Outline

1) Introduction

2) Benefits and prevalence of physical activity

3) Optimal context for effective exercise programs: Evidence

4) Group cohesion in exercise: Research and practical implications

5) Team building strategies
General Research Focus

• Health Promotion

• Psychology of health and physical activity, with a primary focus on group dynamics

Group dynamics → the study of group processes and/or group behaviour
General Applied Focus

• Team member → Sun Life-Ivey Canadian Wellness Return on Investment Study

Professors:
Dr. Greg Zaric, Dr. Sisir Sarma,
Dr. Michael J. Rouse,
Dr. Shauna Burke, Dr. Charlice Hurst

Postdoctoral fellows:
Dr. Adebayo Aderounmu & Dr. Josephine Jacobs

PhD students:
Vivek Astvansh, Ellen Choi, Ken Xiao

Project Manager: Elisa M. Yaquian, MSc
Data Analyst: Rodney T. Tembo, MSc
MSc student: Shivani Parihar
Student volunteer: Jaymie O. Varenbut
General Applied Focus

- Sport Psychology Consultant → team building, group cohesion, and the development of psychological skills for athletes, coaches, and teams
What is Physical Activity?

Any bodily movement produced by skeletal muscles that requires energy expenditure

World Health Organization (2015)
Psychological Benefits of Physical Activity

• ↓ state and trait anxiety
• ↓ depression
• ↑ cognitive functioning
• ↑ self-esteem
• ↑ mood states
• Improved reactivity to stressors

Carron, Hausenblas, & Estabrooks (2003)
Physiological Benefits of Physical Activity

- **↑** bone and functional health
- **↑** muscular & cardiorespiratory fitness
- **↓** risk of hypertension, coronary heart disease, stroke, diabetes, breast & colon cancer
- **↓** risk of falls and hip or vertebral fractures
- **weight control and energy balance**

World Health Organization (2015)
Consequences of Inactivity

Inactivity ↑ the incidence of at least 17 unhealthy conditions:

- Obesity
- Coronary heart disease
- Type 2 diabetes
- Some cancers

“We know of no single intervention with greater promise than physical exercise to reduce the risk of virtually all chronic diseases simultaneously” (p.778)

Booth, Gordon, Carlson, & Hamilton, 2000
To achieve health benefits, adults aged 18-64 years should accumulate at least 150 minutes of moderate- to vigorous-intensity aerobic physical activity per week, in bouts of 10 minutes or more.

It is also beneficial to add muscle and bone strengthening activities using major muscle groups, at least 2 days per week.

More physical activity provides greater health benefits.
Prevalence of Physical Activity

- Approximately 47% of Canadian adults are inactive
  - More men (55%) than women (51%) are active

- Globally, at least 1 in 4 adults fails to achieve the minimum recommendation of daily physical activity

Statistics Canada (2014); World Health Organization (2015)
What is Sedentary Behavior?

Any waking sitting or lying behaviour with low energy expenditure
Average Canadian adults are sitting 9.5 h/day. Some examples include:

- Travel
- Screen time
- Sitting at a desk
Sedentary time is associated with an ↑ risk of diabetes, cardiovascular disease, and cardiovascular and all-cause mortality

Wilmot et al., 2012
Risks of Sedentary Behaviour

“...substituting sedentary behaviour with standing or light-intensity physical activity may reduce the risk of chronic disease and mortality, independently to the amount of MVPA undertaken.”

Wilmot et al., 2012, p. 2902
Economic Impact of Physical Inactivity

The estimated total health care costs of physical inactivity in Canada in 2009 were $6.8 billion

Janssen, 2012
Increasing Exercise Participation

- 20-50% withdrawal rate within the first 6 months of an exercise program
  Dishman, 1988; Oldridge, 1984; Ward & Morgan, 1984

- Researchers have sought to identify factors associated with exercise behavior

- One important factor is the context in which exercise takes place
Optimal Context for an Effective Exercise Program?

- The most common contexts for exercise are group-based or individually-based

  Iverson, Fielding, Crow, & Christenson, 1985

- Which context is superior has been a focus of research and some controversy

  e.g., Burke, Carron, Eys, Ntoumanis, & Estabrooks, 2006; Carron et al., 1996; Dishman & Buckworth, 1996; King, Haskell, Taylor, Kraemer, & DeBusk, 1991
The Evidence

...providing insight into which context should be emphasized in the promotion of physical activity

Sources of Evidence:
1. Theory and “What Works”
2. Individual Preferences
3. Adherence Behaviour
Part One
THEORETICAL UNDERPINNINGS
and
THE ISSUE OF “WHAT WORKS”
Need to Affiliate is a Fundamental Human Motive
Baumeister & Leary (1995)

Evidence supporting this contention...

