



Scoping Review on the Current State of Research for Cancer Rehabilitation

Focus on Physical Function


Speakers



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Disclosure



- Dr. Stout is a paid consultant with BSN Medical





Learning Objectives

1. Recognize significant gaps in the literature for oncology rehabilitation, lack of interdisciplinary agreement on the priorities for cancer rehabilitation research and practice, and absence of a unified definition of cancer rehabilitation.
2. Explain the role of the multidisciplinary role of providers in oncology rehabilitation and describe the role of the physical therapist.
3. Compare and contrast the strengths and opportunities to address deficiencies in oncology rehabilitation through research, education and policy efforts.
4. Propose a framework for future oncology rehabilitation research.


Course Outline

- Background
- Methods
- Literature that supports physical function rehabilitation
- Gaps & suggested opportunities
- Framework for future research
- Conclusions

A Significant Gap in Cancer Care

- Anticipated 20.6 million survivors by 2026^(ACS Survivorship Facts and Figures 2016)
- > 60% experience 1 or more functional impairment



Rehabilitation referral rates are as low as 2%
(Cheville et al 2017)

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A Significant Gap in Cancer Care

- Physical problems are outpacing emotional problems^(Weaver et al 2012)
- Functional impairments are drivers of distress and anxiety
- Functional morbidity screening, assessment, and intervention is essentially absent in cancer care^(Stout 2018)

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Closing the Gap



- Expert consensus identified management of functional morbidity as a priority^(Lyons 2016)
- A bibliometric analysis identified deficits in publication and research funding targeting functional morbidity^(Stout 2018)
- How do we improve functional screening, assessment, and intervention?

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Challenges in Functional Assessment

- Use of appropriate functional measures to drive care
 - Karnofsky Physical Performance and ECOG scales are widely used but poorly specific
 - QOL and HRQOL scores are widely accepted as 'functional' measures
- Are we speaking the same language?
 - Physical function vs. Physical well-being vs. Role function vs Physiological function

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Physical Function

“...the ability to perform the basic actions that are essential for maintaining independence and carrying out more complex activities.”
(Painter et al 1999)

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Purpose: Conduct a scoping review of the published literature regarding *screening, assessment, and interventions related to physical functioning* in cancer survivors (2008-present).

Objectives:

1. Identify areas of strengths and gaps in the published literature.
2. Suggest opportunities to address these deficiencies through future research efforts.

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Scoping review

- Large, complex, heterogenous question not amenable to a SR
 - Summarize and disseminate research findings
 - Identify research gaps
 - Make recommendations for future research

(Peters et al 2015)



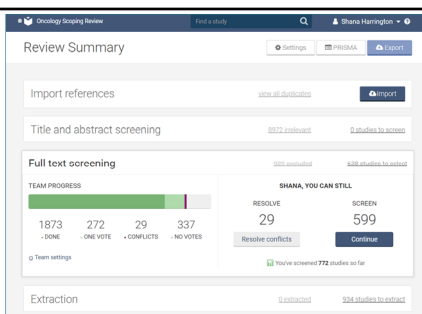
Stages in Conducting a Scoping Review

- Identify the research question
- Identify the relevant studies
- Study selection criteria
- Chart the Data
- Collate, summarize and report the results

Arskey & O'Malley 2005
Pham et al 2014



Covidence



Data Sources and Searches

- Initial literature search was conducted in PubMed & CINAHL databases on August 15, 2018
 - Filters: Human, English & past 10 years
- Utilized relevant keywords, medical subject headings (MeSH) terms



Criteria

Inclusion

- 2008 – present
- English
- Cancer diagnosis
- Across the lifespan
- Screening, assessment &/or intervention related to physical function

Exclusion

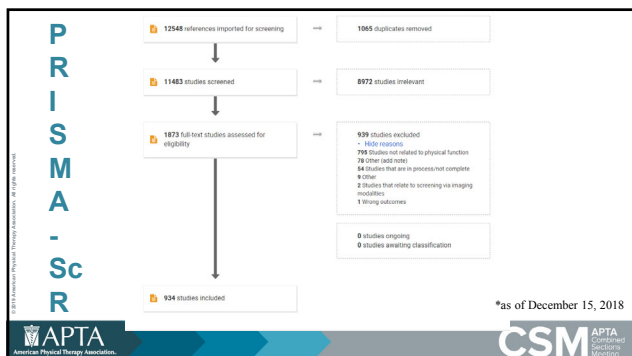
- Non-English
- Prior to 2008
- Pharmaceutical intervention
- Non-cancer population
- Other function: cognitive, cardiovascular, etc.
- Trials in process
- Imaging-based modalities (echo, Doppler US)



Consideration

- Does this study simply characterize a population or does it provide a way to screen/assess/or intervene?
- Multidisciplinary rehabilitation inclusive
 - PT, OT, SLP, nursing





Study Selection

- Title and abstract screening (n=11483)
- Full text reviews (n=1873)
 - Completed by two independent reviewers
 - Conflict resolution

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Data Extraction


- Used Excel to extract data with predetermined content fields
- Based on guidance for conducting systematic scoping reviews (Peters et al 2015)
 - Author & year, design, study population (cancer type), intervention type, intervention, duration, outcomes used.
 - Stage of cancer, age, phase of treatment, application to physical function, impairments, time since diagnosis

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Data Synthesis & Analysis


- Descriptive data extracted under the coding categories
- Analyzed quantitatively through summary counts

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Findings Regarding Screening and Assessment




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Findings Regarding Intervention

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In a scoping review, the results may be presented as a 'map' of the data





Gaps & Suggested Opportunities








Areas of Significant Weakness

1. Lack of Clear Definitions
2. Lack of Consistency in Measurement Tools
3. Poorly Defined Implementation Pathways




Lack of Clear Definition

- Painter definition is clear – but not universally adopted
- Misunderstanding between physical function and physiological function
- Confusion between body structure/function and both activity limitation and participation restriction
- Confusion where sexual function falls




Defining Physical Function

- Ability “to do”
- Activity limitations and participation restrictions
- Not basic functions (impairments) that allow “to do”
 - Range of motion, strength, power, etc.

Defining Physiological Function

- Cardiorespiratory measures
 - Heart rate max
 - VO2 max
 - Ejection fraction

Defining Sexual Function

- Sexual intercourse is a physical act, “to do”, but...
- Sexual function definition is “diminished or absent feeling of sexual interest or desire, absent sexual thoughts or fantasies and a lack of responsive desire” (American Urological Association)
- Sexual function measures refer to measuring interest, desire, and sometimes physical symptoms



Impact of Semantic Inconsistencies

- Inability “to do” resulting in activity limitations and participation restrictions
- Declines in health-related quality of life
- Confusion increased with HRQOL scales that use the word “function”
- HRQOL is well-being



Lack of Consistency in Measurement Tools

- Proxy measures frequently incorrect
 - Could be physiological function
 - Often HRQOL measures
- Using the wrong measure results in missed opportunities
 - Cannot accurately quantify physical function with these measures
 - Miss important findings



Poorly Defined Implementation Pathways

- Measuring functional deficits should lead to management of functional deficits
 - Cross-sectional assessments are inadequate
 - Triage pathways are poorly defined despite guidelines for impairment intervention



Opportunities

- Promote consensus on definition of physical function
- Suggest best practices for when and how to screen and assess function
- Integrate with cancer care team to optimize triage for interventions
- Encourage researchers to follow suit



Framework for Future Oncology Rehabilitation Research



Conclusions

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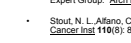




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