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An Investigation into the Use of Yoga in Recreational Therapy Practice

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AN INVESTIGATION INTO THE USE OF YOGA IN
RECREATIONAL THERAPY PRACTICE

A Thesis
Presented to
the Graduate School of
Clemson University

In Partial Fulfillment
of the Requirements for the Degree
Master of Science
Parks, Recreation, and Tourism Management

by
Abigail K. Wiles
August 2019

Accepted by:
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Dr. Brandi Crowe
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ABSTRACT

Yoga is used in healthcare with a variety of populations, but limited knowledge exists regarding credentials of yoga instructors, duration and frequency of sessions, style of yoga used in treatment, and how, where, and with what populations yoga is being used in Recreational Therapy (RT) practice. The purpose of this study was to investigate and describe how yoga is currently used in RT practice.

As part of a nation-wide survey and individual interviews, this secondary analysis investigated how yoga is being used in RT practice across the United States. Sixteen recreational therapists completed both a nation-wide online survey and semi-structured interviews. Quantitative results describe the populations in which yoga is being used in RT practice, as well as the characteristics of recreational therapists who also are employing yoga in their RT practice. Then, conventional and summative content analysis identified four categories related to yoga in RT practice: recreational therapists' practices, treatment planning, outcomes, and yoga intervention.

Yoga is implemented with a variety of populations as part of RT practice. Yoga should be implemented by recreational therapists who are trained to teach yoga or provide population-specific yoga sessions to meet specific patient needs. Limitations of the study and implications are discussed.

DEDICATION

This research and my graduate school career is dedicated to both of my grandmothers, Joyce Wiles and Judy Cockrell, for believing in my undiscovered abilities, understanding my absence from many family functions, and unconditional love and celebration of my achievements. I admire the courage, stamina, faith, and strength these two women instilled into my upbringing, and that is why I am here today. I love them deeply.

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CHAPTER ONE

INTRODUCTION

Originating in India and the Eastern world, the ancient practice of Yoga, a connection of the mind (meditation/*dyhana*), postures (*asana*), and breathing techniques (*pranayama*), has been around for centuries (Cramer, Lauche, Langhorst, & Dobos, 2016; Yang, 2007). Since its birth, yoga has evolved into several different styles, such as Hatha, Iyengar, Ashtanga, Kundalini, Vinyasa, and Yoga Therapy (Cramer et al. 2016). While yoga has different approaches via the different styles of yoga, collectively yoga traditions share many philosophical foundations and acknowledge that one's body is comprised of energies. Yogic philosophy suggests that if an individual is ill, the cause of their illness is a disturbance in their energy (Sivananda Yoga Vedanta Centre, 1999). According to yogic philosophy, energy flows through the body at a series of different locations called chakras (Sivananda Yoga Vedanta Centre, 1999). Therefore, the specific place of illness on one's body links to an instability in one of the seven chakras (Sivananda Yoga Vedanta Centre, 1999). Initially, yoga was practiced for religious and philosophical purposes only, however this ancient practice has migrated from the East to the West where it can be practiced without religious application (Collins, 1998; Sengupta, 2012).

Yoga was introduced to America during the 1800's through an English translation of the Bhagavad Gita, a Sanskrit scripture, where it created controversy amongst Christians due to its non-Christian roots (Douglass, 2007). An Indian yoga practitioner, Swami Vivekananda, minimized these concerns by presenting yoga as a means to

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achieving physical and mental wellness (Douglass, 2007). Yoga has become increasingly popular in the United States and is practiced by Americans mainly for physical & mental health reasons (Hart, 2008).

Yoga is considered a complementary health approach (CHA) by the National Center for Complementary and Integrative Health (National Center for Complementary and Integrative Health [NCCIH], 2017a). This government agency researches complementary forms of medicine used in healthcare (NCCIH, 2017b). Due to the benefits yoga has shown to elicit, yoga is commonly used as a therapeutic intervention in clinical treatment among individuals with varying disorders and illnesses (e.g. Katzman et al., 2012; Khalsa, 2004; Libby, Reddy, Pilver, & Desai 2012; Van Puymbroeck, Burk, Shiness, Kuhlenschmidt, & Schmid, 2013; Van Puymbroeck et al., 2018; Yang, 2007).

