed the same survey instrument allowing the study to have a single database that housed all completed surveys and ensured data consistency and reduced bias associated with using two modes of data collection.

3.3.3   Completes

Of the 2,407 Survey 1 completes, 515 completed via telephone and 1,892 completed via the web.

Of the 1,604 Survey 2 completes, 375 completed via telephone and 1,229 completed via the web.

3.3.4   Participation Reminders

Westat sent reminders via email, text message, and through postcard mailings during the field period for each survey as well as during the six-month waiting period between the two surveys, in order to keep respondents engaged in the study.

Email reminders were sent daily to web non-respondents after 4 days. The email reminded them of the survey website link and their unique access code to log in. It also mentioned that they would receive the promised gift card incentive once the survey was complete. These email reminders were sent for both surveys and only to participants who provided an email address in the screener.

Text message reminders were sent to all participants who provided a cell phone number and permission to receive text reminders.

Text messages/reminders were sent to...

- Participants who completed the screener, but not the survey.
- Remind participants who completed the screener and had a scheduled date and time for the survey.
- Web non-respondents after 5, 6, and 7 days of not completing the survey.
- Survey 1 completers to remind them about the start of Survey 2.
- Thank respondents after each survey was completed.

Postcards were implemented mid-way through the Survey 1 field period. The postcards included the survey website link and unique access code for respondents to complete the screener and survey online only (see Appendix K). We continued to send reminder postcards monthly to all nonrespondents for Survey 1. Postcards were used to remind participants to complete Survey 2 as well; we sent up to three monthly reminder postcards to each Survey 2 non-respondent (See Appendix L).

3.4   Data Collection

Data collection for Survey 1 began on July 18, 2022 and ended January 24, 2023. We reached 2,407 Survey 1 completes from the participant pool of 16,256 beneficiaries (initial main and reserve sample of 6,256[3] + additional sample of 10,000).

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[3] A total of 6,460 were received from SSA, but Westat was instructed not to contact 204 of them.

Survey 1 overall response rate[4] was 15 percent and the adjusted response rate[5] was also 15 percent. We closed Survey 1 as soon as we reached our target number of completes. We estimated Survey 1 to take about 50 minutes in length to complete all survey components. Survey 1 length was on average, about 47 minutes if completed on the telephone and 51 minutes if completed on the web. Table 3-1 shows some key final dispositions for Survey 1.

Table 3-1.	Survey 1 final dispositions
Final disposition	**Number**
Total beneficiaries received from SSA	**16,460**
Initial sample	6,460
Additional sample	10,000
Total beneficiaries fielded	**16,256**
Initial sample	6,256*
Additional sample	10,000
Completed Screeners	**2,997**
Web	2,010
Phone	987
Completed Surveys	**2,407**
Web	1,892
Phone	515
Ineligible	373
Deceased	27

* Excludes the 204 cases that SSA asked us not to contact.

Data collection for Survey 2 began on January 18, 2023, and ended on August 6, 2023. We reached a total of 1,604 Survey 2 completes from the 2,407 Survey 1 completes. Survey 2 overall response rate[6] was 67 percent and the adjusted response[7] was also 67 percent. 375 completed via telephone and 1,229 completed via web. We estimated Survey 2 to take about 75 minutes in length to complete all survey components. Survey 2 length was on average, 53 minutes for telephone administration and 51 minutes for web administration. Table 3-2 shows notable key final dispositions for Survey 2.

Table 3-2.	Survey 2 final dispositions
Final disposition	**Number**
Survey 1 Completes (Survey 2 Sample)	**2,407**
Completed Screeners	**1,677**
Web	1,208
Phone	469
Completed Surveys	**1,604**
Web	1,229
Phone	375

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[4] The overall response rate for Survey 1 uses a denominator of 16,256, which is the total Survey 1 sample fielded.

[5] The adjusted response rate for Survey 1 uses a denominator of 15,856, which excludes beneficiaries found ineligible and deceased.

[6] The overall response rate for Survey 2 uses a denominator of 2,407, which is the eligible Survey 2 sample.

[7] The adjusted response rate for Survey 2 uses a denominator of 2,400, which excludes beneficiaries found ineligible and deceased.

Final disposition	Number
Ineligible	0
Deceased	7

3.5   Help Desk

The study Help Desk helped Survey 1 and Survey 2 respondents with the online survey and responded to various study-related questions. The Help Desk toll-free phone number was included in all study communications made available to respondents. The Help Desk was open from 9 a.m. to 10 p.m. EST Monday through Friday and 2 p.m. to 9 p.m. EST on Saturday and Sunday.

Seven representatives (agents) staffed the Help Desk. The Help Desk Coordinator received virtual training and was responsible for training the study Help Desk staff. All staff received study materials sent to respondents to review and to help prepare them to receive and document calls from beneficiaries.

Most incoming calls to the study Help Desk were related to the web survey (see Table 3-3). Issues logging into the web survey (e.g., unable to log in due to survey being closed or participant received text about survey and wanted to know how to log in) accounted for the most calls (N=303). The remaining calls related to the web survey included 13 technical issues while using the survey (e.g., survey freezing, not able to move forward, kicked out of the survey) and 11 issues related to the web survey PIN (e.g., error inputting PIN or couldn't find PIN). General study questions accounted for the second largest number of calls (N=267). Questions about incentives (mainly that they did not receive it) were the next largest category of calls (N=258). Participants also called the Help Desk when they wanted to schedule or reschedule a survey with a telephone interviewer and those accounted for 144 calls. We had 32 calls to update contact information for future calls and mailings. Fourteen beneficiaries called in to refuse study participation—they were removed from all future calls or mailings. We received five calls informing us that the beneficiary we were looking for was deceased. Finally, three calls were categorized as "other".

Table 3-3.	Help desk calls	
Subject	**Total**	**% of Calls**
Web Survey Log in	303	29%
General Study Questions	267	25%
Incentive	258	25%
Scheduling/Rescheduling Survey	144	14%
Update Contact Information	32	3%
Refusal	14	1%
Technical Issue	13	1%
Web Survey PIN	11	1%
Participant Deceased	5	<1%
Other Issue	3	<1%
Grand Total	**1,050**	**100%**

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4. Data Management and Processing

4.1 Variable Descriptions

The Survey 1 and 2 codebooks can be found in Appendix M.

Variable naming conventions were applied to easily identify cateogories of variables (see Table 4-1). Variable names contain prefixes identifying the variable category (e.g, SC for screener, S for survey) and the administration number (i.e., 1 or 2).

Table 4-1.	Variable naming conventions
Variable category	**Naming convention**
Frame variables	F_*
Web Screener Varables	SC#_W_*
CATI Screener Variables	SC#_C_*
Classification Variables	S#_*
BUCAT3 Variables	S#_BUCAT3_*
WD-FAB Variables	S#_WDFAB_*
Web Screener Dispositions	SC#_WEB_DISP
CATI Screener Dispositions	SC#_CATI_DISP
Final Screener Dispositions	SC#_DISP
Final Screener Eligibility	SC#_ELIG
Final Survey Dispositions	S#_DISP
Final Survey Eligibility	S#_ELIG
Weights	BASEWGT
	PNRW0, PNRW1-PNRW120
	PNR2W0, PNR2W1-PNR2W120

\# = Administration: 1 or 2

* = Variable name

4.2 Data Processing

Data from multiple sources were reviewed, cleaned, processed, and combined to create the final analysis data file. The steps taken during this process are described below.

4.2.1 Data Cleaning, Editing, and Coding

Raw data files were extracted from their source databases and merged into a "Collection" database. The "Collection" database contains a record for each sample member and the raw unprocessed data from the sample and data collection instruments. Raw data sources included frame data, computer assisted telephone interviewing (CATI) screener response data, web screener response data, main survey response data, WD-FAB summary score data, and survey instrument paradata (e.g., survey statuses, dates of administration, administration timing, etc.). Data from each source were flattened and frequencies were produced for each raw variable and raw values and distributions were reviewed for accuracy against survey specifications.

"Collection" database records were then copied to a "Holding" database and "Other/Specify" strings for race were extracted for backcoding (described below). The following processing occurred on the holding database:

1. Raw variables were copied to the "delivery" version of the variable name (with category and prefix standards mentioned above applied) and, if necessary, transformed (e.g., a string date into a SAS date).

2. WD-FAB summary scores were extracted from their delimited format and flattened into delivery variables.

3. Backcoded race responses were merged back into the delivery race variables.

4. Duplicate screener records were examined, and the final screener administration mode was determined as some respondents may have started in one mode (e.g., web) and completed in another (e.g., CATI); the completion mode was used.

5. Main survey data were checked for duplicates records (none were found).

6. Each delivery variable was reviewed for anomalous values and cleaned. The following cleaning occurred:

   A. Restored a missing leading zero in F_IMP.

   B. "Missing" codes (e.g., '-9') were removed from string variables so missing strings are blank (e.g., WLC1, address/email/phone.

   C. Incomplete year responses (e.g., "202") were recoded to not ascertained (.N).

   D. Carriage returns and line feeds were removed from string variables.

7. Missing value recoding was applied, i.e., unanswered/not ascertained (.N), refused (.R), and don't know (.D) codes were harmonized and enforced across all delivery variables.

8. Valid skip (.S) coding was applied according to instrument routing logic.

9. Final screener and survey disposition and eligibility variables were calculated based on the instrument statuses and cleaned/recoded data according to AAPOR standard definitions.

10. Frequencies and crosstabs were produced on the cleaned/recoded delivery variables; the output was reviewed for anomalous values and skip patterns, excessive missingness, data presence vs. final disposition and eligibility.

Backcoding was completed on race and ethnicity "other/specify" strings. If the string indicated a race that was already a response option, the "other" variable was set to 0 (not selected) and the particular race variable was set to 1 (selected), then the specify string was deleted. The backcoded versions of the race data were merged back into the holding database as described in step three above. 100 strings were able to be backcoded.

Processed and reviewed holding records were then copied to a "ForWeighting" database for statisticians to produce weights and perform other statistical reviews. See weighting procedures below. Once a weighted file was produced by statisticians, the weights were merged into the "Holding" database.

The processed/cleaned delivery versions of the variables were then copied from the "Holding" database to a "Delivery" database. The variable order was set, and final variable labels and value labels/formats were applied. A SAS PROC CONTENTS and final formatted frequencies were produced and reviewed for completeness and accuracy.

4.2.2   Definition of a Survey Complete

A survey response was considered a complete (eligible respondent) if the respondent was determined eligible within the screener and completed the main survey through at least the WD-FAB (i.e., domain scores were generated for the respondent). See Appendix N for a description of problems discovered during the data cleaning process and resolutions applied.

4.2.3   Weekly Reports

Westat produced weekly internal reports including information on Help Desk calls received, the status of telephone screeners and surveys, and survey timing estimates. The project team used these internal reports to develop weekly progress reports for SSA. Westat submitted weekly progress reports to SSA throughout both Survey 1 and Survey 2 field periods. These reports included quantitative information on mailings (advance letters, postcards, incentives), summary of the sample dispositions (total called, completed screeners, completed surveys, ineligible, refusal, other non-response), response rates, and survey instrument timings.

4.3   Assessment of Data Quality

Quality control checks in the form of frequency reviews and crosstab reviews of data patterns (e.g., skip patterns) were conducted. Also, special SAS missing values were assigned to differentiate between different types of missingness in the data.

4.3.1   Data Errors/Issues

Data were reviewed for invalid values and data patterns. No invalid data patterns or values were detected.

4.3.2   Handling Missing Data

The special SAS missing value .N represents "NOT ASCERTAINED" values in the dataset. This means that a question was asked and was not answered, or the respondent did not get to that item in a screener interview (break off).

The special SAS missing value .D and .R represent "DON'T KNOW" and "REFUSED", respectively. These missing values are only assigned when either of these responses are an explicit response option displayed on the screen in a web survey, or if an interviewer has coded a verbal response during a CATI interview.

The special SAS missing value .S represents "VALID SKIP". These items were not administered, as they did not apply due to a previous response.

All four special missing values can be included/excluded in procedures like a numeric system missing value (.) in SAS.

4.4   Weighting and Nonresponse Bias Analysis

In general, the purposes of weighting survey data from a complex sample design are to
(1) compensate for variable probabilities of selection, (2) account for differential nonresponse rates
across subgroups, and (3) adjust for possible undercoverage of certain population groups. For the
WD-FAB study, weighting is used to address purposes (1) and (2) but does not address purpose
(3) because there is no undercoverage of the target population. Please see Appendix O for a detailed
description of the weighting procedures.

For the WD-FAB study, a nonresponse bias analysis was undertaken to determine the potential for
bias in the survey estimates due to differential nonresponse and the extent to which the weighting
adjustments may have mitigated those biases. The details of the nonresponse bias analysis are
provided in Appendix P.

