MATHEMATICA Policy Research

Research BRIEF

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New Perspectives on Practice:
A Guide to Measuring Self-Regulation and Goal-Related Outcomes in Employment Programs

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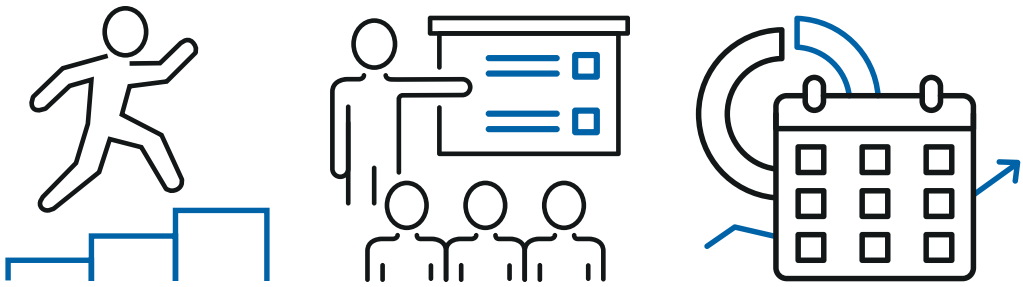


OPRE

Employment programs are inherently goal-oriented. They seek to help participants achieve self-sufficiency, typically through education, work readiness and job training, job search assistance or requirements, supportive services (such as assistance with child care and transportation), and access to employment opportunities. Programs have been working to improve participants' employment outcomes for decades, but the field continues to seek greater effectiveness. New evidence from neuroscience, psychology, and other behavioral sciences suggests that employment programs may be able to improve participants' long-term outcomes by enhancing their ability to set and pursue their own goals, and that specific skills, behaviors, and mindsets are critical to goal achievement.

Some employment programs are beginning to offer services that explicitly seek to improve participants' ability to set and pursue their own goals. Determining whether such services are succeeding can be challenging. Even when programs compare employment outcomes of their participants with outcomes of a comparable group of non-participants, they often lack valuable information about whether participants are reaching more intermediate goals, who is benefiting most from which services, and whether and how services are changing participants' goal-related skills, behaviors, or mindsets. More directly measuring the skills, behaviors, and mindsets needed for goal achievement can help programs track critical steps participants may be taking toward self-sufficiency and better assess the promise of goal-oriented employment services for adults with low incomes.

Box 1. This brief is right for you if your program:

- Wants to know whether and how an intervention the program has already implemented is working to equip people with the skills, behaviors, and mindsets needed to effectively set and pursue goals
- Is considering implementing a new intervention to equip people with the skills, behaviors, and mindsets needed to effectively set and pursue goals and wants to know more about the skills and needs of program participants to determine what interventions might be most useful
- Has the capacity to collect information on individual program participants

This brief, a product of the GOALS project (described in Box 2), aims to help programs collect and use data from goal-related measures in a way that minimizes cost and disruption to program operations, has the potential to inform ongoing program improvements, and provides evidence for the field about how to affect goal-related outcomes. We begin with a summary of the role of goals in facilitating self-sufficiency, followed by a discussion of why it may be important for programs to measure goal-related skills, behaviors, mindsets, and outcomes. We then offer guidance for practitioners on what to measure and how and when to measure it, focusing on measures that are both potentially useful and feasibly implemented in real-world program contexts. We conclude with insights on preparing for measurement and provide some additional resources that might help programs in their goal-related measurement efforts.

Box 2. Overview of the Goal-Oriented Adult Learning in Self-Sufficiency (GOALS) project.

The Office of Planning, Research and Evaluation (OPRE) at the U.S. Department of Health and Human Services, Administration for Children and Families (ACF) is investing in learning more about ways to enhance the skills associated with setting and pursuing goals, particularly strategies that may help adults with low incomes achieve their employment goals and become self-sufficient. In 2014, OPRE awarded a contract to Mathematica Policy Research to conduct the GOALS project to explore how emerging insights from neuroscience, psychology, other behavioral sciences, and goal achievement can inform employment programs for adults. Several project activities contributed to the development of this brief, including: (1) a literature synthesis that reveals the self-regulation skills that may be most relevant for attaining employment-related goals, and the environmental influences that can support or inhibit optimal use of these skills; (2) exploratory site visits to observe and document how programs for low-income populations are trying to improve and support use of self-regulation skills and goal achievement processes and the successes and challenges they have faced; and (3) assessment of the implementation experiences and support for improvement of three different goal-oriented pilot interventions within five employment programs located across the country.

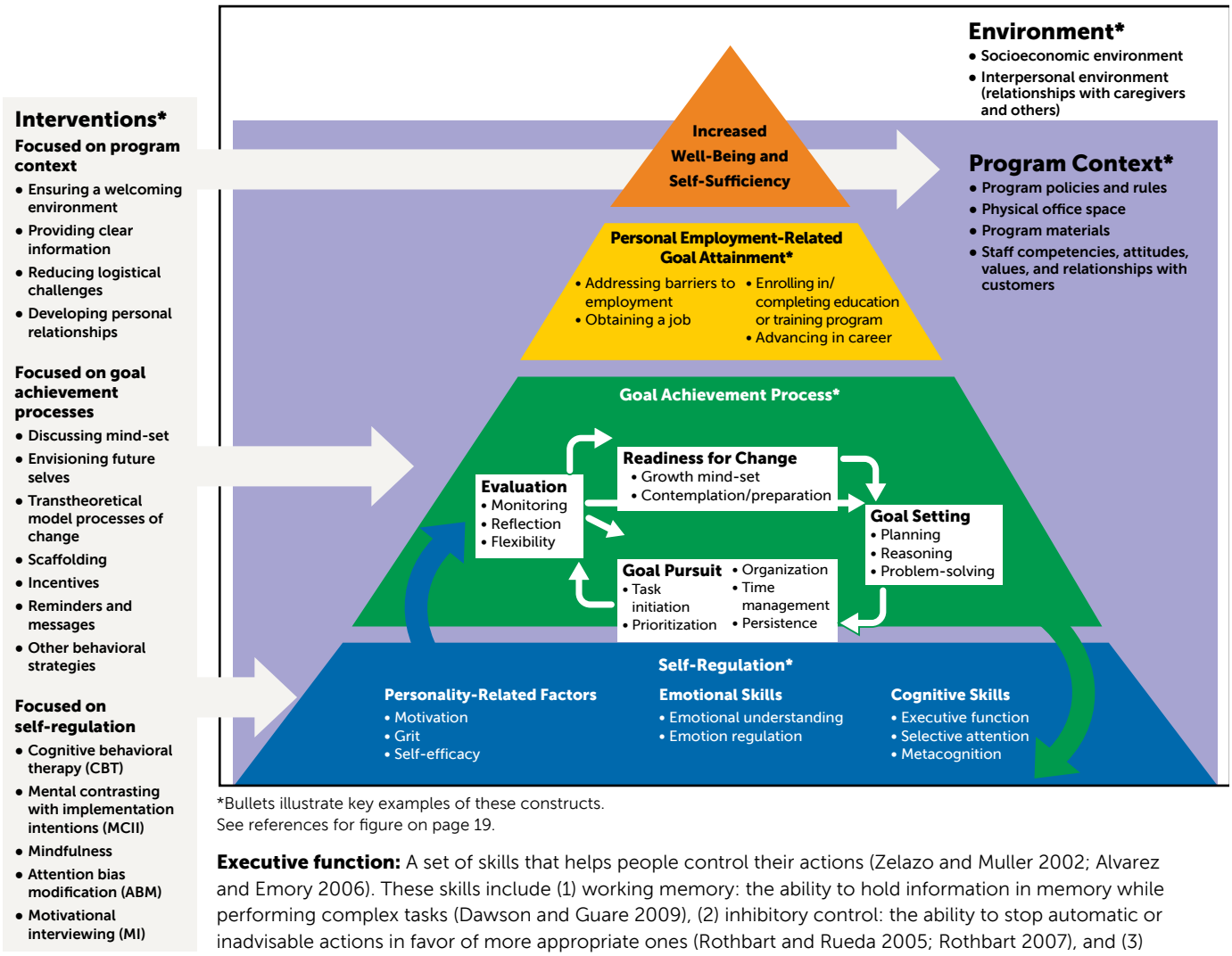
HOW DO GOALS FIT INTO THE PATHWAY TOWARD SELF-SUFFICIENCY?

