Get Moving: Mental Health & Physical Activity

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Objective

To provide a collection of evidence and strategies that can be used in your practice to support physical activity promotion for the prevention and management of mental health concerns.

Mental Illness and Addictions

- Highly Prevalent: 1 in 5 Canadians
- Most Common:
  - Depression: 4-5%
  - Anxiety (social phobia / agoraphobia / panic disorder): 5-15%
  - Bipolar Disorder: 1-2% / Schizophrenia: ~1%
  - Substance Use or dependence: 5-6%
  - Eating Disorders: 0.3-1%

Physical Activity (PA) and Mental Health Promotion

- Improvement in mental health
- Prevention of poor mental health/illness
- Improvement in quality of life of individuals with mental illness
- Treatment of mental illness

(Mutrie & Faulkner, 2003)

Show Me the Money!
Evidence to support PA in the prevention and management of poor mental health

What are the effects on clinical depression?
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WMD = -0.32

Original Research
Changes Over Time in Physical Activity and Psychological Distress Among Older Adults

John C. Murray, MPH, J. Guy Feather, PhD, Scott Volkinstein, PhD, E. T. Fawcett, PhD

Hypothesis: This study examined the relationship between physical activity and psychological distress among older adults. The study aimed to determine if an increase in physical activity would lead to a decrease in psychological distress.

Methods: A longitudinal study was conducted with 100 participants over a period of 12 months. Participants were divided into three groups based on their physical activity levels: low, moderate, and high. The level of psychological distress was assessed using the depression inventory at the beginning and end of the study.

Results: Participants in the high physical activity group showed a significant decrease in psychological distress compared to the low activity group (p < 0.05). The moderate activity group showed a moderate decrease in distress (p = 0.08), but this was not statistically significant.

Conclusion: The findings suggest that an increase in physical activity is associated with a decrease in psychological distress among older adults. Further research is needed to explore the mechanisms underlying this relationship.

Figure 1: Changes in physical activity and psychological distress over time

Source: NM10
Primary Prevention: Exercise and Non-Clinical Depression

- Depression symptomatology is reduced with exercise
- Overall moderate anti-depressive effect of exercise

<table>
<thead>
<tr>
<th>Meta-analysis</th>
<th>Effect Size</th>
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</thead>
<tbody>
<tr>
<td>MVPA (aerobic/resistance)</td>
<td>-0.59</td>
</tr>
<tr>
<td>Supervised exercise</td>
<td>-0.37</td>
</tr>
<tr>
<td>Unsupervised exercise</td>
<td>-0.52</td>
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</table>

(Rebar et al., 2015)

Physical Activity and the Prevention of Depression
A Systematic Review of Prospective Studies

83% of the examined studies showed a negative relationship between baseline physical activity levels and later risk of depression

What are the effects on clinical depression?
What are the effects on clinical depression?

No differences between exercise and antidepressant medication were noted (SMD = −0.04 [95% CI −0.31, 0.24]) in two separate studies (Blumenthal et al., 2003; 2007).

Follow-Up of Recovered Participants (N = 133) (6 Months Later)

Babyak et al., 2000

35 SMD = -.42 [95%CI = -.81 to -.22]
“equivalent of 5 BDI points”
(0 to 63, <10 minimal and > 30 severe depression)
Mental health is more than just the absence of illness...

What are the typically affective responses to an acute bout of exercise?

- **Before vs. After Exercise**
  - Positive affect tends to increase pre- to post-exercise at non-exhaustive intensities.

- **During Exercise**
  - Affect gets progressively more negative as exercise intensity increases.
  - Moderate-intensity exercise results in more positive affective change, but individual differences need to be considered.

(Ekkekakis & Dafermos, 2012; Ekkekakis et al., 2011; Ekkekakis, Lind & Vazou, 2010)

Physical Activity Rx in the Context of Mental Health
Physical Activity Rx in the Context of Mental Health

Canadian Physical Activity Guidelines:

“To achieve health benefits, adults aged 18-64 years should accumulate at least 150 minutes of moderate-to-vigorous aerobic physical activity per week, in bouts of 10 minutes or more”

(Canadian Society of Exercise Physiology, 2011)

Physical Activity Rx in the Context of Mental Health

Inconsistent with the evidence for mental health and physical activity:

- Intensity
- Duration
- Frequency

Physical Activity Rx for the Management of Depression
Physical Activity Rx for the Management of Depression

Level 1 Evidence

- First-line monotherapy for mild to moderate MDD
- Second-line adjunctive treatment for moderate to severe MDD
- Recommendations vary, but at least:
  - 30 minutes of supervised moderate-intensity
  - 3 times per week
  - 9 weeks

(Ravindran et al., 2016)

Physical Activity Rx for the Prevention of Mental Health Concerns

- No set physical activity guidelines
- Self-paced
  - Individual intensity preference (not tolerance)
  - Enhanced sense of control (no evaluative threat)
  - Quality of the experience

(Ekkekakis & Lind, 2008; Ekkekakis et al., 2006; Parfitt et al., 2008)

- Progression is key

Strategies to Consider Including Within Your Current Practice

- (Dice image)
**Autonomy Support in Primary Care**

- Quality of the interpersonal context
  - Assessed via the *Health Care Climate Questionnaire*
- Central to facilitating self-determined motivation, healthy development, and optimal functioning
- Being autonomy supportive includes:
  - providing choice to the greatest extent possible
  - avoiding pressuring tactics
  - fostering a caring and nurturing environment
  - sharing and understanding one's feelings
  - recognizing an individual's unique perspective
  - reflective listening

(Deci & Ryan, 1987; Miller & Rollnick, 2006, 2009; Zuroff et al., 2012)

**Motivation as a Continuum**

More autonomous motivation positively associated with:
- autonomy support from therapists
- mood during therapy sessions
- satisfaction with therapy
- intentions to persist in therapy
- better session outcomes (e.g., depression severity)

(Michalak et al., 2004; Peletier et al., 1997; Zuroff et al., 2007, 2012)
Motivational Climate

Mastery
- Differentiated and varied tasks
- Novelty and repetition
- Self-referenced goals
- Recognizing effort and progress
- Formative assessments
- Flexibility (learning time)

Competence
- Activities
- Goals
- Active thinking

Autonomy
- Choice
- Collaboration
- Nurturing and caring
- Encouraging

(Ames, 1992; Deci & Ryan, 1985, 2000; Nicholls, 1984)

A Mental Health “Spin” on Evidence-Based Behaviour Change Techniques

- Self-Monitoring
  - Self-compassion
  - Self-awareness vs. shaming/self-criticism

- Goal-setting
  - Strength-based
  - Choice

- Planning
  - Short-term
  - Solution-focused coping

(Michie et al., 2013) [http://www.bct-taxonomy.com]

Move U Happy U

- Behavioural counseling and exercise intervention
  - Student health services referral

- How is the program tailored?
  - a needs assessment conducted for each student
  - provided with choice and selection of adaptable behaviour change strategies
  - 6 weeks in duration to fit
  - address common barriers and integration into the Athletic Centre
  - self-selected intensity and type of exercise
  - one-on-one exercise session rather than group-based

(Omran et al., 2016)
Physical activity has immediate and long-term impacts on mental health

- Prevention
- Treatment

Challenge how physical activity is prescribed in primary care for mental health benefits

Building choice and adaptability into practice

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