



A New Approach to Examining Disability

How the WD-FAB Could Improve SSA's Processes and Help People with Disabilities Stay Employed

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US federal agencies struggle to determine eligibility for important disability benefits. Simultaneously, government programs fail to sufficiently help workers with disabilities stay in the labor force. An innovative tool developed through interagency cooperation could help the Social Security Administration (SSA) and other federal and state agencies in both these areas. The tool, the Work Disability – Functional Assessment Battery (WD-FAB), uses item response theory and computer adaptive testing to quickly interview individuals and systematically map their physical and mental health functioning. Physical functioning includes activities such as walking, kneeling, lifting and gripping. Mental health functioning includes activities such as coping with stress, controlling impulses, following instructions, and solving problems.

The WD-FAB could help SSA and state disability determination service (DDS) agencies better understand an applicant's functional ability and may improve the reliability of those agencies' decisionmaking processes. Currently, hundreds of thousands of applicants appeal for a hearing with an administrative law judge after a DDS denial. This extended appeals process is difficult for applicants, who experience financial hardship and uncertainty, and is expensive for SSA to administer.

The WD-FAB could be used at several points throughout SSA's determination process. For example, at initial intake, the WD-FAB would provide information about an applicant's physical and mental health functioning to inform the collection of relevant evidence. The data generated by the WD-FAB interview would not be the basis for the DDS decision, but it would complement the information collected under the current process to help SSA reach a reliable decision earlier in the process. WD-FAB scores could also be used in the quality review process to help the agency determine whether the most appropriate

evidence was collected to make a determination. We describe these potential applications in more detail later in this brief.

The WD-FAB could also help programs better target services toward people with potentially disabling health conditions so they can stay in or reenter the labor force. Currently, federal and state programs struggle to adequately serve workers at risk of dropping out of the labor force, especially workers with a new serious illness or injury. Some effective programs have a high per person cost, and services need to be well targeted to maximize cost efficiency (Bardos, Burak, and Ben-Shalom 2015; Contreary, Ben-Shalom, and Gifford 2018; IAIABC 2016). Using the data provided from the WD-FAB, program managers and evaluators could learn how to better target timely services to the workers most likely to benefit from them.

Background on the Work Disability–Functional Assessment Battery

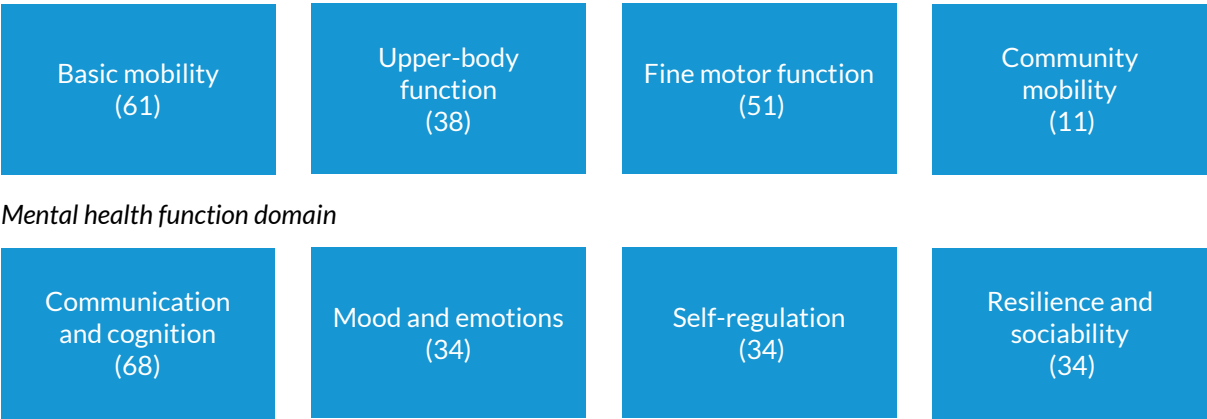
Since 2008, the National Institutes of Health (NIH) has worked with SSA through an interagency agreement to improve the disability determination process. NIH collaborated with Boston University to develop the WD-FAB, which provides a comprehensive and systematic way to collect information about self-reported functioning across eight physical and mental health domains. The WD-FAB advances SSA's current approaches to collecting functional information: it uses standardized questions about functioning that have undergone reliability and validity testing, and these characteristics are generally not as prominent in SSA's current disability determination process (Marfeo et al. 2018; Marino et al. 2015; McDonough et al. 2017, 2018; Meterko et al. 2015, 2019). Because it uses a computer-based platform and an algorithm that selects the most appropriate questions for each respondent, the instrument is highly efficient and allows the assessment of a broader range of functional abilities with minimal burden on the user. Importantly, the WD-FAB focuses on functioning and does not address the environmental demands of work. Both elements are needed to fully inform SSA's decisions about work disability.

