5-2017

A Systematic Mapping Review of Health Promotion and Well-being Concepts in Physical Therapy

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May 17, 2017

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ABSTRACT

BACKGROUND AND PURPOSE: The American Physical Therapy Association adopted the International Classification of Functioning, Disability, and Health (ICF) in 2008. ICF provided universal terminology for health professions, defined health in bio-psychosocial terms, and introduced neutral language and contextual influences on health (World Health Organization, 2001). The primary purpose of this study was to create a descriptive map of the physical therapy (PT) literature specific to the areas of health promotion (HP), prevention, and well-being and the use of ICF terminology. The secondary intent was to explore the status of research and topics of interest physical therapy pertaining to these areas.

METHODS: A systematic mapping review aims to evaluate the knowledge of or evidence for specific areas (Evidence for Policy and Practice Information Centre, 2010). It allows researchers to conduct an in-depth review and construct a descriptive map of the literature, gain an understanding of the state of affairs pertaining to scholarship of a particular concept or topic, and identify gaps and directions for future study (Grant & Booth, 2009). Comprehensive database searches were conducted using combinations of the search terms "physical therapy," "health promotion," "wellness," and "well-being." Ultimately, 132 articles met study criteria and were analyzed. A coding sheet was created using ICF terminology and tested for inter-rater reliability, and each article was reviewed. Articles were classified as primary prevention for healthy populations or secondary/tertiary prevention for those with a diagnosis. The coded articles were charted for further descriptive analysis and identification of themes.

RESULTS: Four major subcategories were identified in the articles: wellness, well-being, quality of life (QOL), or HP. The distribution of articles for well-being, wellness, and HP were fairly even for primary prevention, and only 10% of the articles involved QOL. However, the majority of articles related to secondary/tertiary prevention coded for well-being (48.4%) or QOL (45.3%). Both primary prevention and secondary/tertiary prevention articles most commonly coded for exercise (75% and 87.5, respectively) and mood (55% and 81%, respectively). Other recurring primary prevention article codes were balance (32%), musculoskeletal (29%), and neuromuscular (26%). Secondary/tertiary prevention articles had common codes of neuromuscular (53%), pain (50%), and mobility (47%).

CONCLUSIONS: The composition of PT literature on primary prevention in healthy individuals and secondary/tertiary prevention in individuals with diagnosis is markedly different. It appears that researchers associate HP and wellness with healthy populations, and QOL and well-being with populations with a diagnosis. The inconsistent and interchangeable use of language was a challenge for systematic analysis.

The undersigned certify that they have read, and recommended approval of the research project entitled…

A SYSTEMATIC MAPPING REVIEW OF HEALTH AND WELL-BEING CONCEPTS IN PHYSICAL THERAPY

submitted by
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in partial fulfillment of the requirements for the Doctor of Physical Therapy Program

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Chapter 1: INTRODUCTION

Over the past 25 years, the cost of healthcare in the United States has drastically increased from 700 billion dollars in 1990 to over 3.2 trillion dollars in 2015.[1] This cost accounts for 17.8% of the nation's gross domestic product and is expected to continue to increase at a rate of 5.8% a year until 2025.[1] Several efforts have been made to help combat the rising cost of healthcare in the US, and improve its overall effectiveness.[1]

The Triple Aim developed in 2008 by the Institute for Healthcare Improvement (IHI), is an example of one of these efforts being made. Its intent was to improve upon the established methods of healthcare delivery and accomplish three objectives: improve the patient experience, improve overall population health, and reduce per capita cost.[2,3] Additionally, The Patient Protection and Affordable Care Act of 2010 (ACA) outlined significant changes to the delivery and payment of health services. Among changes proposed by the ACA were provisions to provide funding to primary care services that promote prevention, wellness, and public health.[2] Many of these changes were intended to shift the focus of a 'sick care' system providing secondary and tertiary care services to healthcare encounters focused on well-being, prevention and primary care.

The International Classification of Functioning, Disability and Health (ICF), was introduced by the World Health Organization in 2001.[4] The primary intent of the ICF was to develop a comprehensive biopsychosocial health model that was universally applicable, used neutral and positive language, and frame health in terms of functioning, rather than disease. This model also made explicit the contextual factors that are determinants of health that was missing in original models of the WHO. Health conditions may lead to impairments, activities limitations, and participation restrictions. In other words an individual's ability to fully

participate in life situations, regardless of functional limitations, impacts their quality of life and health status. Health-related concepts associated with the ICF model of relevance to this study are well-being and quality of life. The definitions for health-related concepts are highly varied in the literature, and their usage is problematic. This study uses the ICF model as the conceptual framework for health and health-related concepts and therefore adheres to its definitions.

