Personal and Environmental Factors that Support and Encourage Innovation and Best Practices that Lead to Employment Outcomes in Public Rehabilitation

Fong Chan (UW-Madison)
Timothy Tansey (UW-Madison)
The Rehabilitation Research and Training Center on Effective Vocational Rehabilitation Service Delivery Practices (RRTC-EBP-VR) is established at both the University of Wisconsin-Madison, and the University of Wisconsin-Stout under a grant from the Department of Education, National Institute on Disability and Rehabilitation Research (NIDRR) grant number PR# H133B100034.
The **RRTC-EBP-VR** is a national research collaborative partnered by the following key institutions and organizations:

- The University of Wisconsin – Madison
  Department of Rehabilitation Psychology and Special Education

- The University of Wisconsin – Stout
  Stout Vocational Rehabilitation Institute (SVRI)

- The University of Texas – El Paso

- Southern University at Baton Rouge

- Michigan State University

Contact Us Toll Free: 1-855-820-3929
Online: www.research2VRpractice.org
What does the RRTC-EBP-VR do?

The Rehabilitation Research & Training Center for Evidence-Based Practice in Vocational Rehabilitation (RRTC-EBP-VR) funded by NIDRR conducts evidence-based research and provides practitioners with knowledge and tools for evidence-based vocational rehabilitation practices that will improve employment rates, and quality of employment, for people with disabilities.
Our Goal...

To ensure that new knowledge gained through the course of research ultimately improves the lives of people with disabilities, and furthers their participation in society (NIDRR, 2005).
What is the desired impact of the RRTC-EBP-VR?

- Improve employment and quality of employment outcomes for people with disabilities who receive services from state Vocational Rehabilitation Agencies
- Communicate important research findings related to high performing state VR programs
- Showcase effective Vocational Rehabilitation Service Delivery
- Enhance and influence policy development to improve outcomes in the Vocational Rehabilitation System
- Demonstrate effective tools, strategies, and relationships for sharing key information
Evidence-Based Practice

• The utilization of EBP allows rehabilitation counselors to fulfill their ethical obligations to their consumers. The information through EBP will allow counselors to:
  – protect consumers from harm (non-maleficence)
  – result in improved efficiency in utilization of scarce resources (justice)
  – allow consumers to exercise knowledgeable self-determination and truly informed choice (autonomy)
Current Challenges

• Lack of strong theoretical based research and empirically supported assessments, planning, and interventions especially culturally relevant services targeting employment outcomes.

• Current rehabilitation practices have been characterized as “experience-based,” “eminence-based,” or “habit-based” (Law, 2002).

• The lack of scientific research and evidence related to VR is problematic as it can significantly hamper our ability to demonstrate to our funding sources and people with disabilities receiving rehabilitation services that our practice is based on best scientific evidences and that it is efficacious, effective, and efficient.
Theory → Research → Practice → Better Rehabilitation Outcomes
Phase III Research

C1-ICF: Preliminary findings indicated that several ICF predictors are strongly associated with employment outcomes of people with epilepsy. (1) medical benefits (e.g., Medicare, Medicaid), (2) number of AEDs, (3) perceived stigma, (4) social support, (5) general employability, (6) work tolerance, and (7) work communication skills. For people with SCI, hope, spirituality, resilience, disability acceptance, and positive coping are related to subjective well-being. For people with fibromyalgia, SSI/SSDI, pain intensity, cognitive impairments, depression, positive coping, social support, disability as non-devaluing are associated with participation and also partially mediated the relationship between functional disability and participation.


C4-VR Counselors’ Toolkit.

C3-Motivational Interviewing: A randomized controlled trial.

C5-Evidence-Based Practice VR Survey.
Importance of Integrative Conceptual Framework and Systematic Research

- Strength-based/positive human traits.
- The need to consider contextual personal (P) and environmental (E) factors in the development of efficacious and effective rehabilitation counseling practice (cf., Wright, 1983).
- The P x E interaction effect.
ICF Publications

1. Main volume with glossary
   - Full version 9999 cat.
   - Short version 99 cat.

2. Clinical Descriptions & Assessment Guidelines

3. Assessment Criteria for Research

4. Other versions
   - Specialty adaptations
     • Children and Youth

5. Dedicated Assessment Tools
WHO ICF

• ICF can serve as a useful tool for Health Information Systems

• Evaluation: needs, outcomes, costs, quality, satisfaction

• Service provision, social policy

• Application guidelines, training, tools are needed
Interaction of Concepts
World Health Organization
The International Classification of Functioning, Disability and Health

Health Condition
(disorder/disease)

Body function&structure
(Impairment)