People come to employment programs with different needs, skills, and aspirations. For some, being self-sufficient is a long-term goal, whereas for others, it is readily within reach. Whether a participant is working toward a short- or long-term goal, programs can bolster participants' progress by fostering the psychological skills, behaviors, and mindsets that are central to the goal achievement process. Figure 1 summarizes these interrelated components that support participants' progress on a pathway to self-sufficiency.[1] Depending on a program's particular emphasis, any of these components might be areas for potential measurement.

At the base of the pyramid in Figure 1, ***self-regulation*** is an umbrella term for a wide range of psychological skills—including cognitive skills, emotional skills, and personality-related factors—that together support goal achievement. Figure 1 highlights several components of self-regulation most common in the research literature, all of which are relevant to goal achievement. For example, selective attention is a cognitive skill that a person might use to weed out distractions and focus on setting and pursuing a specific goal, whereas motivation is a personality-related factor that would help the person maintain his or her interest and enthusiasm to achieve the goal.

Self-regulation can be important for a person's ability to engage in the ***goal achievement process,*** represented in the green band of Figure 1. When people are working toward a goal, they engage in a process of (1) readying themselves for change, (2) identifying and setting a goal, (3) making and acting upon plans to pursue the goal, and (4) evaluating progress toward achieving the goal. These four steps of goal achievement require the use of self-regulation, even as engaging in them can help to build an individual's self-regulation—a feedback loop represented by the arrows between the blue and green bands of the pyramid.

Figure 1.
The role of self-regulation and goal achievement processes in self-sufficiency



*Bullets illustrate key examples of these constructs.
See references for figure on page 19.

Executive function: A set of skills that helps people control their actions (Zelazo and Muller 2002; Alvarez and Emory 2006). These skills include (1) working memory: the ability to hold information in memory while performing complex tasks (Dawson and Guare 2009), (2) inhibitory control: the ability to stop automatic or inadvisable actions in favor of more appropriate ones (Rothbart and Rueda 2005; Rothbart 2007), and (3) cognitive flexibility: the ability to hold more than one idea at a time and to switch between tasks or thoughts as needed, (Hassin et al. 2009).

Selective attention: The ability to attend to one particular task in the face of other thoughts, information, and actions (Zelazo et al. 1997).

Metacognition: A skill that allows people to reflect on their own thinking and actions (Flavell 1979; Achtziger et al. 2012; Dawson and Guare 2016).

Emotion understanding: The ability to use physiological, visual, and environmental cues to interpret how one's self or another is feeling (Cole et al. 2009; Gross 2013; Murray et al. 2015).

Emotion regulation: A process that makes emotions manageable or useful; emotion regulation could involve lowering the level of emotional expression ("cooling off" when angry, for example) or raising the level of emotional expression ("up-regulating" so that one can have energy to persist) (Gross and Thompson 2007; Giuliani et al. 2008).

Motivation: A characteristic that allows people to pursue, persevere, and accomplish tasks (Harackiewicz 2000; Ryan and Deci 2000). Intrinsic motivators are personal feelings of satisfaction, accomplishment, or self-worth. Extrinsic motivators are tangible rewards determined by other people, such as praise, a promotion, pay increase, or other material rewards (Hennessey et al. 2005).

Grit: A perseverance and passion for long-term goals that enables people to persist in trying to achieve goals that may be far in the future, despite hurdles (Duckworth et al. 2007).

Self-efficacy: The belief people have in their ability to perform at a high level (Bandura 2012).

As indicated by the left panel of Figure 1, programs can attempt to increase employment-related goal attainment, well-being, and self-sufficiency through ***interventions***—that is, program services or strategies —that target different aspects of self-regulation or goal achievement processes. For example, Roca, a program highlighted in Box 3, targets participants' emotional regulation through various services, whereas the Larimer County Workforce Center, highlighted in Box 4, uses an interactive technology platform to target participants' goal achievement processes. Although these programs target different levels of the pyramid, they seek similar participant outcomes: assisting participants with ***personal employment-related goal attainment,*** which can in turn lead to ***increased well-being and self-sufficiency,*** as represented in the gold and orange upper level bands of the pyramid.

Box 3. Program spotlight: Roca.

Roca is a nonprofit community organization focused on improving the lives of low-income young adults in four Massachusetts cities. It serves about 600 young men (ages 17 to 24) and 130 young mothers (ages 16 to 24). Roca seeks to improve emotion regulation, inhibitory control, metacognition, motivation, and self-efficacy, in an effort to change participants' behaviors and improve their life outcomes. It does this through a combination of services, including coaching and motivational interviewing, supplemented by a curriculum of cognitive behavioral therapy. Roca uses the ***Difficulties in Emotion Regulation Scale*** to evaluate whether a change in self-regulation skills is related to changes in employment, education, and recidivism outcomes, and assess if the program's cognitive behavioral therapy works better for some participants than for others.