The ICF views health as an asset, a resource for life, and is part of our understanding of well-being. The ICF model, unlike the medical model, makes it very clear that health is not simply determined biologically, but is also dependent on contextual factors, resulting in a more comprehensive biopsychosocial model of health, well-being and QOL.[4] According to the ICF, well-being elements include health domains that are intrinsic to a person as well as those that are extrinsic, and is experienced by those both with or without a disability.[5]

In 2008, the American Physical Therapy Association (APTA) adopted the ICF model, and stated that the ICF language would be integrated into all documents and communication.[5] As noted below,

> 'The 2016 APTA Position Statement on Physical Therapists' Role in Prevention, Wellness, Fitness, Health Promotion, and Management of Disease and Disability, the 1st role is to "integrate decision-making skills across all dimensions and contextual factors of the ICF." '

Although this statement clearly notes that physical therapy services are to include the dimensions and contextual factors as specified by the ICF, the language used in their position paper is not consistent with ICF. Of particular relevance to this research study, one notable inconsistency is that the ICF uses the term well-being, and nowhere does it mention the term wellness.

Prominent physical therapists in the United States in the realm of health promotion and

prevention continue to utilize wellness terminology rather than well-being.[6] Additionally, many authors, within and outside of PT, use well-being and wellness interchangeably, rather than having discrete definitions of these distinct terms. Well-being and wellness are similar, but are not synonymous. They are distinct concepts. Wellness focuses on intrinsic, individual lifestyle choices, such as smoking cessation, sleep hygiene, and exercise behaviors, while well-being encompasses both intrinsic and extrinsic factors, placing an increased emphasis on personal, social and environmental factors. This is significant as individual changes may not be possible within the environmental or social contexts of an individual. Although researchers using wellness terminology acknowledge that environmental factors can influence an individual, the majority of interventional focus remains on changing the individual such as lifestyle choices and health behaviors. The distinction in the utilization of this language is important to relate research internationally and inter-professionally.

The catalyst for this study was the observation of the everyday use of wellness terminology in physical therapy education, official documents and literature that appears incompatible with the ICF. As wellness and well-being are conceptually distinct, and since the WHO uses well-being in all its official documents, this project was intended to map the utilization of the ICF language of well-being in the physical therapy literature.

The primary purpose of this study was to create a descriptive map of the physical therapy literature specific to the areas of the health-related concepts of health promotion, primary prevention and well-being, and the use of ICF terminology. The secondary intent was to explore the status of research and the topics of interest in physical therapy pertaining to the health-related concept of well-being.

Chapter 2: METHODS

A systematic mapping review was performed to examine the status of research being conducted in the physical therapy field regarding health promotion and concepts of well-being and wellness. Systematic mapping is a research method that summarizes and synthesizes the current state of an area of study, describing what the literature has to say over a broad subject of interest. It is different from a narrative literature review in that there is a quantitative and qualitative analysis of the literature whereby the literature is coded and the content analyzed. Systematic mapping does not attempt to answer a specific question about effectiveness as a systematic review does, but instead, collates, describes, and catalogues available evidence. The studies mapped can then be used to identify knowledge gaps, knowledge clusters, and evidence for policy-relevant questions.[7]

Literature searches were performed in the PsycINFO, Medline, and CINAHL databases with the following keywords: "physical therapy," "health promotion," "wellness," and "well-being." Articles in the study met the inclusion criteria of: being peer-reviewed, written in English, published between 2001 and 2015, and having "Wellness," "Well-being," and/or "Quality of Life" in either the title, keywords, or abstract. As the focus of the study was on peer-reviewed literature, sources that were narratives, book chapters, and dissertations were excluded from the study.

A visual representation of the search and methodological culling of articles is shown in Figure 1. The initial search resulted in 2,602 articles. 2,130 articles remained after duplicates were removed. 1,960 articles were then removed for lack of inclusion criteria. This left 170 articles appropriate for the next step of coding. The 170 files were separated into the categories of "Primary Prevention" (PP) and "Secondary/Tertiary Prevention" (STP) based on article

subjects. PP articles included healthy subjects whereas STP articles included subjects with existing medical conditions. Abstracts were reviewed to further screen articles for appropriateness. 6 non-applicable articles were filtered out during this stage, leaving 164 articles for full text screening and coding.