The WD-FAB uses item response theory and computer adaptive testing to create a comprehensive, standardized assessment while minimizing user burden. Item response theory orders survey items (questions) hierarchically for each construct of interest, allowing score estimation at the item level. This means a respondent does not need to answer all questions to generate a score for that construct. Although the full instrument contains more than 300 items, the computer software selects only the most relevant items based upon a users' prior responses. A study sample answered an average of 50 items across the eight domains in just over 14 minutes (Meterko et al. 2015). This technology allows greater score precision with less respondent burden (Jette et al. 2019; Meterko et al. 2019). Unlike static questionnaires, the WD-FAB is a dynamic instrument: items can be added or revised, and the software can vary the order of the domain items that are selected from for each user. The instrument can be administered online, over the phone, or in person.

NIH used the World Health Organization's International Classification of Functioning, Disability and Health (ICF) as the conceptual framework for developing the WD-FAB (World Health Organization

2001). As shown in figure 1, the WD-FAB focuses on functional activities; this is a broader perspective than assessing only impairments of body or of organ structure or function. Development of the WD-FAB progressed over three stages and led to the identification of eight domains, four for physical health functioning and four for mental health functioning, also shown in figure 1 (Jette et al. 2019).

FIGURE 1
WD-FAB Domains and Items
Physical function domain



Source: Work Disability – Functional Assessment Battery.

WD-FAB scores range from 0 to 100. Scores are estimated to a general population sample with a mean of 50 points and a standard deviation of 10 points. Higher scores indicate higher levels of functioning (Meterko et al. 2019). Figure 2 shows the score for a woman with chronic lower-back pain. Study results demonstrate that adult SSA disability claimants had lower WD-FAB scores than normative samples of working-age people with no floor or ceiling effects (Marfeo et al. 2018; McDonough et al. 2017). Individual WD-FAB scores create a profile of functioning that can be compared with scores for a general adult population.

WD-FAB scores can help disability examiners determine whether a case requires further development or they can corroborate existing evidence in a file. The WD-FAB supports the efficient and comprehensive assessment of functional activity consistent with contemporary perspectives of disability. Its design is flexible and supports updates that align with advances in conceptual and scientific approaches to disability.

Critics of systems relying on self-reported information question their response accuracy, and in this instance, respondents have a financial incentive to become eligible for SSA’s disability programs. Although additional research on the WD-FAB will help agencies identify exaggerated responses, the instrument allows SSA to collect functional data on a large scale to examine anomalous responses and response patterns based upon sociodemographic and health condition characteristics. These data would substantially extend the agency’s current analytic capabilities.

FIGURE 2

WD-FAB Functional Profile

Identifier: MOCKUP1	Date: 1/15/2018
Gender: Female	Age: 30
Primary allegation: Chronic lower back pain	

Physical function profile	Score estimate	Score precision
Basic mobility: Involves getting into and out of positions, staying in positions for periods of time, and walking and moving around from one place to another.	25	±2
Upper-body function: Involves using arms and body to push, pull, and carry objects and move them from one place to another.	48	±2
Fine motor function: Involves the coordinated actions of handling objects, picking up, manipulating, and releasing them using one's hand, fingers and thumb.	52	±2
Public transportation: Involves using buses, trains, or subways to get from one place to another; this includes using timetables, wayfinding and getting in and out of train cars or buses.	45	±2
Driving: Involves planning and carrying out the tasks involved in driving a motor vehicle, such as entering/exiting the vehicle, navigating roadways, and parking.	60	±2
Mental health function domains		
Communication and cognition: Includes aspects of function such as organizational skills as well as paying attention, following instructions, communicating through speech and writing, applying knowledge that is learned, thinking, solving problems, and making decisions	60	±2
Mood and emotions: Represents a range of aspects of a person's internal emotional state that can affect a person's ability to work, including degree of emotional stability, depressive feelings, and anxiety.	30	±2
Self-regulation: Characterizes attributes of function such as controlling temper, respecting others, following rules, using social abilities, interacting with people in a contextually appropriate manner, and responding to the feelings of others	55	±2
Resilience and sociability: Includes a range of capabilities related to handling stress, accomplishing goals, and learning from mistakes. Resilience is the process of adapting well in the face of adversity; trauma; tragedy; threats; or significant sources of stress, such as family and relationship problems, serious health problems, or workplace and financial stress.	50	±2