- Is manifested in countless situations (e.g., relationships, clubs, teams)
- Influences our thoughts and emotions (e.g., lack of a relationship)
- Influences health if not satisfied
- Influences behaviour (e.g., conformity of dress, manner of speaking)
- Is present in all people
The Issue of “What Works”

- Many human behaviours are considered to be socially inappropriate and/or personally destructive

- Health professionals have developed programs to induce effective behavioural change

- These programs use group support to facilitate behavioural change
Groups Whose Mission Statement has a Preamble...

“A fellowship of men and women who share their experience, strength and hope with each other so that they may solve their common problem and help others to recover from…”

- Gamblers Anonymous
- Cocaine Anonymous
- Marijuana Anonymous
- Debtors Anonymous
- Sexaholics Anonymous
- Sexual Compulsives Anonymous
Part Two

THE ISSUE OF PREFERENCE
The Issue of Preference

- Physical activity programs have the most potential for success when tailored to individual preferences
  Ruland & Moore, 2001; Wilcox et al., 1999

- Creating programs based on exercise preferences should increase physical activity adoption and maintenance
The Issue of Preference

- For *middle-aged* and *older adults*, the most preferred context for physical activity is exercising alone
  
  King et al., 1990; Wilcox et al., 1999

However, this research examined preferences:

a) For only 2 contexts → *alone* or in a *structured class*

b) For aerobic activity only

c) Among adults (> 30 years)
Physical Activity Context: Preferences of University Students

Burke, Carron, & Eys (2006)
Methods

- 601 undergraduate students:
  - 198 males, mean age = 19.74, $SD = 1.35$
  - 403 females, mean age = 19.36, $SD = 1.19$

- Individual preferences:
  - Participants were asked to identify their **most** and **least** preferred contexts for aerobic activity and strength training
Four Possible Contexts for Physical Activity

1) Structured class setting (e.g., an aerobics class at a fitness centre)

2) With others outside of a structured class setting (e.g., walking/jogging with others outside or at a fitness centre)

3) Alone in an exercise setting (e.g., walking/jogging on a treadmill at a fitness centre)

4) Completely alone (e.g., walking/jogging alone)
Results

Most preferred context for aerobic activity:

Percent indicating MOST preferred

* p < .001
Results

Least preferred context for aerobic activity:

Percent indicating LEAST preferred

* p < .001
Results

Most preferred context for strength training:

Percent indicating MOST preferred

<table>
<thead>
<tr>
<th>Context</th>
<th>Males</th>
<th>Females</th>
</tr>
</thead>
<tbody>
<tr>
<td>Structured class</td>
<td>30</td>
<td>15</td>
</tr>
<tr>
<td>With others</td>
<td>60</td>
<td>45</td>
</tr>
<tr>
<td>On own in exercise setting</td>
<td>15</td>
<td>20</td>
</tr>
<tr>
<td>Alone</td>
<td>5</td>
<td>10</td>
</tr>
</tbody>
</table>

* $p < .001$
Results

Least preferred context for strength training:

Percent indicating LEAST preferred

* p < .001
Part Three

THE ISSUE OF ADHERENCE

SET GOAL.
MAKE PLAN.
GET TO WORK.
STICK TO IT.
REACH GOAL.
The Issue of Adherence

- Two meta-analyses have provided support for the conclusion that exercising with others is superior to exercising alone. Carron et al., 1996; Dishman & Buckworth, 1996

- One review reported that “exercise adherence … was higher for home-based aerobic exercise compared to group-based exercise.” Atienza, 2001, p. S50

- One meta-analysis found that adherence in home- vs. group-based interventions were small, comparable, and short-lived. Van der Bij, Laurent, & Wensing (1996)
Group Versus Individual Approach?
A Meta-Analysis of the Effectiveness of Interventions to Promote Physical Activity

Burke, Carron, Eys, Ntoumanis, & Estabrooks (2006)
“Home-based programs”

Home-based Contact

Home-based Isolation

Collectives

“True” Groups

“Group-based programs”
Results - Adherence

Intervention protocols fall along a continuum of effectiveness:

- **True Groups**
  - ES = .74*  
  - (n = 10)

- **Collectives**
  - ES = .72*  
  - (n = 6)

- **Home – Contact**
  - ES = .09  
  - (n = 18)

- **Home – Isolation**

* p < .05
Some Reasonable Generalizations

The case for groups and/or social support is strong...

