Development of a group-based self-management intervention for adults experiencing chronic pain

by Kyle Vader, PT, MScPT

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Agenda

- Describe chronic pain and impact on function
- Discuss evidence for self-management interventions in chronic pain
- Describe the development of a self-management intervention
- Highlight challenges and successes to implementation

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Background

- Education
  - BHSc (Hons), McMaster University, Hamilton, ON
  - MScPT, University of Toronto, Toronto, ON
- Current work
  - Physiotherapist, Chronic Pain Clinic, KHSC-HDH, Kingston, ON
- Future plans
  - PhD (Rehabilitation Science), Queen's University, Kingston, ON
- Research interests
  - Pain; disability; rehabilitation; adherence

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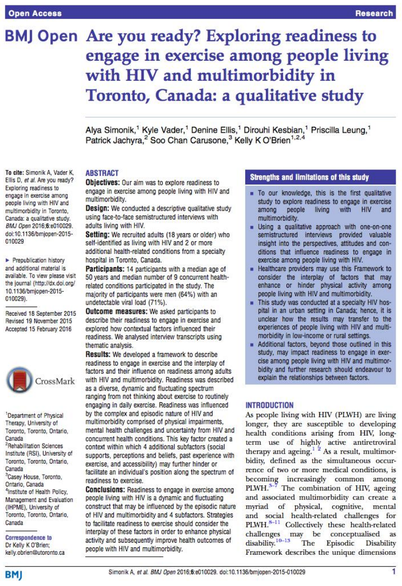
Why did I join CIHRRC?

- Previous research experience with Dr. Kelly O'Brien (University of Toronto) & Dr. Soo Chan Carusone (Casey House)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Are you ready? Exploring readiness to engage in exercise among people living with HIV and multimorbidity in Toronto, Canada: a qualitative study

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ABSTRACT

Objectives: Our aim was to explore readiness to engage in exercise among people living with HIV and multimorbidity.

Design: We conducted a descriptive qualitative study using face-to-face semistructured interviews with adults living with HIV.

Setting: We recruited adults (18 years or older) who self-identified as living with HIV and 2 or more additional health-related conditions from a specialty hospital in Toronto, Canada.

Participants: 14 participants with a median age of 50 years and median number of 9 concurrent health-related conditions participated in the study. The majority of participants were men (64%) with an undetectable viral load (71%).

Outcome measures: We asked participants to describe their readiness to engage in exercise and explored how contextual factors influenced their readiness. We analysed interview transcripts using thematic analysis.

Results: We developed a framework to describe readiness to engage in exercise and the interplay of factors and their influence on readiness among adults with HIV and multimorbidity. Readiness was described as a diverse, dynamic and fluctuating spectrum ranging from not thinking about exercise to routinely engaging in daily exercise. Readiness was influenced by the complex and episodic nature of HIV and multimorbidity comprised of physical impairments, mental health challenges and uncertainty from HIV and concurrent health conditions. This key factor created a context within which 4 additional subfactors (social supports, perceptions and beliefs, past experience with exercise, and accessibility) may further hinder or facilitate an individual's position along the spectrum of readiness to exercise.

Conclusions: Readiness to engage in exercise among people living with HIV is a dynamic and fluctuating construct that may be influenced by the episodic nature of HIV and multimorbidity and 4 subfactors. Strategies to facilitate readiness to exercise should consider the interplay of these factors in order to enhance physical activity and subsequently improve health outcomes of people with HIV and multimorbidity.

Strengths and limitations of this study

- To our knowledge, this is the first qualitative study to explore readiness to engage in exercise among people living with HIV and multimorbidity.
- Using a qualitative approach with one-on-one semistructured interviews provided valuable insight into the perspectives, attitudes and conditions that influence readiness to engage in exercise among people living with HIV.
- Healthcare providers may use this Framework to consider the interplay of factors that may enhance or hinder physical activity among people living with HIV and multimorbidity.
- This study was conducted at a specialty HIV hospital in an urban setting in Canada; hence, it is unclear how the results may transfer to the experiences of people living with HIV and multimorbidity in low-income or rural settings.
- Additional factors, beyond those outlined in this study, may impact readiness to engage in exercise among people living with HIV and multimorbidity and further research should endeavour to explain the relationships between factors.