Source: Work Disability – Functional Assessment Battery.

Using the WD-FAB in Social Security Disability Determination

Eligibility Factors and the Conceptual Model of Disability

Assessing and determining disability is difficult. For SSA, determining a person's ability to engage in work often requires looking at more than his or her health condition and impairment. Contemporary disability frameworks recognize disability as the outcome of the interaction between individual functioning and the environment. SSA can integrate more current perspectives into its disability determination process without modifying the agency's statutory definition of disability.

When the SSA disability insurance amendments became law in 1956 (Kearney 2006), the medical model dominated perspectives on health and disability. At that time, disability was considered a limitation of the person that was addressed with medical intervention (Institute of Medicine 1997; Stobo, McGeary, and Barnes 2007). Current perspectives, such as the World Health Organization's ICF, view disability as a biopsychosocial phenomenon and recognize that the environment can facilitate or inhibit a person's functioning (World Health Organization 2002). This framework defines "the environment" broadly to include the physical space, such as dwellings and terrain, as well as social factors, such as public policy and cultural norms (World Health Organization 2001).

Over time, SSA has integrated functioning into some of its disability determination processes. For example, SSA added functional criteria to the medical listings, the medical criteria used to assess impairment at step three of the five-step disability determination process.¹ Although symptomology provides key information about pathological conditions, symptoms alone provide limited information about individual functioning (Jette et al. 2019). Changes in health condition and impairment as well as the influence of medical treatment on health conditions and impairment often manifest as changes in functional ability. Adopting a conceptual disability framework would provide SSA with a way to more comprehensively and consistently integrate functioning into its processes; it would also help SSA target the type of information that would be most informative to the assessment of work disability. The WD-FAB is one step in that direction.

Recently, SSA has undertaken research that is inconsistent with a conceptual disability framework that emphasizes functional ability. SSA entered into a five-year contract in fiscal year 2018 that includes an investigation into new diagnostics and biomarkers (SSA 2018, 2019b). The agency also hosted a recent forum to examine how biomarkers could be integrated into the agency's disability determination process.² Biomarkers provide a quantitative measure of change at a cellular level, but they offer little information about the resultant influence on a person's functional ability. This limitation was confirmed by the forum speakers. Although SSA's statutory definition of disability requires the agency to assess impairment severity, for many claims, the agency will need to consider functional ability to more fully inform its decision about a person's ability to work. SSA needs to more fully orient its disability determination processes to examine impairment severity as it affects functional capacity.

ROLE FOR THE WD-FAB IN THE DETERMINATION PROCESS

A new claim for SSDI and SSI benefits is accepted by SSA staff at field offices and forwarded to a DDS agency for evaluation. If an applicant is denied after the initial review, he or she can appeal the decision and, in most of the country, request a reconsideration review by another disability examiner. The initial determination and reconsideration stages of the process occur without the state disability examiner seeing the applicant. The examiners make determinations largely based on the medical evidence the applicant provides, and the DDS offices procure only a limited amount of additional evidence.

The reconsideration stage of the determination process is controversial. For several decades, 10 states have not had a reconsideration review in part or all of the state, and SSA has recently begun to reestablish the review process in these states. Currently, only 12.6 percent of claims are allowed during the reconsideration review. Critics argue the reconsideration review is only a “rubber stamp” on the initial review and have called for eliminating this stage of the process (Dubin 2016; Ekman 2018; Greszler, Gonshorowski, and Boccia 2019). Alternatively, Smalligan and Boyens (2019) recommended enhancing the reconsideration review so SSA can resolve more claims earlier and reduce the number of appeals for a hearing with an administrative law judge.