Box 4. Program spotlight: Larimer County Workforce Center.

The Larimer County Workforce Center (LCWC) is a one-stop service center for TANF, the Supplemental Nutrition Assistance Program, workforce development, and other social services in Larimer County, Colorado. In 2016, in response to growing caseloads and reduced funding, LCWC partnered with a local technology firm to create a web-based, interactive platform that systematizes many of TANF's standard processes and steps to achieving common customer goals (such as securing housing, accessing Medicaid, or obtaining child care assistance). The platform allows participants to select areas of need and then walks them through the process of setting and pursuing goals in each area. It provides tools to support goal achievement including, for example, worksheets to help participants manage their time, prioritize their goals, and initiate tasks. The platform, called Your Virtual Path to Success, is dual-facing: program staff can view and track participants' progress in real-time, and clients can interact with staff through file sharing and messaging. Because it is web-based, it automatically collects ***administrative data*** on participants' engagement in program activities, which can be used to examine outcomes, including progress toward their goals.

Programs can also support goal achievement by targeting external influences on participants' skills, behaviors, and mindsets. Psychologists have long argued that people have limited capacity or "bandwidth" for using their self-regulation skills.[2] Complicated paperwork or stringent program requirements may require employment program participants to deplete some of this bandwidth. By altering the ***program context*** (for instance, its rules, staffing structure, or physical space), programs can reduce unnecessary demands on participants and thus help increase the bandwidth they have available for self-regulation, better support individuals' development and use of self-regulation, or enhance their engagement in the goal achievement process. San Francisco's Project 500, described in Box 5, offers an example of a program that seeks to create an atmosphere that lessens the burden on participants' self-regulation while improving their ability to engage in the goal achievement process.

Box 5. Program spotlight: Project 500.

A strategic initiative launched by the mayor's office, Project 500 is an effort to serve 500 of San Francisco's most vulnerable families, namely low-income young mothers. The program is housed in the Human Services Agency (HSA) and implemented by HSA staff and their counterparts at other city and county agencies and partner organizations. The program combines sustained and flexible mentoring with nurse home-visits, behavioral health support, and traditional TANF services, including child care support, educational opportunities, and job training. The program is piloting a set of goal-achievement tools designed to help provide a more consistent focus across service providers on supporting employment readiness with a long-term goal of self-sufficiency. Through alignment of frontline staff activities around a goal-achievement framework, combined with efforts to improve communication and coordination and reduce redundancies across providers (for example, in client assessment), program leaders are seeking to simplify the Project 500 program context. Specifically, they plan to have mentors serve as a consistent point of contact, helping clients navigate other services. At the same time, their use of the goal-achievement framework will support a consistent service approach and send unified message to clients. This, in turn, can reduce logistical challenges and the corresponding burden on participants, allowing them to focus on achieving their goals.

Finally, Figure 1 reminds us that it is also important to consider how the broader ***socio-economic environment*** can shape the development and use of self-regulation and people's ability to set, pursue, and achieve goals. For example, poverty, family instability, exposure to violence or abuse, neglect, and food insecurity can inhibit a person's self-regulation. Because these broader environmental factors are rarely within an employment program's control, however, they are not the focus of this document.

WHY SHOULD EMPLOYMENT PROGRAMS MEASURE GOAL-RELATED SKILLS, BEHAVIORS, MINDSETS, AND OUTCOMES?

Promoting self-regulation and engagement in goal achievement processes is a strategy that programs may use to improve employment and self-sufficiency. By targeting some of these underlying processes—processes that are foundational to an individual's ability to achieve goals—programs may help participants realize lasting effects across different areas of their lives.

For programs that are investing effort in boosting participants' self-regulation and/or goal achievement, it is important to assess progress in this area. Some employment programs already track longer-term outcomes (such as obtaining and maintaining a job and the characteristics of those jobs).[3] Measuring the self-regulation and goal achievement skills, behaviors, and mindsets that the programs seek to change to help participants achieve those longer-term outcomes presents an opportunity to understand how the program is contributing to participants' progress towards goal attainment in employment and perhaps other areas of life.

For programs seeking to change participants' goal-related skills, behaviors, mindsets, and outcomes, measurement of such concepts can provide useful information. Measurement can provide different types of information, depending on how, when, and from whom data are collected. Decisions about these aspects of data collection can be described as the "study design" or the way in which research is structured to inform a question. There are many types of study designs. Generally, determining whether a program or program component (that is, an aspect of a program or a set of activities focused on a particular topic or skill) has an impact (above and beyond any other influence in participants' lives) requires a rigorous design in which participants are randomly assigned to a treatment group (which receives the intervention) or a control (which does not receive the intervention) and collection of data from both groups over time. Other ways of collecting data can also be used to suggest whether a program may be having the desired effect. A discussion of study design is outside the scope of this brief, but many resources exist for programs interested in learning more about study design.[4]

Regardless of the study design, measures of participant's goal-related skills, behaviors, and mindsets can fulfill several purposes. For example, these types of measures can:

- **Help programs monitor performance.** Measuring changes in the skills, behaviors, and mindsets the program intends to influence (by comparing them before and after participants engage in a program or program component) can provide timely feedback to the program on its progress and potential for successes. It may take programs a long time to affect employment outcomes. By measuring intermediate outcomes, such as changes in self-regulation skills or related behaviors and mindsets, programs (and evaluators and researchers) can obtain interim feedback on whether participants' skills, behaviors, or mindsets are changing.

- **Show who might be most likely to benefit from the intervention.** Different interventions may work for different people. Measuring self-regulation and goal-related skills, behaviors, and mindsets can help programs identify who might benefit most from a particular intervention. For example, an intervention designed to help participants set and pursue goals might not work for people who are in crisis. Similarly, an intervention designed to increase emotion regulation might not be valuable to those with strong skills in this area. In such a case, measurement could help target the intervention to participants with difficulty regulating their emotions.