5. Descriptive Statistics and Analysis

This chapter provides descriptive information on the demographic characteristics, beneficiary profile, health status, and physical and mental functioning of respondents from both Survey 1 and Survey 2. A total of 2,407 beneficiaries completed Survey 1 and of those, 1,604 also completed Survey 2. Tables and figures in this section present the results of each survey administration. The survey data is weighted to reflect the total beneficiary sample.

5.1 Survey Questions

This section presents findings related to select characteristics of survey respondents, including demographic, beneficiary profile, health status, recent employment and education, and medical service utilization. The majority of these characteristics are derived from the classification questions in both surveys. However, details related to beneficiary status, such as CDR diary type, are obtained from administrative data provided by SSA.

5.1.1 Demographic Characteristics

The majority of Survey 1 respondents were female (59%), while 41 percent were male. The majority of Survey 1 respondents (86%) were over the age of 35, 44 percent were in the 35 – 54 age group, and 42 percent were 55 years or older. Nearly one-third of Survey 1 respondents (32%) had a high school diploma as their highest level of education, while 24 percent had completed at least some college coursework.

The majority of Survey 2 respondents were female (60%), over the age of 35 (89%), White (68%) and not of Hispanic ethnicity (90%). Nearly one-third of Survey 2 respondents were never married (32%). One-third of Survey 2 respondents (33%) had a high school diploma as their highest level of education, while 25 percent had completed at least some college coursework. Table 5-1 presents the demographic characteristics for both surveys.

Table 5-1.	Demographic characteristics of survey respondents			
Characteristic	**Survey 1**		**Survey 2**	
	N	**%**	**N**	**%**
Gender				
Female	31,073	58.9%	23,932	60.0%
Male	21,692	41.1%	15,989	40.1%
Age Range				
< 35 years old	7,484	14.2%	4,235	10.6%
35 – 54 years old	23,244	44.1%	17,309	43.4%
55+ years old	22,037	41.8%	18,376	46.0%
Race				
American Indian or Alaska Native	1,592	3.2%	1,261	3.4%
Asian	1,002	2.0%	599	1.6%
Black or African American	12,232	24.6%	9,626	25.8%
Native Hawaiian or Pacific Islander	212	0.4%	183	0.5%
White	34,516	69.5%	25,468	68.3%
Other	82	0.2%	174	0.5%
Hispanic Ethnicity				
Yes	4,941	9.4%	3,845	9.6%
No	47,824	90.6%	36,075	90.1%

Table 5-1.	Demographic characteristics of survey respondents (continued)				
Characteristic	**Survey 1**		**Survey 2**	
	N	**%**	**N**	**%**
Marital Status				
Never Married	17,982	34.6%	12,589	32.1%
Married	13,309	25.6%	10,680	27.2%
Living with a partner in committed relationship	4,115	7.9%	2,857	7.3%
Separated	3,338	6.4%	2,399	6.1%
Divorced	11,191	21.5%	9,198	23.5%
Widowed	2,032	3.9%	1,491	3.8%
Education Level				
Less than HS diploma	7,017	13.5%	5,430	13.7%
HS diploma	16,651	31.9%	12,931	32.7%
Associate degree	4,781	9.2%	3,720	9.4%
Vocational training	2,515	4.8%	1,345	3.4%
Some college – no degree	12,327	23.6%	9,749	24.6%
College or more	8,881	17.0%	6,428	16.2%

5.1.2 Beneficiary Characteristics

This section describes the characteristics of respondents related to their receipt of SSA benefits, including the type of benefits they receive, primary impairment type, and CDR diary type. Table 5-2 describes the beneficiary-related characteristics of Survey 1 and Survey 2 respondents.

The majority of Survey 1 beneficiaries had a primary impairment that was physical (56%). Almost two-thirds (61%) of Survey 1 respondents received only SSI, 37 percent received only SSDI, and 3 percent received both SSI and SSDI. The majority of Survey 1 respondents have a MIP designation (71%), followed by MINE (20%) and MIE (9%). The majority of Survey 2 respondents had a primary impairment that was physical (57%). The majority of Survey 2 respondents received only SSI benefits (61%), 37 percent received only SSDI benefits, and 2 percent received both SSI and SSDI benefits. The majority of Survey 2 respondents have a MIP designation (72%), followed by MINE (21%), and MIE (7%).

SSA uses a predictive model score to determine the type of CDR to initiate with a beneficiary. A high predictive score indicates a high likelihood of cessation of benefits. A medium or low predictive score indicates a lower likelihood of cessation of benefits. Approximately, 41 percent of Survey 1 respondents had a low predictive score, 30 percent had a medium predictive score, and 29 percent had a high predictive score. On average, Survey 1 respondents reported being on benefits for 4.3 years. Among Survey 2 respondents, 45 percent had a low predictive score, 32 percent had a medium predictive score, and 23 percent had a high predictive score. On average, Survey 2 respondents reported being on benefits for 4.4 years.

Table 5-2.	Beneficiary characteristics of survey respondents				
Characteristic	**Survey 1**		**Survey 2**	
	N	**%**	**N**	**%**
Impairment Type				
Mental	22,996	43.6%	17,032	42.7%
Physical	29,769	56.4%	22,888	57.3%
Beneficiary Type				
SSI	31,984	60.6%	24,482	61.3%
SSDI	19,152	36.3%	14,609	36.6%
Both	1,629	3.1%	829	2.1%
CDR Diary Type				
MIE	4,629	8.8%	2,726	6.8%
MINE	10,503	19.9%	8,426	21.1%
MIP	37,634	71.3%	28,769	72.1%
Predictive Model Score				
Low	21,601	40.9%	17,804	44.6%
Medium	15,915	30.2%	12,804	32.1%
High	15,248	28.9%	9,313	23.3%

5.1.3 Employment and Education Characteristics

This section describes the employment and educational pursuits of survey respondents within the last 2 years, as well as the percentage of respondents that have been given medical clearance to return to work (Table 5-3).

Respondents were asked if a doctor had cleared them to return to work in the past 2 years. The vast majority of Survey 1 (93%) respondents have not been medically cleared to return to work within the last 2 years. In regard to employment, 17 percent of Survey 1 respondents were employed at some point in the past 2 years. Only 6 percent of Survey 1 respondents had attended school or work training in the past 2 years. The majority of Survey 2 respondents had not received medical clearance to return to work from a doctor (94%) within the past 2 years. The majority of Survey 2 respondents were not employed (85%) and had not attended school or work training (96%) within the past 2 years.

Table 5-3.	Employment and education characteristics of survey respondents				
Characteristic	**Survey 1**		**Survey 2**	
	N	**%**	**N**	**%**
Doctor provided return to work order within last 2 years				
Yes	3,599	6.9%	2,525	6.4%
No	48,933	93.2%	37,154	93.6%
Employment within last 2 years				
Yes	8,799	16.7%	6,208	15.6%
No	43,953	83.3%	33,713	84.5%
Attended School or Work Training within last 2 years				
Yes	3,122	5.9%	1,765	4.4%
No	49,630	94.1%	38,155	95.6%

5.1.4   Health Characteristics

Respondents were surveyed across several factors related to their recent and perceived health status. This section describes the physical, mental, and emotional health status of Survey 1 and Survey 2 respondents, including overall health rating, medical service utilization, and perceived changes in health over time.

Respondents were asked how they would rate their overall health in general (Figure 5-1). Overall, the majority of Survey 1 respondents rated their overall health as "Fair" (45%) or "Poor" (31%). The majority of Survey 2 respondents rated their overall health as "Fair" (46%) or "Poor" (30%).

Figure 5-1.   Self-rated general health by survey administration
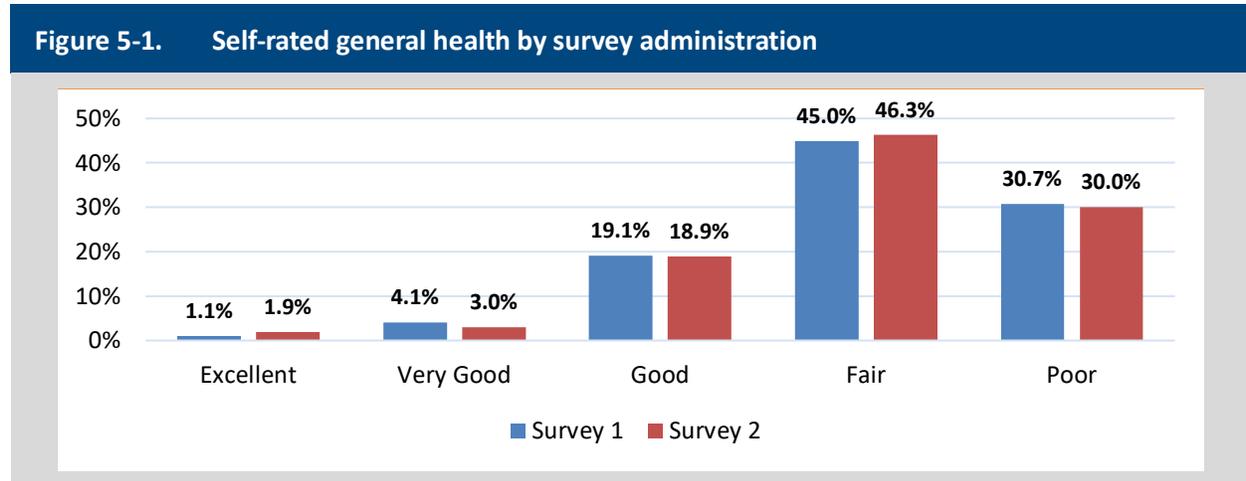
Respondents were asked how they would rate their overall mental health in general (Figure 5-2). The majority of Survey 1 respondents rated their overall mental health as "Fair" (37%) or "Poor" (25%). Nearly one-fourth (24%) of Survey 1 respondents rated their mental health as 'Good'. The majority of Survey 2 respondents rated their overall mental health as 'Fair' (38%) or 'Poor' (24%), while 25 percent rated their overall mental health as 'Good'.

Figure 5-2.   Self-rated mental health by survey administration
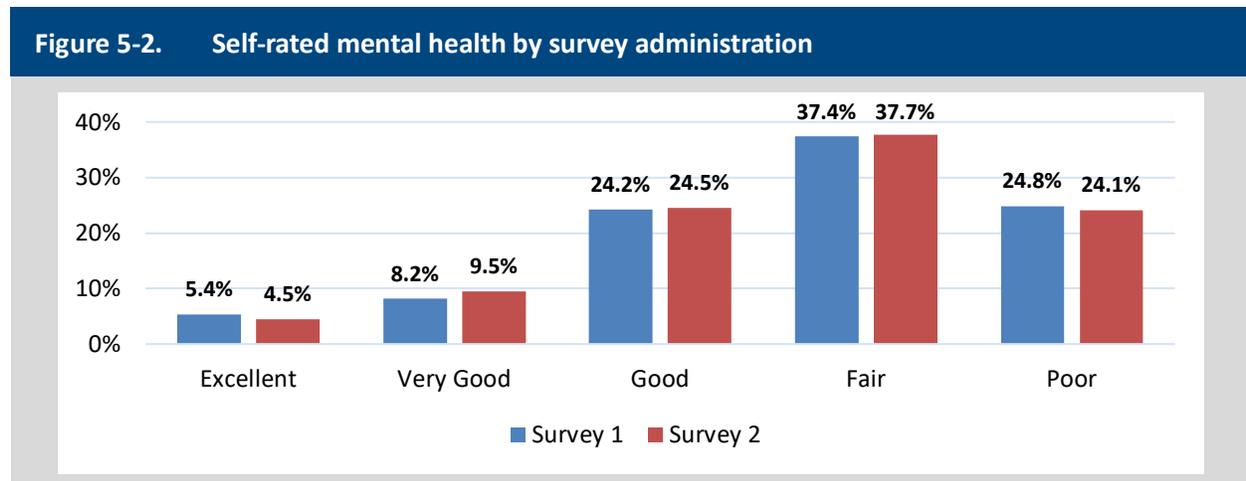
Respondents were asked to provide the number of days out of the previous 30 days in which their physical health, including physical illness and injury, was not good. On average, Survey 1 respondents reported experiencing 17.4 days of poor physical health in the past month. Survey 2 respondents reported an average of 17.2 days of poor physical health in the past month.

Additionally, respondents were also asked to indicate the number of days out of the previous 30 days when their mental health (including stress, depression, and emotional problems) was not good. Survey 1 respondents reported an average of 17.5 days of poor mental health during the past month. Survey 2 respondents reported an average of 17.0 days of poor mental health during the past month.

Respondents were further asked how frequently they felt specific emotions during the past month. When asked how often they felt calm and peaceful (Figure 5-3), the majority of Survey 1 respondents reported feeling calm and peaceful 'A little of the time' (37%) or 'Some of the time' (27%). The majority of Survey 2 respondents reported feeling calm and peaceful 'A little of the time' (33%) or 'Some of the time' (28%), while 17% reported feeling calm and peaceful 'None of the time' during the past month.

