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Supported Decision-Making: Implications from Positive Psychology for Assessment and Intervention in Rehabilitation and Employment

Hatice Uyanik¹ · Karrie A. Shogren¹ · Peter Blanck²

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Abstract *Purpose* This article reviews existing literature on positive psychology, supported decision-making (SDM), employment, and disability. It examines interventions and assessments that have been empirically evaluated for the enhancement of decision-making and overall well-being of people with disabilities. Additionally, conceptual themes present in the literature were explored. Methods A systematic review was conducted across two databases (ERIC and PsychINFO) using various combination of keywords of 'disabilit*', work rehabilitation and employment terms, positive psychology terms, and SDM components. Seven database searches were conducted with diverse combinations of keywords, which identified 1425 results in total to be screened for relevance using their titles and abstracts. Database search was supplemented with hand searches of oft-cited journals, ancestral search, and supplemental search from grey literature. Results Only four studies were identified in the literature targeting SDM and positive psychology related constructs in the employment and job development context. Results across the studies indicated small to moderate impacts of the assessment and interventions on decisionmaking and engagement outcomes. Conceptually there are thematic areas of potential overlap, although they are limited in the explicit integration of theory in supported decisionmaking, positive psychology, disability, and employment. Conclusion Results suggest a need for additional scholarship

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² Burton Blatt Institute, Syracuse University, Syracuse, NY, USA in this area that focuses on theory development and integration as well as empirical work. Such work should examine the potential utility of considering positive psychological interventions when planning for SDM in the context of career development activities to enhance positive outcomes related to decision-making, self-determination, and other positive psychological constructs.

Keywords Supported decision-making · Positive psychology · Rehabilitation · Employment · Disability

Introduction

The United Nations Convention on the Rights of Persons with Disabilities [1] recognizes the right of legal capacity for people with disabilities and re-affirms the concept of supported decision-making (SDM) [2]. SDM is recognized as a viable alternative to traditional guardianship arrangements that may protect the inherent right of people with disabilities to be involved in decisions about their lives, including decisions about rehabilitation and employment. When overbroad and undue guardianship arrangements are used, this limits the self-determination of people with disabilities. There is an ongoing effort to reform supports for decision-making to empower people with disabilities to be self-determining and act as causal agents [3] over choices and decisions about their lives, particularly in the employment context [4].

Many jurisdictions, including Australia, Canada, Germany, Ireland, Israel, Latvia, New Zealand, Sweden, United Kingdom, and states within the United States incorporate SDM within their legal systems. The increasing recognition of SDM as an alternative paradigm necessitates the consideration of how effective supports may be developed and assessed to enable SDM [5].

Supported decision-making, in practice, is defined as practices, arrangements, and agreements that include informal and formal supports from diverse sources (e.g., person-based supports such as peers, paid supporters, family, and technological supports, and educational supports) [6]. The most appropriate practices, arrangements, and agreements should be directed by the person with a disability and reflect their preferences [7]. Nonetheless, needed supports may change over a person's lifespan based on changes in environmental demands, necessitating flexible models to enable informed choices [8]. Promoting SDM counteracts many of the deficit models that historically have shaped guardianship practices [8]. SDM is consistent with a social-ecological model of disability, which holds that people with disabilities have strengths and capacities that are enhanced in response to environmental demands through effective and individualized supports [5].

One area that has not received significant attention within the context of SDM is the role of supports for decision-making in enabling integrated employment outcomes for adults with disabilities. Data continue to suggest weak employment outcomes, particularly for adults with intellectual and developmental disabilities, with an overreliance on segregated employment models [9]. These non-inclusive approaches, similar to guardianship models, are based on ability deficit-models rather that socialecological models of disability. As such, there is a need for consideration of SDM practices, arrangements, and agreements to promote positive integrated employment outcomes and build self-determination in the job development and occupational rehabilitation processes.

The emergence of social-ecological models of disability has been paralleled by strengths-based, person–environment fit models in other fields. In psychology, the field of positive psychology has emerged. As the president of the American Psychological Association in 1998, Martin Seligman defined his vision for the field of positive psychology, namely promoting the exploration of what makes life worth living and building enabling conditions of a life worth living. One major focus in positive psychology is on enhancing well-being by building on strengths and virtues. Seligman [10] has developed a model that focuses on how to increase well-being and flourishing though positive emotion, engagement, meaning, positive relationships, and accomplishment (PERMA).

With a few notable exceptions [11, 12], there has been limited attention directed to the relationship between positive psychology and the PERMA model, SDM, disability and employment. However, there are clear overlaps between the goals of promoting well-being and human flourishing in positive psychology, and the goals of SDM and integrated employment to enhance self-determination and quality of life [13].