All articles were coded into categories of "Wellness," "Well-being" including variations of spelling, "Quality of Life," or "Health Promotion." based on title, abstract, and keyword list. Articles without any explicitly stated keywords were coded generally under health promotion. Next, an article from each of the two prevention lists was chosen, read fully, and coded individually by researchers to compare inter rater coding. This was performed 3 times to test inter rater consistency as well as develop and finalize rubric components for coding and analysis.

A simplified version of the rubric is represented in Figure 2. Along with category codes, the rubric included sections for the variables and patient population descriptors as content codes. These 20 standardized content codes were based on ICF terminology and placed within the ICF subsections of Body Systems, Body Functions, and Activities and Participation. Each article was given the single most appropriate category code but could have multiple content codes. Other sections of the rubric included contextual factors, the study's country of origin, and the author's professional affiliation.

Following finalization of the rubric, full text screens were performed and rubrics completed for each of the 164 articles. Articles were read and coded by one reviewer before being read and coded by a second reviewer. Any coding discrepancies were discussed and agreed upon by the two reviewers. 33 articles were excluded during the full text screen stage. Reasons for exclusion were: articles being non-research, lack of full article access, and disconnect between database keywords and author keywords resulting in previous inclusion of inappropriate

articles.

Ultimately, 131 research articles were fully coded and analyzed; 67 PP and 64 STP. Once rubrics were completed, data was extracted and compiled to explore trends between variables and differences within the articles pertaining to their use of the ICF language.

Chapter 3: RESULTS

The category codes of "wellness", "well-being', "quality of life", and "health promotion" were utilized differently between the PP and STP articles, shown in Graph 1 and Graph 2. The PP articles had relatively equal utilization of the terms "health promotion", "well-being", and "wellness" (31%, 29.5%, 29.5% respectively); while only 10% of the articles referred to quality of life. In the STP articles, "well-being" and "quality of life" were utilized most often (45%, 48% respectively), while "wellness" was only referenced in 5% of the articles and "health promotion" only in 2% (1 article). To summarize these differences; articles involving healthy subjects utilized the language "wellness", "well-being" and "health promotion". In contrast, the vast majority of articles concerning subjects with medically diagnosed conditions use the terms "quality of life" and "well-being", while greatly reducing the utilization of the terms "wellness" and "health promotion".

Content categories were created, mapped and compiled to explore what types of variables are incorporated in the mapped research. Of the all articles coded, the top ten content codes utilized are shown in Graph 3. Each category code is further broken down, displaying the contribution to the content code frequency made by both PP and STP. To further explore how the content codes varied between the PP and STP literature mapped, the top 5 content codes were graphed of the PP articles and also the STP articles, shown in graphs 4 and 5, respectively. The

top 5 content codes for the articles concerning healthy subjects were exercise, mood, balance, the musculoskeletal body system, and the cardiovascular system. STP data are included for comparison in these content areas. In contrast, the top 5 content codes in articles concerning medically diagnosed subjects were exercise, mood, neuromuscular system, pain and mobility.

While all of the coded articles mentioned physical therapy within their title, abstract, or keywords, as part of our inclusion criteria, they were not all written by or with physical therapists. Graph 6 shows the percentages of coded articles that were written by only physical therapists (30%), physical therapists along with other professionals (29%), and finally those articles which were written without a physical therapist (41%). The other professions most often authoring these papers included various physician specialties, nursing, occupational therapy, psychology, and public health. 4 of the total coded articles were unable to determine the professions of the authors.

Chapter 4: DISCUSSION

This is the first study to systematically map the health-related concepts of health promotion and well-being in the physical therapy literature. As previously noted, there were substantial differences between research on healthy individuals and those with conditions or diseases.

Category Codes

Health promotion was the category code assigned in approximately ⅓ of the articles on PP, while it was only found in 2% of STP articles. The question to be asked, then, is why individuals with a diagnosis are not being targeted for health promotion as frequently as those

that are healthy. The intent of health promotion is to minimize risk factors for diseases; but those with a diagnosis are also at risk of either worsening symptoms or the development of other medical conditions. The frequent use of the term wellness in the physical therapy literature on PP is indicative of the focus on health promotion in healthy persons and the importance of the functioning of body structures and systems, rather than the whole person in the context of their lives. In other words, a healthy body seems to be associated with wellness.

