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NAVIGATING BARRIERS AT WORK: EXPLORING THE PERCEPTIONS OF
EMPLOYEES WITH DISABILITIES

BY

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DISSERTATION

Submitted to the University of New Hampshire

in Partial Fulfillment of

the Requirements for the Degree of

Doctor of Philosophy

in

Psychology

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On August 8, 2016

Original approval signatures are on file with the University of New Hampshire Graduate School

DEDICATION

To Jesse and Mina, of course, who inspire me and whom I strive to make proud.

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My workspace



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ABSTRACT

NAVIGATING BARRIERS AT WORK: EXPLORING THE PERCEPTIONS OF
EMPLOYEES WITH DISABILITIES

by

Kimberly G. Phillips

University of New Hampshire, September, 2016

To maintain successful employment, people with disabilities must often navigate attitudinal barriers that result in bias, conflict, and discriminatory treatment on the part of their supervisors and coworkers. Two studies were designed to investigate the idea that employees' perceptions of and response to these types of barriers depend, in part, on their beliefs about their own self-competence, ability to cope with problems, and estimations of their relationships with others, particularly supervisors, in the workplace. Two models were developed and tested to assess how employees' perceived potential at work, as measured by both self-judgment and lifespace data, as well as an ability-based measure of personal intelligence, related to their experience of attitudinal barriers. Survey respondents were 1,631 adults aged 18 to 64 who were currently or recently employed and who experienced one or more disabilities or disabling health conditions. Results showed that occupational self-efficacy, coping style, personal intelligence, and perceptions of person-focused and task-focused supervisor support were all useful in understanding employees' with disabilities perceived potential at work and its associations with attitudinal barriers, decisions whether or not to disclose disability at work, and subjective work success. Conclusions address issues related to measurement and application to workplace policy and intervention.

CHAPTER I

Introduction to the Studies

Despite experiencing barriers and obstacles to employment, people with disabilities are striving to work (Kessler Foundation, 2015). Recent gains in the employment rate and labor force participation of people with disabilities suggest that barriers to working are not always insurmountable (National Trends in Disability Employment, 2016). Continued research on the types of barriers that people with disabilities face, as well as the facilitators that help overcome barriers, is needed to ensure people with disabilities can fully participate in the workforce.

Navigating Barriers at Work

Research has documented many types of barriers to employment that people with disabilities face and often strive to overcome. Systems-level barriers include those related to legal, economic, or structural concerns. For example, people with disabilities may find it difficult to work if earning a wage means they could lose much-needed federal assistance (Kessler Foundation, 2015; Bureau of Labor Statistics, 2013). Or, as an example of a structural concern, an individual who uses a wheelchair could more easily obtain a desired position at the local town hall if the building had an accessible entrance and a working elevator. However, if the town lacked the infrastructure (e.g., no sidewalks and no bus system), the person could not make it to the job without an independent means of transportation. Person-level barriers, on the other hand, arise as the individual perceives, acts, and interacts in the social environment of the workplace, and they may be either *personal* or *interpersonal* in nature.

Personal barriers. Personal barriers refer to an individual's own functional limitations when trying to achieve goals. Resulting from physical or psychological

tendencies and abilities, personal barriers include challenges, such as the experience of chronic pain or high anxiety, which an individual must manage in order to maintain employment. Facilitators to overcoming these types of barriers can also be physical (e.g., fitness, health) or psychological (e.g., conscientiousness, emotional intelligence).

Interpersonal barriers. Interpersonal barriers occur when employees face stigma, stereotypes, bullying, or discrimination as a result of their interactions with others, including supervisors, coworkers, and customer, in the workplace. These are among the most commonly reported obstacles encountered by employees with disabilities at work. The existence of workplace discrimination against people with different types of disabilities has been well-documented in the research literature (Chan, 2005; Johnson, 2015; Kruse & Schur, 2003; Schur, Kruse, Blasi, & Blanck, 2009; Snyder, et al., 2010; Stone & Colella, 1996), and as many as one-third of employees perceive negative supervisor attitudes as a barrier to employment (Bruyere, Erickson, & Ferrentino, 2002-2003; Bureau of Labor Statistics, 2013; Erickson, von Schrader, Bruyere, VanLooy, 2014; Fassinger, 2008; Kessler Foundation, 2015; Stone & Colella, 1996). This finding is significant because employees (and consequently, employers) enjoy favorable outcomes, including increased job satisfaction and productivity, decreased turnover intention, and greater affective commitment to the organization when they believe their workplaces are fair, supportive and care about them (Eisenberger & Rhoades, 2002; Ng & Sorensen, 2008). Among people with disabilities, additional benefits to employment include improved efficacy to manage difficulties in other areas of their lives (Soeker, 2011), increased community participation and the avoidance of social isolation (Vornholt, Uitdewilligen, & Nijhuis, 2013).

Individual Differences in the Successful Navigation of Attitudinal Barriers

Imagine visiting with a friend who remarks that a manager he works with has a negative attitude towards him because of something he cannot change about himself. You

may respond to this news with sympathy if you suppose it makes your friend sad, or concern if you think his job might be in jeopardy, or anger if you imagine he is being mistreated. While your friend's comment conveys important information (i.e., that something at work is not good), it also leaves quite a bit unsaid. Perhaps you could draw more informed conclusions or offer more meaningful advice if you knew the kinds of treatment or behaviors he was facing.

As you frame your response, you will likely also take into account what you know about your friend's personality. If your friend tends to see the problematic side of things or often attributes negative motivations to others, you may wonder whether she is interpreting things less favorably than is warranted. Many psychological studies on mood-congruent judgment, for example, indicate that people with neurotic styles and negative moods perceive interpersonal relationships more adversely than others (Forgas & Bower, 1987). Or, your friend may be caught in a vicious cycle, in which her tendency to see the down side of things makes others start to avoid or even mistreat her.

Identifying personal and interpersonal factors related to the perception of attitudinal barriers can help to ensure equal and just employment opportunities for people with disabilities (Kruse & Schur, 2003) and facilitate their chances to avoid or overcome interpersonal obstacles at work. For instance, what makes one employee with a disability more or less likely than another, in the same situation, to perceive a barrier? Further, what makes one employee more likely to believe that she can successfully address and even overcome such interpersonal barriers at work? The present research seeks to answer these questions.

Purpose of the Present Studies

The goal of the two studies described in these chapters is to identify personal and interpersonal resources associated with the perception and navigation of attitudinal barriers

to employment for individuals with disabilities. To this end, the first aim of the studies is to identify personality characteristics of employees that influence the way they view and interpret their competencies, actions, and interactions in the workplace. The second aim is to concretize the broad range of thoughts and behaviors that employees with disabilities could mean when they refer to negative attitudes on the part of their supervisors. The third aim is to understand how certain personality characteristics relate to employees' decision to disclose their disabilities to others in the workplace. Finally, the fourth aim is to investigate the impact of perceived attitudinal barriers on employee's expected work outcomes. To achieve these aims, two measurement models will be developed, tested, and compared in order to answer the questions *what* is being perceived, and *who* is perceiving it.

Subsequent chapters describe two studies of employees' with disabilities perceived potential at work. Chapter II briefly reviews the research literature that informed the present studies, especially focusing on the personality qualities and beliefs of employees. Chapter III describes an empirical study in this realm. Research subjects include people with disabilities who responded to a survey that included measures related to their personal beliefs and experiences at work. Models were tested to fit the survey instrument and its facets. Chapters IV and V present results of the survey data analyses, and Chapter VI describes a second study, using the same data, to assess whether personal intelligence globally influences the relation of certain personality characteristics to expected work outcomes or the decision whether or not to disclose disability to a supervisor. Chapter VII concludes with a general discussion.

CHAPTER II

Employees' with Disabilities Perceived Potential at Work

Individual differences among employees abound in any workplace. Some people work harder than others, some collaborate more willingly, some complain more vehemently. Each employee's unique set of expectations, beliefs, strengths, and limitations both shape and are shaped by their personal experiences, as well as their interactions with others (Freitas & Downey, 1998; Shoda, LeeTiernan, & Mischel, 2002). Such individual differences contribute to the varying ways that employees respond to challenges and opportunities, the goals they set, and the particular filters through which they view and evaluate themselves and one another (Mischel, 2004; Mischel & Shoda, 1995).

Social cognitive theories of personality concern this interaction between individuals' self-understanding and need for self-direction, on the one hand, and the social environment in which people function and from which they constantly learn, on the other (Bandura, 1986; Lent, Brown, & Hackett, 2002; Mischel & Shoda, 1995). In this view, individuals develop a sense of their own competencies, which in turn inform their expectations about their present and future circumstances and abilities (Pervin, Cervone & John, 2005). According to Mischel and Shoda (1995), individuals' beliefs and experiences contribute to self-concepts that differ according to the situation or setting in which they find themselves but also are somewhat stable across similar types of situations or circumstances. Here, the focus of the self-concepts will refer specifically to the self-at-work, or the "work-self."

Perception of Work-Self Competence

Social cognitive career theory posits that "people help construct their own career outcomes; that their beliefs (for example, about themselves, their environments, and possible career paths) play key roles in this process; that we are not merely beneficiaries (or victims)" (Lent, Brown, & Hackett, 2002, p. 255). As one develops beliefs about one's

effectiveness and competence in a setting, a stable self-in-situation concept emerges (Mischel & Shoda, 1995). As such, social learning opportunities presented via the social environment and one's own personal background and experience translate into a greater or lesser degree of self-efficacy (Betz, 2007; Lent, Brown, & Hackett, 2002).

Self-efficacy can be defined as a person's belief in his capability to succeed at a given undertaking (Bandura, 2006; Judge & Bono, 2001). According to Bandura (1995, 1997, as cited in Bandura, 2006):

“Perceived efficacy plays a key role in human functioning because it affects behavior not only directly, but by its impact on other determinants such as goals and aspirations, outcome expectations, affective proclivities, and perception of impediments and opportunities in the social environment” (p. 309).

For example, if I see myself as a very competent student, I may be calm and self-assured in any academic setting, whether presenting in class, taking an exam, or discussing a homework assignment. My self-assuredness also influences my expectations about my general ability to succeed in the class and the final grade I will earn.

Although widely applicable to research on personality and individual differences across a variety of domains, self-efficacy is most usefully examined when applied to a specific context rather than being assessed in a global manner (Bandura, 2006; Lent & Brown, 2006). The present study's purpose is to understand employees' perception of interpersonal barriers in the workplace, so occupational self-efficacy will be used.

Occupational self-efficacy. Occupational self-efficacy concerns individuals' views of their competence to successfully perform their jobs (Rigotti, Schyns, & Mohr, 2008). It affects employees' willingness to engage in certain tasks as well as their persistence when faced with challenges (Fassinger, 2008). It also has been shown to relate to both job satisfaction and performance (Judge & Bono, 2001). A meta-analysis by Judge and

colleagues (2007) found that self-efficacy's relation to job performance persists with moderate effect sizes even when controlling for other personality traits. Further, efficacy can ameliorate the effects of stressors both in and out of the workplace (Grau, Salanova, & Peiro, 2002; Soeker, 2011). Fassinger (2008) pointed to the construct as particularly useful to the work domain and highlighted its conceptual utility for studying effects related to diversity, or in this case, disability. Similarly, Bandura (2009) noted that "unless people believe that they can produce desired effects and forestall undesired ones by their actions, they have little incentive to act or to persevere in the face of difficulties" (p. 179).

In addition to being a critical component of work-self conceptualization, self-efficacy improves coping ability, which psychologists have identified as important to understanding employees' workplace perceptions and expectancies (Jex, Bliese, Buzzell, & Primeau, 2001; Judge & Bono, 2001; Stanojevic, Krstic, Jaredic, & Dimitrijevic, 2014). In fact, Jex and colleagues (2001) suggest that "what is needed to more accurately model the impact of self-efficacy on stressor-strain relations is to account for employees' use of different coping styles" (p. 402).

Coping style. Coping is defined as "efforts to prevent or diminish threat, harm, and loss, or to reduce associated distress" (Carver & Connor-Smith, 2010). Individuals cope with challenges, obstacles, and difficulties, in part, according to their beliefs about themselves and their capacity to manage or respond effectively to situations and people (Stanojevic, Krstic, Jaredic, & Dimitrijevic, 2014). For example, people whose core self-evaluations are positive (Kammeyer-Mueller, Judge, & Scott, 2009) and who are generally optimistic (Carver & Connor-Smith, 2010) tend to view difficult situations as challenges rather than threats (Greenglass, Schwarzer, Jakubiec, Fiksenbaum, & Taubert, 1999; Searle & Lee, 2015). Such individuals engage actively, seeking solutions to problems and working through them constructively (Carver & Connor-Smith, 2010; Jex, Bliese, Buzzell, &

Primeau, 2001). They are “more likely to take the initiative to select, create, and influence work situations and environments that are more likely to provide opportunities...” (Seibert et al., 1999, as cited in Ng, Eby, Sorensen, & Feldman, 2005, p. 374). On the other hand, more disengaged, defensive, or avoidant coping styles are associated with poorer outcomes and greater strain in the long run (Kammeyer-Mueller, Judge, & Scott, 2009; McGonagle & Hamblin, 2014) because nothing has been done to remove or alter the barrier or stressor that is being perceived (Carver & Connor-Smith, 2010). For examples of the numerous coping styles individuals employ, most of us need only to look to our own colleagues or acquaintances.

To illustrate, imagine an organization at which a much-anticipated new project is about to be launched. The four employees assigned to lead it, Kim, Jim, Tim, and Susan, are very excited to begin. Their boss calls them all to a meeting and announces that she has decided to replace them with a new team that had more experience in leading projects such as this. The four of them will instead remain on their current projects. The boss explains how this will be best for the organization and tries to convince the team members that it is in their best interest, as well. The meeting adjourns, and the employees each respond to the news in their own way. Susan stays behind in the boss’s office and, with a raised voice, expresses her anger and outrage at the unfairness of the decision. Tim confides his disappointment to his family and allows them to cheer him up over dinner, while Jim requests a transfer to another department. Finally, Kim schedules a follow-up meeting with her boss, for which she will prepare a brief PowerPoint presentation highlighting her recent accomplishments in order to persuade the boss to reconsider and assign her to the new project.

Each of these responses illustrates a particular coping style. Susan’s choice is venting while Kim prefers an active response. Tim seeks emotional support, and Jim

disengages (Carver, 1997). Moreover, each of these responses is likely to produce different results. For example, some coping styles help individuals act in such a way as to avoid barriers that they would otherwise have encountered (Greenglass & Fiksenbaum, 2009; Jex, Bliese, Buzzell, & Primeau, 2001; Stanojevic, Krstic, Jaredic, & Dimitrijevic, 2014).

These “proactive” copers, in particular, tend to view difficult situations as challenges rather than threats (Greenglass, Schwarzer, Jakubiec, Fiksenbaum, & Taubert, 1999; Searle & Lee, 2015) and orient toward them more positively than do those whose coping mechanisms may be characterized as more passive or defensive (McGonagle & Hamblin, 2014). Moreover, active and proactive employees are “more likely to take the initiative to select, create, and influence work situations and environment that are more likely to provide opportunities...” (Seibert et al., 1999, as cited in Ng, Eby, Sorensen, & Feldman, 2005, p. 374). Perhaps most important to the current investigations, perceived workplace barriers may not be as detrimental to individuals who possess strong coping efficacy (Luzzo & McWhirter, 2001).