Positive psychology, SDM, and employment also share a similar foundation in their recognition of the importance of strengths-based approaches and practices. This suggests that there may be useful information in the field of positive psychology that informs SDM, particularly in the context of occupational rehabilitation and employment. To explore the possible implications of strength-based approaches for promoting SDM and employment outcomes, and drawing on literature from the disability field and positive psychology, we conducted a review of the literature, examining what the disability and positive psychology literature suggests with regard to: (a) work-related decision-making of people with disabilities; (b) interventions used to enhance decisionmaking in the employment context, and to enhance overall well-being and quality of life for people with disabilities; and, (c) assessment procedures and measures used to evaluate work-related decision-making and overall well-being and quality of life of people with disabilities.

Method

To achieve our goals, we conducted a systematic review of the literature. To identify literature related to positive psychology, SDM, employment, and disability, we conducted keyword searches within ERIC and PscyINFO databases. Keywords included the combination of 'disabilit*' and work rehabilitation and employment terms (employment, work rehabilitation, vocational rehabilitation, employment rehabilitation, occupational rehabilitation); PERMA model (positive emotion, engagement, positive relationships, meaning, and accomplishment); and supported decisionmaking components (decision-making ability, environmental demands for decision making, and support needs for decision making).

Seven database searches were conducted with diverse combinations of keywords, including general concepts searches to capture as many results as possible. We retrieved 1425 results in total, including scholarly journals (973), books (158), dissertation and thesis (74), reports (57), and other sources (163) published between 1952 and 2017. To narrow the results, we used the following inclusion criteria: (a) peer-reviewed journal articles written in English; (b) at least one participant with a disability (either self-diagnosed or documented); and (c) the use of empirical intervention or assessment procedures with a concrete, measured outcome related to developing decision-making abilities and employment with one or all PERMA model constructs (positive emotion, engagement, positive relationships, meaning, and accomplishment).

Given that positive psychology emerged as a field in the early 2000s, we restricted our analysis of interventions and assessment to articles published since 2000. We supplemented the database search with hand searches of oft-cited journals in the disability and rehabilitation field, including *Journal of Vocational Rehabilitation, Journal of Career Development*, and *Disability and Rehabilitation*. No additional articles were identified. Finally, we conducted ancestral searches using articles that met the inclusion criteria. We identified one article through further supplemental search from empirical articles in the grey literature search that will be discussed subsequently. After database, journal, ancestral, and grey literature searches, four articles were found that met all three inclusion criteria. These articles will be described subsequently.

Because of the limited number of articles, and to gather more information about factors that have been identified as facilitating or as barriers to the work-related decision making of people with disabilities, we also explored the broader literature that resulted from the searches focusing on nonempirical articles, which focused on conceptual issues related to PERMA model constructs, SDM constructs, and employment. We also conducted a grey literature search to identify national, statewide, and international project reports, policy briefs, and white papers [14]. The grey literature search was completed using Google Search and Google Scholar databases, including following search terms: "supported decision-making", "positive psychology", "PERMA" and "employment" OR "career development" OR "vocational rehabilitation" OR "occupational rehabilitation". Only governmental, or organizational project and guideline reports [15, 16] with relevance to positive psychology and SDM in the employment context for people with disabilities were included.

We then engaged in a content analysis of the non-empirical articles, theoretical papers, and reports results from the grey literature search; this included over 935 articles or reports. By reading abstracts, we summarized key themes that emerged related to enabling SDM in the employment context and potential applications of constructs associated with positive psychology to SDM and employment.

Findings

Intervention and Assessment on SDM, Positive Psychology, and Employment

Although there was no formal use of the PERMA model in research on SDM and employment in the disability field, there were four studies that targeted decision-making and included constructs related to the PERMA model that provide direction for systematic analysis about the inclusion of positive psychology constructs in SDM and employment research. These four studies are described in this section. Three articles used a group design and one article used single-case design to explore the impact of assessments and interventions to enhance decision-making and employment. A total of 307 people were included in the intervention studies, including 40 individuals without disabilities and 267 individuals with disabilities, between 13 and 67 years old.

Disabilities included intellectual disability, autism, learning or behavioral disorders, sensory impairments, physical disabilities, learning disabilities, mental health conditions (i.e., schizophrenia, depression, bipolar disorder, anxiety disorders, and personality disorders). Disability status was confirmed across studies either through record review or self-report. Three studies were conducted in the United States, and one study was conducted in the United Kingdom.