Situations in which group cohesion is increased are particularly effective for adherence
Group Cohesion

“a dynamic process which is reflected in the tendency for a group to stick together and remain united in the pursuit of its instrumental objectives and/or for the satisfaction of member affective needs”

- Carron, Brawley, & Widemeyer, 1998
The Role of Cohesion in Exercise

“Experts agree that the support, variety and motivation a group provides can help improve physical and mental health and create lasting exercise routines.”

- Tammy Worth, Los Angeles Times

- An important factor within wellness programs is social support—forming a close-knit community among employees
Cohesion in Exercise Groups: Research and Practical Implications

- Environmental Factors
- Personal Factors
- Leadership Factors
- Group Factors
Environmental Factors

• ↑ class size = ↓ cohesion
Personal Factors

• ↑ *diversity* in gender, level of previous physical activity = ↓ cohesion

• ↑ perceptions of *similarity* in age, physical appearance, attitudes, beliefs about exercise = ↑ cohesion
Leadership Factors

• Enthusiasm, motivation, personal instruction, and availability → positively related to cohesion

• Sincere, honest, and consistent, showing concern for participants

• Awareness of non-verbal communication skills

• Strive to create a supportive atmosphere rich in praise, encouragement, and positive reinforcement
Group Factors

• Group goal setting associated with ↑ group performance

Example → equating 10 minutes of exercise (group or individual) to one km of walking (e.g., across the province); participants set a collective goal for the total # of km the group or team ‘walks’ over 4-weeks
**Additional Practical Implications: Team Building Strategies**

- Fundamental objective to enhance exercise adherence by increasing perceptions of group cohesion

- Despite some challenges, a number of team building strategies have been successfully used in exercise and workplace settings
<table>
<thead>
<tr>
<th>Factor</th>
<th>Intervention Strategies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distinctiveness</td>
<td>Have a group name. Make up a group T-shirt. Hand out neon headbands and/or shoelaces. Make up posters or slogans for the class.</td>
</tr>
<tr>
<td>Individual positions</td>
<td>Use specific positions for low-, medium-, and high-impact exercisers. Let them pick their own spot and encourage them to remain in it for the duration of the program.</td>
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<tr>
<td>Group norms</td>
<td>Establish positive group standards. Encourage exercise leaders in the class to set high standards of achievement. Have members introduce each other to increase social aspects. Establish a goal to lose weight together. Promote a smart work ethic.</td>
</tr>
<tr>
<td>Factor</td>
<td>Intervention Strategies</td>
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<tr>
<td>Individual sacrifices</td>
<td>Ask two or three people for a goal for the day. Ask regulars to help new people and encourage becoming fitness friends.</td>
</tr>
<tr>
<td>Interaction and communication</td>
<td>Use partner work and have them introduce themselves. Introduce the person on the right and left. Work in groups of five and take turns showing a move. Use partner activities.</td>
</tr>
</tbody>
</table>
Move More/Sit Less Workplace Initiatives

Example Group-Based Workplace Wellness Initiatives

Corporate Challenge

in motion
Physical Activity - do it for life!

MIDDLESEX - LONDON
Building Canada’s Healthiest Community
The “group” as an agent of change...

Walking clubs, pedometer challenges, community-based “team” challenges (e.g., InMotion™ Challenge, Corporate Challenges, etc.)

Team building, team goal setting

Group-based activity sessions led by a qualified instructor

Group information sessions involving health professionals “making the case” for wellness in the workplace

Buddy system

The “group” as an agent of change...

- Choose one of the examples provided (or create your own) related to using the ‘group’ as an agent of change.

- Create a sample action plan for how this might be carried out in your workplace. What can YOU do to make this happen?

- Considerations: Budget, time allotted, personnel required, buy-in and interest….others?

- Spend two minutes thinking about what you can do; anyone willing to share with larger group?
Final Thoughts...

- As wellness “champions” we must find better ways to capitalize on the group as an agent for behavioural change in wellness programs.

- The case for groups and/or social support is STRONG—how can we overcome the biases of some employees toward groups?
Evidence underscores importance of:

- Encouraging and promoting wellness (exercise participation in particular) in a social context
- Ensuring that employees embarking upon a wellness program receive regular social support and/or contact
Questions?