- **Guide program improvements.** Measurement data can guide how a program adapts interventions to better serve its target population and, in turn, better achieve program objectives. For example, if data suggests that a particular intervention may work well for male participants but not their female counterparts, program leaders can examine why it may not be as useful for women and attempt to improve aspects of the intervention to better address their needs. Data that a program already collects on an ongoing basis can also be used in new ways to adapt program procedures. For example, a program might track the timing of staff check-in phone calls to participants and also record attendance at training sessions. By looking at these data together, the program might discover that attendance at training sessions increases in the week after participants talk to staff on the phone. As a result, the program might change the participant check-in schedule so that phone calls occur immediately prior to training sessions.

WHAT SHOULD PROGRAMS MEASURE?

As Figure 1 shows, various skills and behaviors may be involved in the goal achievement process and choosing the right ones to measure may be challenging. In selecting measures, it can be helpful to first consider what questions a program would like to be able to answer. Data can be considered a tool to help programs gather information that will demonstrate outcomes or inform service delivery. To get the most out of the tool, it is critical to understand how the information gathered relates to the program's objectives, activities, and expected outcomes. For example, a program might use strategies that directly target participants' self-regulation, as in the case of Roca, which uses a curriculum to build emotion regulation among disadvantaged young adults (see Box 3). In this case, it would be appropriate to measure components of self-regulation (specifically, emotion regulation) as short- or medium-term program outcomes. In contrast, a program might seek to build participants' ability to set and pursue goals without changing their self-regulation skills, as in the case of Project 500, which streamlines services to reduce burdens the program environment may place on self-regulation (Box 5). Although setting and pursuing goals may give participants the opportunity to build and practice self-regulation skills, it would probably not make sense for Project 500 to measure self-regulation because the intervention is not explicitly designed to affect self-regulation.

In general, it may be helpful for program administrators to first articulate the program's key components and its underlying theory of change—that is, what a program expects to happen and why—before selecting specific measures.[5] Although this may seem complex, it can be done by answering a series of straightforward questions:

- **What is the program trying to accomplish?**
  - What are the program's key objectives?
  - What does the program seek to achieve with respect to participants' goal-related skills, behaviors, and mindsets?
  - What does the program seek to achieve with respect to participants' self-sufficiency?

- **How does the program plan to accomplish these things?**
  - What strategies (that is, program activities, services, or other resources) does it use to achieve these outcomes?
  - More specifically, what strategies does it use to assess, build, or strengthen goal-related skills, behaviors, and mindsets?
- **Whom does the program target?**
  - Are different strategies (program activities, services, or other resources) used with different participants?

In general, the more precisely programs can answer these questions, the more clarity they will gain with respect to potential measures. The conceptual framework in Figure 1 can guide program administrators' consideration of the questions with specific attention to goal-related skills, behaviors, and mindsets.

HOW SHOULD PROGRAMS COLLECT DATA?

Once program leaders have determined what they should measure—that is, what skills and behaviors are most *relevant* to their program—they must then consider what data collection methods and measurement tools are most *feasible,* given their program context and available resources.

Data on skills, behaviors, and mindsets relevant to the goal-achievement process can be collected in many ways. For employment programs, the most accessible methods include (1) participant self-report data, in which participants provide data by responding to a questionnaire; (2) observer report data, in which another person (for example, a program staff member or an employer) uses a checklist or other rating system to record data about the participant; or (3) administrative data, in which staff collect data through normal program activities, such as an intake interview.[6]

Each of these data collection methods has benefits and challenges (Table 1). For example, self-reports may be relatively easy to administer to program participants, but people can misreport their behaviors and may misperceive their own skills, thinking themselves stronger or weaker than they really are. Observer reports may be less biased, especially if they rely on clear checklists and other observation tools that have been validated or otherwise tested in similar program settings. However, staff members or others need to be trained to fill out the assessments or complete observations, which requires some resources. Administrative data collection is a low-cost method if the program already collects the data for other purposes, but it may not be appropriate for measuring skills, behaviors, or mindsets not easily summarized and recorded during normal program activities. For example, programs typically measure program attendance in administrative data (and can use those data to better understand how participant behaviors relate to program success), but capturing participants' readiness for change may be challenging to do through administrative data. Best practice in measurement involves using multiple, complementary sources of data to measure a single skill or behavior, but this is not always possible in

Table 1:
Potential data collection methods

Method of data collection	Benefits (+) and challenges (-)
Self-report: Asking participants about their own skills, behaviors, and mindsets, usually through a validated* questionnaire that participants fill out on their own or during interviews conducted by a program staff member. The questionnaires or interviews may include closed- or open-ended questions and can be filled out electronically or in hard copy.	+ Relatively easy to administer + Can be low burden on program staff - Validated tools may require licensing fees or other costs - May be burdensome for participants, particularly if conducted outside of regular program activities - May be biased by the respondent's feelings, perceptions, or expectations
Observer report: Measuring skill or behavior through someone else's direct observation or assessment of the participant. Data are typically collected using validated tools or standardized forms completed by someone who interacts with the participant—such as program staff, an employer, or a peer—and who rates the participant's behavior at a given point or over time.	+ Relatively easy to administer + Low burden on participants - Validated tools may require licensing fees or other costs - Observers may need training on how to complete reports - Responses are limited to the context in which the observer interacts with the participant
Administrative data: Collecting data for record keeping or operational purposes. These data can be used to track information on program participants that may also relate to behavior change, such as the number of appointments a participant attended or missed or the number of referrals a participant followed through on. Given that most programs already collect administrative data, it may be an extension of standard practice.	+ Low burden on participants - May be burdensome for program staff - Requires systems capacity to collect, aggregate, and analyze data - Limited to measures of things that occur in the course of normal program activities

* A validated data collection tool is one that research has proven actually measures what it claims to measure.

program settings. To guide the choice of data source, program administrators should consider the following:

- What data is the program already collecting and how?
- Can the program feasibly revise existing data collection systems or processes to implement additional measures?
- What resources (staff, financial, technical, etc.) does the program have to carry out measurement?

The answers to these questions may point stakeholders toward some measures and help to rule out others.

Self- and observer-report tools

Many self- and observer-report tools measure the goal-related skills, behaviors, and mindsets reflected in Figure 1, but few have been used in employment programs for low-income adults. In this brief, we present six measures that may be particularly promising for use in employment programs because they:

- Measure key skills, behaviors, or mindsets required for goal setting, pursuit, and/or achievement
- Can be administered with relatively little effort by program staff in a typical employment program
- Have been used successfully in rigorous studies over time or in a variety of settings with different types of respondents
- Are relatively easy for programs to score and interpret

Table 2 provides an overview of the six measurement tools.[7] It describes their format, cost (although some of these tools are public, others must be purchased), time to administer, and additional considerations. Below the table are additional details on each tool; side boxes provide sample assessment items for publicly available tools.