Under an enhanced reconsideration review, more time and resources would be spent developing the medical evidence with applicants who are initially denied and appeal their case. These changes would address the difficulty DDS staff have obtaining evidence from treating sources in the time they currently have available (Government Accountability Office 2008), which can lead to denials of claims that should have been awarded. They could also enable the DDS to request and obtain more consultative examinations to better understand the claimant’s condition. Consultative exams are helpful when an applicant has no health insurance and limited medical records.

The reconsideration process could be strengthened and improved in several ways. Many past proposals have included adding an in-person interview during the reconsideration stage to better understand the applicant’s condition.³ Some disability examiners and administrative law judges say that applicants often fail to adequately or fully initially report their health conditions (e.g., an applicant may report a serious musculoskeletal condition but not disclose having severe problems with depression). Some of these gaps are not revealed until an applicant is at the hearing before an administrative law judge. A WD-FAB interview could achieve a similar objective at a much lower cost to SSA and with less burden to the applicant. Using the WD-FAB score, the DDS examiner could review the evidence in the initial determination to identify gaps that require further evidence. In this manner, WD-FAB would be a tool the examiner uses and not the basis for an allowance or denial. An improved reconsideration process that produces better decisions and reduced appeals for a hearing before an administrative law judge will reduce uncertainty and financial hardship for applicants. It would also cut SSA’s administrative costs: a 10 percent reduction in appeals would reduce SSA’s costs by nearly \$300 million a year (Smalligan and Boyens 2019).

The WD-FAB results could also be useful when SSA conducts its quality review of DDS decisions. Despite evidence of variations in allowance rates and processes among states, SSA’s internal reviews of state DDS allowances and denials consistently find that between 95 and 98 percent of DDS decisions

are made accurately (SSA 2019a; SSAB 2001). One explanation for this is that SSA's internal reviews focus on reviews of DDS files. The internal review is therefore a judgement of whether the evidence available in the file justifies the final decision, not whether all potentially relevant evidence was collected and properly analyzed. If state DDS offices make decisions based on incomplete evidence, decisions could be inconsistent or erroneous, but that would not be reflected in SSA's determination of accuracy. The self-reported WD-FAB scores would give SSA an important additional source of information to compare with the evidence collected by the DDS examiners, and they would act as a resource to analyze quantifiable functional data with other case characteristics among DDS agencies.

Although the number of disability insurance applications has declined in recent years (Board of Trustees 2019), the large volume of applications for SSDI and Supplemental Security Income disability benefits, on average, influences viable options for programmatic improvement. Like other government agencies, SSA must allocate limited resources in its service to the public. For the SSA disability programs, this means adjudicating disability claims as efficiently and consistently as possible.

Tools to Help Workers Who Experience New Functional Limitations Stay in the Labor Force

Each year, on average, 4.2 percent of working-age adults who are in the labor force report developing a new work-limiting condition or experiencing a new health shock. Most workers are able to manage these conditions and stay employed. But within two years, these workers are three times more likely to leave the workforce (Mudrazija and Smalligan 2019). Some workers who experience a new health challenge benefit from services provided by their employers, but many others do not have access to either public or private assistance (Smalligan and Boyens 2018).

The WD-FAB could be tested as a resource to help public and private organizations develop, target, and evaluate their strategies to help workers with new functional limitations stay employed. Return-to-work services or early intervention strategies are aimed at supporting continued employment for workers who develop a new illness or injury or who experience the worsening of a chronic condition that could limit their ability to work.

Return-to-work services are provided to a person as soon as is practical after he or she acquires a new medical condition or an existing condition worsens. Ideally, these services begin when medically allowable and while the person is still adapting to a new condition. Return-to-work services can take many forms, but the most effective approaches improve coordination, communication, and services among the employee, the employer, and the health care provider, with an overarching focus on the person's functional capacity and ability to stay at or return to work.