For individuals with a diagnosis, the focus shifted to well-being and quality of life, with wellness being minimally present. Well-being was present as frequently as quality of life in STP, while it was much more prevalent than quality of life in PP. Quality of life was present in almost half of all STP articles, while, in PP, it was the least commonly found category code. This may indicate an assumption that healthy individuals already have high quality of life, and that those with a disease have lower quality of life that requires intervention through management of their condition. Perhaps authors choose to focus on disease management to promote well-being and quality of life in STP. In this context, health and wellness are not associated with individuals that have a diagnosis.

Despite the intents of the ICF, it appears that physical therapy may still be focused on the medical view of health, with a diagnosis defining an individual, rather than taking a whole-person approach. The fact that wellness and well-being have been equally utilized in research on healthy populations may perhaps indicate that researchers perceive wellness and well-being as the same construct.

Content Codes

Since all the articles mapped pertained to physical therapy with content or author-

assigned keywords, due to our inclusion criteria, it is no surprise that exercise was the most coded content code overall. In both healthy populations and those with a diagnosis, exercise and mood were the two most prevalent content codes. This indicates that, regardless of health or disease state, the literature identifies these two components as being broadly necessary factors of well-being. However, notable differences between PP and STP were present beyond the top two content codes. In regards to PP, the remaining three of the top five codes were balance, the musculoskeletal system, and the cardiovascular system. In many articles, the focus of PP is improving health by increasing physical activity, primarily through exercise.

In research on STP, the other top content codes were the neuromuscular system, pain, and mobility. The prevalence of the neuromuscular code is a reflection of the most common diagnoses studied being neuromuscular in nature. Pain and mobility were likely prevalent as they are two commonly assessed variables in QOL outcome measures. Here, the purpose of exercise was often symptom management and enhanced function.

ICF Implications

The study findings confirmed that there are issues with the application of these health-related concepts. The original purpose of the ICF model was to develop a universal language across countries and professions. However, based on the results of this study, this has yet to occur in physical therapy with regards to use of the terminology of well-being versus wellness. This is exemplified by the finding that well-being is the term of choice for studies performed by researchers from other disciplines that are not affiliated with physical therapy. Moreover, physical therapy researchers outside of the United States also utilize the term “well-being.” However, “wellness” is the term primarily utilized by physical therapy researchers within the

United States.

The APTA adopted the ICF model 8 years ago, but there does not yet seem to be any movement towards a change in language in the physical therapy literature, defeating a main purpose of utilizing the ICF model. Overall, it appears that other professions seem to be doing more in the area of health promotion and prevention research. Perhaps physical therapy is just beginning to make progress in these areas and the literature on these topics will grow in the future.

Study Limitations

One limitation of this study was that the inconsistent and interchangeable use of language posed a challenge for systematic analysis. Terms such as wellness, well-being, health, and quality of life have many definitions and are used variably in the literature. Another limitation is that this study may be limited in international articles, as the mapping did not include articles that were not written in or translated to English. Finally, a non-standardized assessment tool was created and utilized to code the articles, as the systematic mapping as a method of study has only recently started to be utilized.

Future Research

The results of this systematic mapping provide many directions for future research. It is firstly important to continue delving into the data from this study to further explore trends in health promotion and well-being concepts within the physical therapy literature. The current data lends itself to extensive analysis in a variety of ways. Specific points of interest include looking more closely at interventions and outcome measures individually, the prevalence of well-being

versus wellness in studies authored by physical therapists in conjunction with other professions, and whether or not the use of ICF terminology has increased at all since the APTA adoption of ICF framework in 2008. Wellness terminology is still being used, but the extent of changes that the adoption of the ICF has made on research terminology is unclear.

Implications for PT Practice

The results of this study have multiple implications for physical therapy practice. First, consistent use of language, in line with the ICF model, is necessary for physical therapy to be recognized by other disciplines and policy-makers as contributing to health promotion and enhancing the well-being of individuals and populations. Additionally, well-being has been studied and many standardized measures are routinely used for policy making and as an indicator of national health. It is possible that, by using wellness, research in this field by physical therapists in the United States is not being found in literature searches by other disciplines. Of concern is that exercise, falls prevention, mobility, and activities that are within the scope of physical therapy are also within the scope of practice of other professions. The physical therapy profession must therefore identify its unique role in prevention and health promotion.