Brady and colleagues [17] examined the reliability and validity of a self-evaluation instrument, the *Job Observation and Behavior Scale-Opportunity for Self-Determination* (JOBS-OSD), that supports employees with disabilities to make decisions relevant to their work performance and support needs in the work environment. Participants were 78 adult employees and 27 students who were transitioning from school to supported employment. Both groups represented various disability categories, including intellectual disability, autism, learning or behavioral disorders, sensory impairments, and physical disabilities.

The JOBS-OSD is a self-assessment tool designed to gather input from the employee/student with disability in the employment environment. It includes 30 questions organized into three subscales: (a) work-related daily living activities, (b) work-related behaviors, and (c) work-required job duties. It is administered in a standardized interview format by a staff member (i.e., teacher, job coach) in a three-step procedure that includes an advance organizer, work performance assessment, and support needs determination.

Findings suggest the items were reliable and the scale had validity in the assessment of work-related needs. Difference were found across the groups included in the study. Specifically, adult employees scored themselves higher in the supports they needed to perform job duties than students in transition to supported employment. Further, adults in competitive work roles perceived themselves as having less support needs than employees in supported employment or sheltered employment, and those in support edemployment perceived themselves as having fewer support needs than those in segregated employment.

The reasons for these differences needs to be further explored (e.g., are they related to differing demands of the varying job environments, and personal characteristics that are driving employment opportunities such that individuals with more significant support needs are more likely to be placed in segregated environments). However, overall, the JOBS-OSD shows promise as a tool to enable adults with disabilities to self-evaluate their strengths and the quality of their work and support needs, which has a role in enhancing

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self-determination and identifying needs for decision-making supports. The results of this assessment may be used to further the application strengths-based approaches to create career development plans and employment support plans for youth in transition and workers with disability. In future research, merging planning for decision-making supports with the identification of strengths, approaches developed in positive psychology may be further explored.

Lusk and Cook [18] investigated the effects of an intervention to promote career exploration, problem solving, and decision-making for females with disabilities. The eightsession intervention program includes lectures, group and individual exercises and activities focused on identifying interests, strengths, and values (consistent with the PERMA model, although not labeled as such in the study) related to career decision-making, problem solving, and preparing for careers and planning for the future. The intervention was implemented with a group of females with disabilities, and the impact compared to two control groups who did not receive the intervention, one comprised of females with disabilities and the other comprised of females without disabilities.

The Career Maturity Inventory-Revised and Problem Solving Inventory also were used to examine changes in career development and problem solving. The findings suggested that females with disabilities in the intervention group initially reported lower problem solving and decision-making pre-intervention, compared to both control groups, but showed significant increases compared to both groups postintervention. These results suggest that the intervention was associated with enhanced career exploration and decisionmaking skills. Further research should explore the impact of SDM arrangements and consider the use of constructs from the PERMA model to enhance outcomes.

Henderson and colleagues [19] designed a decision aid to promote safe disclosure of one's disability status in the work environment. The Conceal or Reveal ("CORAL") decision aid was designed to be understandable by users with disabilities. The use of CORAL was examined in 80 individuals with various psychiatric disabilities. Participants were followed for up to 3 months after being taught to use CORAL, measures included the Decisional Conflict Scale, the Stage of Decision Making Scale, the Work Limitations Questionnaire, and an employment satisfaction questionnaire.

The intervention group who received CORAL reported less decisional conflict than the control group, both immediately and 3 months after training as well as greater satisfaction in employment-related decision-making, decision-making skills, and feelings of empowerment related to looking for a job or changing job status. While not specifically labeled as an intervention targeting positive psychological constructs in the context of SDM and employment, the changes in feelings of empowerment align with constructs in the PERMA model and research in positive psychology on enhancing feelings of accomplishment and meaning in the work environment, which may be shown to enhance the job outcomes of people with disabilities.

Finally, Mackey and Nelson [20] investigated the impact of video feedback on the job-related behaviors of 19-yearold twins with autism. Using a within-participant multiple probe design across targeted job behaviors, the researchers examined changes in individualized, job-related behaviors during unpaid-employment skills training in three different work locations per week. Data were collected using the modified version of a behavioral observation tool, Behavioral Observation of Students in School (BOSS).

The findings, based on data collected using BOSS on individualized, job-related behaviors on a one-minute interval system, suggest that the participants increase their decision-making skills, active engagement, and appropriate interaction with others. However, decision-making was least impacted by the video feedback intervention. Utilizing SDM arrangements and practices may be promising in future research to determine if it has an additional impact on job outcomes.