Figure 5-3.   Frequency of calm and peaceful feelings during past month
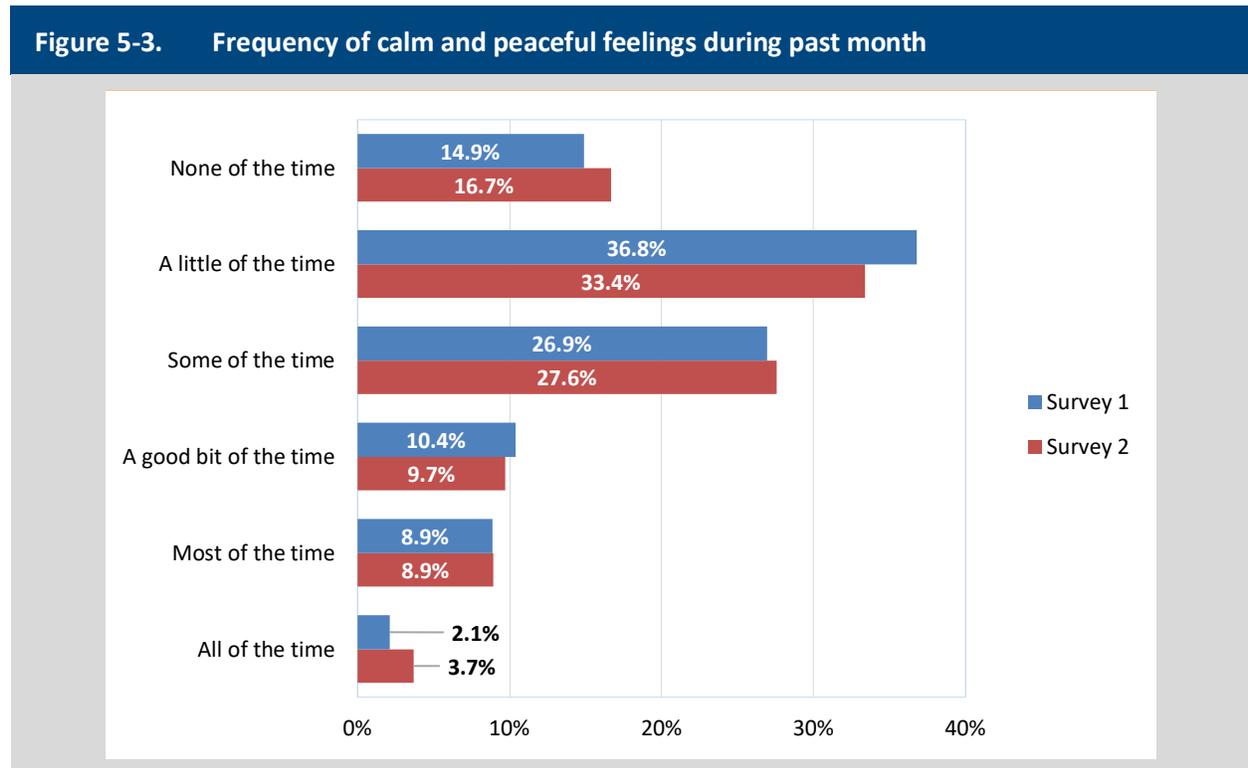
Respondents were asked how often they felt energetic in the past month (Figure 5-4). The majority (70%) of Survey 1 respondents reported feeling energetic either 'None of the time' or 'A little of the time' (34% and 36% respectively). Only 2 percent of Survey 1 respondents reported feeling energetic 'All of the time' in the past month. The majority (72%) of Survey 2 respondents reported feeling energetic either 'None of the time' or 'A little of the time' (34% and 38% respectively). Only 2 percent of Survey 2 respondents reported feeling energetic 'All of the time' in the past month.

Figure 5-4. **Frequency of energetic feelings during past month**
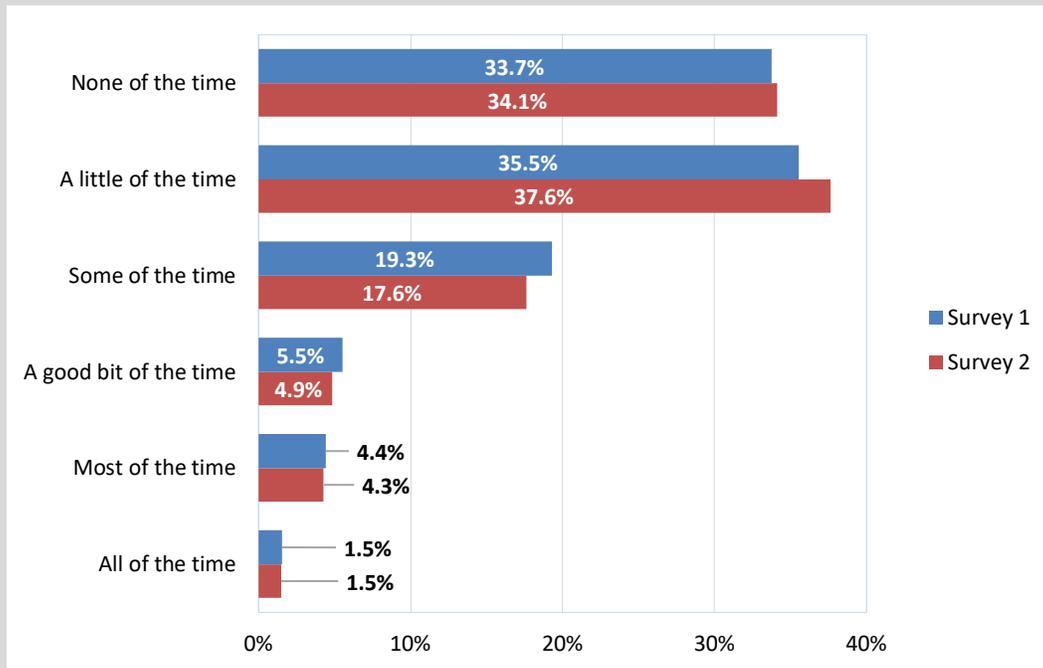
When asked how often respondents felt downhearted and blue during the past month (Figure 5-5), nearly one-third (32%) of Survey 1 respondents reported feeling downhearted and blue 'Most of the time' (21%) or 'All of the time' (11%). Among Survey 2 respondents, one-third (33%) reported feeling downhearted and blue 'Most of the time' (22%) or 'All of the time' (11%).

Figure 5-5.   Frequency of downhearted and blue feelings during past month
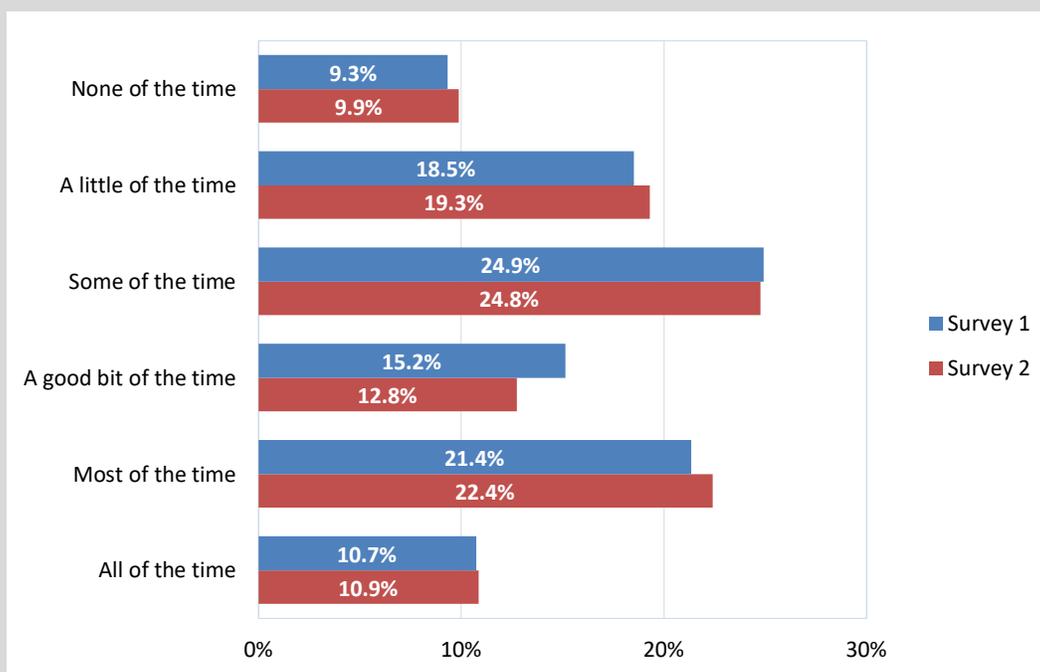
Mobility and Transportation

Respondents were asked several questions related to their mobility and transportation options (Table 5-4). The majority of Survey 1 respondents (52%) are able to currently drive a car and 15 percent of Survey 1 respondents use public transportation. Approximately, 20 percent of Survey 1 respondents use a wheelchair or motorized scooter, 17 percent use a wheelchair or motorized scooter 'Sometimes', and 3 percent use a wheelchair or motorized scooter 'All the time'. Nearly half (48%) of Survey 1 respondents use a walking aid, 34 percent use an aid 'Sometimes', while 14 percent use a walking aid 'All the time'.

The majority of Survey 2 respondents (55%) are able to currently drive a car and 15 percent of Survey 2 respondents use public transportation. Approximately, 20 percent of Survey 2 respondents use a wheelchair or motorized scooter: 17 percent use a wheelchair or motorized scooter 'Sometimes', and 3 percent use a wheelchair or motorized scooter 'All the time'. Half (50%) of Survey 2 respondents use a walking aid: 36 percent use an aid 'Sometimes', while 14 percent use a walking aid 'All the time'.

Table 5-4.   General mobility of survey respondents, by survey administration

Characteristic	Survey 1		Survey 2	
	N	%	N	%
Currently Drives Car				
Yes	27,532	52.2%	21,837	54.7%
No	25,232	47.8%	18,084	45.3%
Uses Public Transportation				
Yes	7,889	15.0%	6,093	15.3%
No	44,876	85.0%	33,828	84.7%
Uses Wheelchair or Scooter				

Characteristic	Survey 1		Survey 2	
	N	%	N	%
Sometimes	9,042	17.1%	6,642	16.6%
All the time	1,674	3.2%	1,174	2.9%
Never	42,049	79.7%	32,105	80.4%
Uses Walking Aid				
Sometimes	17,854	33.8%	14,491	36.3%
All the time	7,375	14.0%	5,567	13.9%
Never	27,537	52.2%	19,864	49.8%

Changes in Health over Time

Respondents were asked to describe their health status over the last 2 years as either 'better', 'same', or 'worse' (Figure 5-6). Nearly one-half of Survey 1 respondents described their health as 'worse' than 2 years ago (49%), while 43 percent reported it as the 'same', and 8 percent reported it as 'better'. Half of Survey 2 respondents described their health as 'worse' than 2 years ago (50%), while 42 percent reported it as the 'same', and 8 percent reported it as 'better'. Overall, the majority of respondents reported their health status as worse than it was 2 years prior to taking the survey, indicating that the majority of respondents perceived their health to be declining over time.

Figure 5-6.   Health changes over the last 2 years
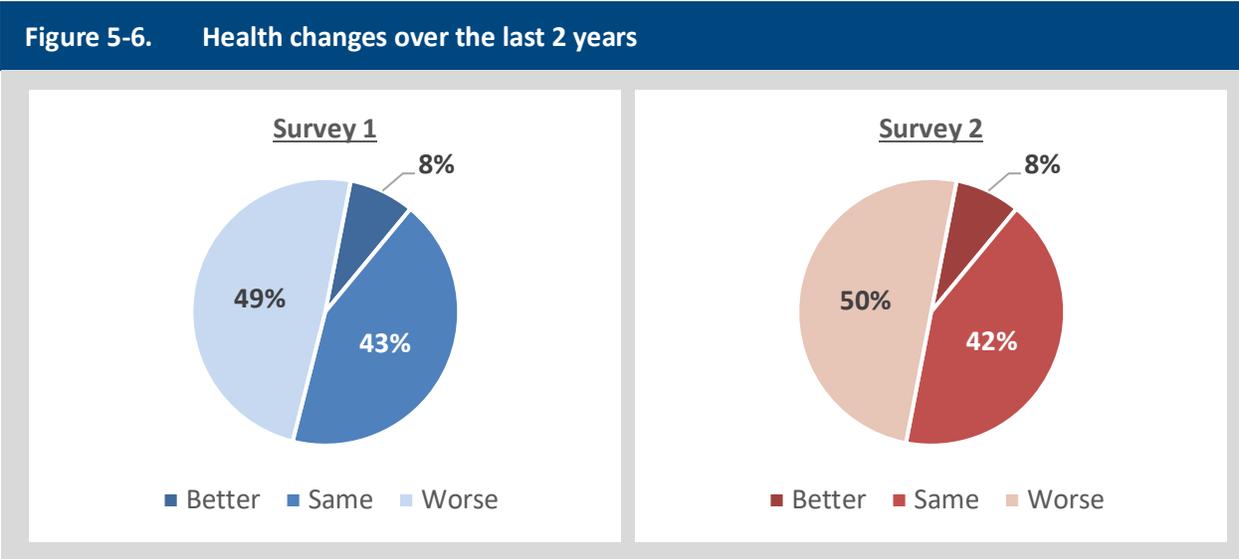
Respondents were asked two questions to further identify how they perceived their physical health and emotional health (e.g., feeling anxious, depressed, or irritable) has changed over time.

