Path Analysis of a Self-Determination Model of Work Motivation in Vocational Rehabilitation

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High Unemployment/Underemployment of Persons with Disabilities

- Unemployment rate for persons with disabilities >2x that of persons without disabilities

- Average hourly earnings of all vocational rehabilitation (VR) customers in competitive employment is 52% of the general workforce

- Lower participation of people with disabilities in the labor market coincides with an increased likelihood of living at or below the poverty level

(Atkins & Giusti, 2005; Rehabilitation Services Administration [RSA], 2008; U.S. Department of Labor, Office of Disability Employment Policy, 2014)
Efforts to Increase Employment of Persons with Disabilities

- **The state VR program** is tasked with assisting individuals with chronic illnesses and disabilities to achieve their independent living and employment goals.

- The state-federal VR program spends approximately $3 billion dollars annually in to serve approximately one million individuals a year.

- >50% of VR service recipients find employment in integrated settings after receiving VR services.

(Dutta et al., 2008; U.S. Government Accountability Office [GAO], 2005)
Improving Employment Outcomes

- Rehabilitation professionals must provide people with disabilities the most effective psychosocial and vocational services and interventions.

- These services and interventions must be based on the best scientific evidence available.

- Evidence-based practice must integrate clinical expertise and client perspectives to help persons with disabilities find quality employment consistent with their abilities and career interests.

(Chan, Chronister, & Cardoso, 2009; Chan et al., 2012)
Lack of Motivation as a Barrier to Employment

- **Motivation** is the most important individual-based factor influencing employment outcomes.

- The **motivation of VR consumers to work** is influenced by numerous factors:
  - **person-related factors** - e.g., disability related functioning, secondary health conditions, level of education, past work history
  - **environmental factors** - e.g., work related support received from family, SSA work disincentives, employment discrimination

- Decreased motivation for employment can create **ambivalence about employment goals**.

- **Ambivalence** regarding the prospect of obtaining employment can be the root of **overwhelming fears and anxieties** (e.g. concerns about embarking on something unknown, meeting work demands, discrimination in the workplace, and the fear of losing cash and health benefits).

  (Chan et al., 2009; Chan et al., 2012; Strauser, 2014)
Three Theories

- Self-Determination Theory
- Social Cognitive Theory
- Stage of Change
Self-Determination Theory

Self-determination theory (SDT) focuses on the degree to which an individual’s behavior is self-motivated and self-determined.

**Intrinsic Motivation**
the natural, inherent drive to seek out challenges and new possibilities that associates with cognitive and social development

Positively related to Well-being indicators

**Extrinsic Motivation**
the motivation that comes from external sources.
(e.g., money, rewards, etc.)

Negatively related to Well-being indicators

(Deci & Ryan, 2002; Ryan & Deci, 2000)
SDT : Three essential elements

| Three underlying innate needs | Autonomy | Competency | Relatedness |

(Baumeister & Leary, 1995; Deci & Ryan, 1991; Reeve, Nix, & Hamm, 2003; Ryan & Deci, 2000)
Autonomy

Three underlying innate needs

- Autonomy
- Competency
- Relatedness

Autonomy is the need to experience one’s behavior as integrated within and endorsed by the self, when autonomous, people initiate and regulate their behaviors with a high degree of volition and a sense of choice.

- Choice, acknowledgment of feelings, and opportunities for self-direction were found to enhance intrinsic motivation as they allow people a greater feeling of autonomy.

- Therefore, treatment environments that promote autonomy are likely to enhance adherence and health outcomes

(Baumeister & Leary, 1995; Deci & Ryan, 1991; Reeve, Nix, & Hamm, 2003; Ryan & Deci, 2000)
Competency

Three underlying innate needs

- Autonomy
- Competency
- Relatedness

Competency is the need to be effective in one’s interactions with the environment. When feeling competent, people desire to exercise their capacities, seek out optimal challenges to increase their skills and subsequent opportunities.