Overall, the four identified studies, while not jointly targeting SDM and PERMA model constructs (positive emotion, engagement, meaning, positive relationships, and accomplishment), test interventions and assessments that had implications for the effective delivery of supports for decision-making in the employment and job development context as well as for enhancing self-determination, quality of life, and PERMA-related constructs. Results across the studies indicated small to moderate impacts of the assessment and interventions on decision-making and engagement outcomes. This suggests the potential utility of considering these interventions when planning for SDM in the context of career development activities to enhance positive outcomes related to decision-making, self-determination, and other positive psychological constructs.

Content Analysis

To build on the findings of the studies of intervention and assessment, we conducted a content analysis of nonempirical articles and reports to examine trends in the field related to SDM and positive psychology in the occupational rehabilitation and employment context. In this section, we present key findings related to models, supports, and barriers to integrating positive psychology and SDM to enhance employment and quality of life outcomes.

Based on the International Classification of Functioning, Disability and Health framework, a conceptual definition is proposed, which states that vocational rehabilitation is: Author's personal copy

a multi-professional evidence-based approach that is provided in different settings, services, and activities to working age individuals with health-related impairments, limitations, or restrictions with work functioning, and whose primary aim is to optimize work participation [21].

Theories of career development, including, social cognitive theory [22] and social learning theory of career decision-making [23] provide a context for thinking about the integration of SDM and positive psychology within vocational rehabilitation and employment supports.

These theories acknowledge the role of finding meaning in one's work to promoting engagement and positive emotions and outcomes. As such, supporting identification of the best job match as well as the supports needed to enable outcomes beyond retention, including engagement, meaning, accomplishment, social relationships, and positive emotions, are critical to enabling people with disabilities to gain and sustain employment [24], although more research is needed. Based on the existing research, focusing on engagement through meaning and accomplishment in work, we propose that a critical direction to consider in intervention and assessment is to identify and support people with disabilities to make decisions about their career paths, and to foster job-matches as well as opportunities for advancement when employed.

Models of promoting employment, such as supported employment and customized employment [25], are aligned with promoting and enhancing positive emotion, engagement, meaning, positive relationships, and accomplishment. Supported employment provides opportunities for people with disabilities to be self-determining with regard to their employment supports by identifying and regulating their employment supports based on understanding of their needs. Supported employment providers may re-conceptualize the provision of support around SDM, involving the person with a disability in choosing who and how supports are provided to address needs.

This approach has the potential for promoting greater autonomy as well as positive emotions related to making decisions about career development and supports, which has been shown to improve career satisfaction [25]. Further interventions emerging from positive psychology that focus on building relationships may be used to develop more effective natural supports to foster SDM. Further, customized employment, given its inherent focus on workplace flexibility and the integration of job seeker's and employer's needs for an optimal employment match [15, 25] has aspects that create natural opportunities for enhancing positive emotions and outcomes for all parties. Job development and employment negotiation supports also may be developed that infuse elements of positive emotion, engagement, meaning, positive relationships, and accomplishment based interventions, targeting these outcomes in all stakeholders.

Further, self-employment and entrepreneurship provide flexibility in the work environment for people with disabilities who start their own business [16, 25]. Palmer et al. [26] interviewed four individuals with physical disabilities who were self-employed to understand the reasons behind their decision-making leading to self-employment. They found that environmental conditions such as the availability of resources and lack of employment opportunities as well as personal factors including support needs influenced decision-making with regard to self-employment. This suggests room for focus on strengths and factors that lead to inclusive and competitive levels of engagement, meaning, and accomplishment. These are driving factors in deciding the best fit for employment; beyond the primary focus on environmental conditions as well as on entry-level jobs as the only option for people with disabilities.

Rizzo [27] suggests the importance of a range of supports to enable employment outcomes from skill-based (e.g., money management and product development skills), to relational (e.g., networking and social skills) and emotional supports, to structural supports (e.g., child care and health care access), as well as supports for decision making (i.e., board of directors, advisory boards). Relationship building is important, as mentors, coaches, and peer supports enable personal develop and job growth. Long-term supports are essential for people with severe disabilities to sustain a meaningful career or successful business, creating a circle of business supports to enhance engagement and productivity [27]. Planning for this as part of SDM and identifying ways that positive experiences may be enhanced for all parties is an area for future development and research.

While models exist for supporting employment outcomes, there are barriers to the implementation of these practices. First, systemic financial barriers are present, including fear of losing Social Security benefits and fear of losing health care benefits [28]. There is also a lack of employment opportunities, education and training, job placement, and personal supports for people with disabilities [29].