Table 2:
Self- and observer-report measurement tools

Tool name	Skill or behavior measured	Collection method	Format	Cost	Length/time to administer	Additional considerations
Measuring self-regulation						
Behavior Rating Inventory of Executive Function—Adult Version (BRIEF-A)	Cognitive and emotional skills	Self- and observer reports	Computerized or paper and pencil	About $100 to $700, depending on format and number and type of materials purchased	10 to 15 minutes, 75 items per report	20 minutes to compute scores manually (software for scoring also available for purchase); available in English and Spanish
Difficulties in Emotion Regulation Scale (DERS)	Emotional skills; emotion regulation	Self-report	Paper and pencil	No cost	Under 10 minutes, 36 items (18-item short form also available)	Responses summed for overall score; available in English, German, and Turkish
Grit Scale	Personality factors	Self-report	Computerized or paper and pencil	No cost	Under 10 minutes, 12 items (8-item Short Grit Scale also available)	Responses averaged for overall score; available in English, Chinese, French, German, and Japanese
Measuring goal achievement processes						
Lam Assessment on Stages of Employment Readiness (LASER)	Readiness for change	Self-report	Paper and pencil	No cost	Under 10 minutes, 14 items	Available in English and Chinese
Employment Hope Scale	Readiness for change	Self-report	Paper and pencil	No cost	10 minutes, 14- and 21-item versions	Responses averaged by subcategory
Goal Attainment Scaling (GAS)	Goal setting, pursuit, and attainment	Self-report at multiple points in time (facilitated by program staff)	Paper and pencil	No cost	No defined length, administration embedded in participant-staff meetings	Program staff and participant work together to complete and score

The appendix identifies methods for accessing each tool in full as well as additional resources that provide technical information, including reliability and validity statistics. Different versions of some of these tools exist; to the extent possible, the information we provide here and in the appendix pertains to the most up-to-date and readily accessible versions.

Behavior Rating Inventory of Executive Function—Adult Version (BRIEF-A). The BRIEF-A measures a subject's cognitive and emotional skills using situations and scenarios from everyday life. The adult questionnaire and versions targeted to younger people have been widely used to assess attention disorders. The BRIEF-A includes a self-report and observer report (available in English and Spanish); using both allows programs to assess one skill or behavior with two data sources (a best practice for measurement).

The BRIEF-A assesses nine components of self-regulation that it breaks into two categories: (1) *behavior regulation,* defined by the measure as a person's ability to control his or her thoughts, behaviors, and emotions, and (2) *metacognition,* defined by the measure as a person's ability to generate problem-solving ideas; to plan, organize and remember the steps necessary to carry out those ideas; and to monitor success and failure in problem solving. Specific skills and behaviors assessed include:

- Maintaining emotional control
- Refraining from acting impulsively or inappropriately
- Being flexible to problem solve and shift course when necessary
- Being aware of how one's behavior affects others
- Being able to initiate a task or activity
- Maintaining a working memory (that is, being able to hold information in mind to carry out a multistep task or to follow complex instructions)
- Planning and organizing to overcome barriers
- Monitoring successes and failures
- Organizing one's materials and environment.

For questions on each of these skills and behaviors, respondents indicate how often a series of scenarios pertain to themselves or the subject (for example, "never," "sometimes," and "often").

Access to the BRIEF-A requires the purchase of a license from the publisher. Scores can be computed by hand in 15 to 20 minutes or through the BRIEF software, which creates feedback reports for clients as well as "interpretive reports" for practitioners. Reports provide an overall score, a score for each category, and a score for each of the nine specific skills and behaviors as well as guidance on interpretation.

Consider using this tool if:

- Your program strategies specifically target participants' cognitive and emotional self-regulation skills
- Program participants have the capacity to fill out self-reports, which require a moderate level of literacy and time, or program staff have the time to be trained and to complete observer reports
- Your program has adequate financial and staff resources to purchase the tool and interpret and use detailed results

Difficulties in Emotion Regulation Scale (DERS). The DERS is designed to assess emotion regulation, which refers to how a person responds emotionally to a given situation and is an important part of self-regulation. The DERS has been used with adolescents and adults, often in health and mental health settings, and is available in English, German, and Turkish.

Using self-reports, the DERS measures emotion regulation in four domains: (1) awareness and understanding of emotions, (2) acceptance of emotions, (3) ability to engage in goal-directed behavior and refrain from impulsive behavior when having negative emotions, and (4) access to emotion regulation strategies perceived as effective. It can be used to measure a person's emotion regulation overall or within each domain separately. The scale is free, relatively short, and practitioners can calculate scores by hand. The measure includes 36 statements about which respondents indicate the amount of time that the statement is true for them, with options on a scale of 1 to 5, corresponding to "almost never," "sometimes," "about half the time," "most of the time," and "almost always." There is also an 18-item shortened version of the tool.

Sample items from the Difficulties in Emotion Regulation Scale (DERS)

"I am confused about how I feel."

"I pay attention to how I feel."

"When I'm upset, I have difficulty getting work done."

Consider using this tool if:

- Your program intervention specifically targets emotional skills
- Program participants have the capacity to fill out self-reports, which require a moderate level of literacy and time

Grit Scale. The 12-item Grit Scale and the 8-item Short Grit Scale measure perceptions of perseverance and passion for long-term goals. Grit can indicate self-control as well as readiness for and commitment to achieving goals. The scales have been used to assess grit among children, adolescents, and adults, especially in educational settings. Both scales are free and available in English, Chinese, French, German, and Japanese.[8] Scores for the paper version can be calculated by hand; online versions calculate scores automatically. Respondents indicate how well each of the items describes themselves, with options including "very much like me," "mostly like me," "somewhat like me," "not much like me," and "not like me at all."

Sample items from the Grit Scale

"I am a hard worker."

"I finish whatever I begin."

"Setbacks don't discourage me."

Consider using this tool if:

- Your program focuses on helping participants achieve goals by identifying their interests and pursuing activities that are meaningful to them and that they are good at (strategies that research has proven can increase grit)
- Program participants have the capacity to fill out self-reports, which require a moderate level of literacy and time

Lam Assessment on Stages of Employment Readiness (LASER). The LASER adapts a "stages of change" theory—often used for substance abuse rehabilitation programs—to low-income populations receiving welfare. This self-report questionnaire can be used to assess a participant's readiness to return to work, with results categorized in three stages: (1) pre-contemplation, when the person is indifferent to change; (2) contemplation, when the person is weighing the benefits and drawbacks of change or is ambivalent about change; and (3) action, when the person sees the benefits of change and is engaged in goal-related and employment-oriented behaviors.