- When individuals believe that they are in control of the decision-making process and feel competent, they have a high degree of willingness to act.

- Subsequently, individuals tend to expand their beliefs regarding their own competence through actions.

(Baumeister & Leary, 1995; Deci & Ryan, 1991; Reeve, Nix, & Hamm, 2003; Ryan & Deci, 2000)
Relatedness is the need to establish close and secure attachments with others. When feeling related, people identify with being emotionally connected to and interpersonally involved in warm, caring relationships.

- Individuals need to feel a sense of being respected, understood, and cared for to form bonds that allow for internal motivation to engage and persist in treatment.

- Ultimately, the therapy relationship makes substantial and consistent contributions to patient success in any types of psychotherapy.

(Baumeister & Leary, 1995; Deci & Ryan, 1991; Reeve, Nix, & Hamm, 2003; Ryan & Deci, 2000; Ryan et al., 2008)
Research Supporting the Use of Self-Determination Theory

- SDT has been proven to be applicable in various fields
  - health promotion (Mancini, 2008; Ryan & Deci, 2008)
  - education (Jang, Reeve, Ryan, & Kim, 2009)
  - sport (Daley, 2006)

- An increase in feelings of SDT components are strongly associated with goal orientation.

In Vocational Rehabilitation, goal orientation can be conceptualized as individuals’ desire to work and their vocational rehabilitation engagement.

(Cerasoli, 2014; Dutta et al., 2016; Ryan, Patrick, Deci, & Williams, 2008; Vansteenkiste, Simons, Lens, Sheldon, & Deci, 2004)
Client engagement entails interventions geared to increase activation and promote positive attitudes and behavior. Engagement can promote better care, improve health-related outcomes, and increase cost savings.

- There is a lack of research on measuring client engagement in VR services. Dutta et al. (2016) states that **client engagement should be one of the core goals of VR services**.

- Emerging evidence supports the importance of self-determination to promote continued use of health care and rehabilitation services and active participation of clients with disabilities.

(Dutta et al., 2016)
The SDT provides insight into clients’ motivation, Self-efficacy and Outcome Expectancy as conceptualized by Social Cognitive Theory.

To connect SDT’s underlying components to a targeted behavioral change, intermediary transitions processes may need to be added.

An amotivational state → Action toward a defined goal state (e.g. vocational rehabilitation engagement)

Self-efficacy and Outcome Expectancy as conceptualized by Social Cognitive Theory

However
Social Cognitive Theory

SCT is concerned with how people acquire and maintain certain behavioral patterns through self-efficacy and outcome expectancy.

**Self-efficacy** (= competency)
Individuals' beliefs about whether they can achieve a given level of success at a particular task.

**Outcome Expectancy**
an individuals' beliefs regarding what consequences are most likely to ensue if particular behaviors are performed.

Self-efficacy and outcome expectancy have been identified as outcome variables in study the effectiveness of psychosocial interventions.
The Stages of change (SOC) model provides a comprehensive framework with intentional behavioral change of individuals with disabilities.

- This model has five distinct stages

  - **Precontemplation**: unaware or denial of the problem
  - **Contemplation**: aware of the problem and of the desired behavior change
  - **Preparation**: intends to take action
  - **Action**: practices the desired behavior
  - **Maintenance**: works to sustain the behavior

(Chou et al., 2009; Prochaska & DiClemente, 1983; Prochaska, DiClemente, & Norcross, 1992; Strauser, 2014)
Stages of Change Model

Precontemplation
unaware or denial of the problem

Contemplation
aware of the problem and of the desired behavior change

Preparation
intends to take action

Action
practices the desired behavior

Maintenance
works to sustain the behavior

Extrinsic motivations

Intrinsic motivations

Autonomy

Self-efficacy

Relatedness

Outcome Expectancy
Purpose

- To test a Self-Determination Model of Work Motivation with a population of persons with disabilities receiving services from State Vocational Rehabilitation agencies.