In sum, self-efficacy and coping refer to two inner strengths an employee may bring to the workplace. Employees also perceive relational strengths (and weaknesses) at work. Returning to an example used previously, while a student with high academic self-efficacy enjoys a sense of competency in the classroom, it is important to note that the student’s view of the professor also affects her perceived potential to succeed in the class and the final grade she expects. If she sees her professor as fair, amicable toward her, and clearly able to explain class goals and content, she might expect a better outcome than if the professor seemed to take pleasure in seeing her fail or regularly provided her with unfavorable feedback about her performance. The same concept applies to employees in the workplace, such that employees’ outcome expectancies derive both from their

perceptions of themselves and their perceptions of others. Here, the “others” of interest are the employees’ supervisors.

Perception of Supervisor Support

An employee is not alone in the workplace but rather has relationships with other people, and a supervisor is key among them. Employees may perceive their supervisors as helpful or detrimental to their progress. When an employee with a disability encounters a negative “attitude” on the part of a supervisor, that employee is perceiving, by definition, a “psychological tendency [of the supervisor] that is expressed by evaluating a particular entity [the employee] with some degree of favor or disfavor” (Eagly & Chaiken, 2007). Such an attitude can be conveyed by the supervisor directly through verbal or nonverbal means, or it could be inferred by the employee through more indirect means: perceived thoughts, overheard words, or deeds on the part of the other individual. In other words, a supervisor’s negative attitude could be construed by the employee as either conveying something *undesirable*, such as discriminatory treatment, or failing to convey something *desirable*, such as support.

Supervisor support, or “personal support,” is one of three domains of organizational citizenship behavior (Borman, Penner, Allen, & Motowidlo, 2001), which was defined by Organ (1988) as pertaining to discretionary workplace behaviors not included in formal rewards systems and not enforceable as part of in-job requirements (as cited in Podsakoff, MacKenzie, Paine, & Bachrach, 2000). Its subdimensions include helping and cooperating with others, showing courtesy, consideration and tact in dealing with others, and motivating others by encouraging them and assisting them to overcome obstacles in order to succeed (Borman, Penner, Allen, & Motowidlo, 2001, p. 55). Many organizational citizenship behaviors occur “within the confines of interpersonal relationships...[and] involve cooperative assistance for individuals in need” (Settoon & Mossholder, 2002, p. 255). Of

interest to the present studies are these specifically *interpersonal citizenship behaviors*, which can be person-focused or task-focused. Here, the person-focused and the task-focused domains of interpersonal citizenship behaviors will be used to gauge employee perceptions of supervisor support and, at the other end of the spectrum, mistreatment.

Person-focused support. Expressions of empathy, trust, and support of a personal nature are examples of person-focused citizenship behaviors (Settoon & Mossholder, 2002). Employees perceiving this type of support take the general view that their supervisors care about them as individuals (Eisenberger, Stinglhamber, Vandenberghe, Sucharski, & Rhoades, 2002; Kottke & Sharafinski, 1988, as cited in Maertz, Griffeth, Campbell, & Allen, 2007). Such perceptions have been shown to positively influence organizational commitment, job satisfaction, job tenure, and to decrease turnover intention among employees with and without disabilities (Rhoades & Eisenberger, 2002; Maertz, Griffeth, Campbell, & Allen, 2007; Ng & Sorensen, 2008; Vornholt, Uitdewilligen, & Nijhuis, 2013).

Person-focused mistreatment occurs when supervisors direct hostile acts and judgments against the personal attributes of an employee. Examples include jokes at the employee's expense, incivility, or avoidance (Van Laer & Janssens, 2011). Stone and Colella (1996, p. 355) suggest that stereotypes form the basis for unfavorable supervisor and coworker expectancies about employees with disabilities, including that they are unable to do the work, disruptive, or threatening. These expectancies, in turn, can engender negative affective reactions such as revulsion, discomfort, and resentment toward employees with disabilities (Stone & Colella, 1996).

Task-focused support. Task-focused supervisor support centers on job-related assistance, problem-solving, and work-role exchanges: things that make the work easier. Examples of supervisor support that are task-focused include helping with difficult aspects

of the job, training, and sharing needed information (Borman, Penner, Allen, & Motowidlo, 2001), as well as providing flexible schedules and other modifications or accommodations (Erickson, von Schrader, Bruyere, & VanLooy, 2013; Kaye, Jans, & Jones, 2011).

Employees perceiving this type of support take the general view that their supervisors value their contributions to the workplace (Eisenberger, Stinglhamber, Vandenberghe, Sucharski, & Rhoades, 2002; Kottke & Sharafinski, 1988, as cited in Maertz, Griffeth, Campbell, & Allen, 2007), and as a result, they are more likely to continue their employment (Hill, Maestas, & Mullen, 2015).

Task-focused mistreatment of employees with disabilities may be either subtle or overt (Jones, Peddle, Gilrane, King, & Gray, 2013; Snyder, Carmichael, Blackwell, Cleveland, & Thornton, 2010). While overt forms of discrimination are typically recognizable as inappropriate and sometimes in violation of the law (e.g., ADA, 1990), subtler discrimination may appear on the surface (albeit falsely) as less detrimental (Snyder, et al., 2010). Researchers have documented many examples of unjust task-focused practices leveled at employees with disabilities, including undue or disproportionate scrutiny of their performance, being passed over for promotion, and having desirable or satisfying tasks withheld or reassigned (McGonagle & Hamblin, 2014). Clearly, such experiences are likely to impact employees' anticipated job performance and work outcomes.

Conceptual Model of Perceived Potential at Work

Figure 1 shows this study's conceptual model. Starting at the left, occupational self-efficacy, coping style and employee behaviors in the workplace comprise employees' perceived work-self competence. Perceived person-focused supervisor support, perceived task-focused support, and supervisor behaviors in the workplace comprise employees' perceptions of overall supervisor support. Work-self competence and perceived supervisor support, in turn, combine to form the measure of perceived potential at work, which refers to

individuals' estimations of their potential to perform and be successful at their jobs. On the right side of Figure 1, perceived potential at work is posited to relate to employees' decision to disclose disability to supervisors and coworkers, the experience of attitudinal barriers, and expected work outcomes, operationalized as satisfaction with the job in general, satisfaction with pay, and perceived opportunities for promotion.

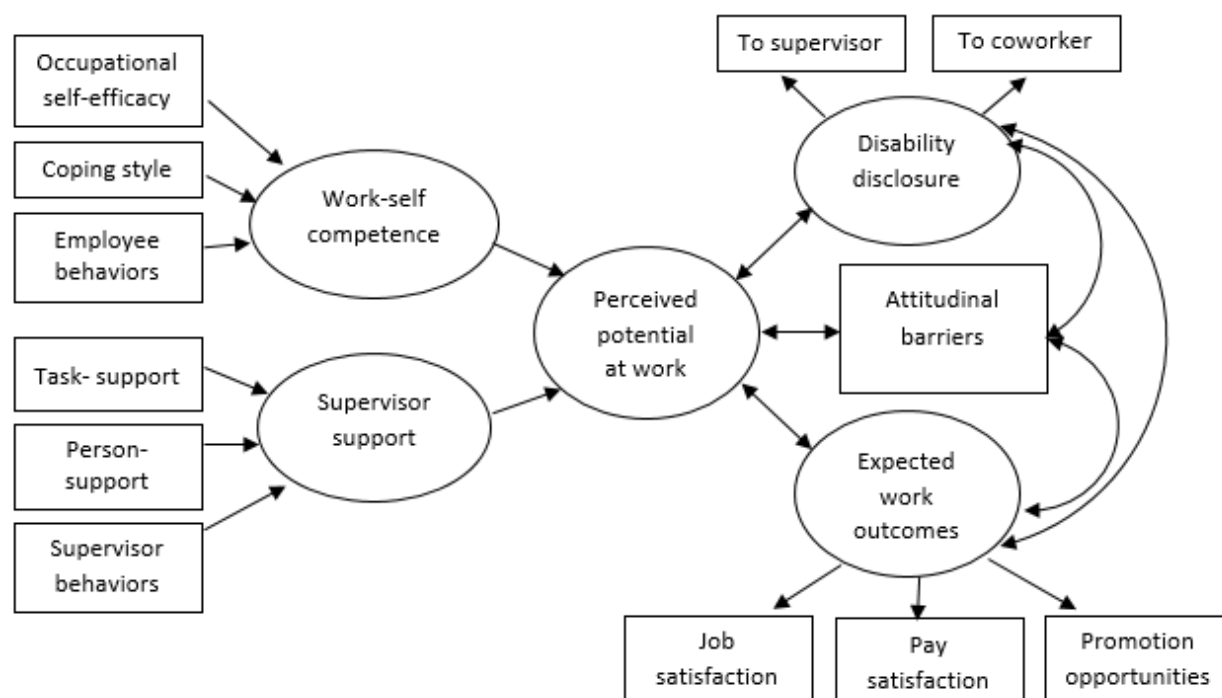


Figure 1. Conceptual Model of Perceived Potential at Work among Employees with Disabilities

Examination of the conceptual model using self-judgments. The conceptual model depicted in Figure 1 will be tested by drawing on small groups of survey items available in or modified from existing self-judgement scales that have demonstrated reliability and validity in measuring their intended outcomes. New items are generated for this study, as well. Self-judgement styles of data collection are commonly used in the social sciences for their convenience and versatility. However, limitations to this type of data

include uncertainty over construct validity and the possibility that respondents lack accurate self-knowledge or are susceptible to self-deception or fictionalization (Chan, 2009; Farmer, 2007).

Examination of the conceptual model using lifespace data. Biographical or lifespace data is a form of self-report that asks people to describe discrete, observable historical and present-day aspects of their behaviors and events in their lives (Brackett, Mayer, & Warner, 2004; Breauagh, 2009; Mayer, 2016). Researchers regard it as a distinct form of data because the questions are externally observable, and (in theory) verifiable (Mayer, 2004; 2016). It may work, in part, because past behavior may be the best predictor of future behavior (Mael, 1991; Owens & Schoenfeldt, 1979, as cited in Allworth & Hesketh, 1999). Even when lifespace data concerns contemporary reports, the form of the items differs from self-judgment items, in that they are identifiable and discrete (Brackett, Mayer, & Warner, 2004). Generation of lifespace items can be achieved in several ways (for a discussion, see Breauagh, 2009). Here, item development was informed by recent qualitative research findings, and input from an expert panel of psychologists and disability researchers was used to construct rational scales (Allworth & Hesketh, 1999; Kessler Foundation, 2015).

The lifespace items will be divided into self- and supervisor-oriented: Two groups of items rather than four will be modeled because life space items tend to be less reliable and involve multiple sources of variance relative to simpler self-judgment items. At the same time they may possess greater validity (see Breauagh, 2009; Mael, 1991; Mayer, 2004; 2016; Mayer, Carlsmith & Chabot, 1998).

Disclosure of Disability

The decision whether or not to disclose a disability at work, in the event that it is not visible or evident, is one of the ways that employees with disabilities navigate attitudinal

barriers and other obstacles in this setting (Hill, Maestas, & Mullen, 2015; Kessler Foundation, 2015). Concealing or downplaying behaviors may appeal to some individuals, especially those who have experienced past discrimination (Lyons, et al., 2016; McGonagle & Hamblin, 2014), as a proactive way of avoiding negative attitudes, unfair treatment, or supervisor and coworker assumptions (Madera, King, & Hebl, 2012; Schur, Kruse, & Blanck, 2005, von Schrader, Malzer, & Bruyere, 2014). The choice whether to conceal or claim disability has implications for employee work outcomes, including job satisfaction and turnover intentions, such that suppressing a disability identity is positively associated with perceived discrimination and negatively associated with job satisfaction (Madera, King, & Hebl, 2012). At the same time, advocates for equal opportunity suggest that disclosure of disability should be encouraged among employees given the fact that it can lead to greater access to helpful accommodations and enhanced opportunities for supervisor and coworker support (von Schrader, Malzer, & Bruyere, 2014). What is currently missing from the conversation, and what this study adds to existing knowledge, is an understanding of the individual differences that influence successful disclosure of disability among employees at work.

Expected Work Outcomes

This study proposes that employees' perceptions of their work-self competencies and their supervisors' support or mistreatment ultimately influence their expected work outcomes. While work outcomes may refer to either objective or subjective estimations, here employees' subjective appraisals will be assessed. Prior research has shown that subjective perceptions of work success, such as job or career satisfaction, are only moderately correlated with more objective measures like actual salary or number of promotions (Ng, Eby, Sorensen, & Feldman, 2005). Also, individual differences of the kind described here are more strongly linked with subjective outcomes, compared to

sociodemographic factors such as age and education that are more associated with objective employment outcomes (Ng, Eby, Sorensen, & Feldman, 2005). The three subjective work outcomes that will be considered in the present study are job satisfaction, satisfaction with pay, and perceived promotion opportunities.

The Present Studies' Contribution to the Literature

The studies described here add to existing knowledge in several ways. First, they reveal individual differences that help or hinder people with disabilities as they strive to overcome personal and interpersonal barriers in the workplace. Second, they clarify the types of behaviors and expectancies people with disabilities have in mind when they report certain interpersonal barriers at work. Third, in addition to better understanding obstacles that must be overcome and the best ways employees with disabilities can surmount them, they identify personal and interpersonal factors most associated with *successful* employment outcomes among employees with disabilities.

CHAPTER III

Study 1: Development and Testing of Two Measurement Models of Perceived Potential at Work among Employees with Disabilities

The purpose of this study is to understand individual differences in the perception of interpersonal barriers to employment among employees with disabilities. A model of four distinct but related qualities was proposed to explain employees' perceived potential at work (see Figure 1). In the model, perceived potential is made up of employee perceptions of (a) their occupational self-efficacy and (b) coping style, as well as both (c) person-focused and (d) task-focused supervisor support. Confirmatory factor analysis will be used to separately model the two measurement approaches utilized here: the self-judgment scales and the self-reported lifespace information. The study hypotheses are presented next.

Hypotheses

Hypothesis 1 proposes a that a model of four factors (occupational self-efficacy, coping style, perceived person-focused supervisor support, and perceived task-focused supervisor support) will be useful in representing employees' perceived potential at work.

Hypothesis 2 posits that a second, lifespace data model can be represented in two factors related to employees' perceived work-self competency and supervisor support. The second model is still more exploratory than the first, owing to the complexities of working with lifespace data, but various factor representations will be tested.

Subjective experience bears some resemblance to specific, cued recall of work events as represented in lifespace data (Farmer, 2007). For that reason, Hypothesis 3 suggests that the two models will relate to one another.

Three additional hypotheses are proposed. Hypothesis 4 posits that perceived potential at work, as measured by the two models, will be associated with the decision to disclose disabilities at work, if the disability is not readily visible or apparent. In the event

the employees' disability is evident without needing to be disclosed, perceived potential at work will relate to employees' comfort discussing their disability with supervisors and/or colleagues. Hypothesis 5 suggests that perceived potential at work will also be associated with employees' experience of attitudinal barriers at work and (Hypothesis 6) will influence the relation between attitudinal barriers and expected work outcomes, operationalized as job satisfaction, satisfaction with pay, and perceived promotion opportunities.

Methods

Participants. Participants were members of a voluntary panel maintained by Qualtrics online survey software and its partner organizations. The sample was purchased with grant funds from the *National Institutes of Disability, Independent Living, and Rehabilitation Research*. Respondents were recruited by Qualtrics and its partner organizations using a variety of methods, including web intercept, targeted email lists, panel member referral, and social media. Incentives for respondents included cash payments, free downloads, and/or membership points; all incentives were decided and allocated by Qualtrics and its partners. Informed consent to participate was obtained in accordance with requirements of the University of New Hampshire Institutional Review Board, and respondents were verified by Qualtrics through a double opt-in process.