Activities
(Limitation)

Participation
(Restriction)

Environmental Factors

Personal Factors
Medical *versus* Social Model

- PERSONAL problem vs SOCIAL problem
- Medical care vs Social integration
- Individual treatment vs Social action
- Professional help vs Individual & collective responsibility
- Personal adjustment vs Environmental manipulation
- Behaviour vs Attitude
- Care vs human rights
- Health care policy vs Politics
- Individual adaptation vs Social change
Contextual Factors

Person
- gender
- age
- other health conditions
- coping style
- social background
- education
- profession
- past experience
- character style

Environment
- Products
- Close milieu
- Institutions
- Social Norms
- Culture
- Built-environment
- Political factors
- Nature
Activities and Participation

1. Learning & Applying Knowledge
2. General Tasks and Demands
3. Communication
4. Movement
5. Self Care
6. Domestic Life Areas
7. Interpersonal Interactions
8. Major Life Areas
9. Community, Social & Civic Life
ICF as a VR Framework for Research and Practice

Functioning (Impairment) → Environment → Activity (Disability) → Personal Factors → Participate (Handicap) → Quality of Life
Positive Psychology

Constructive View

\[ B = f(P, E) \]

Human Dignity
VIA Character Strengths & Virtues
(Peterson and Seligman, 2004)

A life of pleasure, engagement and meaning

- Courage
- Humanity
- Transcendence
- Temperance
- Wisdom and knowledge
- Justice

- Persistence
- Integrity
- Vitality
- Love
- Kindness
- Social Intelligence
- Appreciation of Beauty and Excellence
- Gratitude
- Hope
- Humour
- Spirituality
- Self-regulation
- Prudence
- Humility/Modesty
- Forgiveness and Mercy
- Leadership
- Fairness
- Citizenship
- Love of Learning
- Perspective
- Creativity
- Open-mindedness
- Bravery
P X E Contextual Factor

**Personal Factor** (Positive Psychology Approach)

- Resilience
- Hope
- Disability acceptance
- Core self-evaluations (general self-efficacy, self-esteem, internal locus of control, and emotional stability)
- Social-cognitive theory (self-efficacy and outcome expectancy)
- Self-determination theory (autonomy support, autonomy, competency, and relatedness).
- Human capital and social capital.
PX E Contextual Factor

Environmental Factor

• Social stigma
• Social support
• Social security disability benefits
• Family adaptation
• Economy (unemployment rates)
• Counselor characteristics (e.g., motivational interviewing/working alliance)
• State and VR agency characteristics
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<th>Percent of all counselors listing indicator as most important</th>
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Source: Survey of VR Counselors.

(Hayward & Schmidt-Davis, 2005)
Preliminary Findings/Lessons Learned
Evaluating Snyder’s Hope Theory as a Motivational Model of Participation and Life Satisfaction for Individuals With Spinal Cord Injury: A Path Analysis

Jacob Yui Chung Chan, a Fong Chan, b,c Nicole Ditchman, d Brian Phillips, b and Chih-Chin Chou e
Hope Theory

- Key Concepts:
  - Goal
  - Pathway
  - Agency
  - Barrier
  - Emotion
Attachment Style, Social Support, and Coping as Psychosocial Correlates of Happiness in Persons With Spinal Cord Injuries

Lisa Wilson, a Denise Catalano, b Connie Sung, c Brian Phillips, d Chih-Chin Chou, e Jacob Yui Chung Chan, f and Fong Chan d,g
Mikulincer and Orbach (1995) reported that the percentages of secure, avoidant, and anxious/ambivalent attachment style in the adult population are approximately 56%, 25%, and 19%, respectively. Therefore, attachment insecurity is rather high (44%) in the adult population.
Attachment Theory

• Secure attachment helps people to develop a positive inner working model of self and others (i.e., the person will develop a sense of others as trustworthy, loving, and caring, and a view of themselves as worthy of love).

• Insecure attachment leads to the development of a negative inner working model of self as unworthy or incompetent
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Note. $F(11, 254) = 22.62, p < .001$ for full model; $F(2, 263) = 32.16, p < .001$, for Step 1; $\Delta F(3, 260) = 34.46, p < .001$ for Step 2; $\Delta F(3, 257) = 5.74, p = .001$ for Step 3; $\Delta F(3, 254) = 5.65, p < .001$ for Step 4.

* $p < .05$. ** $p < .01$. 
Core Self-Evaluations

• CSE (General self-efficacy, internal locus of control, self-esteem, and emotional stability).

• CSE is an important factor in HR research and CSE has been found to correlate with job performance, job satisfaction, and life satisfaction.