Respondents were first asked how they would rate their physical health compared to one year ago (Figure 5-7). Over one-third (35%) of Survey 1 respondents reported their health as 'Slightly worse' compared to one year ago, followed by 32 percent who reported their health was 'About the same' as last year. Among Survey 2 respondents, 38 percent reported their health as 'Slightly worse' compared to one year ago, followed by 35 percent who reported their health was 'About the same' as last year.

Figure 5-7.   Physical health rating compared to year prior
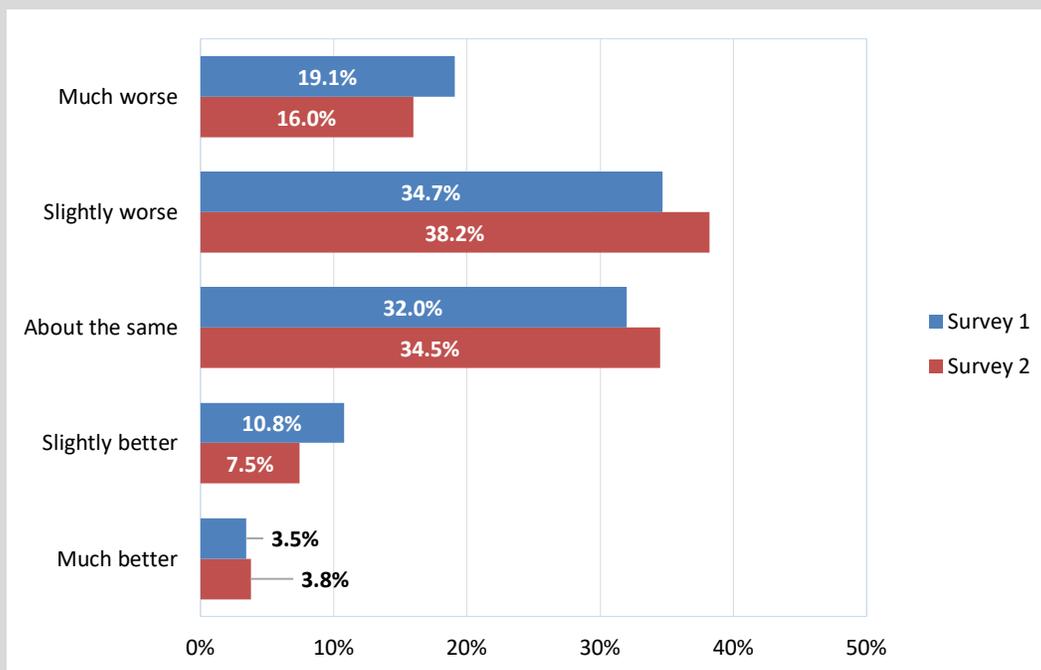
Respondents were then asked how they would rate their emotional health compared to one year ago (Figure 5-8). The largest percentage of Survey 1 respondents (40%) reported their emotional health as 'About the same' as last year. Approximately, 45 percent of Survey 1 respondents reported a decline in their emotional health: 29 percent stated their emotional health was 'Slightly worse' than it was a year ago and 16 percent reported that their emotional health was 'Much worse' than the previous year.

The largest percentage of Survey 2 respondents (44%) reported their emotional health as 'About the same' as last year. Approximately, 43 percent of Survey 2 respondents reported a decline in their emotional health: 27 percent stated their emotional health was 'Slightly worse' than it was a year ago and 16 percent reported that their emotional health was 'Much worse' than the previous year.

Figure 5-8. **Emotional health rating compared to year prior**
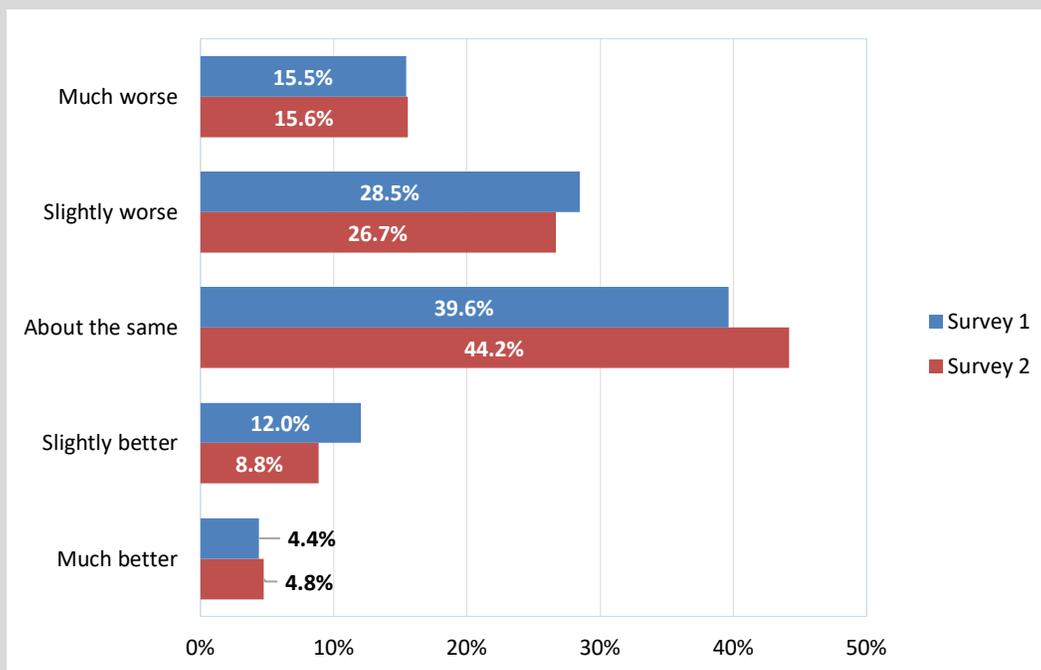
Medical Service Utilization

Respondents were asked several questions about the medical services they utilized for their primary physical or mental health condition(s). Figure 5-9 shows the percentage of respondents who were hospitalized or underwent surgery for their primary health condition within the last 2 years. Over one-half (51%) of Survey 1 respondents had at least one hospitalization or surgery related to their primary health condition in the last 2 years. Overall, Survey 1 respondents had an average of 4.1 hospitalizations or surgeries within the past 2 years. Nearly half (47%) of Survey 2 respondents had at least one hospitalization or surgery related to their primary health condition in the last 2 years. Survey 2 respondents had an average of 3.5 hospitalizations or surgeries within the past 2 years.

Figure 5-9. Hospitalization or surgery for primary health condition within last 2 years

Survey 1

49%
51%

■ Yes ■ No

Survey 2

53%
47%

■ Yes ■ No
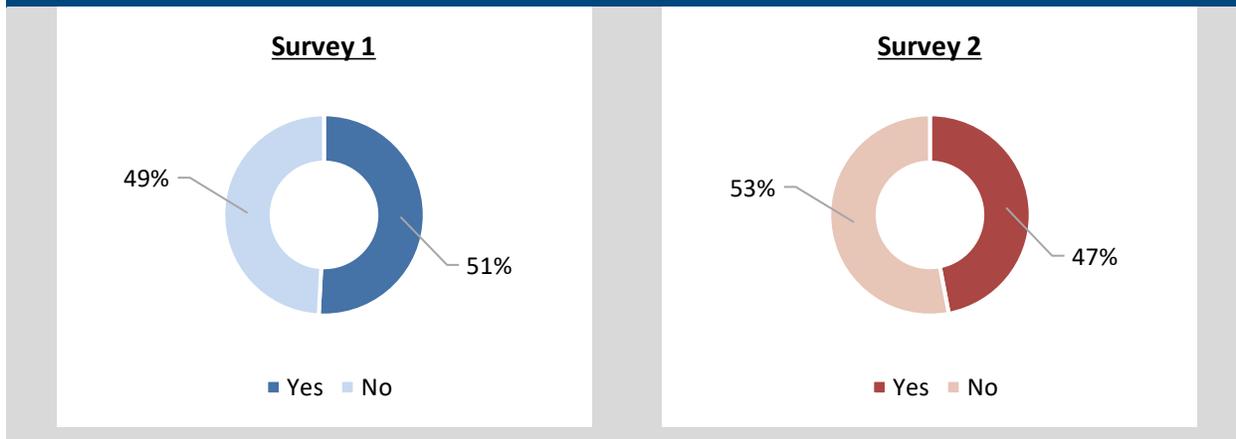
Figure 5-10 shows the percentage of respondents who visited a doctor or clinic for their primary health condition within the last 2 years. The majority of Survey 1 respondents (93%) made at least one visit to a doctor or health clinic related to their primary health condition over the past 2 years. Overall, Survey 1 respondents had an average of 25.6 doctor or clinic visits related to their primary health condition within the past 2 years. The majority of Survey 2 respondents (93%) made at least one visit to a doctor or health clinic related to their primary health condition over the past 2 years. Survey 2 respondents made an average of 23.4 doctor or clinic visits related to their primary health condition within the past 2 years.

Figure 5-10. Doctor or clinic visit for primary health condition within last 2 years

Survey 1

7%
93%

■ Yes ■ No

Survey 2

7%
93%

■ Yes ■ No
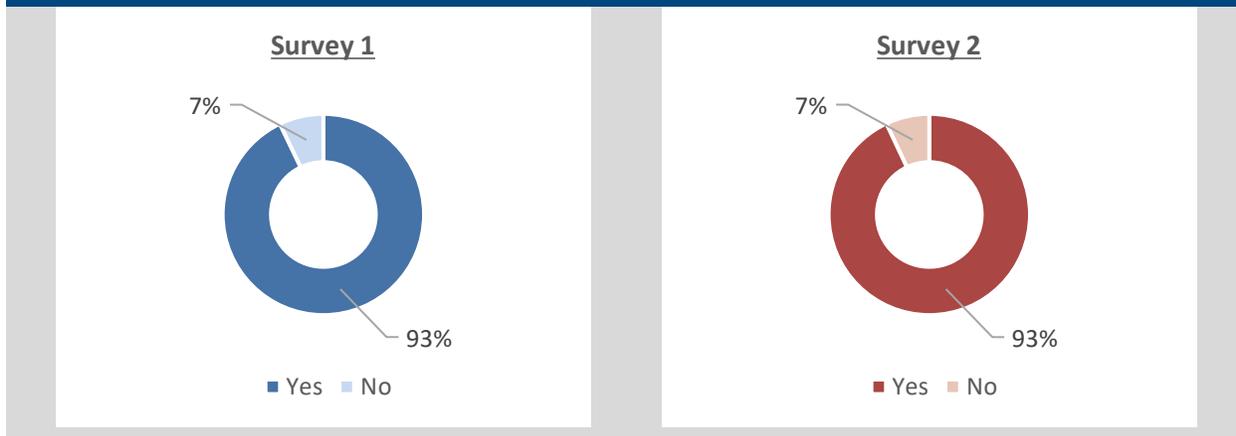
Respondents were asked if they would be interested in receiving rehabilitation or other services that could help them return to work (Figure 5-11). One-third (33%) of Survey 1 respondents expressed interest in receiving these services. Approximately, 29 percent of Survey 2 respondents expressed interest in receiving rehabilitation or other services that could help them return to work.