Sample items from the Lam Assessment on Stages of Employment Readiness (LASER)

"I think I might be ready to look for some kind of job."

"Getting myself ready to find a job is pretty much a waste of time because I can't work anyway."

"I am actively doing something to find a job."

The self-report is free and can be administered on paper. A point system allows for calculation of scores. Respondents indicate their level of agreement with each of 14 statements, on a five-point scale from "strongly disagree" to "strongly agree." LASER is available in English and Chinese.

Consider using this tool if:

- Your program has the capacity to provide (or refer participants to) different programming or services based on their readiness to return to work
- Your program wants to assess which clients are ready to pursue employment-related goals and/or seeks to build participants' readiness for change
- Program participants have the capacity to fill out self-reports, which require a moderate level of literacy and time

Employment Hope Scale (EHS). The EHS attempts to measure what the developers call "empowerment-based self-sufficiency" among low-income job seekers. The instrument captures a person's ability to choose goals, make plans to achieve them, and find the motivation to achieve them within an employment context. The EHS is free and available as a 21-item scale or in a 14-item short form.[9]

Sample items from the Employment Hope Scale (EHS)

"Thinking about working, I feel confident about myself."

"I will be in a better position in my future job than where I am now."

"I am able to utilize my resources to move toward career goals."

EHS is administered on paper, and there is a point system for calculating scores. Respondents select their level of agreement with each of the statements on a scale from 0 ("strongly disagree") to 10 ("strongly agree").

Consider using this tool if:

- Your program seeks to prepare participants to set, pursue, and achieve employment-related goals
- Program participants have the capacity to fill out self-reports, which require a moderate level of literacy and time

Goal Attainment Scaling (GAS). GAS is a system for measuring goal progress and attainment that was originally used in clinical rehabilitation programs. The scoring of progress is standardized, but the goals are customized to the individual. The first stage of the process is collaborative, with the participant and the program staff member working

together to articulate a so-called "SMART" goal (specific, measurable, achievable, realistic/relevant, and timed) and corresponding action steps. The staff member assigns relative weights to the participant's goals based on their difficulty to achieve and importance to the participant. The participant's progress is then self-reported and/or recorded through check-ins with a program staff member at appointed review dates.

GAS is not a questionnaire and therefore does not include specific items. Rather, it offers a standardized template for documenting and scoring progress toward each of the participant's collaboratively identified goals; progress scores range from -2 ("much less than expected") to 2 ("much more than expected"). There are many free GAS templates to choose from.

Consider using this tool if:

- Your program works with participants to set and pursue individual goals
- Your program would like a standardized yet customized way of measuring progress toward goals
- Program staff have the time to meet with participants for in-depth conversations about their goals and are able to check in with participants regularly to assess progress

Administrative data options

Program staff can also draw upon a program's management information system or administrative data system to measure goal-related skills and behaviors or to use information already collected in new ways. These systems can be used to record participants' engagement in program activities that support goal achievement (Figure 1). For example, time management (a behavior typically considered necessary for successful goal pursuit) could be measured in terms of a participant's on-time attendance at program activities.

Table 3 presents examples of potential measures of the goal-achievement process depicted in the green band of Figure 1. Programs could collect data on these measures using their own administrative data systems. Some of these measures are objective indicators of behavior (for instance, whether or not a participant completed a task), while others might require program staff to judge a participant's behavior (for instance, the extent to which a participant has reflected on his or her aspirations). The latter would be similar to the observer reports described previously but would be recorded by a staff member in a program's data system as part of service delivery, rather than being recorded through a stand-alone checklist or questionnaire administered by a staff member.

Table 3:
Examples of goal-related measures collected via administrative data

Potential measure (yes/no response)	Skill or behavior
Readiness for change	
Reflected on aspirations for job	Readiness for change
Completed readiness task (career interest inventory, resume, etc.)	Readiness for change
Goal setting	
Identified personally meaningful employment-related goal	Planning
Identified specific roadblocks to achieving goal	Reasoning
Created a plan to overcome roadblocks and attain goal	Problem solving
Goal pursuit	
Completed first step in plan to attain goal	Task initiation
Overcame a roadblock	Problem solving
Followed up on a resource referral or job lead	Prioritization
Regularly attended program activity/work or communicated reason for absence	Persistence
Regularly attended program activity/work on time or communicated reason for tardiness	Time management
Evaluation	
Assessed next steps needed for goal attainment	Monitoring
Reflected on goal progress	Reflection
Revised or set new goals based on past goal achievement experience	Flexibility

WHEN SHOULD PROGRAMS COLLECT DATA?

Decisions about when to collect data are critical and should be driven by a careful consideration of the questions a program would like to answer. If a program would like to understand how people change while participating it will be important to collect data at more than one point in time. If a program is instead interested primarily in understanding the characteristics of the participants when they enter the program, it may be appropriate to collect information only once.

Ideally, most measurement should begin with the collection of baseline data—that is, data collected before an individual first receives program services—on participant characteristics and the outcomes of interest. Baseline data on participant characteristics can help programs describe the participant population, understand what problems they face, and tailor the intervention to their needs. If goal-related skills, behaviors, or mindsets are expected to change in response to a program, programs should also collect baseline data on these skills, behaviors, or mindsets. These data can support a comparison between participants' skills, behaviors, or mindsets before the intervention and after they receive the intervention, although as noted earlier, measuring program effectiveness requires a comparison group that is selected in a rigorous way. For example, because the Roca program explicitly seeks to improve participants' emotion regulation (Box 3), the program needs baseline

data to detect changes in this skill among participants. Even if a program does not explicitly seek to change a particular skill, behavior, or mindset, it may still make sense to measure some of these areas at the outset of participation if they might affect a participant's ability to benefit from program services (and thus could provide insight on why a participant is or is not making progress). For example, although LCWC does not target self-regulation directly (Box 4), it could make sense to gather baseline data on participants' emotion regulation if the program believes that this skill is key to a person's ability to use the goal-setting and pursuit tools provided by the program or if the program believes that use of the tools can help people regulate their emotions.