• CSE is used by HR professionals in making hiring decisions.
Evaluating an SCCT Model of STEM Career Interests and Goal Persistence in College Students with Disabilities from Racial and Ethnic Minority Backgrounds: A Path Analysis

Alo Dutta¹, Hyun-Ju Kang², Susan Flower², Cahit Kaya², Elizabeth da Silva Cardoso³, Fong Chan², and Madan Kundu¹
Social Cognitive Career Theory

SCCT’s Complete Interest and Choice Model with Person and Contextual Factors

Person Inputs
- Predispositions
- Gender
- Race/ethnicity
- Disability/Health status

Background Contextual Affordances

Learning Experiences

Self-efficacy Expectations

Outcome Expectations

Contextual Influences Proximal to Choice Behavior

Interests → Goals → Actions
Evaluating the ICF Framework as an Employment Participation Model for People with Epilepsy: A Hierarchical Regression Analysis

Connie Sung
1. Seizure type
2. Seizure frequency
3. Number of AEDs
4. Seizure severity
5. Cognitive deficits
6. Depression
7. Anxiety

16. Perceived stigma
17. Social support

18. General employability skills
19. Work tolerance skills
20. Work communication skills
21. Self-direction skills
22. Self-care skills

13. Positive coping
14. Self-efficacy
15. Self-esteem

7. Age
8. Gender
9. Race/ethnicity
10. Education level
11. Cash benefits
12. Medical benefits
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Self-Determination Theory

Validating the self-determination theory as a work motivation model for Clubhouse members with severe mental illness

Sandra D. Fitzgerald
Expanded SDT Model

- Autonomy Support
- Competency
  - Vocational Self-Efficacy
- Relatedness
  - Working Alliance
- Self-Determined Motivation
Table 4.3
Hierarchical Regression Analysis for Prediction of Engagement in Vocational Activities ($N = 124$)

<table>
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<th>$\Delta R^2$</th>
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<th>Final Model</th>
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Note. $F(17, 123) = 8.0$, $p < .001$ for the full model; $F(6, 117) = 2.67$, $p < .05$, for Step 1; $\Delta F(3, 114) = 12.64$, $p < .001$ for Step 2; $\Delta F(1, 113) = 16.58$, $p < .001$ for Step 3; $\Delta F(7, 106) = 4.72$, $p < .001$ for Step 4.

*p < .05, **p < .01, ***p < .001
Table 4.4
Hierarchical Regression Analyses for Prediction of Readiness for Employment (N = 124)

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<td>.22***</td>
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Note. $F(17, 106) = 4.6, p < .001$ for the full model; $F(6, 117) = 1.99, p = .07$, for Step 1; $\Delta F(3, 114) = 5.14, p < .01$ for Step 2; $\Delta F(1, 113) = 1.22, p = .27$, for Step 3; $\Delta F(7, 106) = 5.73, p < .001$ for Step 4.

*p < .05, **p < .01, ***p < .001
ICF Predictors of Stages of Change Employment, Community Participation, and Quality of Life in a Sample of VR Consumers
ICF in VR Practice

• Purpose- to design and validate a brief but reliable and valid instrument that counselors can use to quickly assess their customers’ functioning, activity levels, personal strengths, and facilitators and barriers in the environment to better conceptualize their assessment, planning, and service needs for employment success and full integration in the society.
PROMIS General health scale
- Physical activity
- Emotional problems
- Fatigue
- Pain
- Stress
- Mental Health Assessment
- Depression
- Anxiety

World Health Organization (WHO)-Disability Assessment Schedule

Outcome expectancy
Engagement in VR
Stages of change
WHO-DAS Participation Scale

Age
Gender
Race
Personality
Resilience
Acceptance
Cognitive issues
Self-regulation
Social Efficacy
Self-esteem
Health Self-efficacy
Self-determination
Vocational self-efficacy
Body Mass Index

Workplace barriers
Workplace stigma
Social Support
Normative beliefs
Working alliance

Functioning (Impairment)
Activity (Disability)
Participation (Handicap)
Quality of Life
Environment
Personal Factors
Sample Characteristics

• N=310
• Gender- Female 62.9%, Male 37.1%
• Age- Mean=37.9 (s.d.=13.29)
• Race-
  – Caucasian- 40.9%
  – Hispanic- 38.8%
  – African American- 13.1%
  – Alaskan Native- 5.6%,
• SSI/SSDI beneficiaries
  – 25.5% reporting receiving benefits
  – Benefits ranged from $240 to $2430/month (s.d.=409.76)
If you want to improve employment and quality of work outcomes for people with disabilities, make OUR research, YOUR best practice!

www.research2VRpractice.org