Survey 1	Survey 2
33% Yes, 67% No	29% Yes, 71% No
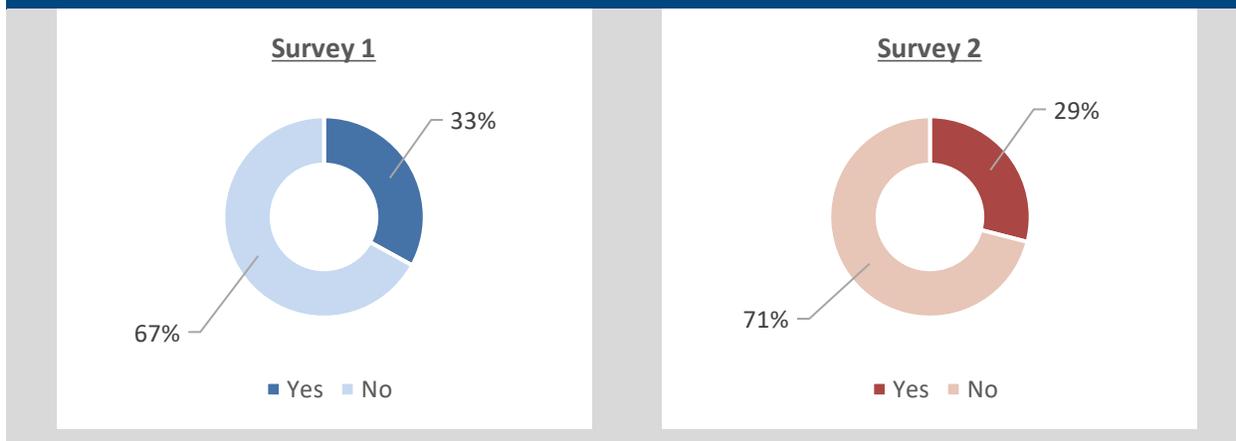
Impact of Health on Normal or Daily Activities

Respondents were asked a series of questions to determine the extent to which their physical or mental health interfered with their daily activities or work. Respondents were asked how limited they felt in moderate activities (i.e., moving table, vacuuming, bowling, playing golf) and climbing several flights of stairs because of their health (Table 5-5).

Survey 1 respondents felt their health placed significant limitations on the activities they could perform, 63 percent of Survey 1 respondents felt they were 'Limited a lot' by their health in completing moderate activities. Similarly, 63 percent of Survey 1 respondents felt their ability to climb several flights of stairs was 'Limited a lot' by their health. Among Survey 2 respondents, the majority felt their ability to complete moderate activities was limited a lot by their health (60%). The majority of Survey 2 respondents also felt their ability to climb several flights of stairs was limited a lot by their health (64%).

Table 5-5. Health limitations of specific activities by survey administration				
Daily activity	**Survey 1**		**Survey 2**	
	N	**%**	**N**	**%**
Moderate Activities				
Limited a lot	32,977	62.6%	24,037	60.3%
Limited a little	14,608	27.7%	12,147	30.5%
Not limited at all	5,072	9.6%	3,670	9.2%
Climbing Several Flights of Stairs				
Limited a lot	33,016	62.8%	25,586	64.3%
Limited a little	14,087	26.8%	10,132	25.5%
Not limited at all	5,484	10.4%	4,057	10.2%

Respondents were asked if their physical health results in them accomplishing less than they would have desired over the past month (Figure 5-12). The majority of Survey 1 respondents reported accomplishing less than they would have liked 'All of the time' (29%) or 'Most of the time' (34%) because of their physical health. Only 7 percent of Survey 1 respondents reported their physical health did not impact what they were able to accomplish over the past month. The majority of Survey 2 respondents (61%) reported accomplishing less than they would have liked 'All of the time' (25%) or 'Most of the time' (36%) because of their physical health. Only 6 percent of Survey 2

respondents reported their physical health did not impact what they were able to accomplish over the past month.

Figure 5-12.   Accomplished less than desired as a result of physical health
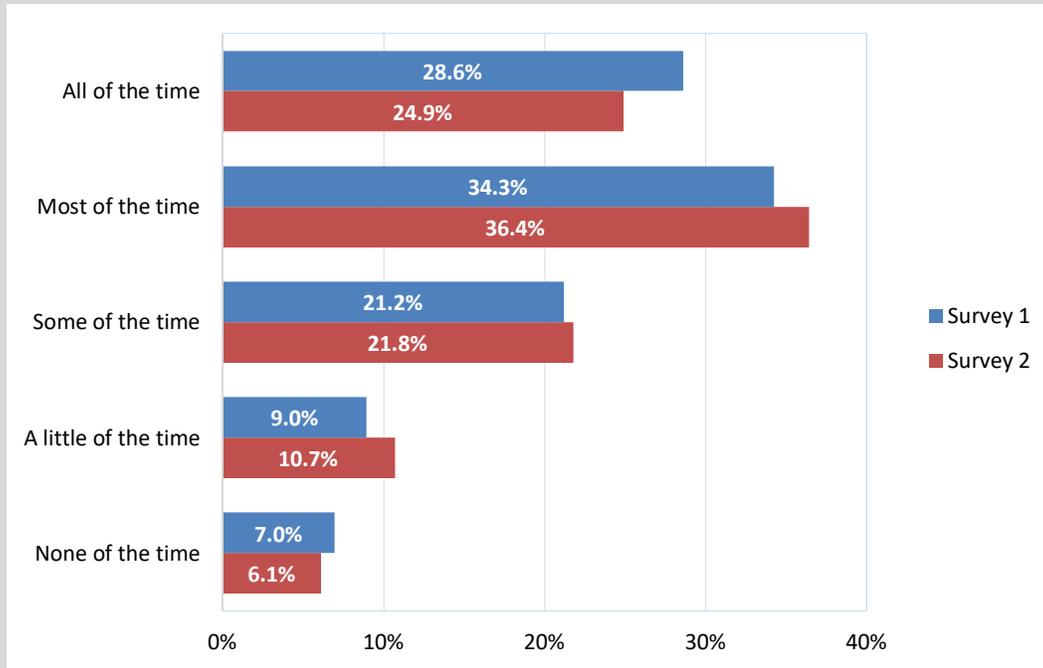
Respondents were asked if they accomplished less than they would have liked within the past month as a result of their emotional health (such as feeling depressed or anxious). As shown in Figure 5-13, 22 percent of Survey 1 respondents reported that they accomplished less than they desired 'All of the time' within the past month because of their mental health and 29 percent reported accomplishing less 'Most of the time' because of their mental health.

Nearly half (48%) of Survey 2 respondents reported a significant impact on their accomplishments within the past month because of their mental health. Specifically, 21 percent of Survey 2 respondents reported that they accomplished less than they desired 'All of the time' within the past month because of their mental health and 27 percent reported accomplishing less 'Most of the time' because of their mental health.

When asked about the limitation their physical health imposed on their work or other activities (Figure 5-14), nearly two-thirds (63%) reported experiencing limitations either 'All of the time' (30%) or 'Most of the time' (33%) in the past month. Survey 2 respondents reported experiencing limitations either 'All of the time' (31%) or 'Most of the time' (35%) in the past month.

Figure 5-14.   Limited in the kind of work or other activities as a result of physical health
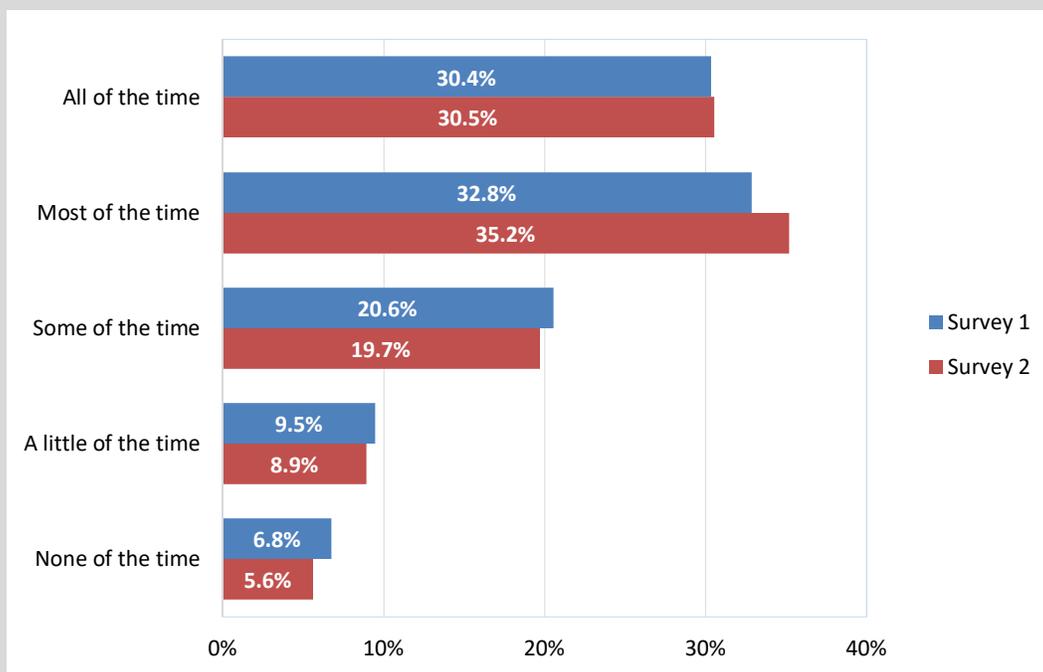
Respondents were asked whether their emotional health, such as feeling depressed or anxious, affected their ability to complete work or other activities as carefully as usual in the past month. As shown in Figure 5-15, most (72 percent) of Survey 1 respondents reported a decline in the quality of their work or activities due to emotional health reasons either 'Some of the time' (28%), 'Most of the time' (26%) or 'All of the time' (18%). Among Survey 2 respondents, most (70 percent) reported their emotional health affected the quality of their work or activities either 'Some of the time' (27%), 'Most of the time' (26%), or 'All of the time' (17%).

Figure 5-15. Didn't complete work or other activities as carefully as usual as a result of emotional health
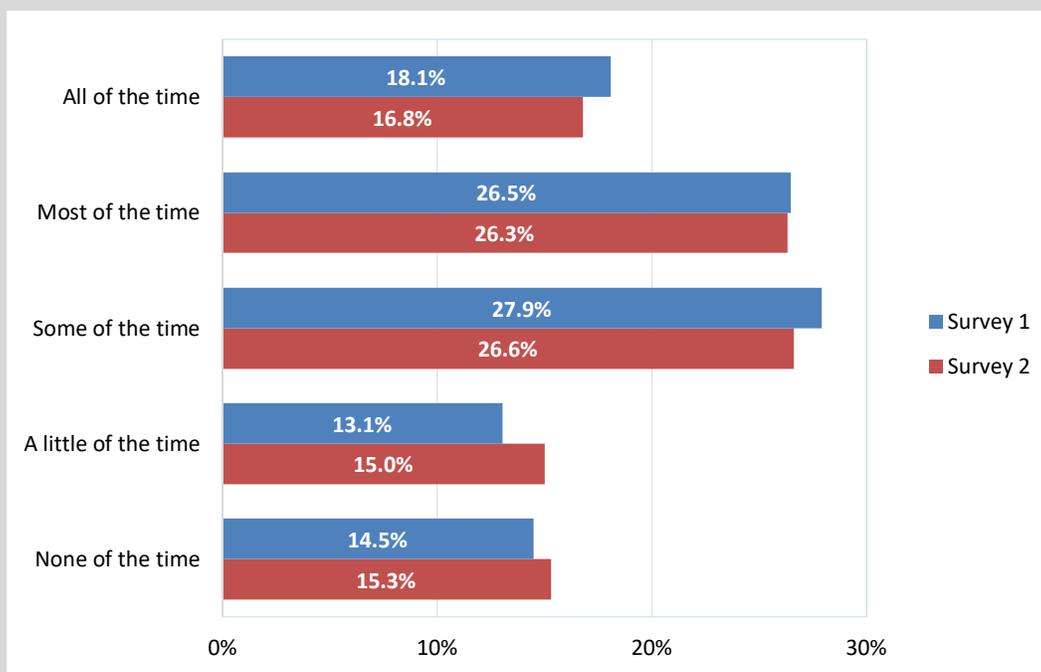
When asked about the extent to which pain interfered with their normal work (Figure 5-16), including housework and work outside the home, within the past month, nearly two-thirds (61%) of Survey 1 respondents reported that pain interfered 'Extremely' (33%) or 'Quite a bit' (28%). The majority of Survey 2 respondents reported significant interference in their normal work from pain. Specifically, 32 percent of Survey 2 respondents reported pain interfered 'Extremely', and 31 percent reported pain interfered 'Quite a bit'.