INTRODUCTION

As people living with HIV (PLWH) are living longer, they are susceptible to developing health conditions arising from HIV, long-term use of highly active antiretroviral therapy and ageing.[1 2] As a result, multimorbidity, defined as the simultaneous occurrence of two or more medical conditions, is becoming increasingly common among PLWH.[3–7] The combination of HIV, ageing and associated multimorbidity can create a myriad of physical, cognitive, mental and social health-related challenges for PLWH.[8–11] Collectively these health-related challenges may be conceptualised as disability.[10–13] The Episodic Disability Framework describes the unique dimensions

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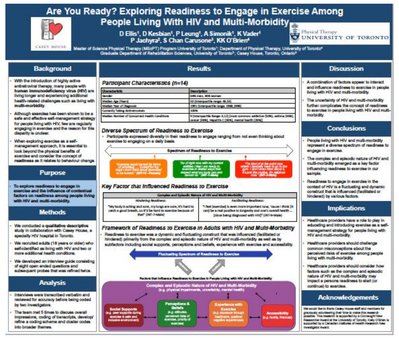
Are You Ready? Exploring Readiness to Engage in Exercise Among People Living With HIV and Multi-Morbidity

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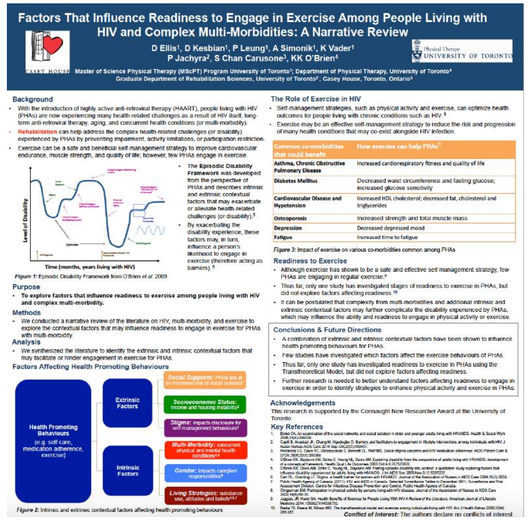
Background
Purpose
Methods
Analysis
Results
Discussion
Conclusions
Implications
Acknowledgements


Factors That Influence Readiness to Engage in Exercise Among People Living with HIV and Complex Multi-Morbidities: A Narrative Review

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Background
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Conclusions & Future Directions
Acknowledgements
Key References