There are many individuals who work in healthcare settings, ranging from physicians to recreational therapists, with the common goal of helping the patient or client. Yoga is identified in the literature as a therapeutic intervention in Physical Therapy (PT) (Beazley, Patel, Davis, Vinson & Bolga, 2017; Galantino et al., 2004), Occupational Therapy (OT) (Mailoo, 2005), and Recreational Therapy (RT) (Bolster et al. 2018; Walter, Van Puymbroeck, Townsend, Linder, & Schmid, 2017) practice. Using recreation and activities as therapy, RT is a healthcare discipline that strives to restore personal independence and functioning, improve quality of life, and decrease barriers to engage in life circumstance among individuals with disability (ATRA, n.d.). Recreational therapists work with variety of populations, including inpatient and outpatient behavioral health, children and adolescents, older adults, inpatient and outpatient physical

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rehabilitation, members of the military and veterans, and in schools. Recreational therapists work with these individuals to help restore their level of functioning while promoting a healthy lifestyle (ATRA, n.d.). RT utilizes a holistic approach to treatment addressing the patients' physical, emotional, cognitive, social, and leisure needs using recreation and leisure activities (ATRA, n.d.). According to Crowe, Van Puymbroeck, and Schmid (2016), yoga can be considered leisure if an individual's motives for participating in leisure mirror one's motives for participating in yoga.

Research has not been conducted on the use of yoga in RT practice pertaining to the credentials of the yoga instructor, the duration and frequency of sessions, and the style of yoga used in treatment, although the use of yoga as a therapeutic intervention in healthcare has been studied (Diorio, et al., 2015; Katzman et al., 2012; Van Puymbroeck et al., 2018; Yang, 2007). However, a study looking at the use of yoga therapy as an intervention in the Department of Veteran's Affairs (VA) concluded that a small number of VA mental health staff are not trained to teach yoga, and that many programs were unaware if the individuals teaching yoga were certified to do so (Libby et al., 2012).

Though there is knowledge that yoga is used in clinical practice in many rehabilitation professions (i.e., PT (Beazley, Patel, Davis, Vinson & Bolga, 2017; Galantino et al., 2004) OT (Mailoo, 2005; Stroller et al., 2012), and RT practice (Bonadies, 2004; Sareen, Kumari, Gajebasia, & Gajebasia, 2007)), there exists a gap in the literature pertaining to how yoga is used in RT practice. There is a need for understanding how, where, and with what populations yoga is being used as treatment. Other information, such as who is teaching yoga and the level of training of the

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individuals teaching is scarce. Since yoga is being used as a therapeutic intervention, it is important to understand how and for what purpose recreational therapists are using this practice with their patients and clients.

CHAPTER TWO

LITERATURE REVIEW

History of Yoga and Yoga Philosophy

Archeological findings reveal the existence of yoga as early as 3,000 B.C. in the Harappan period (Sengupta, 2012; Werner, 1975). These findings include stone seals displaying images of what appears to be yoga meditation, as evidenced by an individual resting in a seated position (Sengupta, 2012; Werner, 1975). The individual depicted on the seal is recognized by some historians as Siva, the god of yoga, and the seated position is thought to be a variation of *Mulabandhasana* (root lock pose) and *Goraksasana* (sage goraksa pose), which are two similar looking yoga postures (McEvelley, 1981). Yoga has also appeared in many early Eastern religions, such as in the Vedic's sacred script, the Atharva Veda. Within the Atharva Veda's hymns, yoga is discussed as part of a religious practice, and references breathing techniques as spiritual rituals (Werner, 1975). Yoga is also mentioned in the religious writings of the Hindu Upanishads and began to appear after 800 B.C. in religions such as Jainism and Buddhism (Sengupta, 2012; Werner, 1975).