Inclusion criteria for survey respondents was adults between the ages of 18 and 64 with one or more disabilities or chronic health conditions. Electronic consent to participate, in accordance with protocols of the University of New Hampshire Institutional Review Board, was granted by 11,045 individuals. Of those, 4,259 were precluded from taking the survey because they indicated no disability or health condition, and 3,181 were not admitted to the survey for being over age 64. Another 583 were dropped for inattentive responding, which means that respondents incorrectly answered at least one Likert-type item designed to assess whether the questions were being thoroughly read. The median time to complete

the survey was 13 minutes. As there were several different tracks through the survey, and some were very short, no participants were excluded based on time to complete the survey. Instead, responses with very short duration times were reviewed individually to verify that they belonged to the shortest survey track. This resulted in no further exclusions.

The analytic sample for this study comprised the subset of the remaining 3,022 participants who reported that they were (a) currently employed, or (b) previously employed within the last two years but not currently working. This resulted in a total of 1,631 individuals. Of these, 1,418 were currently employed.

Measures. A copy of the survey instrument is provided in Appendix A. In addition, all predictor items used in the self-judgement model are presented in Figure 2, and items specific to the lifespace model are shown in Figure 3. These are described next, followed by explanations of the outcome and demographic measures that are common to both models. In some instances items were generated for this study instead of selecting pre-existing scales because of the time limitation inherent in the survey. Means and standard deviations for all measures, prior to being factor analyzed, are provided in Table 1.

Occupational self-efficacy. Occupational self-efficacy was measured with a six-item scale (Rigotti, Schyns, & Mohr, 2008). Respondents were instructed to “indicate how true or untrue it is of you” using a 6-point, Likert-type response key (*not at all true* to *completely true*) for each of the items that appear in the top right box of Figure 3.

Coping style. Coping style was measured with 12 items from the Brief COPE (Carver, 1997), including the following styles six of coping (two items each): (a) active, (b) emotional support-seeking, (c) instrumental support-seeking, (d) venting, (e) behavioral disengagement, and (f) self-blame. Two additional items were created and added to reflect an additional dimension, proactive coping (Greenglass, et al., 1999). Respondents were

asked to indicate on a 4-point, Likert-type scale (*not at all to a lot*) how often they have been using each of the listed strategies to cope with problems or difficulties at work.

Person-focused supervisor support. Six items from the person-focused dimension of a scale of Interpersonal Citizenship Behaviors (Settoon & Mossholder, 2002) were adapted for use in this study. Whereas the original scale measured supervisor ratings of employees, the present research did the reverse and asked employees to rate their current supervisors. The adaptation was achieved by substituting a personal pronoun for the word “coworker” in each of the items. For example, an original item says, *takes time to listen to coworkers’ problems and worries*; the new item says, *takes time to listen to my problems and worries*. Respondents used a 5-point, Likert-type scale (*strongly disagree to strongly agree*) to characterize their supervisors.

Task-focused supervisor support. A new six-item scale was written for this study to measure task-focused supervisor support. While the distinction between person-focused and task-focused came from Settoon and Mossholder (2002), the specific task-focused items on their scale did not lend themselves to an adaptation of employee reports of supervisor behaviors. As such, the new items were instead informed by descriptions of the subdimensions of organizational citizenship behavior in the taxonomy presented by Borman and colleagues (2001). For example, the description of the “helping” subdimension includes, “Helping others by offering suggestions about their work” (Borman, Penner, Allen, & Motowidlo, 2001, p. 55), which informed the following items: *is available if I have a work-related question or problem*; *is willing to help with a task if I need it*. All items are shown in Figure 2. Respondents used a 5-point, Likert-type scale (*strongly disagree to strongly agree*) to characterize their supervisors.

Independent variables in the lifespace model. Life space items representing the two primary domains of the conceptual model, perceived work-self competence and

supervisor attitudes (see Figure 3) were generated for this study using a rational-deductive approach based on findings from the literature reviewed in Chapter II.

Work-self competence. Work-self competence was determined with 13 items generated for this study and answered on a 7-point, Likert-type scale in which respondents indicated “how often” or “how frequently” in the last 30 days they had done or experienced specific work behaviors. Items were designed to reflect both organizational (e.g., proposing solutions to work-related problems, working extra hours in a day) and interpersonal (e.g., raising voices in anger, asking to be treated with more respect) types of competencies.

Supervisor attitudes. Eleven lifespace items indexing supervisor attitudes were created for this study. Research informing the composition of the items came from findings related to person-focused and task-focused citizenship behaviors (Borman, Penner, Allen, & Motowidlo, 2001; Settoon & Mossholder, 2002), perceived workplace discrimination (McGonagle & Hamblin, 2014), and employment experiences of people with disabilities (Kessler Foundation, 2015; Schur, Kruse, Blasi, & Blanck, 2009). Respondents were asked to indicate on a 7-point, Likert-type scale “how often in the last 30 days...” supervisors had done each of the eleven listed behaviors (e.g., exclude you from meetings, pick on your mistakes, discuss your career goals). All items are shown in Figure 3.

Criterion variables relevant to both models.

Perceived attitudinal barriers at work. A checklist of seven items containing potential problems employees might face at work because of their disability (Kessler Foundation, 2015) were included to measure perceptions of personal and interpersonal barriers. These included “negative attitudes on the part of supervisor,” “receiving less pay than others in a similar job as you,” and “supervisor assumes you can’t do the job because of your disability.” Respondents were asked to check off items they had experienced and to indicate whether they attributed the problem to their disability or not.

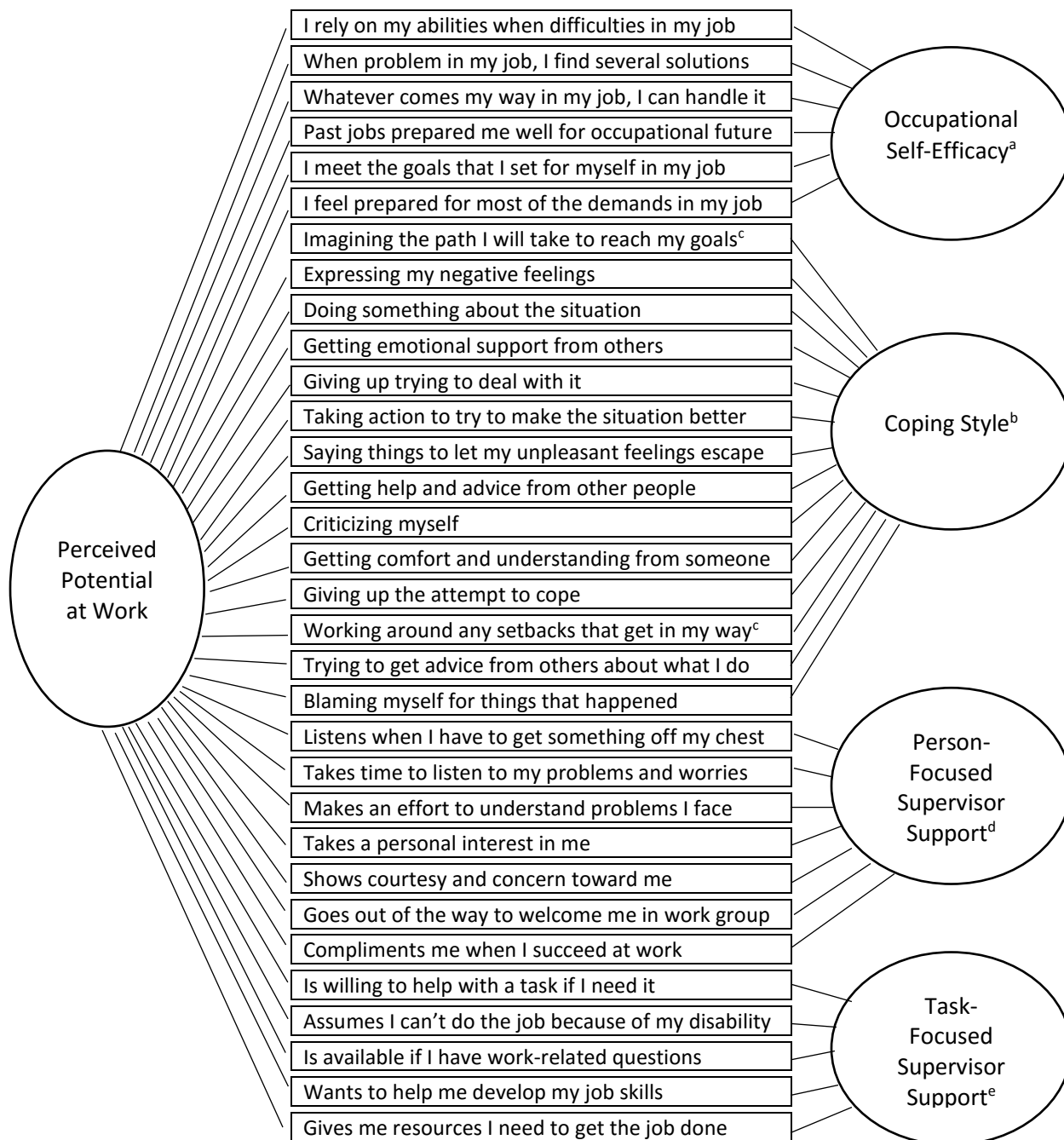
Disclosure of disability. Disability disclosure was assessed using a three-question series. First, respondents were asked whether their disability was visible or apparent to others. Those who answered “no” were then asked (yes or no) whether they had disclosed their disability to their supervisor. Then, a four-point multiple choice item assessed whether they had disclosed their disability to coworkers (*no one to everyone*). This procedure was adapted from Ragins, Syngh, and Cornwell (2007), who used similar methods to study disclosure of sexual orientation among employees at work. Finally, all employees whose disability was known (whether or not by choice) indicated how comfortable they felt discussing their disability at work, according to a 5-point Likert-type scale (*not at all comfortable to completely comfortable*).

Expected work outcomes. Expected work outcomes were measured with three of the five facets of the Job Descriptive Index: job satisfaction (Job in General), satisfaction with pay (Pay), and Opportunities for Promotion (Lake, Gopalkrishnan, Sliter, & Withrow, n.d.). Each scale contains a list of six to eight words or short phrases that respondents answer with either “yes,” “no,” or “I don’t know.” Items are shown in Appendix A.

Demographic variables.

Disability type. Disability screeners, shown in Appendix A, were adopted from the Kessler Foundation National Employment and Disability Survey (2015). The nine items used were based on questions found on multipole national instruments such as the American Community Survey, the Survey of Income & Program Participation, and the Canadian Survey on Disability, plus four additional prompts (Kessler Foundation, 2015).

Other demographics. Respondents indicated their gender, age, race, ethnicity, level of education, and income level, as well as their industry and occupation.



^a6 items from Riggoti, Schyns, & Mohr (2007); ^b12 items from Carver (1997), ^c2 items new for this study; ^d7 items adapted from Settoon & Mossholder (2002); ^e5 items new for this study
Note. All items may be paraphrased for brevity.

Figure 2. Self-Judgment Model of Perceived Potential at Work Using a Bifactor Approach



^aAll items new for this study

Note. Items may be paraphrased for brevity.

Figure 3. Lifespace Model of Perceived Potential at Work Using a Bifactor Approach

CHAPTER IV

Results: Measurement Model Analyses**Data Screening**

Data were reviewed by examining frequencies, histograms and box plots to detect extreme outliers and violations of the assumption that variable distributions were normal. Missing values within a response were coded as such and managed on an individual or pairwise basis by MPlus 7.4 and Stata 12.1 during computation. Items from the self-judgement variables did not exhibit extreme outliers or substantial violations of the assumption of normalcy.

Frequencies and histograms of the lifespace data showed a pattern of positive skew, and a few items of work-self competence and supervisor support (in the lifespace model) also showed floor effects. Categorical factor analysis was used with the lifespace items in order to better manage the skewness of the items. No outliers were removed from the analyses. As with the self-judgment variables, missing values were excluded on an individual or pairwise basis by the analytic software.

Table 1. Summary Statistics of the Original Scales (Full Sample)

	n	Mean	SD	Range	α
Occupational Self-Efficacy	1629	27.76	6.37	6 - 36	.91
Coping Style					
Active	1630	5.39	1.69	2 - 8	.75
Using Emotional Support	1628	4.52	1.78	2 - 8	.82
Using Instrumental Support	1629	4.49	1.79	2 - 8	.82
Venting	1631	4.17	1.70	2 - 8	.79
Self-Blame	1629	4.27	1.91	2 - 8	.83
Behavioral Disengagement	1629	3.73	1.81	2 - 8	.77
Perceived Supervisor Support					
Person-Focused	1630	25.35	7.45	7 - 35	.95
Task-Focused	1629	18.33	5.04	5 - 25	.92

Table 1 shows the means, standard deviations, and reliabilities of the original scales. The responses of this sample were comparable to those of earlier research, contributing

confidence to the adequacy of the sample collected and the screening procedures. For example, the reliability of the short version of Rigotti, Schyns, and Mohr's (2008) occupational self-efficacy scale was .85 to .90, while in the current sample it was .91.

Analytic Strategy

In order to first test and then confirm fit for the measurement models described in Chapter III, the sample was divided in two by odd- and even-numbered participants. The models were tested, revised, and modified as needed using the odd sample and verified using the even. Table 2 summarizes analyses of the self-judgment model, and the lifespan model analyses are presented in Table 3.

The Self-Judgment Model: Testing Hypothesis 1

Step 1: Bifactor confirmatory factor analysis. The study's first hypothesis suggested that occupational self-efficacy, coping style, person-focused and task-focused supervisor support could be combined into an overall variable of perceived potential at work. A bifactor confirmatory factor analysis (CFA) was used to test the fit (Table 2, Step 1). Fit indices for the hypothesized model ($\chi^2_{432} = 3756.68$, $p < .001$; RMSEA = .097; CFI = .822; TLI = .795) were somewhat below established targets. Statistically significant Chi square tests (χ^2), values below .08 for root mean square error of approximation (RMSEA), and values near .95 for Comparative Fit Index (CFI) and Tucker-Lewis Index (TLI) are considered statistical evidence of adequate fit (Widaman & Grimm, 2016). Exploratory factor analysis (EFA) was undertaken to clarify the major dimensions of perceived potential at work.

Step 2: Exploratory factor analysis. Exploratory factor analysis for one through six factors was conducted with a maximum likelihood extraction for continuous data, geomin rotation, and a theta parameterization. General fit statistics for the solutions are listed in

Table 2, Step 2. The fit for one and two factors was poor, so discussion in the next paragraphs focuses on possible solutions with three or more factors.