One suggestion to approach these challenges is providing work incentive counseling as an effective workplace support to enhance self-sufficiency of beneficiaries [29]. Counseling may employ interventions derived from positive psychology and the PERMA model to support positive emotions, engagement, and SDM. Further, there is a need to promote meaningful work experiences in secondary school (and educational planning programs), as well as to address systemic barriers such as transportation and a lack of awareness of reasonable accommodations, particularly on the employerside, as well as the individualization of supports based on specific needs [30, 31]. It is not unexpected that many people with disabilities face career indecision [32], psychological stress [33], economic disincentives [28], and fear of stigmatization [34] related to disclosing and using needed personal supports for decision-making and employment in the workplace. Reframing these issues through interventions that build on strengths and positive emotions, as well as promoting community education to enhance the degree to which people act as supporters rather than inhibitors likely will prove useful.

Overall, there is a wide body of research that suggests ongoing negative perspectives toward hiring employees with disabilities [35], as well as occupational segregation of older adults with disabilities [36], counselor bias in assumptions about eligibility of people with severe disabilities for vocational rehabilitation [37], and bias in the starting wage of people with disabilities [38]. Each of these issues arises from ongoing application of deficit-based models of disability, rather than social–ecological, strengths-based models of disability. Considering how the PERMA model may be used to derive interventions to change and challenge negative attitudes, including shifting toward recognizing the supports that all people provide to each other and the value this creates for all members of a work community, is a promising direction for future research and practice.

The content analysis also suggested strategies that have been identified in the conceptual and grey literatures on ways to overcome the barriers previously described. Positive psychology and constructs associated with the PERMA model were, to some degree, hinted at in the solutions. However, there was not a formal and focused discussion of how to use existing practices to leverage strengths and positive psychological interventions to improve the application of SDM and employment outcomes, again suggesting a need for future research.

For example, strategies like individualized career planning [39], which is linking multiple agencies and supports to ensure informed and meaningful career decision-making for adolescents with significant disabilities, and providing information and support to employers about supporting an employee's strengths, abilities, and needs on the job, includes elements of promoting positive relationships and engagement, and meaning for the employer and employee. Other strategies include work incentive counseling [29], person-centered funding through facilitated decision-making support for people with psychiatric disabilities [40], and performance-based funding in public business systems [41], which all may be enhanced with positive psychological interventions.

Finally, technology-mediated supports have the potential to promote access and engagement in work activities for people with multiple disabilities [42–44]. Blanck [42, 43] argues that the ubiquity of online activity and the shifting of nearly all interactions and activities to the Internet has

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made the right to web "eQuality" crucial to the inclusion of persons with disabilities into the workforce. However, the rights of individuals with disabilities has seldom come without struggle, which is necessary to achieve a shift in attitudes and practice in regard to employment and vocational rehabilitation opportunities. The UNCRPD (Articles 9 and 12), and disability law and policy in the U.S. (e.g., the ADA and Section 508 of the Rehabilitation Act) recognize the importance of these considerations.

All these efforts may be enhanced by a central focus on building positive emotions, engagement, positive relationships, meaning, and accomplishment as components of personal well-being of individuals with disabilities. The importance of the PERMA model, and the potential impacts of infusing it into SDM and employment, is confirmed by work by Lysaght et al. [45], which found that adults with intellectual disability reported social more connections and pride, satisfaction, and meaning through inclusive employment. Similarly, interviews with 12 young adults with Down Syndrome revealed not only the participants' passion for autonomy in employment and other life areas, but also challenges when others sought to control rather than empower them in decision-making [46].

There have been few applications of positive psychology, although not PERMA, to disability and rehabilitation psychology. *Rehabilitation Research, Policy and Education* (2013, 27-3) published a special issue on the role of positive psychology in rehabilitation counseling. Others have focused on positive psychology and employment [47], discussing the role of person–environment fit models and positive psychology in vocational psychology; however, this review did not address people with disabilities.

We are aware on no publications in the positive psychology field that focused on SDM, employment, and positive psychology. There has been, however, preliminary linkages of SDM, social–ecological models, and strengths-based approached rooted in positive psychology. Shogren and colleagues [48] described the development of the *Supported Decision-Making Inventory System* (SDMIS), a tool that is currently being piloted to provide information about supports needed for decision-making. The SDMIS consists of three inventories, the SDM Personal Factors Inventory, the SDM Environmental Demands Inventory, and the Decision-Making Autonomy Inventory [48]. This assessment will be used to inform SDM in the employment context in the future.

Conclusions and Future Directions

This article reviewed extant literature on SDM, positive psychology, disability, and employment. Limited empirical work has explicitly connected these three areas. Author's personal copy

Conceptually, there is alignment of these areas in each literature base; however, there is a need for more research, theory development, and integrated practice strategies.

We found only four empirical articles that targeted assessments and interventions with regard to decision-making in employment and integrated positive psychological constructs or interventions and SDM. The conceptual and grey literature provided additional insight into strategies and supports that may enhance the integration of SDM, positive psychology, and employment, providing direction for future theory, research and practice.