Around 300 BC, Patanjali was the first to comprise yoga traditions into an applied standardized system of practice and written text called the Yoga Sutras (Sengupta, 2012). The Yoga Sutras convey a common theme among Indian culture: one can achieve transcendent mindfulness and attention through the practice of yoga. The writings of Patanjali include an eight-fold path or eight limbs that describe how a person can achieve this state of divine being (Collins, 1998; Jain & Jain, 1973; Sengupta, 2012). Each step

along the path represents a concept one must attain before proceeding further: “*Yama* (universal ethics), *niyama* (individual ethics), *asana* (physical postures), *pranayama* (breath control), *pratyahara* (control of the senses), *dharana* (concentration), *dyana* (meditation), and *samadhi* (bliss)” (Sengupta, 2012, p. 445). Therefore, if a person were to reach *samadhi*, they were considered to be in a state of union with the world. Patanjali called this type of yoga “Classical Yoga” or “Ashtanga Yoga;” and since Patanjali, multiple yoga teachers have emerged out of India, including Krishnamacharya, who instructed many of his students to introduce yoga to the public (Sengupta, 2012).

Movement to the United States

A translation of the Bhagavad Gita, a sacred Hindu text, from Sanskrit to English was developed by Charles Wilkins in Europe in 1785 (Douglass, 2007). Some years later, in the mid- 1800’s, Wilkins’ translation made its way to the United States where it sparked interest and eventually controversy in academia and in the public (Douglass, 2007). Ralph Waldo Emerson (1803-1880), an American poet and philosopher, shared his passion for Wilkin’s translation of the Bhagavad Gita and yoga philosophy with his student, Henry David Thoreau (1817-1862). Thoreau’s study of yoga developed into a passion to practice yoga. His public yoga practice opposed the predominately Christian belief system and produced controversial questions in regard to combining the two practices together. Max Muller, a German scholar, wrote interpretations of Vedic texts in the 1800’s both praising and condemning these writings and yoga practice (Douglass, 2007). Practicing Hindus viewed his writings as disrespectful and racist. It is speculated that due to the unfavorable effects his writings had on Hinduism and yoga, Indian

philosophy was deemphasized and separated from yoga practice in America (Douglass, 2007).

Swami Vivekananda changed the American perspective of yoga from that of blasphemy to acceptance and interest by claiming that it was not just for Hindus but, “...something accessible to all, and of central value to anyone concerned with health and freedom” (Douglass, 2007, p. 37). In 1893, Vivekananda spoke at the World Parliament of Religions about his views on yoga and became well known as the man who introduced yoga to America (Douglass, 2007; Sengupta, 2012). He presented yoga as, “...a discipline to free humanity from its mental constraints and an avenue toward greater physical health” (Douglass, 2007, p. 37). In other words, although the physical act of doing yoga involves two of the eight limbs proposed by Patanjali (*asana* and *pranayama*), the physical yoga practice does not inherently involve religion. Since yoga’s migration to the West, more and more people report including this practice. Around 21 million American adults, mostly females, claim to practice yoga at least one time a year (Cramer et al., 2016). Within the last few decades, in the United States, yoga practitioners have begun to separate religion from yoga, and in turn, engage in yoga for health reasons (Hart, 2008; Sengupta, 2012).

Transition to Healthcare

It is speculated by some scholars that Eastern medicine might have recognized treatment of mental and physical conditions long before Western medicine’s scientific approaches (Collins, 1998; Hart, 2008). Eastern medicine viewed the internal body as made up of energy structures and based its healing techniques off studying the living

body and how these energies affected an individual's physical and mental health (Collins, 1998). Yoga became a topic of medical research in India when Swami Kuvalyananda conducted studies on the biological effects of meditation, *asana*, and *pranayama* beginning in the 1920's (Khalsa, 2004; Newcombe, 2009). Kuvalyananda explained yoga concepts in a way that attracted westernized medicine and science. In fact, Western medicine has started to recognize yoga, a form of Eastern medicine, as being a suitable treatment for integration into healthcare due to its many benefits related to maintaining health and wellness (Collins, 1998; Douglass, 2007; Hart, 2008). "The ultimate aim of the medical sciences is the attainment of optimum physical and mental health for the individual. The ultimate aim of yogic practices is also the same, viz. physical and mental well-being" (Anand, 1991, p. 84).