Effective early intervention strategies can range in complexity. In some cases, they involve an employer providing an accommodation to the employee for ongoing medical visits under the Family and Medical Leave Act or providing a workplace accommodation under the Americans with Disabilities Act. Frequently, breakdowns or gaps in the delivery of health care services need to be addressed (Franklin et

al. 2015; Christian, Wickizer, and Burton 2016). For example, workers who do not receive adequate physical therapy may underestimate their own functional ability as they recover from an injury. Other times, a worker may be treated for only one medical condition when another is also present. More intensive services and coordination between providers may also be needed when a worker has a mental health issue, such as depression, in addition to a physical illness, because this can greatly increase the risk of long-term unemployment for the newly ill or injured worker (Conti, Berndt, and Frank 2008).

When workers experience a new functional limitation or disability, identifying the best strategy to keep them employed or help them return to work can be challenging. A worker struggling to manage a musculoskeletal condition may need a different intervention if he or she also has one or several comorbidities, such as obesity or depression (Gulley et al. 2018). Further, comparing the effectiveness of both interventions and service agencies is currently difficult. The severity of the functional limitations of workers served by different interventions or agencies will vary. Some effective interventions may have difficulty targeting workers with the most need and end up serving many low-risk workers. This can make the approach appear too expensive to take to scale. Identifying the appropriate intervention also requires substantial judgement.

Within a public or private short-term disability or medical leave program, the WD-FAB could be integrated into the early intervention referral system. Providers of these benefits often use private medical duration guidelines to estimate the length of leave for an individual, based on the International Classification of Diseases code of the medical condition, any comorbidities, and the nature of a worker's job. The Rhode Island temporary disability insurance program, for example, uses private guidelines, and when a worker reaches 90 percent of the expected duration of leave, the worker is identified as high risk (Bourbonniere and Mann 2018). Contreary, Ben-Shalom, and Gifford (2018) also identify the potential value of predictive analytics for receiving short-term disability benefits.

Once identified as high risk, a worker could be referred to a return-to-work specialist and asked to volunteer to complete the WD-FAB. The specialist could use the WD-FAB functional profiles to inform the selection of intervention strategies for the worker. Collecting deidentified WD-FAB scores over time would provide analysts with a robust database they could use to both evaluate and refine interventions and to evaluate the effectiveness of the entities administering the interventions.

Currently, SSA is using the WD-FAB in the Supported Employment Demonstration, which uses the Individual Placement and Support model and targets workers who have been denied SSDI or Supplemental Security Income benefits and report having serious behavioral health challenges (Riley and Bonilla 2019).⁴

Conclusion

Effective disability programs help workers with disabilities stay in the labor force and provide a social insurance safety net for people who cannot continue to work. Challenges with understanding and measuring disability have made disability policy controversial, and agreement on solutions is often elusive. The WD-FAB offers an opportunity to leverage advances in approaches to integrate functional information into the assessment of work disability using comprehensive, efficient technologies to

capture self-reported functioning. By evaluating the use of the WD-FAB to help inform the selection of return-to-work strategies and to more fully develop evidence for those applying for income assistance, we are contributing new data that will help agencies make better decisions earlier and help more people stay at or return to work.

Notes

- ¹ “Disability Evaluation Under Social Security,” Social Security Administration, accessed December 3, 2019, <https://www.ssa.gov/disability/professionals/bluebook/AdultListings.htm>.
- ² The forum was held on July 10, 2019, at the Partnership for Public Service in Washington, DC. For an overview, an agenda, and panelist information, see “NDF Outreach,” Social Security Administration, accessed December 3, 2019, https://www.ssa.gov/ndf/ndf_outreach.htm.
- ³ William R. Morton, “Summary of Recommendations and Perspectives on the Reconsideration Level of the Social Security Administration’s Administrative Appeals Process,” memorandum to the House Committee on Ways and Means, Subcommittee on Social Security, November 26, 2018; memorandum was provided to the authors by Kathryn Olson, Democratic staff director for the Subcommittee on Social Security of the House Committee on Ways and Means, on March 21, 2019.
- ⁴ “Supported Employment Demonstration,” Social Security Administration, accessed December 3, 2019, https://www.ssa.gov/disabilityresearch/supported_employment.html.

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Smalligan developed policies that have been incorporated into many pieces of legislation, including the North Atlantic Free Trade Agreement of 1993, the Taxpayer Relief Act of 1997, and the American Recovery and Reinvestment Act of 2009. In 2012, he was a guest scholar at the Brookings Institution,

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