Table 2. Testing Models of the Self-Judgment Items: Iterations & Conclusion							
Model	Item: Split	Fit Indices					Correlation
		χ^2	df	RMSEA	CFI	TLI	
Step 1 – Bifactor Confirmatory Factor Analyses (CFA): Odd Sample (n=816)							
<i>Hypothesized Model</i>							
Four-factor	32:6/14/7/5	3164.28	432	.088	.860	.839	$r = .00$
Step 2 - Exploratory Factor Analyses: Odd Sample (n=816)							
<i>Factor Solutions, Geomin Rotated</i>							
One-factor	n/a	9543.29	464	.155	.535	.503	n/a
Two-factor	32:14/18	5660.23	433	.122	.732	.693	$r = .23$
Three-factor	32:6/14/12	2911.56	403	.087	.871	.842	$r = .13-.43$
Four-factor	32:6/8/6/12	1954.21	374	.072	.919	.893	$r = -.07-.43$
Five-factor	30:6/4/4/4/12	1563.40	346	.066	.938	.911	$r = .05-.42$
Six-factor	32:6/3/4/4/2/12	1344.86	319	.063	.947	.918	$r = -.04-.60$
Step 3 – Simple Structure CFA: Odd Sample (n=816)							
Six-factor	32:6/4/4/4/2/12	1754.38	449	.060	.933	.926	$r = -.04-.77$
<i>Remove Items with Modification Index (MI) > 50</i>							
Five-factor	26:4/4/4/4/9	837.30	265	.051	.959	.953	$r = -.05-.77$
Step 4 – Simple Structure CFA Replication: Even Sample (n=815)							
Five-factor	25:4/4/4/4/9		265	.052	.955	.949	$r = -.05-.73$

All items related to supervisor support (both perceived person-focused and task-focused) loaded strongly on a single factor; loadings ranged from .67 to .88, and items from the occupational efficacy scale continued to load on their single factor. The coping items began to split apart as the number of factors increased. This is not surprising, given that the 14 coping items originated from 7 separate 2-item scales of different coping styles.

At four factors, the coping items loaded onto two separate dimensions, and at five factors they loaded onto three. In the five-factor solution, two coping items, representing self-blame, did not load significantly on any factors and were dropped. At six factors, all coping items showed significant loadings on four respective factors (.43 to .86), and the six-

factor solution (4 coping, 1 supervisor support and 1 self-efficacy) was next tested using simple structure CFA with all 32 items.

Step 3: Simple structure CFA. Although all items loaded in the range of .83 to .88 on their respective factors, the revised six-factor simple structure model with all 32 items did not meet the target values: $\chi^2_{449} = 1754.38$ ($p < .001$), RMSEA=.060, CFI=.933, TLI=.926 (Table 2, Step 3). Examination of the modification indices (MI) revealed poor model fit among some item pairs and for that reason, two occupational efficacy items and three items of perceived supervisor support were dropped. In addition, two coping items were removed, which resulted in two of the coping factors having only two items each. As the two-item factors were highly correlated with one another ($r = .83$), they were combined into a single four-item factor. Fit of the resulting five-factor model with the remaining 26 items was good ($\chi^2_{265} = 837.30$ ($p < .001$), RMSEA=.051, CFI=.959, TLI=.953). Correlations among the self-judgment factors ranged from $r = -.05$ to $.77$.

Next, the five-factor model with 25 items was retested with a bifactor structure as a way to confirm dimensionality (O'Connor-Quinn, 2014; Reise, Morizot, & Hays, 2007; Reise, Scheines, Widaman, & Haviland, 2013). Fit statistics were not as good as the simple structure ($\chi^2_{251} = 1171.27$ ($p < .001$), RMSEA=.067, CFI=.934, TLI=.921). Four of nine items from the supervisor support factor loaded less than .25 on the overall factor, and three of four items from the second coping factor loaded less than .25 on their group factor.

Explained common variance (ECV) was also computed to assess the proportion of variance on the specific factors attributable to the overall factor. While judgments about appropriate values for ECV depend on both the number of items and the number of factors in a model, typically, lower ECV suggests less relation to an overall factor and a greater possibility of bias in the modeled dimensions (Reise, Scheines, Widaman, &



Figure 4. Final Self-Judgment Model: Simple Structure with Five Factors

Haviland, 2013). ECV values for the five-factor bifactor structure ranged from very low (9% for the supervisor support factor) to low (33% for one of the coping factors; 35% for occupational efficacy) to moderate (68% and 79% for the remaining two coping factors). This indicates that none of the five factors can be reliably represented by combining them into an overall construct. Although the factors intercorrelate, they are best considered

independently in relation to the dependent variables. Given this, the simple structure model (shown in Figure 4) was accepted as the best fit for the data.

Step 4: Replication on the even sample. The simple structure CFA was then replicated using the same 25 items in five factors with the even sample. The fit was good: $\chi^2_{265} = 846.57$ ($p < .001$), RMSEA=.052, CFI=.955, TLI=.949 (see Table 2, Step 4). The factors correlated similarly to the factors from the odd sample, at $r = -.05$ to .73, and standardized item factor loadings were .60 to .88. Hypothesis 1 was partially supported: all of the proposed variables were fit to a model and may separately be useful in understanding perceived potential at work, although the concluding solution had five-factors as opposed to four.

The Lifespace Model: Testing Hypothesis 2

Step 1: Bifactor CFA on lifespace items. A bifactor CFA was used to test the fit of the hypothesized model with an overall factor, perceived potential at work, comprised of two group factors, work-self competence and supervisor support. As shown in Table 3, Step 1, initial fit statistics were $\chi^2_{207} = 2179.08$, $p < .001$; RMSEA=.115; CFI=.887; TLI=.862, which failed to meet target levels. This was not surprising, partially because associations among the domains under investigation have not been well-established and also because the items themselves had been previously untested. Exploratory factor analysis was undertaken to clarify the dimensions of the lifespace items.

Step 2: EFA on lifespace items. Exploratory factor analysis on one through four factors was conducted using Mplus version 7.4 with a weighted least squares with mean and variance adjustment extraction for categorical data, facparsim oblique rotation, and a theta parameterization. Geomin rotation was attempted first, and facparsim rotation was chosen instead because facparsim resulted in fewer items loading significantly onto more than one factor. General fit statistics for the solutions are listed in Table 3, Step 2. Initial fit

statistics for two and three factors were good, but of the 23 items, many cross-loaded: 14 items loaded significantly at values of .30 or above on two or more factors in the three-factor solution, and 13 items loaded at values of .30 or above on both factors in the two-factor solution. The four-factor solution fit well ($\chi^2_{167} = 561.10$, $p < .001$; RMSEA=.058; CFI=.993; TLI=.990), and cross-loadings (values above .30 on multiple factors) affected 5 items.

Table 3. Testing Models of the Lifespace Items: Iterations & Conclusion

Model	Item: Split	Fit Indices					Correlation
		χ^2	df	RMSEA	CFI	TLI	
Step 1 – Bifactor Confirmatory Factor Analyses (CFA): Odd Sample (n=712)							
<i>Hypothesized Lifespace Model</i>							
Two-factor	23:13/10	1720.07	207	.101	.974	.968	$r = .00$
Step 2 - Exploratory Factor Analyses: Odd Sample (n=712)							
<i>Factor Solutions, Facparsim-Rotated (Oblique)</i>							
One-factor	n/a	2524.58	230	.118	.961	.957	n/a
Two-factor	23:10/13	1250.88	208	.084	.982	.978	$r = .52$
Three-factor	23:10/6/7	856.28	187	.071	.989	.985	$r = .40-.56$
Four-factor	23:5/7/4/7	561.10	167	.058	.993	.990	$r = .34-.58$
Step 3 – Simple Structure CFA: Odd Sample (n=712)							
Four-factor	23:5/7/4/7	1825.74	224	.100	.973	.969	$r = .83-.93$
Two-factor	23:12/11	2056.32	229	.106	.969	.966	$r = .88$
<i>Removed 3 Items with Modification Index (MI) > 100</i>							
Two-factor	20:12/8	946.73	169	.080	.983	.981	$r = .88$
Step 4 – Simple Structure Model Replication: Even Sample (n=706)							
Four-factor	20:12/8	1223.13	169	.094	.980	.977	$r = .89$

Step 3: Simple structure CFA on lifespace items. Confirmatory analysis of the four-factor simple structure solution indicated a fit of $\chi^2_{224} = 1825.74$ ($p < .001$), RMSEA=.100, CFI=.973, TLI=.969, which met criteria for the CFI and TLI but did not meet criteria for the RMSEA. Factors two and three correlated at $r = .91$, suggesting a single construct, so they were combined. Factors one and four, correlated at $r = .93$, were also combined. The two-factor fit still showed RMSEA values above criteria (Table 3, Step 3). Next, the modification indices were examined, and three items with high MI values (MI > 100) were removed. All items loaded on their specific factor in the range of .67 to .99; the

two factors correlated at $r = .88$, and the fit indices suggested an acceptable fit: $\chi^2_{169} = 946.73$, $p < .001$; RMSEA=.080; CFI=.983; TLI=.981.

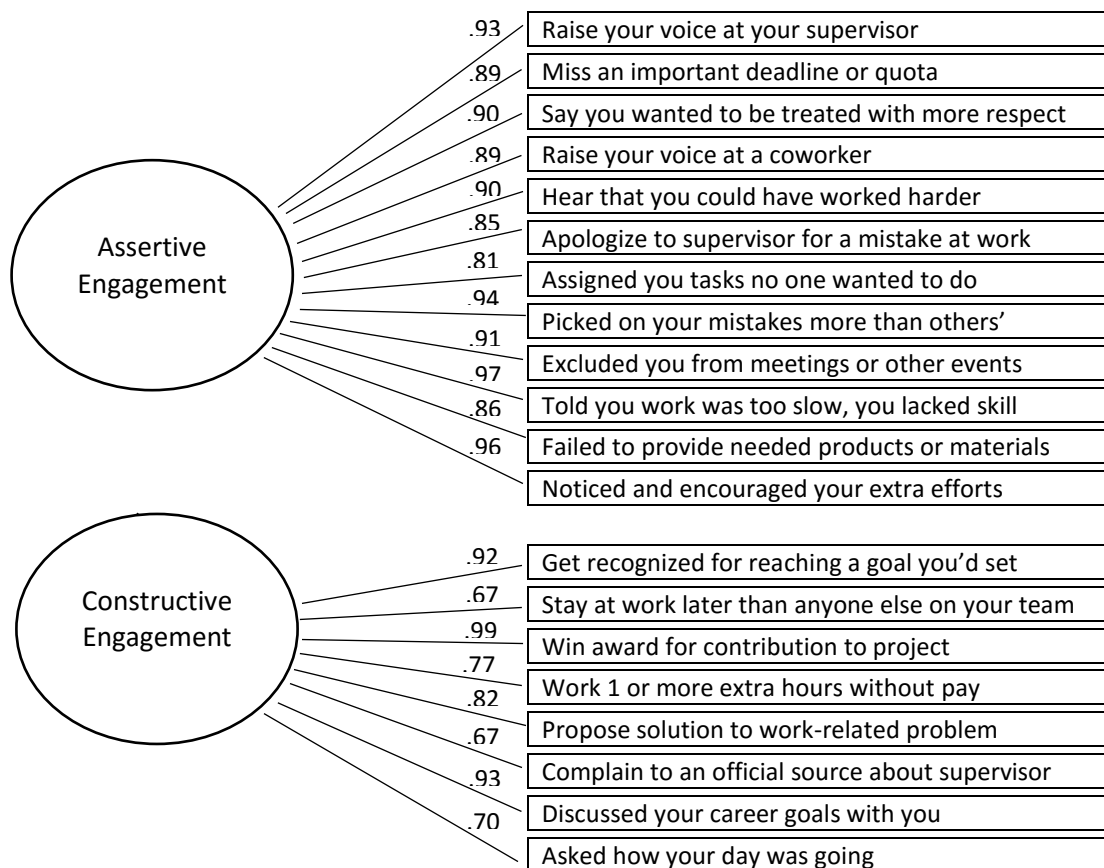


Figure 5. Final Lifespace Model: Simple Structure with Two Factors

The revised model was tested using a bifactor analysis. Fit statistics for the two-factor bifactor CFA were good ($\chi^2_{150} = 736.45$, $p < .001$; RMSEA=.076; CFI=.987; TLI=.983). All items loaded on the overall factor at values of .64 or higher. However, only three of eight items from factor two loaded above .25 on their specific factor. The computed ECV values of 77% and 90% indicated that factor two was difficult to distinguish from the overall factor, whereas factor one was justifiably different. In other words, two related dimensions can be used to model the data, and the simple structure model (shown in Figure 5) was accepted as the concluding solution.

Step 4: Replication of lifespace model on even sample. Replicating the two-factor simple structure CFA with 20 items on the even sample resulted in the following fit: $\chi^2_{169} = 1223.13$, $p < .001$; RMSEA=.094; CFI=.980; TLI=.977 (see Table 3, Step 4). These results support Hypothesis 2; a two-factor structure was successfully modeled, fitting best as a correlated simple structure model rather than a bifactor model.

Construction of New Self-Judgment and Lifespace Scales

Five factor-based scales resulted from the self-judgment measurement model: occupational self-efficacy, active-proactive coping style, support-seeking coping style, avoidant coping style, and perceived supervisor support. Each was developed using the items shown in Figure 4. Descriptive and reliability statistics were computed with the even-numbered observations from the analytic sample, and results appear in Table 4.

Two factor-based scales of workplace behavior resulted from the lifespace model. Each was comprised of the items assigned to its factor in the final CFA; items and corresponding factor loadings are shown in Figure 5. Descriptive and reliability statistics of the lifespace scales are included in Table 4. Consultation with expert researchers from the fields of disability and psychology resulted in the naming of the lifespace scales: assertive engagement and constructive engagement. Proposed characterizations of the nature and interpretation of the scales are offered next.

Table 4. Summary Statistics of New Scales (Even Sample)

	n	Mean	SD	Range	α
Self-judgment					
Occupational Self-Efficacy	814	18.61	4.19	4 - 24	.87
Active-Proactive Coping	814	10.39	3.05	4 - 16	.80
Support-Seeking Coping	812	9.05	3.42	4 - 16	.89
Avoidant Coping	814	8.07	3.26	4 - 16	.83
Perceived Supervisor Support	813	33.33	8.73	9 - 45	.95
Lifespace					
Assertive engagement	708	22.13	14.18	12 - 72	.97
Constructive engagement	708	16.98	8.78	8 - 48	.90

Assertive engagement. The scale of assertive engagement concerns behaviors on the part of both employees and supervisors that are intentionally or inadvertently contentious or insistent. Such behaviors may result from employees struggling or falling behind (e.g., “missed an important deadline or quota” or “heard from a coworker that you could have worked harder”), or they may signify bias or discriminatory treatment on the part of supervisors (e.g., “assigned you tasks no one, including you, wanted to do” or “excluded you from meetings or other events”). The scale focuses on the expression or demonstration of work habits, exchanges, or expectations that connote confrontation (e.g., “raise your voice at your supervisor”) or contain an inherent challenge or demand (e.g., “asked to be treated with more respect”). As such, even the seemingly anomalous item (i.e., “supervisor noticed and encouraged your extra efforts”) can make sense in this scale, given that it could be (a) a suggestion that extra effort is typically lacking and needs to be seen more often or (b) an example of a micro-managerial supervisory style.

Constructive engagement. Similarly (the scales interrelate at $r_s = .64$), the scale of constructive engagement concerns behaviors on the part of both employees and supervisors that seem to be productive, prosocial, and primarily positive. Such behaviors may result from demonstrative achievements at work (e.g., “get recognized for reaching a work goal you’d set” or “win an award for your contribution to a project”), supportive supervision (e.g., “asks how your day was going”), or from compensatory behaviors (e.g., “work 1 or more hours without pay” or “stay later than anyone else on your team”). Even the seemingly anomalous item (i.e., “complain to an official source about your supervisor”) suggests an adherence to proper protocols and constructive problem-solving.

Relation Between the Two Models: Testing Hypothesis 3

Hypothesis 3 stated that the self-judgment model would relate to the lifespan model. To test this proposition, correlations were performed on the self-judgment and

lifespace scales using the even sample. Due to violations of the assumption of normality regarding the scales of occupational self-efficacy, perceived supervisor support, assertive and constructive engagement, Spearman correlation was utilized and is reported in Table 5.