In the future, the applicability of best practices and supports in rehabilitation should be investigated empirically through the lens of positive psychology, robustly examining employment as well as well-being and happiness related outcomes. Evidence-based practices derived from positive psychology and the PERMA model should be explored with people across the spectrum of disabilities (e.g., physical, mental, and cognitive) in SDM related to employment [49, 50].

Recently, for example, Jeste et al. [49] have reviewed how individuals with serious mental illnesses (SMI) experience limitations in decision-making capacity. These individuals often are placed under guardianship, with substitute decision makers to make decisions on their behalf. Led by the Saks Institute for Mental Health Law, Policy, and Ethics, Elyn Saks and colleagues are undertaking the empirical examination of SDM as a possible alternative in some cases involving persons with SMI. This line of study is warranted, as many individuals with SMI needs supports for decision making capacity.

Presently, there are no published scalable data on rates of guardianship or SDM for persons with SMI. Only three empirical studies have explored SDM in this population, and they suggest that SDM is viewed as a potentially superior alternative to substitute decision making for individuals with SMI [49]. Further empirical research is needed to clarify the efficacy of SDM, decisions in need of support, selection of supporters, guidelines for the SDM process, and integration of SDM with technological platforms.

In the future, interagency collaboration [51, 52] as well as interdisciplinary analyses will be critical to integrate conceptions and practice in SDM, positive psychology, and employment research and practice. In all scenarios, the person with a disability must be at the center of this process, being supported to act as a causal agent [3].

Additionally, since vocational development and occupational rehabilitation counseling emphasize the individualization of interventions [22] and the creation of social supports [53], interventions targeting strengths and virtues from positive psychology have the potential to complement and enhance empowerment-focused rehabilitation counseling as well as SDM practices. By enabling people with disabilities to be causal agents in the job development process (career development and sustainability), with effective systems of supports to enable self-determination, opportunities for customized, strengths-based, an inclusive vocational process may be enhanced.

The economic and social capital to be leveraged from vocational rehabilitation service providers [38], supportive providers, and community members will enhance systems of supports that promote positive outcomes for people with disabilities as well as their employers, and for persons who may become disabled in the future or with the natural aging process [54], and for those who for too long have been excluded from entering or reentering the workforce [55].

One central aspect of support involves creating opportunities for exploration of multiple types of jobs to enable meaningful and informed decision-making for people with disabilities. Too often, the only options that are considered are traditional entry level jobs in food service, custodial services, stock handling, and laundry services [56]. Ensuring that assumptions about people with intellectual and developmental disabilities, and with other coexisting impairments, do not lead only to considering low-status or entry level jobs that provide limited control over work outcomes [45] is important.

Lastly, another element in moving conceptually and in practice beyond deficit-based models, and towards strengthsbased models rooted in positive psychology, is creating and targeting job opportunities that are customized, strengthsbased, and use social capital to derive supports and promote outcomes [22, 38] with goals that are self-initiated and selfdetermined. PERMA, in combination with SDM and other person-centered paradigms, have the potential to enhance supports in decision-making for inclusive jobs and careers for persons with disabilities. In moving towards these outcomes, quality of life and well-being, and participation and inclusion in the workplace, will be enhanced for persons with disabilities.

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Compliance with Ethical Standards

Conflict of interest Hatice Uyanik, Karrie Shogren, and Peter Blanck declare that they have no conflict of interest.

Formal Consent For this type of study formal consent is not required.