Complementary and integrative health. NCCIH, formally known as the National Center for Complementary and Alternative Medicine, is a government agency that researches complementary and integrative health interventions used in healthcare (NCCIH, 2017a; NCCIH, 2017b). NCCIH has defined these interventions as CHA and categorizes them into two subgroups: natural products, and mind and body practices (NCCIH, 2017a). Botanicals, vitamins, and probiotics are types of natural products while yoga, massage, tai chi, and other relaxation techniques are mind and body practices (NCCIH, 2017a). According to the NCCIH (2017a), mind and body practices are techniques taught by trained practitioners or teachers. Yoga is categorized in the mind and body subgroup due to integration of meditation, *asana*, and *pranayama* (NCCIH, 2017a). This mind-body intervention is known for its ability to aid in the treatment of the

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symptoms of both physical and mental conditions (Chobe, Bhargav, Raghuram, & Garner, 2016; Hart, 2008; Schmid et al., 2015). CHA has become a popular adjunctive form of treatment in rehabilitation therapies as well as a form of personal care in the American population because of their holistic nature (Hart, 2008).

Yoga as a Healthcare Treatment Modality

Physicians are beginning to recommend yoga to their patients. However, physicians should be aware of the different styles of yoga as well as the special trainings and credentials of the yoga teacher to whom they refer their patients or clients (Forbes, 2010; Riley, 2004). Healthcare personnel who become interested in sharing yoga and wish to obtain additional credentials, can attend specialized training programs to obtain registered yoga teacher (RYT-200, 300, or 500) certifications. There is also an association called the International Association of Yoga Therapists that provides certification for individuals who become yoga therapists (C-IAYT). Yoga therapists are certified to practice the discipline of yoga therapy. Yoga therapy, although uses yoga techniques and philosophy, is different than yoga alone. Yoga therapy intentionally treats physical, emotional and mental diagnoses through individualized sessions (GoodTherapy, 2017; Hart, 2008; YogaTherapy.Health, n.d.). Registered yoga teachers should refrain from labeling their classes and practices as yoga therapy as it is out of their scope of practice (Hart, 2008; Yoga Alliance, n.d.).

Rehabilitation consists of many disciplines, three of which are PT, OT, and RT. These three disciplines, along with others, work together on interdisciplinary teams in different types of settings to help treat patients. An interdisciplinary team works

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collectively to formulate treatment goals and outcomes for their patients (Körner, 2010). While there is limited evidence about yoga as part of usual care in rehabilitation, a few studies exist. The use of yoga therapy as an intervention was found feasible to include in existing inpatient interdisciplinary rehabilitation treatment (Van Puymbroeck, Miller, Dickes, & Schmid, 2015).

A combined form of yoga and PT, called integrated yoga and physical therapy (IYP), has been used as treatment for patients at an inpatient rehabilitation facility (Chobe, Bhargav, Raghuram, & Garner, 2016). IYP consists of yoga *asana*, *pranayama*, chanting, relaxation techniques, and PT interventions such as physiotherapy, and ergometry (Chobe et al., 2016). Other research reports that yoga poses could be used alongside of but separate to PT, or as a substitute treatment, and physical therapists were encouraged to use the results from the study when making treatment plans for their patients (Beazley, Patel, Davis, Vinson & Bolgla, 2017). A common theme between the previous study and another study was that yoga can complement PT practice. In this study, the physical therapist, who specialized in spinal care, and two experienced yoga teachers created a gentle hatha yoga sequence for participants (Galantino et al., 2004). Yogic principles such as *yamas* and *niyamas* were incorporated at the beginning of the yoga sequence followed by postures and meditation. Furthermore, a review of PT interventions categorized yoga as being a “modality of physical therapy” (Vancampfort et al., 2014, p. 630).

Yoga is used in OT practice as well. A study on the effects of a yoga program for members of the military serving overseas suggests that, “Yoga has been accepted by the

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occupational therapy profession as an evidenced-based treatment modality that, with proper training, can be incorporated into the therapeutic process as a preparatory or purposeful activity” (Stroller, Greuel, Cimini, Fowler, & Koomar, 2012, p. 66). Based in yoga philosophy, it was believed that one could regulate problems in his or her daily life by practicing yoga with purposeful attention on the energies within the body (Mailoo, 2005). Therefore, “occupational imbalance and occupational alienation” are diminished by practicing yoga, making it appropriate for application in OT (Mailoo, 2005, p. 575).