Canadian Physiotherapy Association


ONTARIO PHYSIOTHERAPY ASSOCIATION

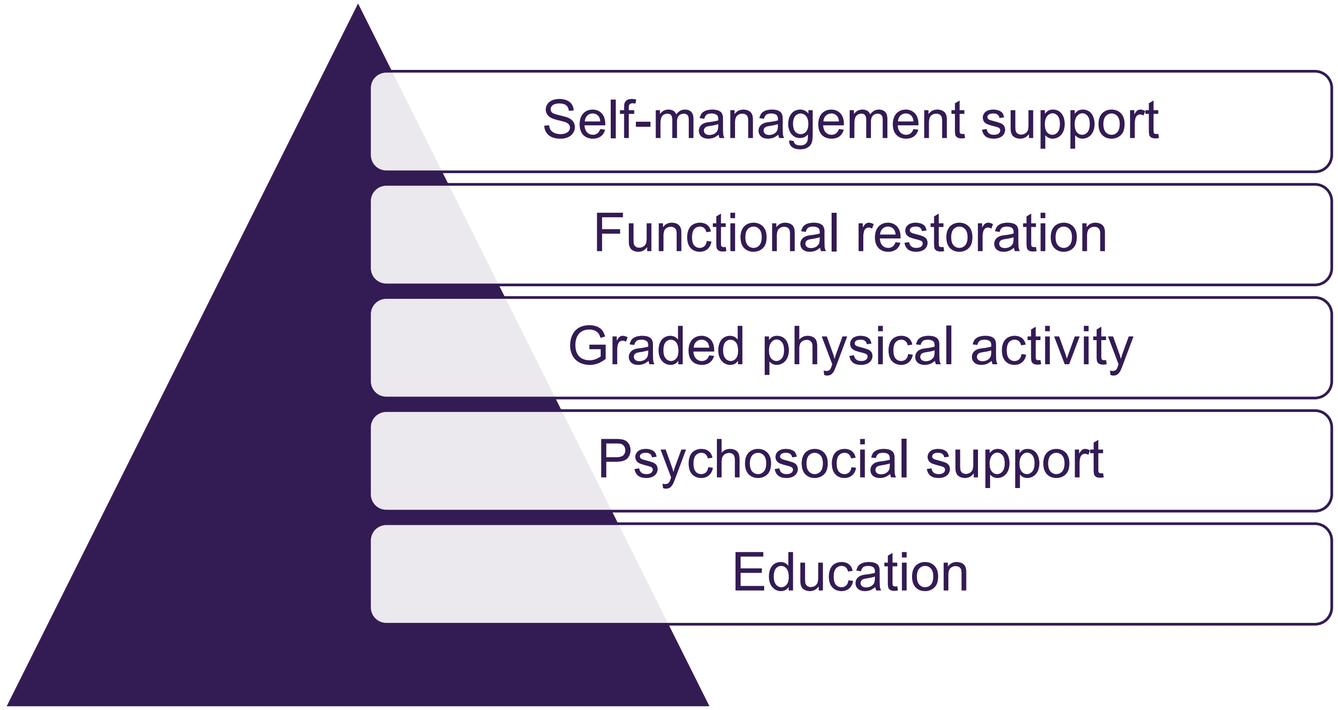
The landscape of chronic pain

- Chronic pain:
  - pain that persists beyond normal tissue healing time (> 3 months) or pain associated with a chronic health condition (Merskey & Bogduk, 1994)
  - 15-19% of Canadian adults live with chronic non-cancer pain (Reitsma et al., 2011)
  - interferes with ADLs, negative impact on quality of life, decreased physical function (Hogan et al., 2017)
  - leading cause of health resource utilization among working-age adults (Loeser, 1999)

Chronic pain among PLWH

- Chronic pain is common among people living with HIV
  - Peripheral neuropathy impacts an estimated 50-60% of PLWH (Ellis et al., 2009)
  - Peripheral neuropathy is the most frequent neurological complication associated with HIV virus type 1 (Wulff et al., 2000)
- Cross-sectional of a cohort of 296 socioeconomically disadvantaged PLWH with chronic pain (Miaskowski et al., 2011)
  - 8.2% reported mild pain, 38.1% reported moderate pain, 53.7% reported severe pain
  - Depression more common among people with severe pain
  - Female sex and less education were associated with more severe pain

