

Relations among anxiety sensitivity, physical activity, & health outcomes

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Research Question

What are the relations among anxiety sensitivity (AS), physical activity & health outcomes?

- Role of personality variable (AS) as potential barrier to physical activity?



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Anxiety Sensitivity (AS)



- ❖ Fear of arousal-related bodily sensations due to beliefs that sensations have harmful **physical, cognitive, and/or social** consequences (Reiss, 1991)
- ❖ High AS (HAS) implicated in development and maintenance of anxiety- and related disorders:
 - ❖ Panic disorder
 - ❖ PTSD (Schmidt et al., 1999)
 - ❖ Substance use disorders (Stewart et al., 1999)
 - ❖ Hypochondriasis (Watt & Stewart, 2000)



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AS and Physical Health



- ❖ **HAS linked to ...**
 - ❖ Poor perceived health (Schmidt et al., 1996, 2003; Schmidt & Telch, 1997; Yartz et al., 2005)
 - ❖ Chronic pain (Asmundson & Norton, 199; Asmundson & Taylor, 1996)
 - ❖ Tinnitus (Andresson & Vretblad, 2000)
 - ❖ Menstrual distress (Sigmon et al., 1996, 2000)



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AS and Physical Activity (PA)

- ❖ **HAS individuals tend to avoid activities (e.g., physical exercise) that induce arousal-related sensations**
 - ❖ Lower perceived fitness levels (Lefaivre & Watt, 2006; McWilliams & Asmundson, 2001)
 - ❖ Engage in less PA (McWilliams & Asmundson, 2001; Watt & MacDonald, 2003)
 - ❖ Less use of exercise to cope with stress (Watt & MacDonald, 2003)
 - ❖ Less likely to participate in organized sports (Lefaivre & Watt, 2006)



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Research Project



Objectives:

1. Examine relations between **AS & PA** and health outcomes in young adults.
2. Examine **learning experiences** (e.g., parental influence) on physical activity levels.
3. Examine **process** by which brief cognitive-behavioural treatment (CBT) with running as interoceptive exposure component reduces high AS.



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Research Project



What we knew or thought we knew:

- Learning experiences → High AS levels
- High AS levels ↔ low physical activity levels
- Brief CBT = decreases in AS levels

What we didn't know:

- Mechanism (i.e., whether decreases in AS are due to *affective* changes, *cognitive* changes, and/or changes in *physical fitness* levels.



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What We Found:



Study 1:

- ❖ Only **20%** met Health Canada guidelines for physical activity (≥ 30 minutes of moderate exercise, ≥ 5x/week)
- ❖ **Men** (vs. women) reported significantly greater frequency (almost 2x) of participation in high and moderate intensity exercise per week.
- ❖ **High AS > Low AS:**
 - ❖ Less stress and anxiety, but not depression
 - ❖ Better perception of health, fitness, and energy
 - ❖ Relations between PA and both mental and physical health mediated, in part, by AS-Social Concerns



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What We Found:

Study 1:

- ❖ **High AS < Low AS:**
 - ❖ Perceive more barriers and benefits to PA
 - ❖ Lower parental support & encouragement for sport/PA



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What We Found:

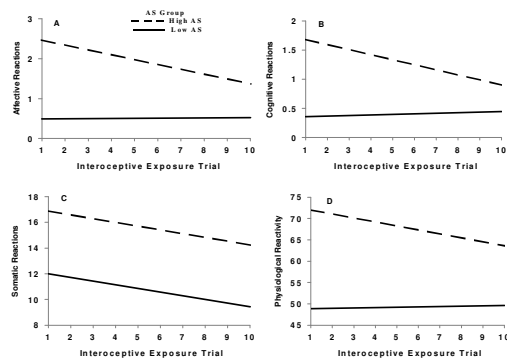


Study 2:

- ❖ At baseline, **High AS > Low AS:**
 - ❖ Affective, cognitive, somatic, physiological reactivity
- ❖ Over IE (running) trials, **High AS > Low AS:**
 - ❖ Decreased affective, cognitive, physiological reactivity; not somatic
 - ❖ Reductions in stress, anxiety, and depression



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General Implications

- ❖ Brief CBT with running as IE component yields positive mental and physical effects
- ❖ PA as non-pharmacologic approach to reducing emotional distress
- ❖ PA as means of prevention / prophylactic effect
- ❖ Benefits to targeting high-risk populations (e.g., high AS)



Implications



Practitioners:

- ❖ Importance of physical exercise (running) in prevention and treatment of physical and mental health problems

Policymakers:

- ❖ Education: parents, teachers, health & medical practitioners
- ❖ Exercise and sport programs for children/adolescents should include attention to role of psychological factors as potential barriers



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What We Still Don't Know

- ❖ Given the broad psychological and physical benefits of PA, need to look at barriers ...
 - ❖ What prevents people from engaging in PA and sport (Sabourin et al., 2010; Smits et al., 2010)?
 - ❖ What prevents health care professionals from prescribing PA more often?
- ❖ What about ...
 - ❖ Women's sport and exercise?
 - ❖ Other factors that may interact with AS (MF, attachment) in PA and sport?



Dissemination of Findings

1. 5 publications in peer-reviewed journals
2. 2 papers being revised for resubmission
3. 17 conference presentations
4. 2 dissertation students & numerous undergraduates
5. Contribution, in part, to ...

Watt, M. C. & Stewart, S. H. (2009). *Overcoming fear of fear: How to reduce anxiety sensitivity*. Oakland, CA: New Harbinger Press



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