In addition to this role identification, the social responsibilities of the physical therapy profession must include looking at communities and the contextual factors that contribute to health and well-being. Health promotion requires health-supporting environments, and cannot be achieved by targeting individual behaviors alone for sustained behavioral change.

Chapter 5: CONCLUSION

This study findings reveal the need for the Physical Therapy profession to align language in its official documents with the ICF. This will not only bring the profession in sync with others

including medicine but also clarify the conceptual anomalies and murkiness prevalent in the literature.

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APPENDIX A

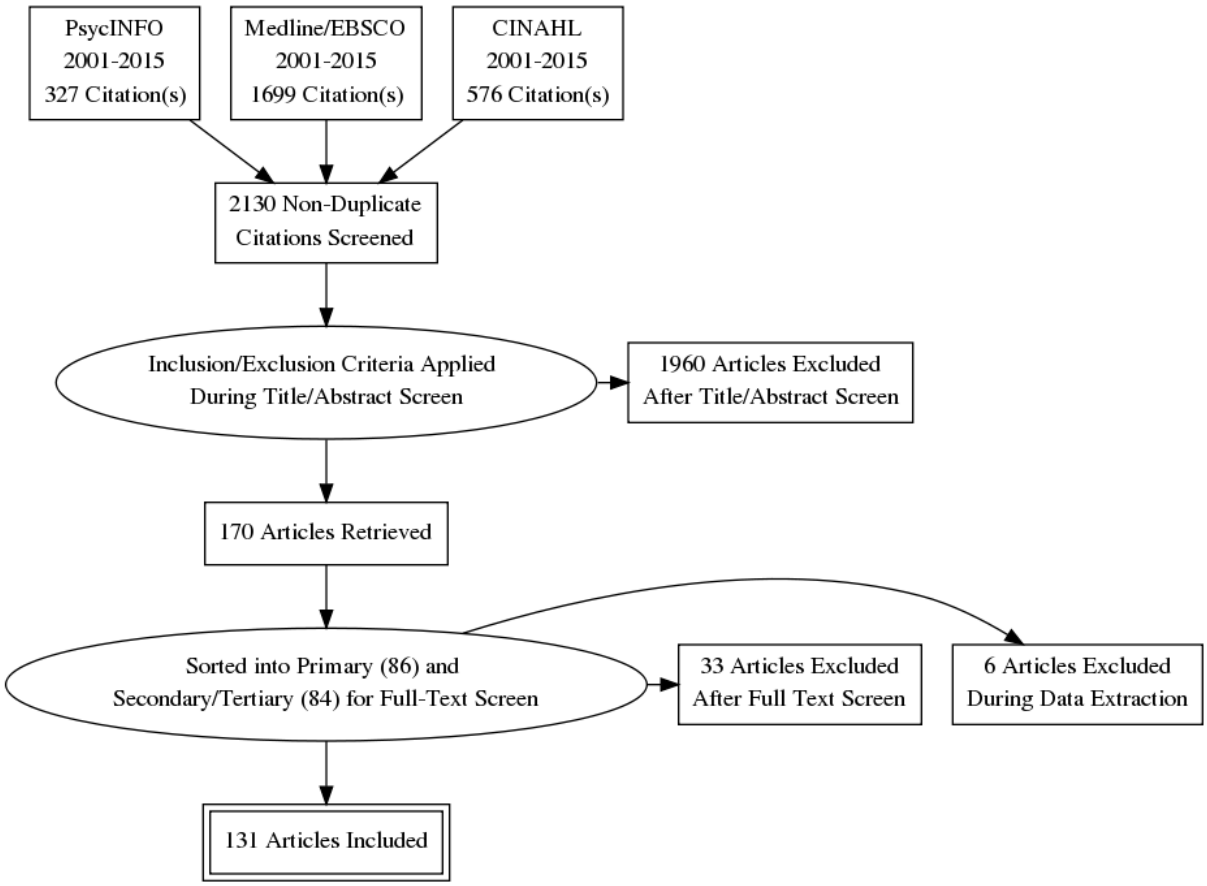
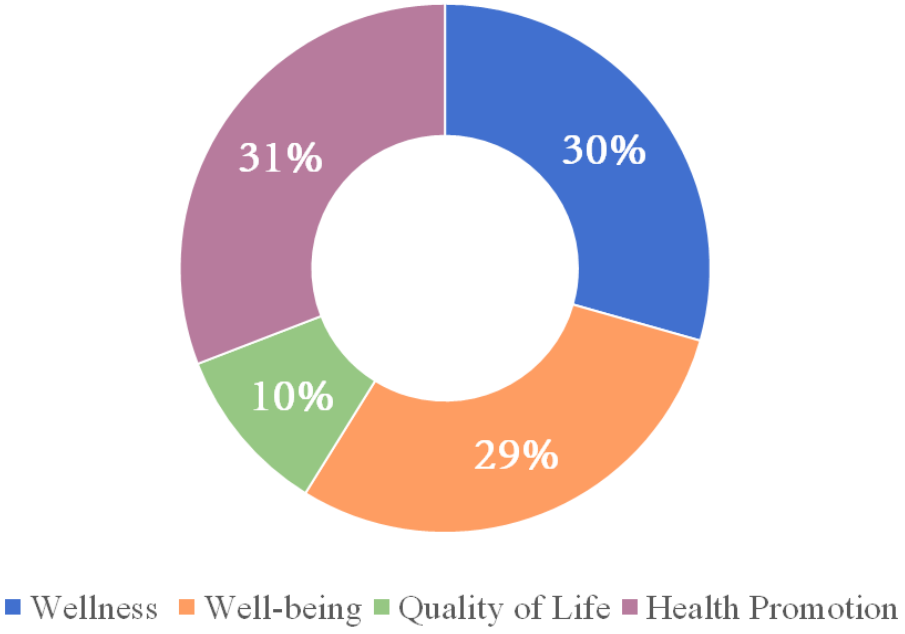