Table 5. Spearman Correlation of Self-Judgment & Lifespace Scales (Even Sample)

	1	2	3	4	5	6	7
Self-judgment							
1. Occupational Efficacy	1						
2. Active-Proactive Coping	.28	1					
3. Support-Seeking Coping	.11	.64	1				
4. Avoidant Coping	-.20	.30	.47	1			
5. Supervisor Support	.43	.22	.22	-.05	1		
Lifespace							
6. Assertive engagement	-.07	.28	.39	.52	-.08	1	
7. Constructive engagement	.22	.37	.37	.31	.24	.64	1

Note. Correlation values less than .07 are not statistically significant.

While the strongest correlations between scales occurred within-domain (e.g., the two lifespace scales correlated with one another at $r_s = .64$), several correlations across the self-judgment and lifespace scales were also notable. For example, avoidant coping was correlated with assertive engagement ($r_s = .52$). Support-seeking coping style was correlated equivalently with both assertive and constructive engagement ($r_s = .39$ and $.37$, respectively), and constructive engagement was also correlated with active-proactive coping ($r_s = .37$). Other significant cross-domain correlations ranged from $r_s = -.07$ to $.28$. Hypothesis 3 was supported, and the two models do relate to one another. Results of analyses regarding the scales' relation to the dependent variables are discussed next in Chapter V.

CHAPTER V

Results: Disclosure of Disability, Attitudinal Barriers, and Expected Work Outcomes**Data Screening**

Univariate histograms and boxplots were examined to assess extreme outliers and violations of the assumption of normality with the dependent study variables. No extreme outliers were detected. Scores on the scale of attitudinal barriers at work (discussed in more detail later in this chapter) showed a positive skew. Bivariate scatter plots showed reasonably linear relations among variable pairs.

Demographic Control Variables

Forty percent (n = 652) of survey respondents were male, 60% were female, and five individuals indicated their gender as neither male nor female. A dichotomous gender variable was created (0 = male, 1 = female), and the five individuals with unspecified gender were dropped from analyses involving gender. The mean age of respondents was 46.73 (range 18 to 65), and 91% of the sample reported their race as White.

All employees completing the survey reported at least one disability or disabling health condition. Individuals with multiple disabilities were asked to indicate and focus on the one that limited them the most. Table 6 shows the prevalence of disability types.

Table 6. Demographics by Disability Type

	Percent (n)	Percent Male	Mean age
Vision	12.1% (197)	53%	41.5
Hearing	9.6% (157)	54%	52.2
Ambulatory	18.3% (298)	39%	51.4
Articulation	15.8% (257)	39%	50.0
Cognitive-learning- psychological	41.0% (664)	32%	44.0
Other	3.6% (58)	74%	42.0

Analytic Strategy

Due to the presence of non-normal distributions and evidence of skew, Spearman correlations were examined to assess the relations among pairs of variables. Multiple and logistic regression analyses were then performed to determine how the self-judgment and lifespace scales related to disability disclosure, attitudinal barriers, and the interaction between attitudinal barriers and expected work outcomes. Plots of residuals were examined and inter-quartile tests performed to ensure no serious violations of the normality of the residuals. The full sample (odd and even combined) was used to conduct the outcome analyses.

Disability Disclosure: Testing Hypotheses 4

Descriptive statistics. Thirty-two percent of survey respondents reported that their disabilities were visible or readily apparent to others, and of those, a minority (38%) indicated they were comfortable discussing their disability with others at work. Of the 68% whose disabilities were not visible, about one-third (35%) had disclosed their disability to their supervisors, and 44% had disclosed their disability to some or all of their coworkers. About half (47%) of employees who had disclosed to their supervisor were comfortable discussing their disability at work. Attitudinal barriers, reported by 57% of respondents, were more likely among employees who had disclosed their disabilities to supervisors (49%; $\chi^2 = 21.44$, $p < .001$; $V = .11$) than among those who had not (32%). Spearman correlations among the scales of disability disclosure, attitudinal barriers at work, and expected work outcomes are shown in Table 7.

Disclosure of disability to supervisors was positively related to the experience of attitudinal barriers at work ($r_s = .07$), as well as to job satisfaction ($r_s = .06$) and perceived promotion opportunities ($r_s = .07$). Disclosure of disability to coworkers was positively

associated with attitudinal barriers at work ($r_s = .11$) and also job satisfaction ($r_s = .07$).

Comfort discussing one's disability was negatively associated with attitudinal barriers ($r_s = -.13$) and positively associated with all three expected work outcomes ($r_s = .13$ to $.19$).

Table 7. Spearman Correlation of Disability Disclosure with Expected Work Outcomes

	Percent (n)	1	2	3	4	5	6	7
1. Disclosed to supervisor	35% (1113)	1						
2. Disclosed to coworkers	44% (1113)	.49	1					
3. Comfortable discussing	33% (1630)	.28	.38	1				
4. Barriers at work		.07	.11	-.13	1			
5. Job satisfaction		.06	.07	.19	-.21	1		
6. Satisfaction with pay		.03	.04	.14	-.21	.31	1	
7. Promotion opportunities		.07	.05	.13	-.16	.37	.38	1

Note. Correlation values less than .06 are not statistically significant.

Regression analyses. Logistic regressions were performed to examine the effects of the self-judgment and lifespace scales on the decision to disclose disability at work.

Results are shown in Table 8.

Table 8. Logistic Regression of Self-Judgment & Lifespace Scales on Disclosure of Disability

	<i>Disclosed disability to supervisor</i>			<i>Disclosed disability to coworkers</i>		
	OR	z_{937}	p	OR	z_{937}	p
Self-judgment						
Occupational self-efficacy	1.00	0.22	.828	.98	-0.96	.337
Active-proactive coping	.99	-0.17	.865	.98	-0.72	.471
Support-seeking coping	1.13	3.92	<.001	1.14	4.46	<.001
Avoidant coping	.89	-3.59	<.001	.91	-3.40	<.001
Percv'd supervisor support	1.02	1.84	.065	1.00	0.38	.702
Lifespace						
Assertive engagement	1.02	1.97	.049	1.01	0.76	.450
Constructive engagement	1.01	0.85	.396	1.03	1.68	.092
Demographic controls						
Gender	.98	-0.14	.892	.94	-0.45	.650
Age	1.01	1.93	.054	1.00	-0.21	.831
Disability type	.94	-1.20	.229	.98	-0.49	.627

Effects of self-judgment and lifespace scales on disability disclosure. The five self-judgment scales, two lifespace scales, and three demographic control variables were

entered simultaneously in two logistic regressions. The overall results were significant regarding the decision to disclose disability to supervisors (pseudo $R^2 = .051$, $\chi^2_{937} = 61.49$, $p < .001$) and coworkers (pseudo $R^2 = .035$, $\chi^2_{937} = 45.54$, $p < .001$). Given the skewed distribution of several of the independent variables, inter-quartile tests of the normality of the residuals were performed in Stata 12.1. Results showed no extreme outliers, and the distribution of the residuals was reasonably normal for both analyses.

Employees who utilized support-seeking coping styles were more likely to disclose their disabilities to others at work (OR = 1.13, $z_{937} = 3.92$, $p < .001$ and OR = 1.14, $z_{937} = 4.46$, $p < .001$ to supervisors and coworkers, respectively), and those whose coping style was avoidant were less likely (OR = .89, $z_{937} = -3.59$, $p < .001$ and OR = .91, $z_{937} = -3.40$, $p < .001$ to supervisors and coworkers, respectively). Disclosure of disability to supervisors, in particular, was also positively associated with assertive engagement (OR = 1.02, $z_{937} = 1.97$, $p < .05$).

Attitudinal Barriers at Work: Testing Hypothesis 5

Descriptive statistics. Attitudinal barriers at work were reported by 56% of employees. Negative supervisor attitudes ($\chi^2 = 57.60$, $p < .001$; $V = .19$), negative coworker attitudes ($\chi^2 = 53.84$, $p < .001$; $V = .18$), and receipt of negative job performance evaluations ($\chi^2 = 48.88$, $p < .001$; $V = .17$) were the most commonly reported barriers and were more likely *not* to be attributed to employee's disabilities. In contrast, the most commonly reported barrier attributed to disability was the receipt of less pay than others in a similar job ($\chi^2 = 43.22$, $p < .001$; $V = .16$). This was followed by supervisors assuming the employee with the disability cannot do the job ($\chi^2 = 36.20$, $p < .001$; $V = .15$), and receiving negative job performance evaluations. Summary statistics and bivariate Pearson correlations among the seven items measuring attitudinal and related barriers at work are presented in Table 9.

Spearman correlations of the self-judgment and lifespace scales with the barriers scale are shown in Table 10; Spearman correlations were used in lieu of Pearson

Table 9. Attitudinal Barriers Faced at Work

	Yes, because of disability % (n)		Yes, but NOT because of disability % (n)			Total % (n)	
Negative supervisor attitudes	12.3% (200)		20.2% (329)			32.4% (529)	
Negative coworker attitudes	11.7% (191)		19.9% (325)			31.6% (516)	
Negative performance evaluation	12.9% (210)		16.9% (275)			29.7% (485)	
Less pay than others in a similar job	14.6% (238)		13.4% (219)			28.0% (457)	
Supervisor assumes I can't do the job	13.1% (214)		12.8% (209)			25.9% (423)	
Denied a raise or promotion	10.9% (177)		14.4% (234)			25.2% (411)	
Other problem	6.0% (98)		3.6% (59)			9.6% (157)	
	1	2	3	4	5	6	7
Negative supervisor attitudes	1						
Negative coworker attitudes	.58	1					
Negative performance evaluation	.27	.32	1				
Less pay than others in a similar job	.46	.34	.28	1			
Supervisor assumes I can't do the job	.47	.43	.30	.47	1		
Denied a raise or promotion	.40	.31	.35	.42	.39	1	
Other problem	.24	.17	.11	.19	.27	.21	1

correlations due to skewed distributions among several of the independent variables.

Results showed significant correlations between attitudinal barriers at work and each of the self-judgment and lifespace scales except occupational self-efficacy and perceived supervisor support. Assertive engagement and avoidant coping were the two scales most strongly related to attitudinal barriers ($r_s = .68$ and $.54$, respectively). Similarly, all of the scales except occupational self-efficacy were significantly correlated with the proportion of attitudinal barriers attributed to disability. Again, assertive engagement ($r_s = .32$) and avoidant coping ($r_s = .29$) were the strongest associations, followed by constructive engagement ($r_s = .26$).

Table 10. Spearman Correlation of Barriers at Work with Self-Judgment & Lifespace Scales

	1	2	3	4	5	6	7	8	9
1. Barriers at work	1								
2. Barriers due to disability ^a	.39	1							
Self-judgment									
3. Occupational self-efficacy	-.01	.04	1						
4. Active-proactive coping	.29	.23	.37	1					
5. Support-seeking coping	.42	.24	.25	.64	1				
6. Avoidant coping	.54	.29	-.02	.28	.44	1			
7. Percv'd supervisor sup.	.06	.15	.43	.28	.35	.13	1		
Lifespace									
8. Assertive engagement	.68	.32	.06	.33	.46	.58	.09	1	
9. Constructive engagement	.49	.26	.29	.41	.45	.40	.35	.72	1

^aproportion of barriers that employees attributed to their disability

Note. Correlation values less than .07 are not statistically significant.

Regression analyses. Standard ordinary least squares (OLS) regression was used to assess whether the self-judgment and lifespace scales influenced the experience of attitudinal and related barriers as well as to determine their relation to expected work outcomes. Non-transformed versions of all scales were used in the regressions; following each analysis, residuals were plotted and tested for normality.

Facing attitudinal barriers. The five self-judgment scales and both lifespace scales were entered simultaneously in standard OLS regression, controlling for gender, age, and disability type. Results are summarized in Table 11. The overall regression was significant ($R^2 = .575$, adjusted $R^2 = .571$, $F_{(10, 1384)} = 186.86$, $p < .001$), explaining about 57% of the variance in the experience of attitudinal and related barriers at work. Inter-quartile tests and plots of the residuals showed no extreme violations of normality. Five of the seven independent variables were significantly related to attitudinal barriers: occupational self-efficacy ($\beta = -.09$, $t_{759} = -4.16$, $p < .001$, $sr^2 = .01$), active proactive coping ($\beta = .05$, $t_{1384} = 2.21$, $p < .05$, $sr^2 < .01$), avoidant coping ($\beta = .14$, $t_{1384} = 5.82$, $p < .001$, $sr^2 = .01$), perceived supervisor support ($\beta = -.09$, $t_{1384} = -4.62$, $p < .001$, $sr^2 = .01$) and assertive engagement ($\beta = .65$, $t_{1384} = 19.03$, $p < .001$, $sr^2 = .11$).

Proportion of barriers attributed to disability. Standard OLS multiple regression was again used to determine whether, controlling for gender, age, and disability type, the self-judgment and lifespace scales were associated with the extent to which employees attributed their experience of attitudinal barriers to their disabilities (as opposed to other reasons). A proportion-of-barriers variable was created by dividing the number of barriers the employee reported as being due to their disability by the total number of barriers the employee reported. With all independent variables entered simultaneously, the overall regression was significant ($R^2 = .133$, adjusted $R^2 = .121$, $F_{(10,759)} = 11.62$, $p < .001$). Inter-quartile tests and plots of the residuals showed no extreme violations of normality. Four of the scales exhibited statistically significant relations to the outcome (see Table 11).

Table 11. OLS Regression of Self-Judgment & Lifespace Scales on Attitudinal Barriers at Work

	<i>Attitudinal barriers experienced</i>			<i>Proportion of barriers attributed to disability</i>		
	β	t_{1384}	p	β	t_{759}	p
Self-judgment						
Occupational self-efficacy	-.09	-4.16	<.001	-.09	-2.16	.031
Active-proactive coping	.05	2.21	.028	.15	3.30	.001
Support-seeking coping	.05	1.88	.061	-.04	-0.89	.376
Avoidant coping	.14	5.82	<.001	.08	1.90	.057
Percv'd supervisor support	-.09	-4.62	<.001	.11	2.62	.009
Lifespace						
Assertive engagement	.65	19.03	<.001	.29	3.89	<.001
Constructive engagement	-.03	-0.99	.321	-.13	-1.76	.080
Demographic controls						
Gender	.02	1.28	.199	-.03	-0.76	.450
Age	-.00	-0.10	.921	-.05	-1.19	.233
Disability type	.01	0.79	.432	-.02	-0.49	.627

Occupational self-efficacy was negatively associated with attributing barriers to disability ($\beta = -.09$, $t_{759} = -2.16$, $p < .05$, $sr^2 = .01$); active-proactive coping ($\beta = .15$, $t_{759} = 3.30$, $p = .001$, $sr^2 = .01$), perceived supervisor support ($\beta = .11$, $t_{759} = 2.62$, $p < .01$, $sr^2 = .01$), and assertive engagement ($\beta = .29$, $t_{759} = 3.89$, $p < .001$, $sr^2 = .02$) were all positively

associated with attributing barriers to disability. These results provided support for Hypothesis 5; both self-judgment and lifespace scales were significantly associated with employees' experience of attitudinal barriers at work.

Expected Work Outcomes: Testing Hypothesis 6

Descriptive statistics. Three scales from the abbreviated Job Descriptive Index (JDI), job in general, satisfaction with pay, and perceived promotion opportunities, were scored in accordance with JDI instructions (Brodke, et al., 2009). Means, reliability statistics, and Spearman correlations with (the skewed scales of) attitudinal barriers at work appear in Table 12. Surprisingly, all significant correlations were in a positive direction, meaning that job satisfaction and perceived promotion opportunities increased when more barriers were faced and when more barriers were attributed to disability.