To guide decisions about when to collect follow-up data (that is, data collected after participants receive a service), program leaders should articulate their expectations for how long after participants receive program services it should take to see the desired changes or outcomes. This helps to ensure that collection of follow-up data does not occur before an outcome could reasonably be expected to have happened. In some cases, it may be unclear when to expect a change; in these cases programs might consider repeating follow-up data collection at various intervals over time. This process provides an opportunity to learn how long it may take to achieve certain outcomes as a result of a particular program. Collecting data on participants who have left the program can be challenging, however, because those individuals may be hard to find and contact.

Besides these substantive considerations, it is important for a program to schedule time to train staff on new data collection tools before administration and to obtain feedback on application of the tools. In addition, programs should create plans for how often data will be analyzed and reviewed.

HOW CAN PROGRAMS PREPARE FOR MEASUREMENT?

Before collecting data, programs must have a plan in place for using the data. The plan should address several important issues, none of which are necessarily specific to goal-related measurement, but all of which are important for ensuring that new measurement efforts are worthwhile:

- **Facilitate staff buy-in.** Buy-in from staff at all levels throughout program development processes is important to any program's success. Buy-in for measurement activities may require special effort, however, because staff may view measurement as time-consuming, and it may not be immediately apparent how it is helpful for clients. Because program staff may be called upon to administer self-report questionnaires, serve as observers, and/or enter administrative data, their buy-in is critical for data quality. Finally, program staff should understand the connections between program measurement and participants' success. Program leaders can encourage staff buy-in by explaining its value for clients and by including staff in the processes for determining what to measure and how and when to measure it. It may also help to periodically solicit staff feedback on data collection processes

and to engage them in reviewing data reports. First and foremost, however, program leaders themselves must be committed to measurement and believe in its value; staff are likely to embrace measurement only if their leadership does.

- **Delineate responsibilities.** A measurement plan should address who will collect the data (administer questionnaires, complete observations, and record measures in the administrative data system) and analyze the data. It should also specify who on the program team will see the results and how they will use them to inform their ongoing activities. Finally, if the data show that the program or measurement tool isn't working, the plan should specify who will use the evidence to make improvements.

- **Consider potential audiences for measurement results.** Programs can use the information they collect in at least three ways: (1) to improve the intervention or to design new services, (2) to share information about program outcomes, and (3) to assess program impacts if data are collected in the context of a rigorous evaluation that randomly assigns participants to treatment and control groups. With respect to improvement, measurement results can highlight areas where program activities may be missing their mark. With respect to sharing information, measurement results can be leveraged to support referrals from partner agencies, apply for additional funding, increase awareness about the program, influence policymakers, and further the field. Stakeholders can consider including information on measurement results in outreach materials, annual reports, and/or funding proposals. And finally, measurement in the context of rigorous evaluation can help determine if program interventions are effective in changing participants' skills, behaviors, and mindsets and in furthering their economic stability and family self-sufficiency.

WHERE CAN PROGRAMS GO FOR ADDITIONAL INFORMATION ON MEASUREMENT?

Additional resources are available to help stakeholders think about measuring goal-related skills, behaviors, mindsets, and outcomes that might be relevant to employment or other human services programs. In particular, Cavadel and colleagues[10] have synthesized research findings related to self-regulation and goal achievement, and a related report includes a more detailed discussion of the framework presented in Figure 1.[11] Furthermore, the appendix provides citations for each measurement tool that readers can explore to learn more about the skills and behaviors addressed by the tools as well as details on how to access these tools. Before implementing any of these tools, it will be important for program administrators to obtain a more detailed understanding of what a tool measures, how it relates to the program's theory of change, and how to incorporate it appropriately into performance monitoring or evaluation.

Although this document provides guidance for measuring goal-related skills, behaviors, mindsets, and outcomes in program settings, this is an evolving area, and much remains to be learned. Outstanding questions particularly exist around the validity and reliability of various measures for low-income adults participating in employment programs and

about the feasibility of various data collection methods considering program staff, structure, and resources. Indeed, by considering the guidelines offered here and taking the first steps toward this type of measurement in their own work, employment service providers can pave the way for broader application of goal-related measures in the human services field. Testing, revising, and using these measures and others will help promote understanding of goal-related interventions for low-income and other relevant populations and can validate their use in employment program settings.

ENDNOTES

[1] Other products from the GOALS project discuss the conceptual framework presented in Figure 1 in more detail (Anderson, Mary Anne, Jacqueline F. Kauff, and Elizabeth W. Cavadel "Improving Outcomes Among Employment Program Participants Through Goal Attainment: A Conceptual Framework, OPRE Report #2017-90." Washington, DC: Office of Planning, Research, and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services, 2017), and the research on which it is based (Cavadel, Elizabeth W., Jacqueline F. Kauff, Mary Anne Anderson, Sheena McConnell, and Michelle Derr. "Self-Regulation and Goal Attainment: A New Perspective for Employment Programs, OPRE Report #2017-12." Washington, DC: Office of Planning, Research, and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services, 2017).

[2] Muraven, Mark and Roy Baumeister. "Self-Regulation and Depletion of Limited Resources: Does Self-Control Resemble a Muscle?" *Psychological Bulletin,* vol. 126, no. 2, 2000, pp. 247– 259.

[3] Some programs, for instance, must report these data to comply with the performance accountability requirements under the Workforce Innovation and Opportunity Act. Temporary Assistance for Needy Families (TANF) programs are required to collect and report data on the percentage of families on the caseload with work-eligible individuals in which a family member participates in specified work activities (including work, job search, and associated activities) for a specific number of hours.

[4] See, for example, a guide produced for educators (applicable across other fields) that describes types of evidence that can be produced with different types of data collection: https://www.mathematica-mpr.com/our-publications-and-findings/publications/understanding-types-of-evidence-a-guide-for-educators

[5] For guidance on developing a theory of change (sometimes also called a logic model) see Shakman, Karen and Rodriguez, Shelia M. "Logic Models for Program Design, Implementation, and Evaluation: Workshop Toolkit (REL 2015–057)." Washington, DC: U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, Regional Educational Laboratory Northeast & Islands, 2015. Retrieved from http://ies.ed.gov/ncee/edlabs.

[6] Direct assessment—such as testing for a specific skill, often in a laboratory or clinical setting—is another common data collection approach, but our scan of relevant literature and data collection instruments suggested that few direct assessments would be appropriate for adult subjects in nonclinical settings.