Figure 5-16.   Degree pain interfered with normal work

Figure 5-16. Degree pain interfered with normal work

Category	Survey 1	Survey 2
Extremely	33.4%	31.6%
Quite a bit	28.5%	31.0%
Moderately	17.3%	16.8%
A little bit	11.8%	12.1%
Not at all	9.1%	8.4%
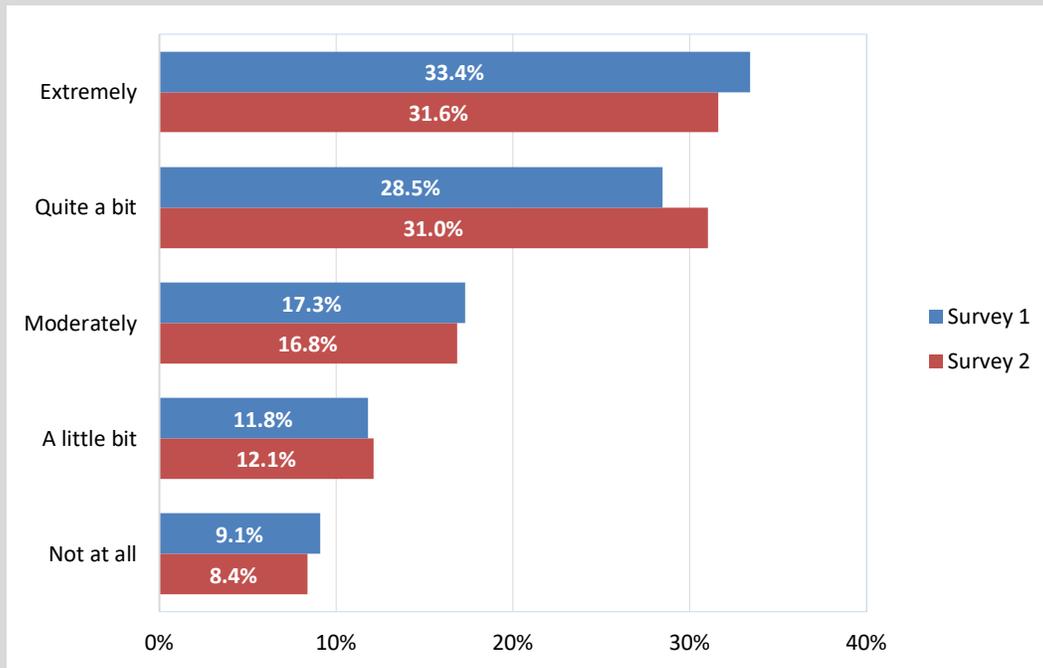
Respondents were asked to provide the number of days in the past month when their physical or mental health issues affected their usual activities, including self-care, work, or recreation. On average, Survey 1 respondents reported that their health interfered with their usual activities for approximately 18.8 days out of the past 30 days. On average, Survey 2 respondents reported that their health interfered with their usual activities for approximately 17.8 days out of the past 30 days.

Respondents were asked to describe how frequently their physical or mental health issues affected their social activities, such as visiting friends or relatives. Figure 5-17 illustrates that among Survey 1 respondents, more than half (58%) reported experiencing interference with their social activities 'Most of the time' (31%) or 'All of the time' (27%) due to their physical or mental health. Among Survey 2 respondents, 54 percent reported experiencing interference with social activities 'Most of the time' (30%) or 'All of the time' (24%) due to their physical or mental health.

Figure 5-17.   Frequency physical or mental health interfered with social activities
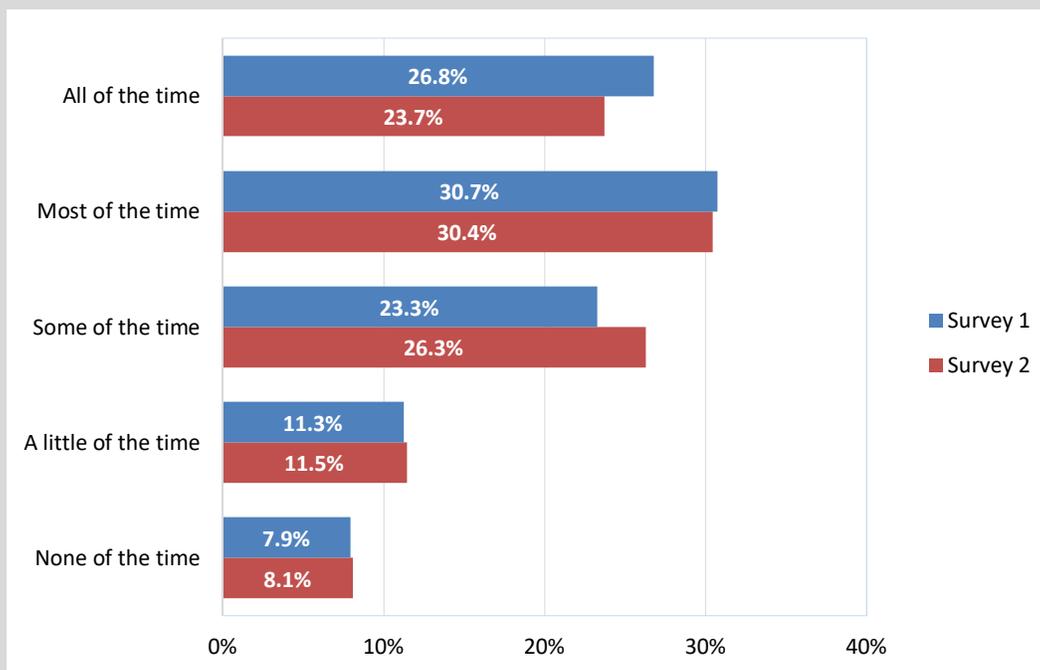
5.2   WD-FAB Functional Domains

The work-related functioning of respondents was assessed using the Work Disability Functional Assessment Battery (WD-FAB). This section provides a summary of the work-related functional limitations of respondents based on the eight physical and mental health subdomains captured with the WD-FAB: Basic Mobility; Upper Body Function; Fine Motor Function; Community Mobility; Mood & Emotions; Resilience & Sociability; Self-Regulation; and Cognition & Communication.

Domain scores are computed based on the respondent's selection from a 5-point scale. Scores on each domain range from 0 to 100, with higher scores indicating greater functionality in the area assessed. Scores are standardized on a national normative sample. The normed mean scale score for the working-age population in each subdomain is 50, with standard deviations of 10 points.

5.2.1   WD-FAB Mental Health Function Domains

The WD-FAB assesses functionality necessary for workplace integration. Lower scale scores reflect greater decline in a work-related area of functioning. The mental health function domains of the WD-FAB include scales assessing:

- Communication & Cognition,

- Resilience,

- Mood and Emotions, and

- Self-Regulation.

The Communication & Cognition domain measures an individual's (self-reported) ability to undertake tasks like watching, listening, calculating, and reading. The domain includes items

measuring comprehension and production of verbal and non-verbal messages. The Resilience domain assesses the individual's ability to adapt, to handle stress, and to manage the demands of daily tasks. The Mood & Emotions domain covers characteristics like optimism, tolerance, and psychic stability. The Self-Regulation domain reflects aspects of function such as controlling temper, respecting others, following rules, and social abilities.

Table 5-6 presents WD-FAB mean scores for the four mental health domains acquired from the baseline assessment (Survey 1) and the second assessment of the same individuals six months later (Survey 2). Across all domains, Survey 1 respondents scored lower than the average of working-age adults, yet still within one standard deviation (Mean 50.0, SD 10.0) meaning that the differences are not statistically significant and further analyses are warranted. Survey 1 respondents have marginally above-average scores in mood and emotions (Mean 50.1, SD 9.2) and self-regulation (Mean 51.0, SD 6.7). This suggests Survey 1 respondents had a slightly higher inclination towards optimism, tolerance, emotional stability, and a slightly greater self-regulation of behavior than average working-age adults. Lower than average scores were noted in cognition and communication (Mean 47.4, SD 6.1) and resilience and sociability (Mean 45.4, SD 7.2), indicating Survey 1 respondents exhibit lower functionality in tasks such as listening, reading, following instructions, and managing daily task demands and stress, than average working-age adults.

Survey 2 respondents also fell within one standard deviation of the norm across all mental health domains. They scored slightly above the norm in mood and emotions (Mean 51.1, SD 9.1) and self-regulation (Mean 51.6, SD 6.8), reflecting greater endorsement for higher optimism, tolerance, emotional stability, and behavioral self-regulation compared to average working-age adults. Survey 2 respondents scored below average in cognition and communication (Mean 47.6, SD 5.8) and resilience and sociability (Mean 45.7, SD 6.9), suggesting that Survey 2 respondents endorsed lower functioning in the ability to undertake tasks like listening, reading, following instructions, and managing daily task demands and stress, than average working-age adults.

Table 5-6.	WD-FAB mental health function domain scores	
Domain	**Survey 1**	**Survey 2**
	Mean (SD)	**Mean (SD)**
Cognition and Communication	47.4 (6.1)	47.6 (5.8)
Mood and Emotions	50.1 (9.2)	51.1 (9.1)
Resilience and Sociability	45.4 (7.2)	45.7 (6.9)
Self-Regulation	51.0 (6.7)	51.6 (6.8)

5.2.2 WD-FAB Physical Health Function Domains

The WD-FAB physical function domains assess the impact of physical limitations on the ability to perform functions necessary to work. The physical function domains include scales assessing:

- Basic Mobility,

- Upper Body Function,

- Fine Motor Function, and

- Community Mobility with respect to both driving an automobile and riding public transportation.

The Basic Mobility domain assesses both the ability to assume, maintain and transfer among various body positions as well as the ability to move around from one place to another. The Upper

Body domain measures abilities like pushing, pulling, and carrying with one or both arms. The Fine Motor Function domain covers manipulating objects by gripping, holding, and pinching. Community Mobility domains assess the abilities associated with using public transportation and driving an automobile.

Table 5-7 presents the WD-FAB mean scores for the four physical function domains acquired from the baseline assessment (Survey 1) and the second assessment of the same individuals six months later (Survey 2). Survey 1 respondents scored more than one standard deviation above the norm in the area assessing fine motor function (Mean 61.9, SD 7.7), indicating respondents have notably higher fine motor functioning, such as gripping and holding objects, than average working-age adults. Survey 1 respondents had lower than average scores in basic mobility (Mean 48.1, SD 8.2), upper body function (Mean 45.8, SD 7.1), and community mobility (Mean 45.8, SD 7.1). This indicates lower functioning in movement between various body positions, performing activities with one or both arms, and using public transportation or driving a car, than average working-age adults.

Survey 2 respondents achieved scores in the area assessing fine motor function (Mean 62.0, SD 7.6) that exceeded the norm by more than one standard deviation, indicating respondents have notably higher fine motor functioning than average working-age adults. Lower than average scores were noted in basic mobility basic mobility (Mean 47.4, SD 7.6), upper body function (Mean 45.7, SD 6.8), and community mobility (Mean 45.1, SD 7.8), indicating lower functioning in movement between various body positions, performing activities with one or both arms, and using public transportation or driving a car, than average working-age adults.

Table 5-7.	WD-FAB physical health function domain scores	
Domain	**Survey 1**	**Survey 2**
	Mean (SD)	**Mean (SD)**
Basic Mobility	48.1 (8.2)	47.4 (7.6)
Community Mobility	45.8 (7.1)	45.1 (7.8)
Fine Motor Function	61.9 (7.7)	62.0 (7.6)
Upper Body Function	45.8 (7.1)	45.7 (6.8)

5.3   Respondent Characteristics across Beneficiary Subgroups

This section explores the variation in the demographic characteristics of respondents observed across beneficiary-related subgroups, including CDR diary type, primary impairment, and predictive model score.

5.3.1   Demographics by CDR Diary Type

Table 5-8 presents the characteristics of Survey 1 respondents based on their CDR diary type: MIE, MINE, or MIP. Female respondents comprise the majority across all diary types, accounting for 61 percent of those with a MIE diary, 55 percent with a MINE diary, and 60 percent with a MIP diary. The age distribution varies across diary types. The majority of respondents with a MIE diary (61%) and a MIP diary (46%) fall in the 35 – 54 age group. Additionally, the majority of respondents with a MINE diary are 55 years of age or older. The race and ethnicity distributions are relatively consistent across the diary types. White respondents represent the largest group in each diary type, followed by Black respondents. The majority of respondents in all diaries are not of Hispanic ethnicity. Nearly the same percentage of respondents with each diary type had been employed within the past 2 years (17% had MINE or MIP diary and 16% had MIE diary).