References

- United Nations. Convention on the Rights of Persons with Disabilities. 2008. https://www.un.org/development/desa/disabilities/convention-on-the-rights-of-persons-with-disabilities.html. Accessed 1 May 2017.
- 2. Glen KB. Supported decision-making and the human right of legal capacity. Inclusion 2015;3(1):2–16.
- Shogren KA, Wehmeyer ML, Palmer SB, Forber-Pratt A, Little TJ, Lopez SJ. Causal agency theory: reconceptualizing a functional model of self-determination. Educ Train Autism Dev Disabil. 2015;50(3):251–263.
- 4. Martinis JG. "The Right to Make Choices": how vocational rehabilitation can help young adults with disabilities increase self-determination and avoid guardianship. J Vocat Rehabilit. 2015;42(3):221–227.
- Shogren KA, Wehmeyer ML. A framework for research and intervention design in supported decision-making. Inclusion 2015;3(1):17–23.
- Dinerstein R. Implementing legal capacity under article 12 of the UN Convention on the Rights of Persons with Disabilities: the difficult road from guardianship to supported decision making. Hum Rights Br. 2012;19(2):8–12.
- Kohn NA, Blumenthal JA. A critical assessment of supported decision-making for persons aging with intellectual disabilities. Disabil Health J. 2014;7(1):40–43.
- Blanck P, Martinis JG. "The Right to Make Choices": the National Resource Center for Supported Decision-Making. Inclusion 2015;3(1):24–33.
- Butterworth J, Hiersteiner D, Engler J, Bershadsky J, Bradley V. National core indicators[©]: data on the current state of employment of adults with IDD and suggestions for policy development. J Vocat Rehabil. 2015;42(3):209–220.
- Seligman ME. Flourish: a visionary new understanding of happiness and well-being. New York: Free Press, Simon and Schuster; 2011.
- Shogren KA, Wehmeyer ML, Singh N. Handbook of positive psychology in intellectual and developmental disabilities: translating research into practice. New York: Springer; 2017.
- 12. Wehmeyer ML. The Oxford handbook of positive psychology and disability. Oxford: Oxford University Press; 2013.
- 13. Blanck P. The first "A" in the ADA: and 25 more "A"s toward equality for Americans with disabilities. Inclusion. 2016;4(1):46-51.

- 14. The Grey Literature Report. What is grey literature? 2017. http://www.greylit.org/about. Accessed 2 Mar 2017.
- U.S. Department of Labor, Office of Disability and Employment Policy (OSEP). 2017. Customized employment. https:// www.dol.gov/odep/documents/2e984b1d_f2de_40dd_ b3c4_3b4073b67ca5.pdf. Accessed 1 Apr 2017.
- U.S. Department of Labor, Office of Disability and Employment Policy (OSEP). 2013. Self-employment for people with disabilities. https://www.dol.gov/odep/pdf/2014StartUp.pdf. Accessed 1 Apr 2017.
- Brady MP, Rosenberg H, Frain MP. A self-evaluation instrument for work performance and support needs. Career Dev Except Individ. 2008;31(3):175–185.
- Lusk SL, Cook D. Enhancing career exploration, decision making, and problem solving of adolescent girls with disabilities. J Vocat Rehabil. 2009;31(3):145–153.
- Henderson C, Brohan E, Clement S, Williams P, Lassman F, Schauman O, et al. Decision aid on disclosure of mental health status to an employer: feasibility and outcomes of a randomised controlled trial. Br J Psychiatry. 2013;203(5):350–357.
- Mackey M, Nelson G. Twins with autism: utilising video feedback to improve job-related behaviours. Br J Spec Educ. 2015;42(4):390–410.
- Escorpizo R, Reneman MF, Ekholm J, Fritz J, Krupa T, Marnetoft S-U, et al. A conceptual definition of vocational rehabilitation based on the ICF: building a shared global model. J Occup Rehabil. 2011;21(2):126–133.
- 22. Soresi S, Nota L, Ferrari L, Sgaramella TM. Career development and career thoughts. In: Wehmeyer ML, editor. The Oxford handbook of positive psychology and disability. New York: Oxford University Press; 2015. p. 239–264.
- Patton W, McMahon M. Career development and systems theory connecting theory and practice. Rotterdam: Sense Publishers; 2014.
- Fritzsche BA, Dhanani LY, Spencer JM. Empowerment through employment: job satisfaction theories and research. In: Strauser DR, editor. Career development, employment, and disability in rehabilitation. New York: Springer; 2014. p. 139–159.
- Wehman P, Brooke V, Lau S, Targett P. Supported employment. In: Wehmeyer ML, editor. The Oxford handbook of positive psychology and disability. New York: Oxford University Press; 2015. p. 338–364.
- Palmer C, Schriner K, Getch Y, Main D. Working for yourself: how people with disabilities choose self-employment. J Appl Rehabil Couns. 2000;31(3):30–37.
- Rizzo DC. With a little help from my friends: supported selfemployment for people with severe disabilities. J Vocat Rehabil. 2002;17(2):97–105.
- Morris M, Rodriguez C, Blanck P. ABLE accounts: a down payment on freedom. Inclusion 2016;4(1):21–29.
- Kregel J, O'Mara S. Work incentive counseling as a workplace support. J Vocat Rehabilit. 2011;35(2):73–83.
- Noel VA, Oulvey E, Drake RE, Bond GR. Barriers to employment for transition-age youth with developmental and psychiatric disabilities. Adm Policy Ment Health Ment Health Serv Res. 2016;44(3):354–358.
- Schur L, Kruse D, Blanck PD. People with disabilities: sidelined or mainstreamed? New York: Cambridge University Press; 2013.
- 32. Enright MS. The relationship between disability status, career beliefs, and career indecision. Rehabil Couns Bull. 1996;40(2):134–152.
- Lustig DC, Zanskas S. The relationship between work values and psychological problems for individuals with disabilities. Rehabil Res Policy Educ. 2013;27(4):261–270.