Role for rehabilitation in chronic pain management



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Self-management

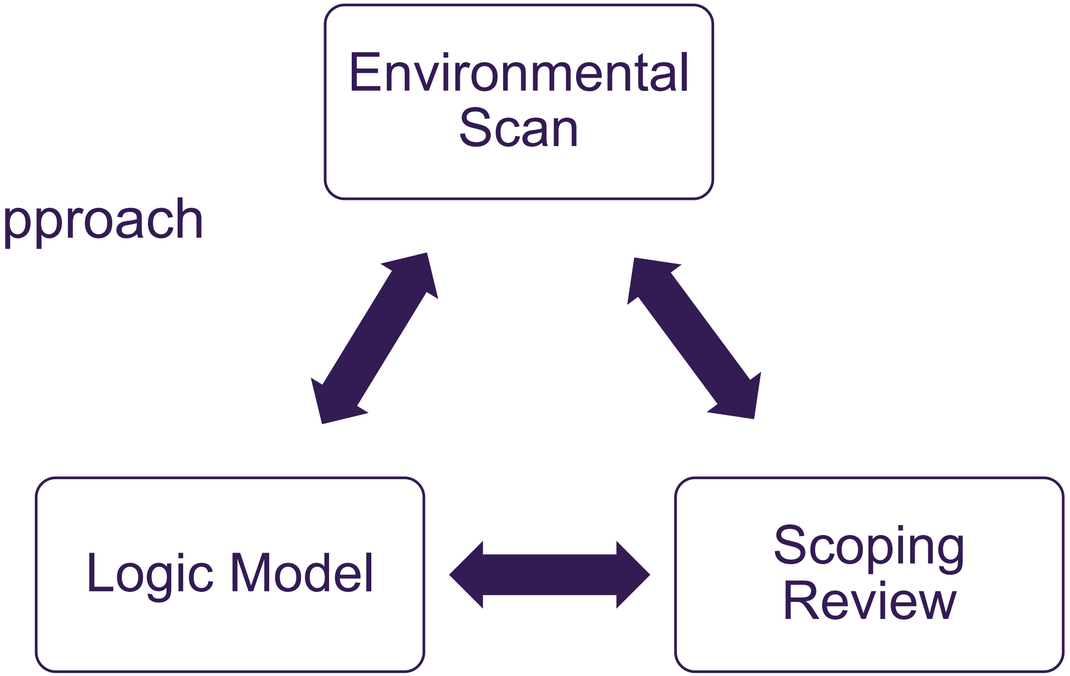
- Self-management (Lorig & Holman, 2003)
  - “ability to manage the symptoms, treatment, physical and psychosocial consequences and life style changes inherent in living with a chronic condition”
  - Tasks – medical, emotional, and role management
  - Skills – problem solving; decision making; resource utilization; formation of patient-provider partnerships; action planning; self-tailoring
  - Self-efficacy thought to play an important role

Evidence for chronic pain self-management

- A chronic disease self-management program lead to improved health status while reducing hospitalization in a heterogenous group of chronic disease patients (Lorig et al., 1999)
- Systematic review on self-management programs for chronic pain conditions found (Du et al., 2011):
  - small to moderate effects in improving pain and disability for arthritis
  - insufficient evidence to determine effectiveness for chronic back pain
- Primary care self-management intervention has the potential to improve function for some people with chronic pain (Miller et al., 2017)
  - strategies to improve adherence and reduce barriers may be needed

Developing a chronic pain self-management intervention – ‘process’

- Iterative process
- Involved an interdisciplinary team
- Created using a biopsychosocial approach
- Created in partnership with
  School of Rehabilitation Therapy
  at Queen’s University
  - Dr. Jordan Miller
  - Dr. Catherine Donnelly



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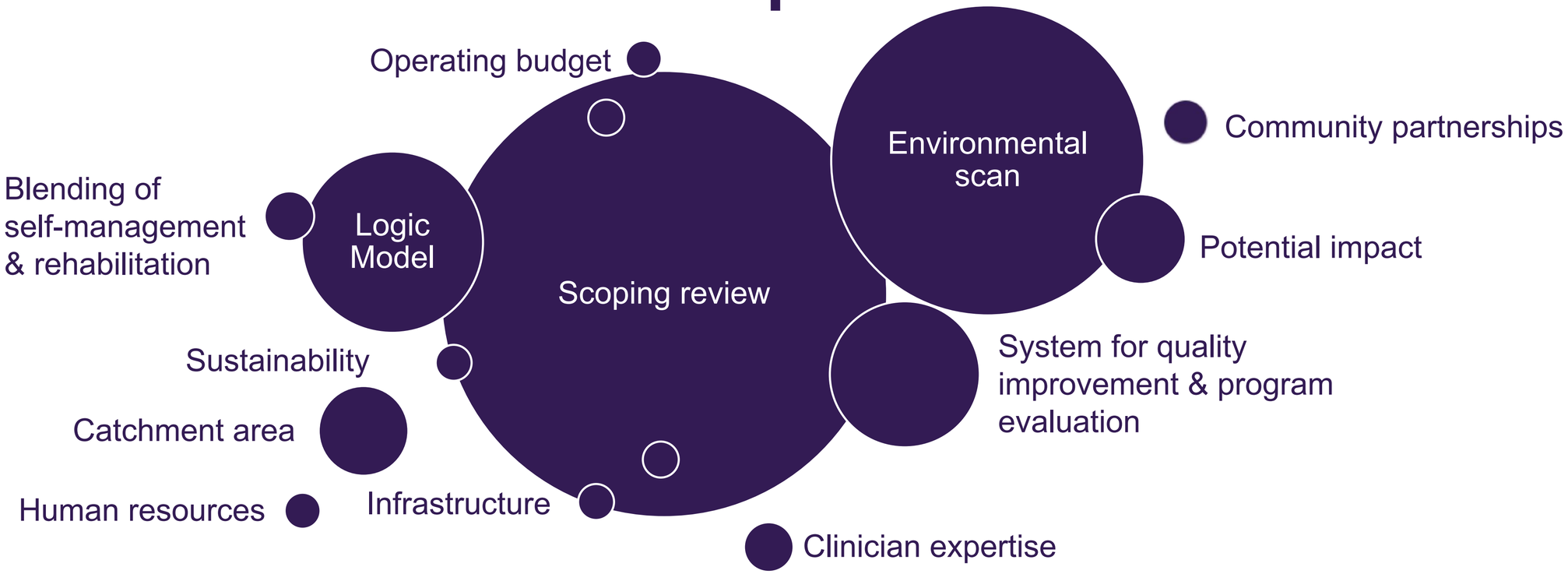
Developing a chronic pain self-management intervention – ‘other aspects to consider’



