Level of Life Balance After a Spinal Cord Injury

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Overview

- Selection of Topic
- Review of Literature
- Methods
- Results
- Discussion
- Implications for Occupational Therapy
- Questions
Selection of Topic

- 4 years in care coordination for adults with disabilities
- Spinal cord injury (SCI) a primary diagnosis on caseload
- Noted complexity in coordinating medical appointments, care assistance and medical complications in this population
- Questioned how life balance is impacted with significant physical impairment

Review of Literature

- SCI Facts
  - 250,000-400,000 currently have a SCI or spinal dysfunction with 7,800 new injuries each year
  - Increased life expectancy with medical advances
  - Majority traumatic accidents
  - 18-25 yr old males
  - 82% male
  - 62% Caucasian
  - Education and employment level slightly lower than average

(NSCIA, 2010)
Review of Literature

• Aspects of Injury
  • Complete versus Incomplete injuries
  • Injury levels:
    • Sacral S1-S5
    • Lumbar L1-L5
    • Thoracic T1-T12
    • Cervical C1-C8
  • Higher number in each region = lower level injury
  • Paraplegia and quadriplegia/tetraplegia

• Stress and SCI
  • No correlation level between stress and injury level
    (Gerhart, Weitznarkamp, Kennedy, Glass, & Charlifue, 1999)
  • 25% of individuals with SCI have clinically elevated stress
    (Migliorini, Tonge, & Taleporos, 2008)

• Emotional Impact
  • Reports on loneliness, depression and dependency issue
    (Krause, 2007)
  • Close to 50% report a mental health condition of which 60%
    report more than one condition
    (Migliorini, Tonge, & Taleporos, 2008)

• Personality a factor
Review of Literature

- **Participation and Time Use**
  - Disruption reported in activities of daily living (ADLs) (Noreau & Fougeyrollas, 2000)
  - Lower social role achievement in quadriplegia (Whiteneck, Charlifue, Gerhart, Overholser & Richardson, 1992)
  - Decrease in productivity and increase in leisure time (Pentland, Harvey & Walker, 1998)

- **Post Injury Employment**
  - 37% of those employed at time of injury were employed post injury (Tomassen, Post, & Van Asbeck, 2001)
  - No link to severity of injury (Pentland, Harvey % Walker, 1998)
  - Barriers: physical, health, stamina, benefit concerns & inaccessibility (Yasuda, Wolman, Targett, Cili & West, 2001)

- **Quality of Life (QOL)**
  - Objective studies reported lower QOL and subjective studies found no differences (Hammell, 2004)
  - Barriers: impairments, pain, fighting the system & medical complications

- **Pain**
  - 84% experience some degree of pain (Jensen, Kuehn, Ammann, & Cardenas, 2007; Siddall, McChillid, Harleski, & Counie, 2005; Turner, Cardenas, Warren, & McCollan, 2007)
  - Pain likely to maintain or increase with time (Jensen, Kuehn, Ammann, & Cardenas, 2007)
  - Can interfere with coping and adaptation (Raichle, Hanley, Jensen & Cardenas, 2007)
Review of Literature

- Life Balance
  - “a satisfying pattern of daily activity that is healthful, meaningful, and sustainable to an individual within the context of his or her current life circumstances”
    (Matuska & Christiansen, 2008, p.11)

- 5 dimensions
  - Feeling interested, engaged, challenged and competent
  - Biological health & physical safety
  - Rewarding & self-affirming relationships
  - Meaningful personal identity
  - Time & energy to meet goals

Research Questions

- Do individuals with spinal cord injuries report different levels of life balance when compared to their non-disabled counterparts?

- Does perceived life balance differ amongst individuals with different levels of spinal cord injury?

- Does the amount of pain typically experienced impact perceived life balance in individuals with a spinal cord injury?
Methods

- Participants
  - Members of care coordination organization
  - SCI
  - Own legal guardian
  - Identified by care coordinator

- Procedures
  - Contacted potential participants
  - Completed via mail or in person
  - Non-disabled age/gender matched group

Methods

- Tools
  - Life Balance Inventory (LBI)
  - Perceived Stress Scale – short version (PSS-4)
  - Demographic Questionnaire
  - Pain Scale
Methods

- Data Analysis
  - Computer generated scores for life balance and stress
  - Scores transferred to spreadsheet
  - Compared means of groups:
    - SCI and non-disabled age/gender match
    - Injury levels: C4/C5, C6/C7, thoracic
    - Pain levels: 7/10 or greater and under 7/10

Results

- 20 participants
- 28-56 years old
  - average 41 years old
- T8 to C3/4
- 14 males, 6 females
- 7 complete, 13 incomplete
- Pain 2-8
  - average 5.33/10

- Pain level
  - 14 - below 7/10
  - 6 - 7/10 or greater

- Time since injury
Results

• Comparison of group means:
  • No significant difference in stress & life balance scores:
    • Comparing between injury levels
    • Comparing between pain levels
  • No significant difference in life balance scores:
    • Comparing SCI group to non-disabled match group
  • Significant difference found in stress scores between SCI group & non-disabled match group

Differences in Stress Experience

• Participants with moderate to high stress:
  • students, employed, seeking employment
• Individuals with SCI:
  • lower marriages, increased leisure time, increased homebound activities, lower employment suggests lower exposure
  • Individuals reporting higher community engagement also reported higher stress levels
• Care coordination support
• Different stressors
Changes with Adaptation to Injury

- Average time since injury = 13.1 years

- Stress can decline significantly in 3 years of adaptation
  (Gerhart, Weitzenkamp, Kennedy, Glass, & Charlifue, 1999)

- Changes in stressors
  (Lequerica, Forchheimer, Tate, Roller, & Toussaint, 2008)

- Coping results in physical, employment, and relationship changes which impact stress

- Dynamic relationship of factors in adaptation makes it difficult to identify which most significantly impacts stress

Life Balance Preservation

- Individual factors
  - Support system
  - Personality
  - Occupation Preferences

- Adaptation and changes in occupation
  - Adaptive techniques
  - New occupations
  - Change in desired participation
Implications for Occupational Therapy

- It is possible to maintain life balance after a SCI
- Stress is experienced differently for individuals with a SCI

Future research:
- Identifying specific stressors in conjunction with LBI items
- Life balance in longitudinal study since injury
- Changes in participation related to life balance over time
- Injury acceptance and life balance
References


Thank You!

Questions?