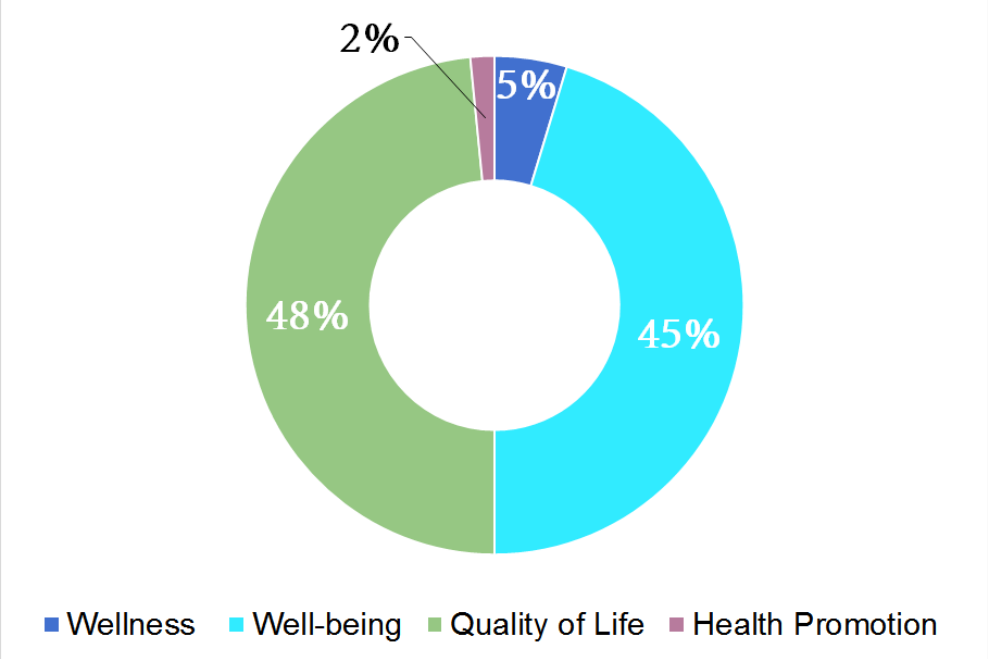
Figure 1. Flow Chart Representative of Culling Process - Articles were retrieved from three databases and underwent multiple rounds of culling until 131 articles remained for analysis. Articles in the study met the inclusion criteria of: being peer-reviewed, written in English, published between 2001 and 2015, and having "Wellness," "Well-being," and/or "Quality of Life" in either the title, keywords, or abstract.