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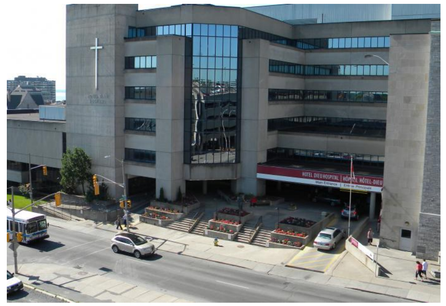
‘The Team’ – Chronic Pain Clinic, KHSC – HDH

- Medical Secretaries
- Social Work
- Occupational Therapy
- Psychology
- Physiotherapy
- Nursing
- Medicine



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Goals of self-management intervention

1. Increase understanding of pain science
2. Increase knowledge of pain self-management
3. Improve emotional coping
4. Promote participation in activities that are consistent with personal values
5. Increase confidence to engage in and apply non-pharmacological pain management strategies in daily life

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Assessment & Measurement

- Outcome Measures
  - Demographic Questionnaire (e.g. age, sex, employment status, etc.)
  - Brief Pain Inventory – Short Form
  - Pain Catastrophizing Scale
  - Pain Self-Efficacy Questionnaire
  - Patient Health Questionnaire – 9
  - Canadian Occupational Performance Measure
  - Pain Stages of Change Questionnaire
  - Self-Efficacy for Managing Chronic Disease 6-Item Scale
  - Feedback / patient experience form

Patient population

- Inclusion criteria
  - Medically stable
  - Appropriate treatment of underlying somatic disorder
  - Ready and willing to participate in self-management intervention
  - Well suited for a group-based intervention
- Typical patient presentation
  - Chronic widespread pain, joint pain, arthritis, spinal pain
  - Most on social assistance or not employed
  - Age 40-60
  - More women than men

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Details of self-management intervention

- 12 sessions (1 session per week, ~ 3 hours per session)
- Held at KHSC-HDH before transitioning to community fitness facility
- Group-based (10-12 adults experiencing chronic pain)
- Delivered collaboratively by PT, OT, and C.Psych
- Involves a combination of:
  - Psychoeducation (pain science)
  - Cognitive behavioural therapy
  - Graded physical activity
  - Goal setting
  - Discussion & brainstorming