- Specifically, the research study:
  - translated SDT theoretical expectations into a path analysis model
  - examined the strength of relations among SDT constructs that influence outcome expectancy, VR engagement and SOC for employment
  - evaluated the general compatibility (i.e., goodness of fit) of the model with the data
Hypotheses

- Functional disability would be negatively associated with autonomy, competency, and relatedness
- Autonomy, competency, and relatedness would be positively associated with outcome expectancy
- Autonomy, competency, and relatedness would be positively associated with VR engagement
- Outcome expectancy and VR engagement would be positive related to SOC for employment
Participants

- 277 VR consumers recruited from Alaska, Kentucky, Florida, Michigan, New Mexico, Texas, Utah, and Wisconsin
- 43% of the participants were White, 10% Black, 41% Hispanic, 4% American Indian or Alaska Native, and 1% Asian
- 61% were women, 24% were married or co-habitating
- 43% of participants had physical and sensory disabilities, 35% had mental health disabilities and 22% had developmental disabilities
- 17% of the participants had less than high school education, 23% were high school graduates and 60% had at least some postsecondary education
Measures

- **Functional disability.** *World Health Organization Disability Assessment Schedule 2.0*

- **Autonomy.** *Vocational Rehabilitation Internal Motivation Scale.*

- **Competency.** *Vocational Self-Efficacy Scale*

- **Relatedness.** *Working Alliance Inventory (WAI)- 12 item*

- **Outcome expectancy.** *Positive Vocational Expectancy Survey*

- **Vocational rehabilitation engagement.** *Vocational Rehabilitation Engagement Scale*

- **Stages of Change-** *Stages of Change for Employment Scale*
Analysis

- Path analysis was used to evaluate the contribution of functional disability and self-determination factors in the hypothesized self-determination model of work motivation.
- All model estimations were conducted with AMOS 18.0 using maximum-likelihood estimation.
Results

- A path analysis was conducted to test the hypothesized relationships among functional disability, autonomy, competency, relatedness, outcome expectancy, VR engagement, and stages of change for employment.

- The initial path analysis revealed a significant chi-square, $\chi^2(10, N = 277) = 193.48, p < .01$; $\chi^2/df = 19.35$; CFI = .71; and RMSEA = 0.258.

The results indicated the model was not a very good-fit model.
The re-specified self-determination model of work motivation resulted in a chi-square value that was not statistically significant, $\chi^2 (8, N=277) = 15.02, p = .06$

Additionally, the alternative fit indices, $\chi^2/df = 1.88$; CFI = .99; and RMSEA = 0.056, all indicated the re-specified model fits the data extremely well.

The difference between the original model and the re-specified model was significant, $\chi^2_{\text{diff}} = (2, N = 277) = 178.46, p < .01$
Graphical Representation of the Re-Specified Self-Determination Model of Work Motivation
Review of Findings

- Functional disability can affect autonomy and competence but does not appear to meaningfully affect relatedness, or subsequently outcome expectations, VR engagement, or Stages of Change for employment.

- **Support was obtained for the SDT model of work motivation**

- The SDT components explained 34% of the variance in outcome expectations.

- The SDT components explained 54% of the variance in VR engagement.

- The SDT component of competency, coupled with outcome expectancy and VR engagement, explained 37% of the variance in Stages of Change for Employment.
SDT and Stages of Change for Employment

- The SDT model has both a direct and indirect effect on stages of change for employment.

  - Specifically-
    - Increasing competency has both direct and indirect effects on stages of change for employment.

- Autonomy and relatedness are important precursors of outcome expectancy and VR engagement, necessary components in increasing stages of change for employment.
Future Directions

- Research is needed on specific interventions to increase autonomy, competence, and relatedness
  - For example, motivational interviewing has been demonstrated to promote autonomy and relatedness

- Longitudinal research is needed on benefits of self-determination model on job acquisition and retention
Thank You!

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