ID: 152		
Categorical Code		QOL
Type of Prevention		Secondary/Tertiary
Content Codes	**Body Systems Addressed?**	Respiratory
	Body Function Addressed?	Pain, mood, fatigue, mental function
	Activities & Participation Addressed?	Mobility, exercise
Country of Origin		Canada
Author Affiliation		Pharmacist, MD, nurse
Purpose		To assess the effects of Iyengar yoga on HRQOL, including fatigue, anxiety, depression, and overall well-being.
Outcome Measures Used		HRQOL: Chronic Respiratory Questionnaire, Hospital Anxiety and Depression Scale, Health Utilities Index, 6MWT (functional mobility), survey of class, journal entries
Core Findings		Improvements in anxiety, fatigue, pain emotion, ambulation, overall HADS scores. Improved breathing capacity, sleep, mobility, energy reported. → IY has significant potential to improve HRQOL in pre-lung transplant pts

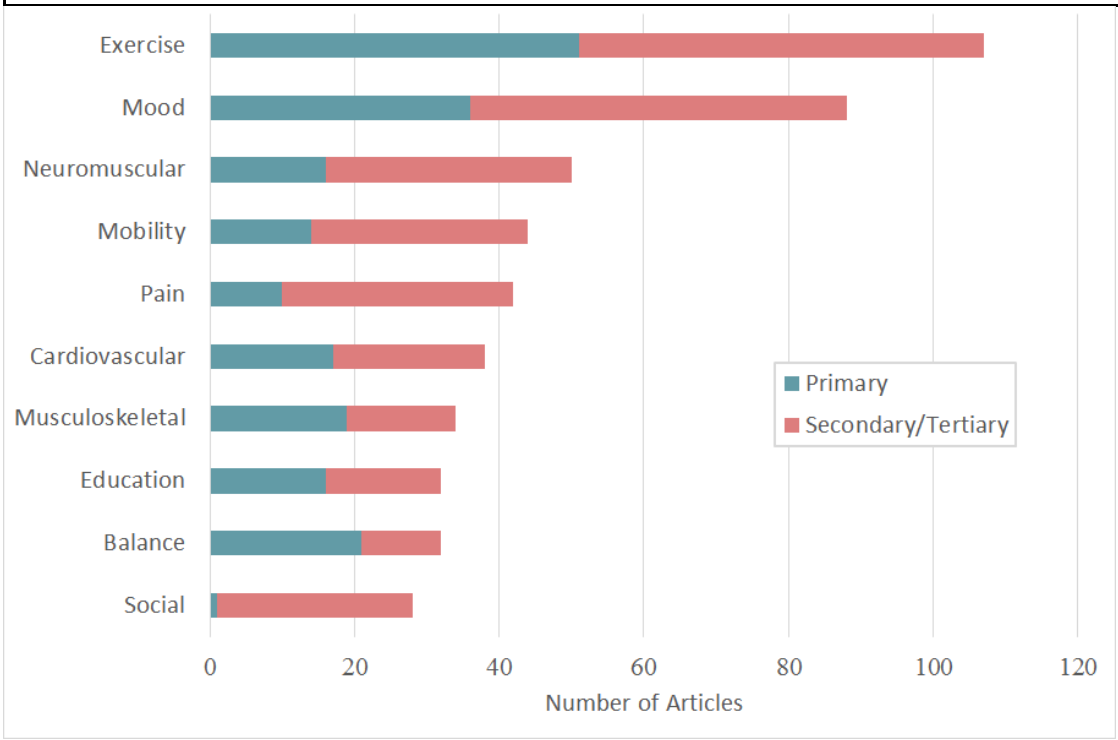
Figure 2. Simplified Coding Rubric - This is a simplified version of the rubric that was utilized for each mapped article during the coding processes. The figure displays the sample completion for different coding categories.