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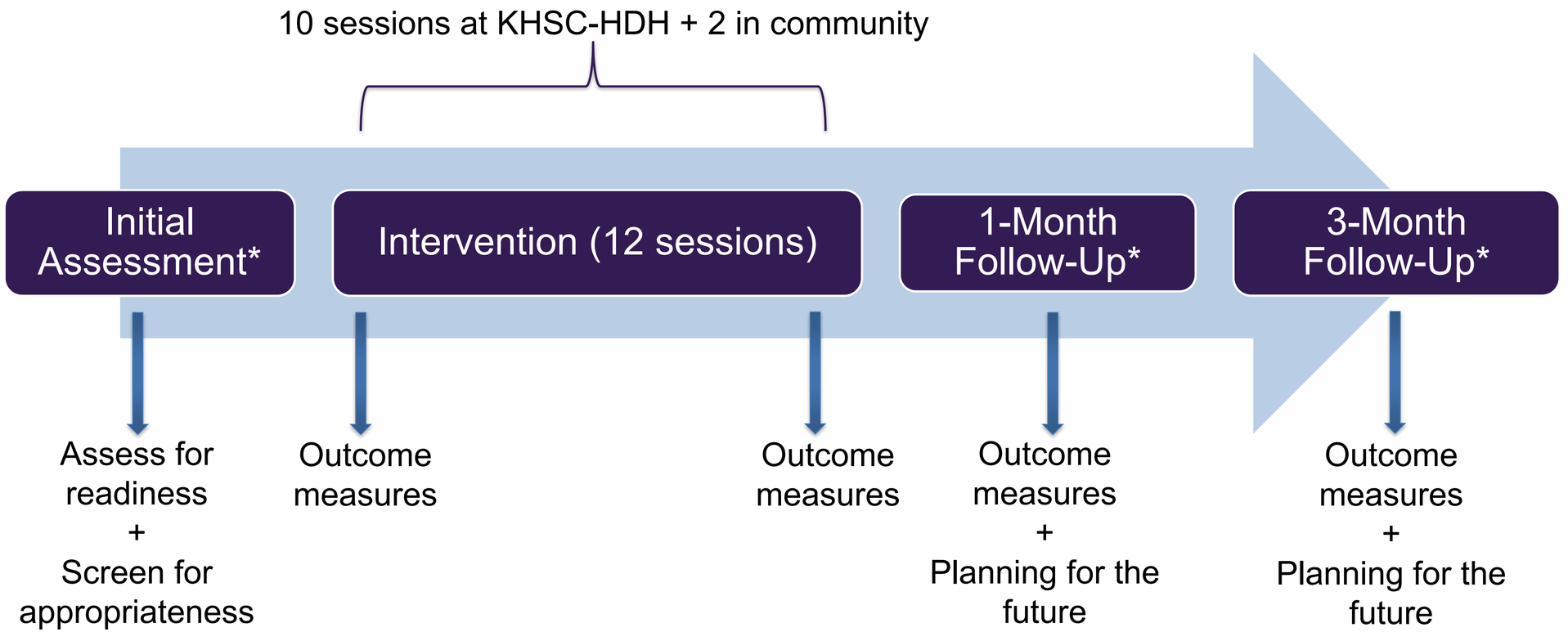
Overview of self-management intervention



* Assessment / Follow-up conducted by OT, PT, or C.Psych

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Session example

Topic	Content
Review (15 minutes)*	Discuss previous sessions content
Pacing (45 minutes)	Group brainstorm & education on pacing strategies
Pain Science Nugget' (15 minutes)*	Tissue tolerance
BREAK (15 minutes)	
Physical activity (30 minutes)	20 minutes of chair yoga + 10 minute discussion
Introduction to mindfulness (45 minutes)	Introduction & description as a pain management strategy
Goal setting & wrap-up (15 minutes)*	'Value Living Questionnaire,' weekly goal, group discussion

* Lead collaboratively by OT, PT, C.Psych

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Implementation – challenges & successes

Challenges

- Screening for readiness prior to intervention
- Selecting appropriate outcome measures
- Determining essential content for intervention
- Developing patient resources that are useable and appropriate for a wide variety of patients with different pain conditions and level of literacy

Successes

- Forming partnerships with community agency (e.g. YMCA/City of Kingston)
- Trialing different intervention parameters (e.g. 6 week, 2x per week vs. 12 week, 1 x per week)
- Filling a gap in pre-existing services in the geographic region
- Quality improvement & program evaluation

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Patient feedback (thus far)

"I changed my routine and got out of my rut"

"I added exercise (and learned about when and why I should do it)"

"I learned to slow down, relax, and challenge negative thoughts"

"I tried things that made me uncomfortable – and some of these things were really helpful!"

"I began to acknowledge and accept the things I cannot change"

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Questions?

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