Table 12. Spearman Correlation of Expected Work Outcomes with Attitudinal Barriers

	Mean (SD)	α	1	2	3	4	5
1. Job satisfaction	11.83 (3.72)	.87	1				
2. Satisfaction with pay	10.02 (6.40)	.84	.31	1			
3. Promotion opportunities	7.87 (5.23)	.77	.43	.40	1		
4. Attitudinal barriers			.13	.03	.23	1	
5. Disability-barriers			.08	.01	.14	.33	1

Note. Disability-barriers = proportion of perceived attitudinal barriers attributed to disability. Correlation values less than .07 not statistically significant.

Regression Analyses. Standard OLS regression was used to test Hypothesis 6, which proposed that perceived potential at work would influence the association between the experience of attitudinal barriers and expected work outcomes. Separate regressions were performed on the outcome variables; the first examined effects on job satisfaction and the second to assessed effects on perceived promotion opportunities. The self-judgment and lifespace scales were entered simultaneously with the scale of attitudinal barriers, and all interaction terms were requested in Stata 12.1 to determine whether disability-related problems at work affected (a) job satisfaction; and (b) perceived opportunities for promotion

for some employees more than for others. Due to non-significant correlations with the outcomes, satisfaction with pay was not included in the regression analysis. Inter-quartile tests were performed and plots examined following regression to ensure that residuals did not violate the assumption of normality. Regression results are summarized in Table 13.

Table 13. OLS Regression of Self-Judgment & Lifespace Scales on Disability-Related Attitudinal Barriers and Expected Work Outcomes

	<i>Job Satisfaction in General</i>			<i>Perceived Promotion Opportunities</i>		
	β	t_{742}	p	β	t_{724}	p
Disability-related barriers	.09	0.45	.654	.19	0.95	.341
Self-judgment						
Occupational self-efficacy	.20	3.95	<.001	-.00	-0.01	.991
Active-proactive coping	-.03	-0.57	.566	.04	0.66	.510
Support-seeking coping	.11	1.84	.066	.12	2.06	.040
Avoidant coping	.01	0.10	.922	-.08	-1.53	.127
Percv'd supervisor sup.	.26	5.49	<.001	.23	4.91	<.001
Interaction effects						
Efficacy x Barriers	-.18	-1.08	.282	.10	0.59	.556
Active x Barriers	.21	1.15	.250	-.11	-0.63	.527
Support-seek x Barriers	-.14	-0.98	.326	.12	0.83	.409
Avoidant x Barriers	-.13	-0.95	.344	-.19	-1.49	.138
Percv'd support x Barriers	.11	0.73	.469	.10	0.69	.489
Lifespace						
Assertive engagement	.14	1.35	.177	.16	1.63	.104
Constructive engagement	.04	0.45	.656	.29	3.38	.001
Interaction effects						
Assertive x Barriers	.26	1.49	.137	-.04	-0.25	.800
Constructive x Barriers	-.15	-0.92	.360	-.17	-1.07	.284

Interaction of self-judgment and lifespace scales with attitudinal barriers on expected work outcomes. Hypothesis 6 was not supported; the self-judgment and lifespace scales did not significantly influence the relation between expected work outcomes and the proportion of barriers that were attributed to disability. A follow-up regression analysis was conducted to determine whether the self-judgment and lifespace scales influenced the relation between the overall experience of attitudinal barriers at work (regardless of whether they were attributed to disability) and expected work outcomes. Inter-quartile tests and plots of the residuals showed no extreme violation of the assumption

of normality. Table 14 contains the regression results, and Figure 6 illustrates example plots, generated using Interaction! software (Soper, 2006), of significant interaction effects. To create the plots, expected work outcomes (job satisfaction or perceived promotion opportunities) were entered as continuous dependent variables, the scale of attitudinal barriers was entered as the independent variable, and the self-judgment or lifespace scales were entered as continuous moderator variables.

Job satisfaction. With independent variables and interaction terms entered simultaneously, the overall OLS standard regression was significant ($R^2 = .244$, adjusted $R^2 = .236$, $F_{(15,1363)} = 29.35$, $p < .001$) and explained about 24% of the variance in satisfaction with the job in general. In the presence of attitudinal barriers, job satisfaction decreased but did not decrease as significantly among employees who exhibited more occupational self-efficacy ($\beta = -.04$, $t_{1363} = -3.17$, $p < .01$, $sr^2 = .01$) and who experienced more constructive engagement at work ($\beta = -.45$, $t_{1363} = -3.17$, $p < .01$, $sr^2 < .01$). Assertive engagement completely mitigated the effects of attitudinal barriers on job satisfaction ($\beta = -.45$, $t_{1363} = -3.17$, $p < .01$, $sr^2 = .01$); job satisfaction decreased only when assertive engagement was not reported and attitudinal barriers were experienced. Conversely, perceptions of more supportive supervisors were associated with increased job satisfaction even when employees reported facing attitudinal barriers ($\beta = -.45$, $t_{1363} = -3.17$, $p < .01$, $sr^2 < .01$).

Perceived opportunities for promotion. Entered simultaneously in standard OLS regression, the self-judgment, lifespace, and attitudinal barriers scales, along with the interaction terms of self-judgment by barriers and lifespace by barriers, significantly accounted for about 24% of the variance in perceived promotion opportunities ($R^2 = .245$, adjusted $R^2 = .237$, $F_{(15,1340)} = 29.02$, $p < .001$). Both of the lifespace scales influenced the relation of attitudinal barriers with perceived promotion opportunities. Employees who reported more assertive ($\beta = .47$, $t_{1340} = 2.87$, $p < .01$, $sr^2 < .01$) and constructive engagement

at work ($\beta = -.44$, $t_{1340} = -2.97$, $p < .01$, $s^2 = .01$) experienced less decrease in perceived promotion opportunities when facing attitudinal barriers.

Table 14. OLS Regression of Self-Judgment & Lifespace Scales on Attitudinal Barriers and Expected Work Outcomes

	<i>Job Satisfaction in General</i>			<i>Perceived Promotion Opportunities</i>		
	β	t_{1363}	p	β	t_{1340}	p
Attitudinal barriers	-.23	-1.49	.136	.08	0.50	.618
Self-judgment						
Occupational self-efficacy	.23	6.21	<.001	.07	1.90	.058
Active-proactive coping	-.05	-1.29	.198	-.02	-0.42	.677
Support-seeking coping	.14	3.23	.001	.13	3.12	.002
Avoidant coping	-.09	-2.20	.028	-.04	-1.09	.274
Percv'd supervisor sup.	.20	5.70	<.001	.25	7.02	<.001
Interaction effects						
Efficacy x Barriers	-.45	-3.17	.002	-.17	-1.25	.212
Active x Barriers	.20	1.28	.199	-.00	-0.02	.985
Support-seek x Barriers	-.21	-1.43	.154	.01	0.09	.929
Avoidant x Barriers	.24	1.93	.054	-.08	-0.63	.526
Percv'd support x Barriers	.28	2.18	.029	.06	0.46	.647
Lifespace						
Assertive engagement	-.08	-1.02	.308	-.07	-0.87	.385
Constructive engagement	.12	2.22	.027	.37	7.16	<.001
Interaction effects						
Assertive x Barriers	.60	3.66	<.001	.47	2.87	.004
Constructive x Barriers	-.31	-2.05	.040	-.44	-2.97	.003

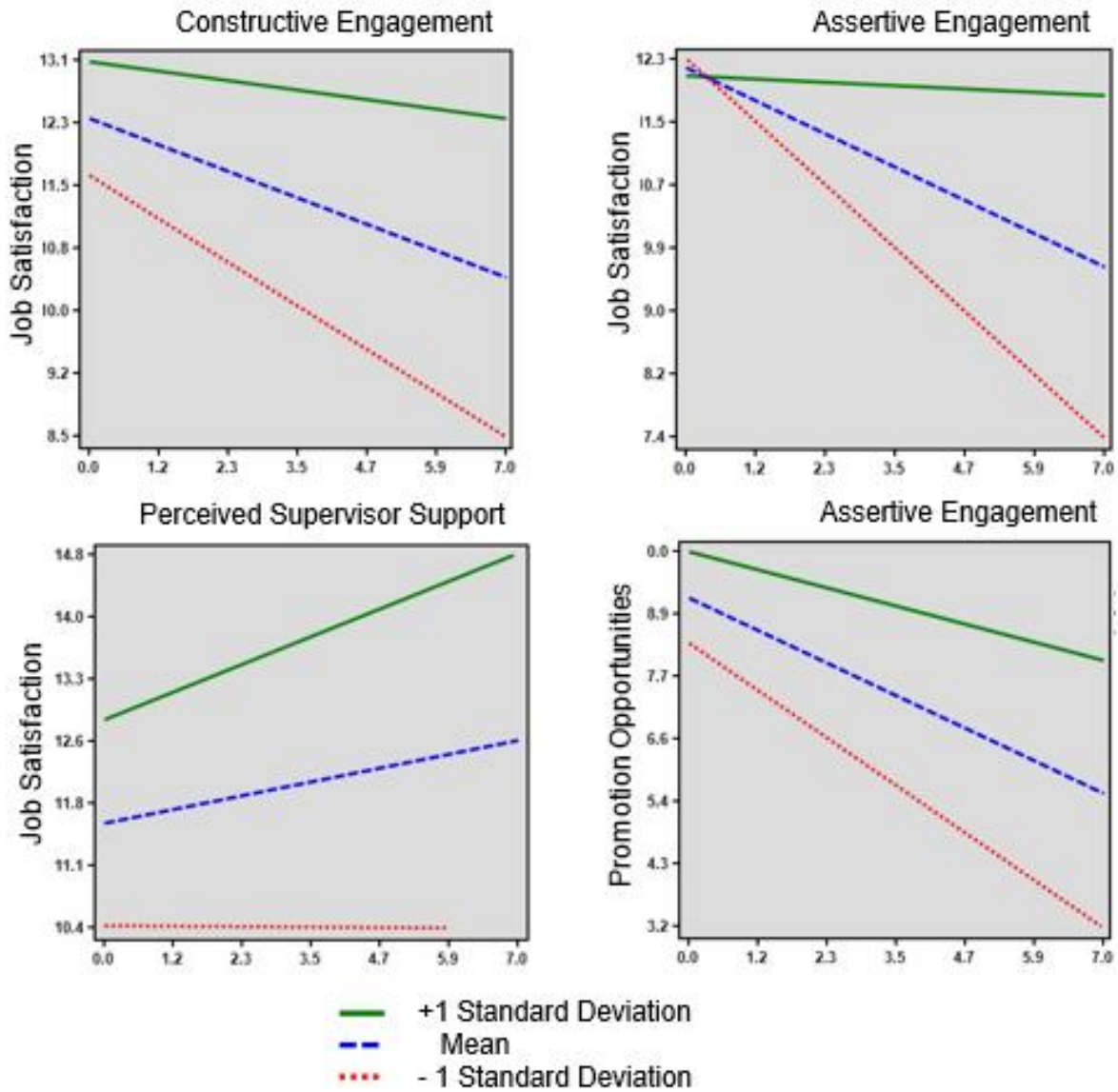


Figure 6. Example Interactions of Self-Judgment & Lifespace Scales with Attitudinal Barriers on Work Outcomes

CHAPTER VI

**Study 2: The Influence of Personal Intelligence on Perceived Potential at Work and
Expected Work Outcomes
(Using the Archival Data from Study 1)**

Personal intelligence refers to “the capacity to reason about personality and to use personality and personal information to enhance one’s thoughts, plans, and life experience” (Mayer, 2008, p. 209). People who are higher in personal intelligence possess greater self-knowledge of their own interests, tendencies, and preferences and are better able to craft their goals and conduct themselves in ways that are congruent with this information (Mayer, Panter, & Caruso, 2012). Similarly, individuals with more personal intelligence can more easily recognize personality aspects of other individuals and use this information to facilitate interactions and anticipate interpersonal outcomes (Mayer, 2008; Mayer, Panter, & Caruso, 2012). Mayer (2014) has also suggested that personal intelligence contributes to individuals’ potential to thrive at work, given their better understanding of their own motivations as well as what others need and will do in the workplace (as cited in Lortie, 2015). Of particular relevance to research on employee perspectives and outcomes, personal intelligences offers “a new explanation of why some of our colleagues do so well, whereas others make sub-optimal choices and behave in counterproductive ways” (Mayer, 2014, para 12).

The present research posits that personal intelligence is related to how employees with disabilities perceive and interact with others, including their supervisors, in the workplace. Thus, the aims of the present study are to (a) determine whether disability type is associated with estimations of personal intelligence using a brief form of the *Test of Personal Intelligence* (TOPI-MINI-12; Mayer, Panter, Caruso, 2013); (b) investigate how personal intelligence relates to employee perceptions of work-self competence and

supervisor attitudes; (c) consider whether personal intelligence influences the likelihood that employees successfully disclose their disabilities to supervisors and coworkers at work; and (d) examine whether personal intelligence influences the relation between the experience of attitudinal barriers and expected work outcomes. These aims will be achieved by answering the research questions presented in the next section.

Research Questions

- Research Question 1: Do norms of personal intelligence, as measured with the TOPI-MINI-12, among adults with different types of disabilities differ from previously-documented norms using the instrument with the general population of adults?
- Research Question 2: Is personal intelligence related to perceived potential at work, as measured with the self-judgment and lifespace scales from Study 1?
- Research Question 3: Does personal intelligence help to globally explain the relation between employees' decisions whether or not disclose disability to supervisors and/or coworkers and expected work outcomes?
- Research Question 4: Does personal intelligence help to globally explain the relation between attitudinal barriers at work and expected work outcomes among employees with disabilities?

Participants

Participants and procedures are the same for Study 2 as those described for Study 1. All respondents completed the measure of personal intelligence. Analyses to answer the research questions included the subsample of respondents who were (a) currently employed, or (b) previously employed within the last year but not currently working (n = 1,631).

Measures

Personal intelligence. An ability test of personal intelligence, *Test of Personal Intelligence MINI MARKER SCALE-12 (TOPI-MINI-12)*, was administered to all participants. Derived from the 134-item *Test of Personal Intelligence version 1.2*, the scale consists of 12 multiple choice items; 6 are related to forming models of personality, and 6 related to reasoning about personality to guide choices (Mayer, Panter, Caruso, 2013). Responses were scored according to the answer key provided by the measure's authors (Mayer, Panter, Caruso, 2013).

Results

Table 15. Personal Intelligence by Disability Type

	n	Mean (SD)	α	t_{1629}	p
General population ^a	158	8.87 (2.95)	.81		
Any disability	1631	8.00 (3.24)	.80		
Vision	197	5.61 (3.28)	.79	11.50	<.000
Hearing	157	8.34 (3.01)	.78	-1.39	.165
Ambulatory	298	8.04 (3.13)	.78	-0.24	.811
Articulation	257	8.26 (2.84)	.72	-1.39	.165
Cognitive-learning/ psych.	664	8.74 (2.91)	.77	-7.71	<.000
Other disability	58	5.47 (4.42)	.91	6.14	<.000

^aAllen & Mayer, 2013, Study 2 (as cited in Mayer, Panter, & Caruso, 2013)

Note. Two-tailed t ratio = disability type compared to "any disability"

RQ1: Personal intelligence and disability type. Table 15 shows a summary of scores on the TOPI-MINI-12 by disability type, which serves to answer Research Question 1. Respondents with visual difficulties ($M = 5.61$, $SD = 3.28$) and disabilities in the "other" category ($M = 5.47$, $SD = 4.42$) scored significantly lower on the TOPI-MINI-12 than the general sample ($t_{1629} = 11.50$, $p < .001$, $\eta^2 = .08$; and $t_{1629} = 6.14$, $p < .001$, $\eta^2 = .02$, respectively). The group of respondents with cognitive, learning, or psychological disabilities scored significantly higher than the general sample ($M = 8.74$, $SD = 4.42$; $t_{1629} = -7.71$, $p < .001$, $\eta^2 = .04$). While the present sample did not contain any people without disabilities, previous findings compiled by Mayer, Panter, and Caruso (2013; e.g., Allen &

Mayer, 2013; see Table 14) suggest that the mean for this overall sample is lower than previously recorded means for the general college student population.