Table 5-8.	Survey 1 respondent characteristics by CDR diary type					
Characteristic	**MIE**		**MINE**		**MIP**	
	N	**%**	**N**	**%**	**N**	**%**
Gender						
Female	2,829	61.1%	5,729	54.6%	22,515	59.8%
Male	1,799	38.9%	4,773	45.5%	15,119	40.2%
Age Range						
< 35 years old	829	17.9%	890	8.5%	5,765	15.3%
35 – 54 years old	2,838	61.3%	3,025	28.8%	17,381	46.2%
55 + years old	961	20.8%	6,588	62.7%	14,488	38.5%
Race						
American Indian or Alaska Native	196	4.6%	224	2.3%	1,173	3.3%
Asian	106	2.5%	99	1.0%	796	2.2%
Black or African American	965	22.7%	3,047	31.3%	8,220	23.1%
Native Hawaiian or Pacific Islander	46	1.1%	3	0.0%	162	0.5%
White	2,908	68.4%	6,371	65.4%	25,237	70.8%
Other	28	0.7%	0	0.0%	54	0.2%
Hispanic Ethnicity						
Yes	617	13.3%	820	7.8%	3,505	9.3%
No	4,012	86.7%	9,683	92.2%	34,129	90.7%
Marital Status						
Never Married	1,543	34.1%	3,974	38.1%	12,465	33.7%
Married	1,116	24.7%	2,450	23.5%	9,743	26.3%
Living with a partner in committed relationship	452	10.0%	764	7.3%	2,899	7.8%
Separated	342	7.6%	656	6.3%	2,340	6.3%
Divorced	885	19.6%	1,960	18.8%	8,345	22.5%
Widowed	182	4.0%	623	6.0%	1,227	3.3%
Education Level						
Less than HS diploma	470	10.3%	1,545	15.0%	5,002	13.4%
HS diploma	1,518	33.1%	3,723	36.0%	11,410	30.6%
Associate degree	478	10.4%	1,152	11.1%	3,152	8.5%
Vocational training	219	4.8%	262	2.5%	2,034	5.5%
Some college – no degree	1,153	25.1%	1,713	16.6%	9,461	25.4%
College or more	747	16.3%	1,945	18.8%	6,188	16.6%
Employed Past 2 Years						
Yes	720	15.6%	1,805	17.2%	6,274	16.7%
No	3,909	84.5%	8,697	82.8%	31,347	83.3%

Table 5-9 presents the characteristics of Survey 2 respondents based on their CDR diary type. Female respondents comprise the majority across all diary types, accounting for 61 percent of those with a MIE diary, 58 percent with a MINE diary, and 61 percent with a MIP diary. The age distribution varies among the different diary types. Most respondents with a MIE diary (58%) and a MIP diary (46%) belong to the 35 – 54 age group. Moreover, the majority of respondents with a MINE diary are aged 55 years or older (63%). White respondents form the largest group within each diary type, with Black respondents coming next in representation. Across all diaries, the majority of respondents do not identify as Hispanic. In regard to employment within the past 2 years, respondents with a MINE diary have the highest percentage (18%), closely followed by MIP (15%), and MIE (16%).

Table 5-9.   Survey 2 Respondent characteristics by CDR diary type

Characteristic	MIE		MINE		MIP	
	N	%	N	%	N	%
Gender						
Female	1,668	61.2%	4,885	57.6%	17,409	60.5%
Male	1,058	38.8%	3,571	42.4%	11,360	39.5%
Age Range						
< 35 years old	431	15.8%	681	8.1%	3,123	10.9%
35 – 54 years old	1,588	58.3%	2,412	28.6%	13,309	46.3%
55 + years old	707	25.9%	5,333	63.3%	12,336	42.9%
Race						
American Indian or Alaska Native	96	3.8%	312	4.0%	853	3.2%
Asian	66	2.6%	55	0.7%	479	1.8%
Black or African American	564	22.4%	2,704	34.5%	6,358	23.6%
Native Hawaiian or Pacific Islander	24	1.0%	3	0.0%	155	0.6%
White	1,743	69.3%	4,766	60.8%	18,959	70.3%
Other	22	0.9%	0	0.0%	152	0.6%
Hispanic Ethnicity						
Yes	337	12.4%	781	9.3%	2,727	9.5%
No	2,389	87.7%	7,645	90.7%	26,042	90.5%
Marital Status						
Never Married	858	32.3%	3,516	42.5%	8,214	29.0%
Married	677	25.5%	1,593	19.3%	8,410	29.7%
Living with a partner in committed relationship	237	8.9%	438	5.3%	2,182	7.7%
Separated	198	7.5%	567	6.9%	1,635	5.8%
Divorced	571	21.5%	1,622	19.6%	7,005	24.8%
Widowed	114	4.3%	538	6.5%	838	3.0%
Education Level						
Less than HS diploma	265	9.8%	1,714	20.3%	3,451	12.1%
HS diploma	874	32.2%	2,605	30.9%	9,451	33.2%
Associate degree	265	9.8%	830	9.9%	2,625	9.2%
Vocational training	164	6.1%	251	3.0%	929	3.3%
Some college – no degree	652	24.0%	1,487	17.6%	7,610	26.7%
College or more	492	18.2%	1,539	18.3%	4,397	15.5%
Employed Past 2 Years						
Yes	442	16.2%	1,492	17.7%	4,274	14.9%
No	2,284	83.8%	6,934	82.3%	24,495	85.1%

5.3.2   Demographics by Primary Impairment

Table 5-10 describes the characteristics of Survey 1 respondents based on their primary impairment type, either mental or physical. Female respondents comprise the majority across each impairment type, accounting for 60 percent of respondents with a primary mental impairment and 58 percent of respondents with a primary physical impairment. Respondents within the 35 – 54 age group make up the largest percentage of respondents with a mental impairment (43%) and a physical impairment (45%). The race and ethnicity distributions are relatively consistent across each impairment type. White respondents represent the largest group of respondents with a primary mental impairment (74%), and those with a primary physical impairment (66%). The majority of respondents across each impairment group are not of Hispanic ethnicity.

Approximately, 21 percent of respondents with a primary mental impairment reported being employed at some point in the past 2 years, compared to 13 percent of respondents with a physical primary impairment.

Table 5-10. Survey 1 respondent characteristics by primary impairment type				
Characteristic	**Mental**		**Physical**	
	N	**%**	**N**	**%**
Gender				
Female	13,804	60.0%	17,269	58.0%
Male	9,192	40.0%	12,500	42.0%
Age Range				
< 35 years old	4,319	18.8%	3,165	10.6%
35 – 54 years old	9,838	42.8%	13,406	45.0%
55 + years old	8,838	38.4%	13,198	44.3%
Race				
American Indian or Alaska Native	882	4.0%	710	2.6%
Asian	645	2.9%	356	1.3%
Black or African American	4,102	18.4%	8,131	29.8%
Native Hawaiian or Pacific Islander	123	0.6%	89	0.3%
White	16,488	73.9%	18,028	66.0%
Other	77	0.3%	5	0.02%
Hispanic Ethnicity				
Yes	1,779	7.7%	3,162	10.6%
No	21,217	92.3%	26,607	89.4%
Marital Status				
Never Married	9,192	40.8%	8,790	29.8%
Married	4,465	19.8%	8,844	30.0%
Living with a partner in committed relationship	1,593	7.1%	2,522	8.6%
Separated	1,370	6.1%	1,968	6.7%
Divorced	4,951	22.0%	6,239	21.2%
Widowed	938	4.2%	1,094	3.7%
Education Level				
Less than HS diploma	2,775	12.3%	4,243	14.4%
HS diploma	7,284	32.2%	9,367	31.7%
Associate degree	2,135	9.4%	2,647	9.0%
Vocational training	970	4.3%	1,545	5.2%
Some college – no degree	5,215	23.1%	7,112	24.1%
College or more	4,235	18.7%	4,646	15.7%
Employed Past 2 Years				
Yes	4,845	21.1%	3,955	13.3%
No	18,139	78.9%	25,814	86.7%

Table 5-11 presents the characteristics of Survey 2 respondents based on their primary impairment type, either mental or physical. Female respondents constitute the majority of both impairment types, 61 percent of respondents with a primary mental impairment and 59 percent with a primary physical impairment are female. Respondents aged 35 to 54 constitute the largest percentage among those with a mental impairment, accounting for 43 percent. Respondents aged 55 years or older make up the largest percentage among those with a physical impairment, making up 48 percent of this group. The distribution of race and ethnicity remains relatively consistent across both impairment types. White respondents form the largest demographic in both categories, with

74 percent among those with a primary mental impairment and 64 percent among those with a primary physical impairment. The majority of respondents in each impairment group do not identify as Hispanic ethnicity. In terms of marital status, approximately one-third of respondents from each group have never been married: 34 percent of those with a mental health impairment and 31 percent of those with a physical health impairment fall into this category. Approximately, 19 percent of respondents with a primary mental impairment reported being employed at some point in the past 2 years, in contrast to 13 percent of respondents with a primary physical impairment.

Table 5-11. Survey 2 respondent characteristics by primary impairment type				
Characteristic	**Mental**		**Physical**	
	N	**%**	**N**	**%**
Gender				
Female	10,432	61.3%	13,500	59.0%
Male	6,601	38.8%	9,388	41.0%
Age Range				
< 35 years old	2,389	14.0%	1,847	8.1%
35 – 54 years old	7,351	43.2%	9,959	43.5%
55 + years old	7,293	42.8%	11,083	48.4%
Race				
American Indian or Alaska Native	574	3.5%	687	3.3%
Asian	414	2.6%	186	0.9%
Black or African American	3,028	18.7%	6,598	31.3%
Native Hawaiian or Pacific Islander	85	0.5%	98	0.5%
White	11,934	73.6%	13,534	64.1%
Other	171	1.1%	3	0.0%
Hispanic Ethnicity				
Yes	1,438	8.4%	2,407	10.5%
No	15,594	91.6%	20,481	89.5%
Marital Status				
Never Married	5,596	33.7%	6,993	30.9%
Married	3,995	24.1%	6,684	29.5%
Living with a partner in committed relationship	1,237	7.5%	1,620	7.2%
Separated	807	4.9%	1,592	7.0%
Divorced	4,028	24.3%	5,171	22.9%
Widowed	922	5.6%	569	2.5%
Education Level				
Less than HS diploma	1,941	11.6%	3,489	15.3%
HS diploma	5,660	33.8%	7,271	31.8%
Associate degree	1,737	10.4%	1,984	8.7%
Vocational training	701	4.2%	643	2.8%
Some college – no degree	3,859	23.0%	5,890	25.8%
College or more	2,853	17.0%	3,575	15.7%
Employed Past 2 Years				
Yes	3,259	19.1%	2,949	12.9%
No	13,773	80.9%	19,940	87.1%

5.3.3   Demographics by Predictive Model Score

Table 5-12 displays the characteristics of Survey 1 respondents based on their predictive model score: Low, Medium, or High. Females constitute the majority in each category: 60 percent of those with a low score, 61 percent with a medium score, and 56 percent with a high score. The dominant

age group for respondents with a low score was 55 years or older. For those with medium and high scores, the largest age group was between 35 to 54 years old, comprising 70 percent and 48 percent respectively. The race and ethnicity distributions are relatively consistent across each model score. White respondents represent the largest group for each score, followed by Black respondents. The majority of respondents with all scores are not of Hispanic ethnicity. Over half (52%) of the respondents with a high predictive score had never been married. More than a quarter (26%) of those with a medium score had some level of college education, slightly more than the 22 percent with a low score and 24 percent with a high score. About 25 percent of respondents with a high predictive score had been employed in the last two years, compared to 19 percent of medium-scored respondents and significantly more than the 9 percent of low-scored respondents.

Table 5-12. Survey 1 respondent characteristics by predictive model score						
Characteristic	**Low**		**Medium**		**High**	
	N	**%**	**N**	**%**	**N**	**%**
Gender						
Female	12,928	59.9%	9,690	60.9%	8,456	55.5%
Male	8,674	40.2%	6,226	39.1%	6,793	44.6%
Age Range						
< 35 years old	283	1.3%	754	4.7%	6,447	42.3%
35 − 54 years old	4,812	22.3%	11,124	69.9%	7,307	47.9%
55 + years old	16,506	76.4%	4,037	25.4%	1,494	9.8%
Race						
American Indian or Alaska Native	527	2.6%	578	3.8%	488	3.4%
Asian	140	0.7%	397	2.6%	465	3.3%
Black or African American	4,804	24.0%	4,261	27.8%	3,167	22.2%
Native Hawaiian or Pacific Islander	139	0.7%	13	0.1%	60	0.4%
White	14,421	72.0%	10,086	65.7%	10,010	70.2%
Other	0	0.0%	8	0.1%	74	0.5%
Hispanic Ethnicity						
Yes	1,841	8.5%	1,371	8.6%	1,729	11.3%
No	19,761	91.5%	14,544	91.4%	13,520	88.7%
Marital Status						
Never Married	5,833	27.3%	4,519	28.6%	7,630	51.6%
Married	5,938	27.8%	4,655	29.5%	2,716	18.4%
Living with a partner in committed relationship	1,270	5.9%	1,117	7.1%	1,728	11.7%
Separated	1,334	6.2%	1,170	7.4%	834	5.6%
Divorced	5,689	26.6%	3,811	24.1%	1,690	11.4%
Widowed	1,323	6.2%	521	3.3%	188	1.3%
Education Level						
Less than HS diploma	2,914	13.8%	2,257	14.2%	1,846	12.2%
HS diploma	7,015	33.1%	3,847	24.2%	5,790	38.3%
Associate degree	1,778	8.4%	1,564	9.8%	1,440	9.5%
Vocational training	1,008	4.8%	916	5.8%	591	3.9%
Some college − no degree	4,621	21.8%	4,105	25.8%	3,601	23.8%
College or more	3,829	18.1%	3,211	20.2%	1,841	12.2%
Employed Past 2 Years						
Yes	1,868	8.7%	3,060	19.2%	3,871	25.4%
No	19,733	91.4%	12,855	80.8%	11,365	74.6%

Table 5-13 displays the characteristics of Survey 2 respondents based on their predictive model score. Females comprised the majority in all three categories of scores: 62 percent in the low score range, 60 percent in the medium score range, and 57 percent in the high score range. Among respondents with a low score, the predominant age group was 55 years or older, accounting for 77 percent. For those with medium and high scores, the largest age group was between 35 to 54 years old, comprising 69 percent and 50 percent, respectively. The distribution of race and ethnicity remained relatively consistent across different model scores. White respondents constituted the largest group for each score, followed by Black respondents. The majority of respondents across all scores did not identify as Hispanic. Regarding marital status, half of the respondents with a high predictive score (50%) had never been married. Among medium-scored respondents, 50 percent had completed some college coursework or earned a degree. In terms of employment, over a quarter of respondents with a high predictive score (26%) reported being employed within the past 2 years. This contrasts with 17 percent of medium-scored respondents and only 9 percent of those with a low predictive model score.