Graph 1. Distribution of Category Codes for Primary Articles

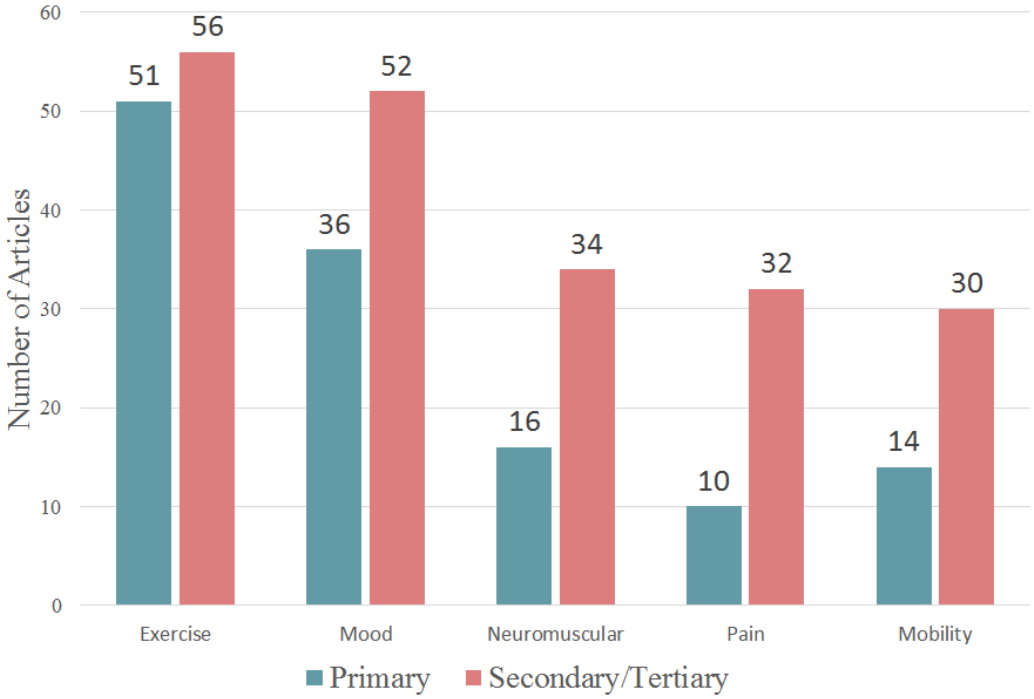


Graph 2. Distribution of Category Codes for Secondary/Tertiary Articles

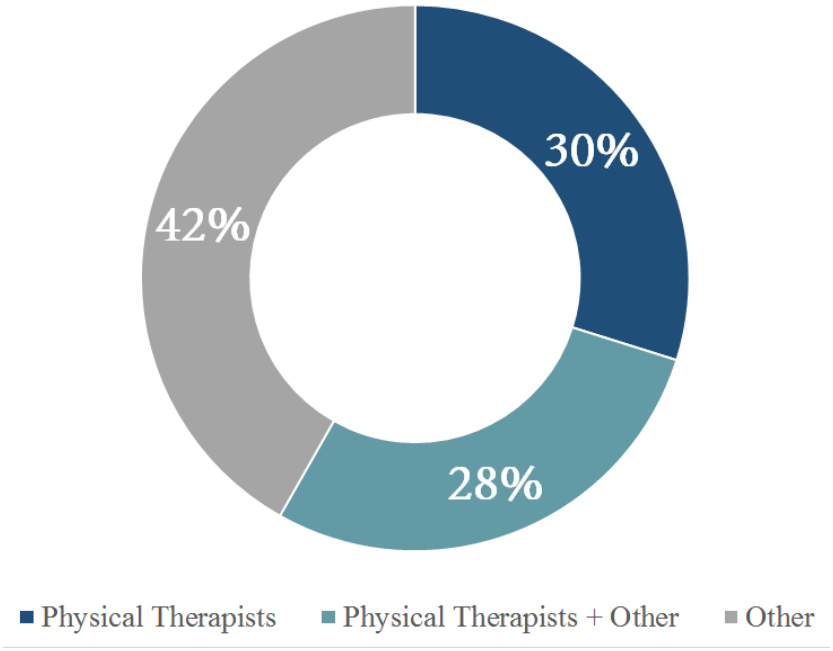


Graph 3. Top Ten Content Codes for All Articles

Graph 4. Top Ten Content Codes for Primary Articles - secondary/tertiary content codes are displayed in red for comparison.



Graph 5. Top Ten Content Codes for Secondary/Tertiary Articles - primary content codes are displayed in blue for reference.



Graph 7. Distribution of Article Professional Affiliation

APPENDIX B: Primary Prevention Resources

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APPENDIX C: Secondary and Tertiary Resources

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