[7] Other measures may also be useful but they either 1) are typically used in laboratory rather than real-world settings and therefore have limited application to employment program contexts, (2) are less focused on skills that might be most related to employment success; or 3) require extensive training to administer or score. For examples of these measures and for references to studies that discuss the validity of the measures presented in this brief, see Cavadel, Elizabeth W., Jacqueline F. Kauff, Mary Anne Anderson, Sheena McConnell, and Michelle Derr. "Self-Regulation and Goal Attainment: A New Perspective for Employment

Programs, OPRE Report #2017-12." Washington, DC: Office of Planning, Research, and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services, 2017.

[8] The scale also has been translated recently into Spanish.

[9] Although the EHS is a stand-alone measure, it can be used in tandem with the Perceived Employment Barrier Scale (PEBS) created by the same developers to assess client-perceived employment barriers and target appropriate support services to low-income jobseekers. A person's score on the EHS minus that person's score on the PEBS reflects a measure of Psychological Self-Sufficiency, or the person's capacity and readiness to work. (Hong, Philip Young P., Joshua R. Polanin, Whitney Key, Sangmi Choi. "Development of the Perceived Employment Barrier Scale (PEBS): An Empowerment Perspective." *Journal of Community Psychology,* vol. 42, no. 6, 2014, pp. 689–706.)

[10] Cavadel, Elizabeth W., Jacqueline F. Kauff, Mary Anne Anderson, Sheena McConnell, and Michelle Derr. "Self-Regulation and Goal Attainment: A New Perspective for Employment Programs, OPRE Report #2017-12." Washington, DC: Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services, 2017.

[11] Anderson, Mary Anne, Jacqueline F. Kauff, and Elizabeth W. Cavadel. "Improving Outcomes Among Employment Program Participants Through Goal Attainment: A Conceptual Framework, OPRE Report #2017-90." Washington, DC: Office of Planning, Research, and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services, 2017.

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APPENDIX

Information for accessing promising measurement tools

Various versions of some measurement tools are available online. Here, we provide links to recent and readily accessible versions and to additional research articles that may be helpful for using the tools.

Behavior Rating Inventory of Executive Function—Adult Version (BRIEF-A)

- The publisher of the BRIEF-A, Psychological Assessment Resources, Inc., provides information for users on how to purchase, administer, and troubleshoot using the BRIEF-A. Sample observer and self-reports and additional product resources are also available from the company website: https://www.parinc.com/Products/Pkey/25
- Information about the development of the BRIEF-A, as well as information about reliability and validity can be found in the assessment manual: Roth, Robert M., Peter K. Isquith, and Gerard A. Gioia. *BRIEF-A: Behavior Rating Inventory of Executive Function - Adult Version.* Lutz, FL: Psychological Assessment Resources, 2005.

Difficulties in Emotion Regulation Scale (DERS)

- The 36-item DERS and information on how to score it can be found in the journal article that confirms its validity:

  Gratz, K.L., and Lizabeth Roemer. "Multidimensional Assessment of Emotion Regulation and Dysregulation: Development, Factor Structure, and Initial Validation of the Difficulties in Emotion Regulation Scale." *Journal of Psychopathology and Behavioral Assessment,* vol. 26, 2004, pp. 41–54.

- A downloadable PDF of the same 36-item tool is also available on the website of the Cairn Center, a mental health care center: http://cairncenter.com/forms/difficultiesinemotionalregulation_scale.pdf
- The 16-item DERS short-form scale can be found in the journal article that describes its reliability and validity:

  Kaufman, Erin A., Mengya Xia, Gregory Fosco, Mona Yaptangco, Chloe R. Skidmore, and Sheila E. Crowell. "The Difficulties in Emotion Regulation Scale Short Form (DERS-SF): Validation and Replication in Adolescent and Adult Samples." *Journal of Psychopathology and Behavioral Assessment,* 2015. doi:10.1007/s10862-015-9529-3

Employment Hope Scale (EHS)

- The 21-item and 14-item EHS forms are both available on the website of Dr. Philip Hong, Ph.D., professor and director of the Center for Research on Self-Sufficiency at Loyola University, Chicago: http://philiphong.weebly.com/uploads/2/1/4/1/21418864/ehs___pebs__hong__2017.pdf

- Information about the reliability and validity of the EHS can be found in: Hong, Philip Young P., Joshua R. Polanin, and Therese D. Pigott. "Validation of the Employment Hope Scale: Measuring Psychological Self-Sufficiency Among Low-Income Jobseekers." *Research on Social Work Practice,* vol. 22, no. 3, 2012, pp. 323–332.

Grit Scale

- Dr. Angela Duckworth, the developer of the Grit Scale, provides a 10-item computerized version of the scale on her website, along with links to the 12- and 8-item scales in multiple languages, research on grit, and information on her book about grit: http://angeladuckworth.com
- Additional information about the reliability and validity of the Grit Scale can be found in: Duckworth, Angela L., and Patrick D. Quinn. "Development and Validation of the Short Grit Scale (GRIT–S)." *Journal of Personality Assessment,* vol. 91, no. 2, 2009, pp. 166–174.

Goal Attainment Scaling (GAS)

- The Massachusetts School Psychological Association created an informational packet on how GAS can be used individually with students, in groups, and for self-review. This packet provides examples of the use of GAS in a school setting: http://mspa.wildapricot.org/resources/Documents/DDM-Goal_Attainment_Scaling.pdf
- *Goal Attainment Scaling (GAS) in Rehabilitation: A Practical Guide,* was written by the Northwest London Hospital's National Health Service Trust and describes the process for implementing GAS. Although the guide focuses on using GAS for people with brain injuries, the processes may be extended to different populations: https://www.kcl.ac.uk/lsm/research/divisions/cicelysaunders/attachments/Tools-GAS-Practical-Guide.pdf
- For information on how GAS may be used in coaching, see: Spence, Gordon B. "GAS-Powered Coaching: Goal Attainment Scaling and Its Use in Coaching Research and Practice." *International Coaching Psychology Review,* vol. 2, no. 2, 2007, pp. 155–167.
- Information about the reliability and validity of GAS, as used in rehabilitation settings, can be found in: Hurn, Jane, Ian Kneebone, and Mark Cropley. "Goal Setting as an Outcome Measure: A Systematic Review." *Clinical Rehabilitation,* vol. 20, no. 9, 2006, pp. 756-772.

Lam Assessment on Stages of Employment Readiness (LASER)

- The English-language version of the LASER as well as information about reliability and validity can be found in: Lam, Chow S., Anne H. Wiley, Andrew Siu, and James Emmett. "Assessing Readiness to Work from a Stages of Change Perspective: Implications for Return to Work." *Work,* vol. 37, no. 3, 2010, pp. 321–329.

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