Table 5-13. Survey 2 respondent characteristics by predictive model score						
Characteristic	**Low**		**Medium**		**High**	
	N	**%**	**N**	**%**	**N**	**%**
Gender						
Female	11,019	61.9%	7,614	59.5%	5,299	56.9%
Male	6,785	38.1%	5,190	40.5%	4,014	43.1%
Age Range						
< 35 years old	283	1.6%	414	3.2%	3,538	38.0%
35 − 54 years old	3,826	21.5%	8,858	69.2%	4,625	49.7%
55 + years old	13,694	76.9%	3,532	27.6%	1,150	12.3%
Race						
American Indian or Alaska Native	561	3.4%	406	3.4%	294	3.4%
Asian	0	0.0%	334	2.8%	265	3.0%
Black or African American	4,137	25.0%	3,495	29.1%	1,994	22.7%
Native Hawaiian or Pacific Islander	139	0.8%	8	0.1%	36	0.4%
White	11,687	70.7%	7,630	63.5%	6,152	70.1%
Other	0	0.0%	145	1.2%	29	0.3%
Hispanic Ethnicity						
Yes	1,746	9.8%	1,123	8.8%	976	10.5%
No	16,058	90.2%	11,681	91.2%	8,337	89.5%
Marital Status						
Never Married	4,731	26.9%	3,328	26.5%	4,530	49.9%
Married	4,556	25.9%	4,257	33.9%	1,866	20.5%
Living with a partner in committed relationship	845	4.8%	1,045	8.3%	968	10.7%
Separated	1,342	7.6%	580	4.6%	477	5.3%
Divorced	4,880	27.8%	3,237	25.8%	1,082	11.9%
Widowed	1,219	6.9%	109	0.9%	163	1.8%
Education Level						
Less than HS diploma	2,731	15.5%	1,499	11.9%	1,199	12.9%
HS diploma	5,869	33.2%	3,434	27.2%	3,628	39.0%
Associate degree	1,772	10.0%	1,100	8.7%	848	9.1%
Vocational training	539	3.1%	346	2.7%	460	5.0%
Some college − no degree	3,995	22.6%	3,784	29.9%	1,969	21.2%
College or more	2,756	15.6%	2,474	19.6%	1,198	12.9%
Employed Past 2 Years						

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Characteristic	Low		Medium		High	
	N	%	N	%	N	%
Yes	1,596	9.0%	2,227	17.4%	2,384	25.6%
No	16,208	91.0%	10,577	82.6%	6,929	74.4%

5.4 Association Between Key Respondent Characteristics and WD-FAB Domain Scores

This section explores the variability in WD-FAB domain scores among respondents, considering key demographic characteristics such as age, gender, and primary health impairment. To assess potential differences, statistical analyses[8] were used to examine the significance of mean score variations across the eight WD-FAB domains for different respondent characteristics. Table 5-14 presents the findings of the analysis for Survey 1 respondents, with findings summarized below.

Table 5-14. Association between mean WD-FAB domain scores and key demographic characteristics of survey 1 respondents	Cognition and communication	Mood and emotions	Resilience and sociability	Self-regulation	Basic mobility	Community mobility	Fine motor function	Upper body function
Age Group	*	*	*	*	*		*	*
< 35 years old	47.2	50.4	44.9	50.1	54.0	46.5	63.1	49.7
35 – 54 years old	46.7	49.1	44.1	50.3	47.4	46.7	61.5	45.3
55 + years old	48.2	51.0	46.9	52.0	46.8	45.7	61.9	45.0
Gender					*			*
Female	47.5	49.8	45.6	51.0	47.2	45.6	62.2	44.9
Male	47.2	50.5	45.2	51.1	49.3	45.1	61.5	47.1
Predictive Model Score	*	*	*	*	*		*	*
Low	47.7	50.7	46.3	51.9	46.7	45.7	61.2	44.7
Medium	46.9	49.7	44.7	50.1	46.6	45.6	61.4	45.0
High	47.5	49.6	44.9	50.6	51.5	46.2	63.4	48.2
CDR Diary Type	*	*	*	*		*		*
MIE	46.8	48.3	43.9	50.3	48.2	44.3	62.1	45.6
MINE	48.7	53.4	47.2	52.8	48.7	47.9	61.6	46.6
MIP	47.1	49.4	45.1	50.6	47.9	45.5	61.9	45.6
Primary Impairment	*	*	*	*	*			*
Mental	45.7	47.5	43.3	49.1	50.5	45.8	62.4	47.6
Physical	48.7	52.1	47.0	52.5	46.2	45.8	61.5	44.4
Employed within Past 2 Years	*				*		*	*
Yes	48.3	51.1	46.3	51.4	52.1	46.6	63.4	49.2
No	47.2	49.9	45.2	50.9	47.3	45.6	61.6	45.1

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[8] *Variation in WD-FAB domain scores for age group, predictive model score, and CDR diary type was assessed using one-way ANOVAs to determine the significance of mean differences across two or more groups. Variation in WD-FAB domain scores for gender, primary impairment, and past 2-year employment was assessed using t-tests to determine the significance of mean differences between two groups.*

Note: The significance level was set at 0.05 for all statistical tests, indicating that p-values below 0.05 were considered statistically significant in determining associations between mean WD-FAB domain scores and key demographic variables. An asterisk (*) represents a statistically significant result.

Age Group

WD-FAB domain scores differed significantly between age groups for all WD-FAB domains except for one, community mobility. Respondents younger than 35 had significantly higher domain functioning scores on basic mobility, fine motor function, and upper body function, compared to those in the older age groups. Respondents aged 55 years and older had higher scores in cognition and communication, mood and emotions, resilience and sociability, and self-regulation, compared to the younger age groups.

Gender

WD-FAB domain scores differed significantly between male and female respondents on the basic mobility and upper body function domains, where male respondents displayed higher functionality in these domains compared to female respondents.

Predictive Model Score

WD-FAB domain scores differed significantly across predictive model score groups for all WD-FAB domains except for one, community mobility. Low-scored respondents had higher functioning scores across the four WD-FAB mental health domains: cognition and communication, mood and emotions, resilience and sociability, and self-regulation, when compared to medium-scored and high-scored respondents. High-scored respondents had higher functioning across three of the physical health WD-FAB domains (basic mobility, fine motor function, and upper body function), compared to the other score groups.

CDR Diary Type

WD-FAB domain scores differed significantly between CDR diary groups for all WD-FAB mental health domains: cognition and communication, mood and emotions, resilience and sociability, and self-regulation, and two physical health domains: community mobility and upper body function. MINE diary respondents had higher functioning across all six domains, when compared to MIE and MIP respondents.

Primary Impairment

WD-FAB domain scores differed significantly between respondents with a primary mental health impairment and those with a primary physical health impairment on six WD-FAB domains: cognition and communication, mood and emotions, resilience and sociability, self-regulation, basic mobility, and upper body function. Respondents with a primary physical health impairment had higher scores across all the WD-FAB mental health domains, including cognition and communication, mood and emotions, resilience and sociability, self-regulation, when compared to respondents with a primary mental health impairment. Respondents with a primary mental health impairment had higher functioning on two of the physical health domains – basic mobility and upper body function, when compared to respondents with a primary physical health impairment.

Employed with Past 2 Years

Respondents who worked in the past 2 years and those who did not, showed statistically significant differences in WD-FAB domain scores across four domains: cognition and communication, basic mobility, fine motor function, and upper body function. Respondents who were employed within

the past 2 years had higher functioning on all four domains compared to those who did not work within the past 2 years.

Table 5-15 presents the findings of the analysis for Survey 2 respondents, with findings summarized below.

Table 5-15. Association between mean WD-FAB domain scores and key demographic characteristics of survey 2 respondents								
	Cognition and communication	Mood and emotions	Resilience and sociability	Self-regulation	Basic mobility	Community mobility	Fine motor function	Upper body function
Age Group	*	*	*	*	*			*
< 35 years old	47.5	51.6	45.0	50.6	52.9	46.5	62.6	49.1
35 – 54 years old	46.8	50.3	44.5	51.0	47.2	45.0	61.8	45.3
55 + years old	48.4	51.8	47.0	52.5	46.3	44.9	62.1	45.3
Gender					*			*
Female	47.7	51.1	45.8	51.7	46.5	44.8	62.1	44.8
Male	47.4	51.2	45.4	51.5	48.9	45.5	61.8	47.0
Predictive Model Score	*		*	*	*	*	*	*
Low	48.0	51.5	46.4	52.3	46.3	44.7	61.4	45.0
Medium	46.9	50.9	45.0	51.1	46.1	44.5	61.8	44.9
High	47.9	50.7	45.1	51.1	51.2	46.8	63.4	48.2
CDR Diary Type	*	*	*	*				
MIE	47.5	49.1	44.3	50.4	48.1	45.1	62.2	45.4
MINE	48.8	54.7	47.9	53.4	48.2	47.0	61.8	46.9
MIP	47.2	50.3	45.1	51.2	47.1	44.6	62.0	45.4
Primary Impairment	*	*	*	*	*			*
Mental	46.0	48.2	43.7	49.5	49.5	45.3	62.4	47.8
Physical	48.8	53.3	47.1	53.2	45.9	44.9	61.7	44.1
Employed within Past 2 Years					*	*	*	*
Yes	48.5	52.2	46.5	51.7	51.1	47.1	64.3	49.4
No	47.4	50.9	45.5	51.6	46.7	44.6	61.6	45.0

Note: The significance level was set at 0.05 for all statistical tests, indicating that p-values below 0.05 were considered statistically significant in determining associations between mean WD-FAB domain scores and key demographic variables. An asterisk (*) represents a statistically significant result.

Age Group

WD-FAB domain scores differed significantly between age groups for all WD-FAB domains aside from community mobility and fine motor function. Respondents younger than 35 had significantly higher domain functioning scores on basic mobility and upper body function. Respondents aged 55 years and older had higher domain scores on cognition and communication, mood and emotions, resilience and sociability, and self-regulation, compared to the younger age groups.

Gender

WD-FAB domain scores differed significantly between male and female respondents on the basic mobility and upper body function domains, where male respondents displayed higher functionality in these domains compared to female respondents.

Predictive Model Score

WD-FAB domain scores differed significantly across predictive model score groups for all WD-FAB domains except for the mood and emotions domain. Low-scored respondents had higher functioning scores for the cognition and communication, resilience and sociability, and self-regulation domains, when compared to medium-scored and high-scored respondents. High-scored respondents had higher functioning scores across all four WD-FAB physical health domains: basic mobility, community mobility, fine motor function, and upper body function, compared to the other score groups.

CDR Diary Type

WD-FAB domain scores differed significantly between CDR diary groups for all WD-FAB mental health domains: cognition and communication, mood and emotions, resilience and sociability, and self-regulation. MINE diary respondents had higher functioning across all four mental domains, when compared to MIE and MIP respondents.

Primary Impairment

Respondents with a primary mental health impairment differed significantly from those with a physical health impairment across six WD-FAB domains: cognition and communication, mood and emotions, resilience and sociability, self-regulation, basic mobility, and upper body function. Respondents primarily dealing with physical health issues displayed higher scores across all WD-FAB mental health domains, when compared to respondents with a primary mental health impairment. Respondents facing primary mental health challenges demonstrated higher levels of functioning in two physical health domains—basic mobility and upper body function—compared to those with a primary physical health impairment.

Employed with Past 2 Years

Respondents who were employed at some point during the past 2 years had significantly higher scores across all WD-FAB physical health domains – basic mobility, community mobility, fine motor function, and upper body function, when compared to respondents who did not work within the past 2 years. However, there was no significant difference between these two groups in any of the WD-FAB mental health domains: cognition and communication, mood and emotions, resilience and sociability, and self-regulation.

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