RQ2: Personal intelligence and perceived potential at work. Correlations were performed to assess whether personal intelligence was related to perceived potential at work, as operationalized by the five self-judgment scales (occupational self-efficacy, active-proactive coping, support-seeking coping, avoidant coping, and perceived supervisor support) and the assertive and constructive engagement lifespace scales from Study 1. Because several of the independent variables, including scores on the TOPI-MINI-12, were not normally distributed, Spearman correlations were utilized.

Table 16. Spearman Correlation of Personal Intelligence with Self-Judgment & Lifespace Scales

	1	2	3	4	5	6	7	8
1. Personal intelligence	1							
2. Occupational self-efficacy	-.09	1						
3. Active-proactive coping	-.16	.28	1					
4. Support-seeking coping	-.29	.11	.63	1				
5. Avoidant coping	-.28	-.20	.30	.47	1			
6. Perceived supervisor sup.	-.13	.43	.22	.22	-.05	1		
7. Assertive engagement	-.47	-.07	.28	.39	.52	-.08	1	
8. Constructive engagement	-.43	.22	.37	.37	.31	.24	.64	1

Note. All correlation values are statistically significant at $p < .05$.

The Spearman r_s values in Table 16 answer Research Question 2 affirmatively by demonstrating that personal intelligence is significantly related to all of the self-judgment and lifespace variables. All relations are in the same direction: lower scores on the test of personal intelligence are associated with higher scores on the self-judgment and lifespace scales. For example, people with lower personal intelligence are more likely to report assertive engagement at work ($r_s = -.47$), and they are also more likely to report constructive engagement ($r_s = -.43$).

RQ3: Personal intelligence and the disclosure of disability to supervisor and/or coworkers. Logistic regressions were used to determine whether personal intelligence

helps to globally explain employees' with disabilities decisions to disclose their disabilities at work. The TOPI-MINI-12 was entered simultaneously with the five self-judgment and two lifespan scales, as well as three demographic control variables (gender, age, and disability type). Results are shown in Table 17. The overall regressions were statistically significant regarding disclosure to supervisors (pseudo $R^2 = .051$, $\chi^2_{937} = 61.51$, $p < .001$) and coworkers (pseudo $R^2 = .036$, $\chi^2_{937} = 46.48$, $p < .001$). Controlling for the effects of gender, age, disability type, and the self-judgment and lifespan scales, personal intelligence did not help to significantly explain the variance in disclosure of disability to supervisors or coworkers.

Table 17. Logistic Regression of Personal Intelligence, Self-Judgment & Lifespace Scales on Disclosure of Disability

	<i>Disclosed disability to supervisor</i>			<i>Disclosed disability to coworkers</i>		
	OR	z₉₃₇	p	OR	z₉₃₇	p
Personal intelligence	1.00	-0.13	.898	1.02	0.97	.334
Self-judgment						
Occupational self-efficacy	1.00	0.21	.831	.98	-0.93	.353
Active-proactive coping	1.00	-0.15	.877	.98	-0.82	.411
Support-seeking coping	1.13	3.90	<.001	1.14	4.52	<.001
Avoidant coping	.89	-3.59	<.001	.91	-3.38	<.001
Percv'd supervisor support	1.02	1.83	.067	1.00	0.43	.665
Lifespace						
Assertive engagement	1.02	1.87	.062	1.01	0.98	.329
Constructive engagement	1.01	0.83	.404	1.03	1.76	.079
Demographic controls						
Gender	.98	-0.11	.909	.92	-0.57	.568
Age	1.01	1.93	.053	1.00	-0.28	.779
Disability type	.94	-1.16	.244	.97	-0.64	.523

RQ4: Personal intelligence, attitudinal barriers, and expected work outcomes.

Standard OLS multiple regressions were performed to assess whether personal intelligence was useful in understanding employees' with disabilities expected work outcomes, as well as the relation between attitudinal barriers at work and expected work outcomes. Five self-judgment scales, two lifespan scales, the TOPI-MINI-12, and the attitudinal barriers scale

were entered simultaneously, and interaction effects were requested in Stata 12.1. The overall regression was statistically significant ($R^2 = .245$, adjusted $R^2 = .237$, $F_{(15,1340)} = 29.02$, $p < .001$), and results appear in Table 18.

Table 18. OLS Regression of Personal Intelligence, Self-Judgment & Lifespace Scales with Attitudinal Barriers on Expected Work Outcomes

	<i>Job Satisfaction in General</i>			<i>Perceived Promotion Opportunities</i>		
	β	t_{1361}	p	β	t_{1338}	p
Main Effects						
Personal intelligence	-.12	-3.10	.002	-.20	-5.23	<.001
Disability-related barriers	-.13	-0.69	.488	.14	0.74	.462
Occupational self-efficacy	.22	5.97	<.000	.06	1.58	.114
Active-proactive coping	-.03	-0.80	.427	.01	0.38	.704
Support-seeking coping	.12	2.81	.005	.10	2.44	.015
Avoidant coping	-.09	-1.40	.161	-.04	-1.05	.292
Percv'd supervisor support	.20	5.75	<.000	.25	7.13	<.001
Assertive engagement	-.13	-1.72	.086	-.16	-1.98	.047
Constructive engagement	.10	1.81	.070	.33	6.59	<.001
Interaction Effects						
Personal intel x Barriers	-.06	-1.01	.311	-.03	-0.46	.647
Efficacy x Barriers	-.41	-2.88	.004	-.13	-0.95	.342
Active x Barriers	.20	1.28	.200	-.02	-0.14	.892
Support-seek x Barriers	-.20	-1.40	.161	.03	0.25	.805
Avoidant x Barriers	.26	2.09	.037	-.07	-0.59	.553
Percv'd support x Barriers	.23	1.78	.075	.01	0.06	.949
Assertive x Barriers	.51	2.95	.003	.41	2.38	.017
Constructive x Barriers	-.30	-2.00	.046	-.43	-2.93	.003

Main effects of personal intelligence on expected work outcomes. Entering all scales and interaction terms simultaneously, results of the overall OLS regressions were significant for satisfaction with the job in general ($R^2 = .257$, adjusted $R^2 = .248$, $F_{(17,1361)} = 27.69$, $p < .001$) and perceived opportunities for promotion ($R^2 = .272$, adjusted $R^2 = .262$, $F_{(17,1338)} = 29.35$, $p < .001$). Higher personal intelligence was associated with lower levels of satisfaction with the job in general ($\beta = -.12$, $t_{1361} = -3.10$, $p = .01$; $sr^2 = .01$) and fewer perceived opportunities for promotion ($\beta = -.20$, $t_{1338} = -5.23$, $p < .001$; $sr^2 = .02$).

Interaction effects of personal intelligence on the association of attitudinal barriers and expected work outcomes. The second part of Research Question 4 was answered negatively; when controlling for effects of the self-judgment and lifespace scales, personal intelligence did not significantly influence the association between attitudinal barriers at work and job satisfaction or perceived opportunities for promotion.

CHAPTER VII

General Discussion

The present studies examined how to measure employees' with disabilities perceived potential at work and its relation to expected work outcomes. Self-judged competence and coping, lifespace reports of work experiences, and the understanding of personality all contributed significantly to the work lives of employees with disabilities, affecting their decisions to disclose their disabilities to supervisors and colleagues at work, their reports and attributions of attitudinal barriers, and their subjective estimation of success in their jobs. The main findings began with how to best represent employee attitudes and experiences from a measurement perspective, and then addressed how those relate to understanding and improving the workplace experiences of employees with disabilities.

Measuring Employee Perceptions

Self-judgment scales. One of the two foci of these studies was to examine a new way to represent employee perceptions of their work potential. To this end, a group of well-regarded measures and measurement approaches were tested in a sample. A hypothesized measurement model with 32 items was tested and failed to fit well. Examination using exploratory and confirmatory factor analysis resulted in five self-judgment scales estimating self-efficacy at work, coping style, and perceptions of supervisor support. The coping scales, originally conceptualized as a single factor, comprised three clusters of items, primarily originating from Carver's (1997) Brief COPE but combined in new ways and demonstrating improved reliability over the originals. Multiple styles of coping in the analyses proved useful, as different patterns of association with disability disclosure, the experience of attitudinal barriers, and job satisfaction resulted from each. Of particular interest, the active-proactive coping scale included two unique items developed

for these studies that added a proactive element, related to anticipation and, according to some prior research, avoidance of barriers or obstacles (McGonagle & Hamblin, 2014). Findings here showed that active-proactive coping was used more often by employees who attributed a higher proportion of the barriers they faced at work to their disabilities.

It was further discovered, by studying items used in prior scales, that task-focused and person-focused supervisor support could be utilized as a unitary factor. Because supportive supervision often entails more material or tangible forms of assistance for employees with (some types of) disabilities, new items also were developed for this study to include instrumental and task-focused kinds of accommodations or encouragement. Future research might investigate whether the two types of items, person-focused and task-focused, unite as cohesively in a sample of individuals without disabilities, as well. In the meantime, measurement of perceived supervisor support among employees *with* disabilities is likely to be more meaningful when considering both interpersonal and job-related, instrumental supports.

Lifespace scales. Two new lifespace scales originating from the studies' second measurement model exhibited significant explanatory power regarding employees with disabilities and their experiences in the workplace. Once again the model as originally hypothesized failed to fit well; and, once again, an alternative and equally meaningful division was obtained. Following analysis, the modeled scales retained a two-dimensional structure, but the factors' distinctions emerged from their valence rather than their orientation. The successfully modeled scales contained 1) items related to assertive engagement on the part of both self and supervisors and 2) items signifying contributions, accomplishments, and productivity at work in addition to collegial interactions and relationships with supervisors.

Another interesting finding regarding the lifespace scales was their strong obtained correlation with one another ($r_s = .64$). The two scales sometimes, but not always, predicted similar things. For example, in regression analyses, disclosure of disability to supervisors was associated with assertive engagement but not constructive engagement, whereas both assertive and constructive engagement positively influenced perceived promotion opportunities when dealing with attitudinal barriers at work. Also, personal intelligence was negatively related to both types of engagement. The association of personal intelligence to the first (negatively worded) scale is somewhat intuitive; employees who scored lower on the scale of personal intelligence report more conflict and assertion at work. At the same time, however, they report more productivity and collegiality. This finding is similar to what Hill and colleagues noted (2015) in their study of employer accommodations for people with disabilities: traits positively associated with workplace outcomes are often negatively associated with one another in the population.

This suggests that beyond what their face validity reveals, the lifespace scales also imply a more global meaning. In some ways, the scales appear to capture something of the “squeaky wheel.” Employees who engage in more behaviors and more visible interactions will by default have more experiences, both positive and negative, to report. This quality of being “on the radar” can be both a benefit and a hindrance, at different times or in different circumstances. The nature of the lifespace scales makes them sometimes tricky to interpret and underscores the necessity of fitting them to a measurement model before using them in analyses. It also adds to their richness as independent variables because they can mean one thing in certain associations (e.g., assertive engagement at work is strongly associated with the experience of attitudinal barriers at work) and another thing in other analyses (e.g., active engagement, for better or worse, accompanies greater job satisfaction when facing attitudinal barriers at work).

Understanding and Improving Workplace Experiences of Employees with Disabilities

Disclosure of disability. The decision to disclose a disability to supervisors and coworkers when the disability is not visible or readily apparent is complex, and arguments for and against disclosure at work have been made (e.g., Lyons, et al, 2016). Though disclosing disability may facilitate employees' opportunity to get needed assistance or accommodations, it also may increase their exposure to bias or discrimination. Results of the present studies show that disability disclosure, particularly to supervisors, is associated with assertive engagement and avoidant coping behaviors. Notably, causality was undetermined in the present study, so it is unclear whether disclosure of disability was typically used as a strategy to help manage existing difficulties or whether interactions in the workplace deteriorated as a result of the disclosure. Providing some evidence for the former possibility, employees who utilize support-seeking coping styles are more likely to disclose their disabilities to supervisors and coworkers.

Perhaps a more revealing indicator of circumstances in which employees successfully disclose their disabilities is the measure of comfort they feel discussing their disabilities with their supervisors and coworkers. In these studies, a minority of employees (38%) whose disabilities were visible or readily apparent were comfortable discussing them, and fewer than half of employees (47%) whose disabilities were not visible but who had disclosed them felt comfortable talking about their disabilities with supervisors or coworkers. Yet, comfort discussing one's disability was negatively associated with the experience of attitudinal barriers and was related to increased job satisfaction, satisfaction with pay, and better perceived opportunities for promotion. This finding suggests the importance of interventions and policies aimed at facilitating successful disclosure of disability. For example, Lyons and colleagues (2016) recommend that vocational training for employees with disabilities include strategies for highlighting positive aspects of disability and preparing

for potential discriminatory backlash. Similarly, Hill and colleagues (2015) suggest that “policies targeting the environment surrounding disability disclosure may be more effective at increasing accommodation of [employees with disabilities]” (p. 3) than appealing directly to employer behaviors.

Attitudinal barriers. Research on barriers to employment among employees with disabilities often assumes that barriers experienced are associated with disability. Just over half of the employees in these studies reported experiencing problems of an attitudinal nature at work. For example, consistent with previous research (e.g., Kessler Foundation, 2015), about one-third of employees with disabilities reported negative attitudes on the part of their supervisors and/or coworkers. It is notable that employees attributed these attitudinal barriers to their disabilities less than half of the time. Further investigation is needed to clarify the circumstances and extents to which employees attribute barriers in the workplace to their disabilities, particularly because employees experience lower levels of job satisfaction and a poorer outlook on their opportunities for promotion when barriers are attributed to disability.

These studies provide strong evidence of the link between attitudinal barriers, employee coping, and supervisor-employee engagement in the workplace. A more assertive style of engagement was most closely associated with both the experience of attitudinal barriers in general and employees’ attribution of attitudinal barriers to their disabilities. Hill and colleagues’ (2015) noted that, “Individuals with demanding styles are often aggressive and make sure that their needs are met; individuals with avoiding styles do not tend to communicate their needs” (p. 2). This hints at the relation between active engagement and avoidant coping, in that both coincide with the experience of unmet needs. Both signify a degree of conflict or contention at work, and both include attempts to navigate barriers experienced, whether more or less productively. Importantly, each of these styles -

constructive engagement, assertive engagement, and avoidant coping - help employees to feel better, specifically, better about their jobs and their potential to succeed at their jobs, in the face of interpersonal obstacles. Feeling better matters, especially to the extent that it leads to job maintenance and decreased turnover intention. Future studies will need to investigate the extent to which feeling better may coincide with more objective work success and the fulfillment of personal employment goals among employees with disabilities.

Limitations

Several limitations must be considered when interpreting the results of this study. First, the study was only available online, which if attempting to generalize and, as such, excluded individuals without access to the internet. Respondents self-selected, and while identity verification was conducted by Qualtrics and its partners and attention-checks were used to ensure response quality, it is possible that participants could answer dishonestly or misrepresent themselves or their disabilities and perceptions.