- 34. Toth KE, Dewa CS. Employee decision-making about disclosure of a mental disorder at work. J Occup Rehabil. 2014;24(4):732-746.
- Fraser RT, Johnson K, Hebert J, Ajzen I, Copeland J, Brown P, Chan F. Understanding employers' hiring intentions in relation to qualified workers with disabilities: preliminary findings. J Occup Rehabil. 2009;20(4):420–426.
- Pagan-Rodriguez R, Sanchez-Sanchez N. Evidence on the occupational segregation of older people with disabilities in Europe. Disabil Rehabil. 2011;33(25–26):2656–2661.
- Chan F, Wong DW, Rosenthal DA, Kundu MM, Dutta A. Eligibility rates of traditionally underserved individuals with disabilities revisited: a data mining approach. J Appl Rehabil Couns. 2005;36(3):3–10.
- Phillips BN, Robison LJ, Kosciulek JF. The influence of social capital on starting wage for people with and without disabilities. Rehabil Couns Bull. 2014;58(1):37–45.
- Condon E, Callahan M. Individualized career planning for students with significant support needs utilizing the Discovery and Vocational Profile process, cross-agency collaborative funding and Social Security Work Incentives. J Vocat Rehabil. 2008;28(2):85–96.
- O'Brien D, Ford L, Malloy JM. Person centered funding: using vouchers and personal budgets to support recovery and employment for people with psychiatric disabilities. J Vocat Rehabil. 2005;23(2):71–79.
- Wehman P, Revell G. Lessons learned from the provision and funding of employment services for the MR/DD population. J Disabil Policy Stud. 2005;16(2):84–101.
- 42. Blanck P. eQuality: the struggle for web accessibility by persons with cognitive disabilities. New York: Cambridge University Press; 2014.
- 43. Blanck P. eQuality: the right to the web. In: Blanck P, Flynn E, editors. Routledge handbook of disability law and human rights. London: Routledge; 2017. p. 166–194.
- 44. Lancioni GE, Singh NN, O'Reilly MF, Sigafoos J, Alberti G, Perilli V, et al. People with multiple disabilities learn to engage in occupation and work activities with the support of technologyaided programs. Res Dev Disabil. 2014;35(6):1264–1271.

- Lysaght R, Ouellette-Kuntz H, Morrison C. Meaning and value of productivity to adults with intellectual disabilities. Intellect Dev Disabil. 2009;47(6):413–424.
- 46. Scott M, Foley K-R, Bourke J, Leonard H, Girdler S. "I have a good life": the meaning of well-being from the perspective of young adults with Down syndrome. Disabil Rehabil. 2013;36(15):1290–1298.
- Robitschek C, Woodson SJ. Vocational psychology: using one of counseling psychologys strengths to foster human strength. Couns Psychol. 2006;34(2):260–275.
- Shogren KA, Wehmeyer ML, Uyanik H, Heidrich M. The development of the Supported Decision Making Inventory System. Intellect Dev Disabilit (in press).
- 49. Jeste D, Eglit G, Palmer B, Martinis J, Blanck P, Saks E. Supported decision-making by people with serious mental illnesses: an overview. Psychiatry (**in press**).
- Woudzia LA. Supported decision-making and positive psychology. Res Pract Intellect Dev Disabil. 2016;4(1):61–68.
- Tilson GP. Enhancing cross-agency collaboration through the use of a universal discovery instrument: introducing the Life and Career Assessment Matrix. J Vocat Rehabil. 2016;44(3):257–271.
- Flannery KB, Slovic R, Treasure T, Ackley D, Lucas F. Collaboration and partnership to improve employment outcomes. J Vocat Rehabilit. 2002;17(3):207–215.
- Cramm JM, Finkenflügel H, Kuijsten R, van Exel NJA. How employment support and social integration programmes are viewed by the intellectually disabled. J Intellect Disabil Res. 2009;53(6):512–520.
- Arstein-Kerslake A, Watson J, Browning M, Martinis J, Blanck P. Future directions in supported decision-making. Disabil Stud Q. 2017. https://doi.org/10.18061/dsq.v37i1.5070
- Blanck P. Disability in prison. Univ South Calif Interdiscip Law J. 2017;26(2):309–322.
- Blanck PD. The Americans with Disabilities Act and the emerging workforce: employment of people with mental retardation. Washington, DC: American Association on Mental Retardation; 1998.