The survey did not include people without disabilities, which provided no real referent group for this particular sample. In future studies, it would be helpful to compare the experience and attribution of attitudinal barriers between people with and without disabilities. Interpretation of mean scores on the test of personal intelligence would also be more useful if a comparison group without disabilities were included.

There remains room to improve the measurement of perceived potential at work among employees with disabilities. Even though the self-judgment and lifespace scales significantly related to the examined outcomes of disability disclosure, the experience of attitudinal barriers at work, and expected work outcomes, the regression analyses showed that much of the variance in these outcomes is yet to be explained. For example, the present studies did not include a measure of disability severity, and some variation in the outcomes of interest may stem from the extent of employees' functional limitations. In

addition, a limited number of self-judgment and lifespace items were tested, and this could be expanded to investigate other possible correlates of work-self competence and interpersonal support. For example, new lifespace items concerning a broader range of workplace behaviors and experiences could be developed and tested. Also, the present studies' focus on supervisor interactions could be expanded to include coworker relationships as well.

Finally, both the self-judgment and the lifespace scales rely on the perceptions of the participant. Even responding truthfully, employees responses are valid only to the extent their self-knowledge is accurate. Reliability would be enhanced and a more comprehensive understanding could emerge through the inclusion of third-party input. For example, corresponding survey data from supervisors and/or coworkers of employee participants would provide multiple perspectives on attitudes and interactions in the workplace.

Conclusion

Findings from these studies contribute new knowledge and understanding of the ways in which employees with disabilities experience and navigate attitudinal and related barriers at work. Such knowledge is a necessary component of ensuring equal and just employment opportunities for people with disabilities, as it can inform interventions designed to increase employment opportunities and facilitate employees' with disabilities efforts to overcome barriers and enjoy successful work outcomes. Such interventions can target both self-advocacy and the role of supervisors and coworkers. Interventions aimed at self-advocacy, for example, can help employees to recognize and maximize their own engagement and coping styles in order to best approach and achieve the employment goals they set for themselves. Prior research has established links between perceptions of supervisor support and job satisfaction, engagement, and commitment to the workplace, and the studies here provide information about the kinds of support that are most influential

for employees with disabilities. Interventions targeting employers, supervisor, and coworkers can use these findings to inform trainings aimed at improving understanding and treatment of employees' with disabilities in order to dismantle attitudinal barriers that interfere with employees' perceived potential at work.

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APPENDIX A: UNH INSTITUTIONAL REVIEW BOARD APPROVAL

University of New Hampshire

Research Integrity Services, Service Building
51 College Road, Durham, NH 03824-3585
Fax: 603-862-3564

20-Apr-2016

Houtenville, Andrew James
Paul College
10 Garrison Avenue
Durham, NH 03824

IRB #: 6077

Study: Kessler National Disability and Employment Survey

Approval Expiration Date: 10-Sep-2016

Modification Approval Date: 19-Apr-2016

Modification: Change in PI to Andrew Houtenville and Re-administration of Survey

The Institutional Review Board for the Protection of Human Subjects in Research (IRB) has reviewed and approved your modification to this study, as indicated above. Further changes in your study must be submitted to the IRB for review and approval prior to implementation.

Approval for this protocol expires on the date indicated above. At the end of the approval period you will be asked to submit a report with regard to the involvement of human subjects in this study. If your study is still active, you may request an extension of IRB approval.

Researchers who conduct studies involving human subjects have responsibilities as outlined in the document, Responsibilities of Directors of Research Studies Involving Human Subjects. This document is available at <http://unh.edu/research/irb-application-resources> or from me.

If you have questions or concerns about your study or this approval, please feel free to contact me at 603-862-2003 or Julie.simpson@unh.edu. Please refer to the IRB # above in all correspondence related to this study. The IRB wishes you success with your research.

For the IRB,



Julie F. Simpson
Director
cc: File

,

University of New Hampshire

Research Integrity Services, Service Building
51 College Road, Durham, NH 03824-3585
Fax: 603-862-3564

11-May-2016

Houtenville, Andrew James
Paul College
10 Garrison Avenue
Durham, NH 03824

IRB #: 6077

Study: Kessler National Disability and Employment Survey

Approval Expiration Date: 10-Sep-2016

Modification Approval Date: 03-May-2016

Modification: Addition of Questions

The Institutional Review Board for the Protection of Human Subjects in Research (IRB) has reviewed and approved your modification to this study, as indicated above. Further changes in your study must be submitted to the IRB for review and approval prior to implementation.

Approval for this protocol expires on the date indicated above. At the end of the approval period you will be asked to submit a report with regard to the involvement of human subjects in this study. If your study is still active, you may request an extension of IRB approval.

Researchers who conduct studies involving human subjects have responsibilities as outlined in the document, *Responsibilities of Directors of Research Studies Involving Human Subjects*. This document is available at <http://unh.edu/research/irb-application-resources> or from me.

If you have questions or concerns about your study or this approval, please feel free to contact me at 603-862-2003 or Julie.simpson@unh.edu. Please refer to the IRB # above in all correspondence related to this study. The IRB wishes you success with your research.

For the IRB,



Julie F. Simpson
Director

cc: File

,

,

APPENDIX B: NATIONAL DISABILITY AND EMPLOYMENT SURVEY

Part 1: Consent

[Consent form]

1. Are you 18 years old or older?
(yes – no)
2. What is your gender?
(male – female – other)

Part 2: Disability Screen

(yes – no – don't know)

3. Do you have serious difficulty seeing even when wearing glasses?
4. Do you have difficulty hearing?
5. Do you have serious difficulty walking or climbing stairs?
6. Do you have any difficulty walking a quarter of a mile - about 3 city blocks?
7. Do you have any difficulty doing physical activities such as lifting, carrying, bending or manipulating small objects?
8. Because of a physical, mental, or emotional condition, do you or any of the adults in your household have serious difficulty concentrating, remembering, or making decisions?
9. Do you think you have a condition that makes it difficult in general for you or them to learn? Such conditions include attention problems (ADD), hyperactivity (ADHD), dyslexia and others.
10. Do you have any emotional, psychological or mental health conditions? These may include anxiety, depression, bipolar disorder, substance abuse, anorexia, as well as other conditions.
11. Do you have a developmental disability or disorder? This may include Down syndrome, autism, or Asperger syndrome, as well as other conditions.
12. Do you have any other kind of disability?
13. What kind of disability is that?

Part 3: Employment Screen

(yes – no)

14. Have you ever worked at a job for pay, including self-employment?
15. Are you currently working at a job for pay, including self-employment?
16. Have you been actively looking for work in the past year?
17. Have you [worked] since the onset of your disability?
18. About how many total hours per week do you usually work for pay, counting all jobs?
19. In what type of industry do you work?
 - a. Professional, scientific and technical
 - b. Finance, Insurance, and Real Estate
 - c. Administrative or Support
 - d. Service Industry
 - e. Education
 - f. Health
 - g. Manufacturing
 - h. Construction
 - i. Agriculture, forestry, or fishing
 - j. Other (specify)

Part 4: Self-judgment Model

20. Please indicate how true or untrue each statement is about you.

(not at all true – a little – somewhat – moderately – mostly – completely true)

- a. I can remain calm facing difficulties in my job because I can rely on my abilities
- b. When I am confronted with a problem in my job, I can usually find several solutions
- c. Whatever comes my way in my job, I can usually handle it
- d. My past job experiences have prepared me well for my occupational future
- e. I meet the goals that I set for myself in my job
- f. I feel prepared for most of the demands in my job

21. Here is a list of some ways that people cope with problems. **How often** have you been using these **strategies to cope** with problems or difficulties you face at work? For this question, don't worry about whether the strategy is working, just say whether you do it. Make your answers as true for you as you can.

(not at all - a little bit- a medium amount - a lot)

- a. Imagining the path I will take to achieve my goals
- b. Expressing my negative feelings
- c. Concentrating my efforts on doing something about the situation
- d. Getting emotional support from others
- e. Giving up trying to deal with it
- f. Taking action to try to make the situation better
- g. Saying things to let my unpleasant feelings escape
- h. Getting help and advice from other people
- i. Criticizing myself
- j. Getting comfort and understanding from someone
- k. Giving up the attempt to cope
- l. Working around setbacks that threaten to get in my way
- m. Trying to get advice or help from other people about what I do
- n. Blaming myself for things that happened

22. Please indicate how much you agree or disagree with the statements about your supervisor.

(strongly disagree - disagree - neither agree nor disagree - agree - strongly agree)

My supervisor...

- a. Listens when I have to get something off my chest
- b. Takes time to listen to my problems and worries
- c. Takes a personal interest in me
- d. Shows concern and courtesy toward me, even under the most trying situations
- e. Makes an extra effort to understand the problems I face
- f. Always goes out of the way to make me feel welcome in the work group
- g. Compliments me when I succeed at work
- h. Is available if I have a work-related question or problem
- i. Is willing to help with a task if I need it
- j. Wants to help me develop my job skills
- k. Wants to give me the resources I need to get the job done
- l. Accepts the suggestions I make to improve the work

Part 5: Lifespace Model

23. In the past 30 days, how many times did you...

(zero – 1 - 2 to 4 – 5 to 7 – 8 to 10 – 10 to 15 - more than 15)

- a. In a meeting, propose a solution or plan to fix a work-related problem
- b. Win an award at work for your contribution to a project or projects
- c. Get recognition in a meeting for reaching a work goal you'd set for yourself
- d. Raise your voice in anger or frustration at your supervisor
- e. Stay at work later than anyone else on your team
- f. Do extra work not assigned to you in order to help a coworker
- g. Complain to human resources or another official source about the way your supervisor was treating you

24. In the past 30 days, how often did you...

(Never - rarely - occasionally - sometimes - frequently - usually - all the time)

- a. Tell a colleague or supervisor that you wanted to be treated with more respect
- b. Miss a deadline or quota it had been important to meet
- c. Work 1 or more extra hours (without pay) to fulfill your responsibilities
- d. Raise your voice in anger or frustration at a coworker
- e. Apologize to your supervisor for making a mistake or being wrong
- f. Hear from a coworker or supervisor that you could have worked harder on a task or project

25. In the past 30 days, how many times did your supervisor...

(zero – 1 - 2 to 4 – 5 to 7 – 8 to 10 – 10 to 15 - more than 15)

- a. Say that your work was too slow or that you lacked needed skills
- b. Pick on your mistakes while ignoring the mistakes of others
- c. Fail to include you in trainings, meetings, or other events your coworkers attended
- d. Discuss your career goals with you and help you make a plan to achieve them
- e. Insult or tease your clothing or appearance
- f. Ask how you were doing or how your day was going
- g. Notice and encourage you when you put in extra hours or a special effort on a task

26. In the past 30 days, how often did your supervisor...

(Never - rarely - occasionally - sometimes - frequently - usually - all the time)

- a. Assign you a task that no one, including you, wanted to do
- b. Fail to provide accommodations or supports you needed to do your job
- c. Fail to provide materials or products you needed to do your job

Part 6: Personal Intelligence

[TOPI-MINI-12]

Part 7: Disability Disclosure

27. Is your disability or health condition visible or apparent to others without you having to disclose it?

(yes – no)

28. At work, have you disclosed your disability to your supervisor?

(yes – no)

29. At work, have you disclosed your disability to your coworkers?

(no one - some people - most people – everyone)

30. How do you feel about discussing your disability with others at your current/previous job?

(Very uncomfortable - somewhat uncomfortable – neutral - somewhat comfortable - completely comfortable)

Part 8: Expected Work Outcomes

31. Think of your job in general. All in all, what is it like most of the time?

(yes – no - can't decide)

- a. Good
- b. Undesirable
- c. Better than most
- d. Disagreeable
- e. Makes me content
- f. Excellent
- g. Enjoyable
- h. Poor

32. Think of the pay you get now. How well does each of the following words or phrases describe your present pay?

(yes – no - can't decide)

- a. Barely live on income
- b. Bad
- c. Well paid
- d. Underpaid
- e. Comfortable
- f. Enough to live on

33. Think of the opportunities for promotion that you have now. How well does each of the following words or phrases describe these?

(yes – no - can't decide)

- a. Good opportunities for promotion
- b. Opportunities somewhat limited
- c. Dead-end job
- d. Good chance for promotion
- e. Fairly good chance for promotion
- f. Regular promotions

Part 9: Demographics

34. In what year were you born? (drop down list)

35. What is the highest grade in school, or level of education that you've completed and got credit for?

- a. Eighth grade or less
- b. Some high school
- c. High school graduate (includes G.E.D.)
- d. Technical school
- e. Some college
- f. College graduate
- g. Or postgraduate work

36. Are you of Hispanic or Spanish origin?
(yes – no)

37. What is your race? (Select any that apply)

- a. White
- b. Black or African American
- c. American Indian or Alaska Native
- d. Asian
- e. Native Hawaiian or Other Pacific Islander
- f. Other (specify)

APPENDIX C: CONSIDERATIONS REGARDING SCALE ITEM FAIR USE AND COPYRIGHT

As described in the methods sections in Chapters 3, 4, and 5, the present studies used, adapted, and were informed by scales and items developed by previous researchers. The purpose of this, Appendix C, is to carefully document instances in which only partial scales were used in order to demonstrate that the dissertation follows practices of fair use and complies with ethical, legal, and policy requirements, per the American Psychological Association (2010).

Proactive Coping

In order to include an indicator of a coping style not measured by the Brief COPE (Carver, 1997), two items were generated for this survey. Conceptually, these items were informed by the content of the Proactive Coping Inventory (Greenglass, et al., 1999), but the wording is original. The Proactive Coping Inventory is cited in the measures section of Chapter 3 and elsewhere in the dissertation literature review.

Table A-1. Conceptual Basis for Two New Proactive Coping Items

Current item	Proactive Coping Inventory sample items^a
Imagining the path I will take to reach my goals.	I visualize my dreams and try to achieve them.
Working around any setbacks that threaten to get in my way.	I always try to find a way to work around obstacles; nothing really stops me. Despite numerous setbacks, I usually succeed in getting what I want.

^aFrom Greenglass & colleagues (1999)

Person-focused and Task-focused Supervisor Support

The conceptualization of person-focused and task-focused supervisor support came from an article on interpersonal citizenship behavior by Setton and Mossholder (2002) and is cited as such in the literature review of Chapter 2 and the methods in Chapter 3. The person-focused supervisor support items in the current study were adapted from Settoon and Mossholder's (2002) work. In their study, supervisors rated employees using a scale of

Interpersonal Citizenship Behaviors. The present research does somewhat the reverse, asking employees to answer about their supervisors' behaviors. For example, an original item says, *takes time to listen to coworkers' problems and worries*; the new item says, *takes time to listen to my problems and worries*.

The task-focused behaviors used by Settoon and Mossholder (2002) did not lend themselves to similar adaptation to the present context, as they were primarily about employees helping coworkers in ways that are not necessarily characteristic of a supervisor's role (e.g., *helps coworkers with heavy workloads even though it is not part of the job; takes on extra responsibilities to help coworkers when things get demanding at work*). Thus, the task-focused items were created for this study.

Items generated for present research were informed by descriptions of the personal support subdimension of Borman and colleagues' taxonomy of organizational citizenship behaviors (Borman, Penner, Allen, & Motowidlo, 2001). For example, the description of a subdimension includes, "Helping others by offering suggestions about their work" (p. 55), which informed the following items: *is available if I have a work-related question or problem; is willing to help with a task if I need it*.