Recreational Therapy and Yoga

RT is a field that addresses the physical and mental health of individuals with health conditions by using recreation and leisure activities as therapy to promote quality of life, well-being, independent functioning, and to reduce limitations to life activities (ATRA, n.d.). There is a dearth of information in the RT literature that describes how yoga is used in practice. While statements have been made that RT has used CHA as an intervention in the treatment of patients (Bonadies, 2004; Sareen et al., 2007), and yoga is mentioned as conventional RT intervention, there is little evidence in the literature to support how recreational therapists are using yoga in RT practice (Bonadies, 2004), although a few RT textbooks categorize yoga as a mind-body intervention (Van Puymbroeck & Schmid, 2016), a moving meditation facilitation technique (Austin, 2018), and a stress management facilitation technique (Meckley, Dattilo, & Malley, 2011), it is unknown how these techniques are used with patients.

Importantly, more information is needed about the credentials of the individuals leading the sessions, the duration and frequency of the sessions, the setting of the

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sessions, and the styles of yoga chosen for implementation. Limited information is known about the credentials of the individuals teaching yoga in RT, even though the literature recommends that an individual who teaches yoga to individuals with disabling conditions be both experienced with the population and a trained yoga teacher (Cohen et al., 2007; Douglass, 2009; Hart, 2008; Libby et al., 2012; Sareen et al., 2007; Sherman, Cherkin, Erro, Miglioretti, & Deyo, 2005), therefore it is important to understand the credentials of individuals teaching yoga as part of RT practice. Further, it is recommended that any recreational therapist have training and an understanding of yoga before using it as an intervention with their clients (Sareen et al., 2007).

As stated by Bonadies (2004), "...it will only benefit recreation therapists to take advantage of a modality such as yoga to assist in the self-management of illness and disease" (p. 165). In order to investigate these topics, an in-depth study needs to be conducted within the field of RT, similar to the one conducted by Libby, Reddy, Pilver, and Desai (2012), which investigated how yoga and other mindfulness practices were being used with the VA Healthcare System. They concluded that yoga and other mindfulness practices are extensively offered to patients within the VA and that, "understanding how yoga is used by these programs may inform ongoing efforts to define and distinguish yoga therapy as a respected therapeutic discipline" (Libby et al., 2012, p. 79). It is important for the field of RT to understand how yoga is being implemented in order to lay a foundation for the use of yoga as an appropriate therapeutic intervention.

Application of The Health Protection/ Health Promotion Model

Investigation into how yoga is being used in RT can be supported by the Health Protection/Health Promotion Model (HP/HP Model). Recreational therapists use models such as this one to aid in the Assessment, Planning, Implementation, Evaluation, and Documentation (APIED) process when working with clients or patients. This model is based on the premise that RT uses leisure, recreation and activities to help people overcome barriers and to obtain health and wellness (Austin, 1998).

This model operates on four concepts: a "...humanistic perspective, high-level wellness, the stabilization and actualization tendencies, and health" (Austin, 1998, p. 110). The humanistic perspective assumes that all individuals are responsible for their own health and wellness, and that humans possess physical, mental, emotional, social, and spiritual domains. Therefore, recreational therapists should focus on the unique qualities of each patient while attending to all aspects of that individual (Austin, 1998; Powell & Sable, 1990). Yoga is an example of a holistic intervention that not only focuses on the physical aspects of a person, but it also works to heal the mind (Chobe et al., 2016; Hart, 2008; Schmid et al., 2015). High-level wellness is also a holistic concept in that it focuses on the capability of increasing one's potential. This concept focuses on the strengths of a person rather than the weaknesses, such as a disability or health condition, therefore contrasting western medical approaches. For example, an individual's world in a healthcare setting revolves around their illness, disease, impairment, or disability. Focusing on and constantly discussing patient disabilities rather than abilities is a lot to manage for patients, and these individuals may wish to seek forms

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of treatment that focus on their abilities or what they can do (Hart, 2008). The stabilization tendency intrinsically helps individuals manage stress and avoid harmful situations (health protection) (Austin, 1998). The actualization tendency enforces health promotion meaning that it helps one to advance toward health and well-being (Pender, 1996). Health implies the possession of positive ways to cope with stress, being able to adapt to life situations, and fulfilling relationships. One who is healthy has the ability to reach goals and grow into their fullest potential (Austin, 1998). Relatedly, research suggests that yoga can be an effective form of coping (Crowe, Van Puymbroeck, & Schmid, 2016).

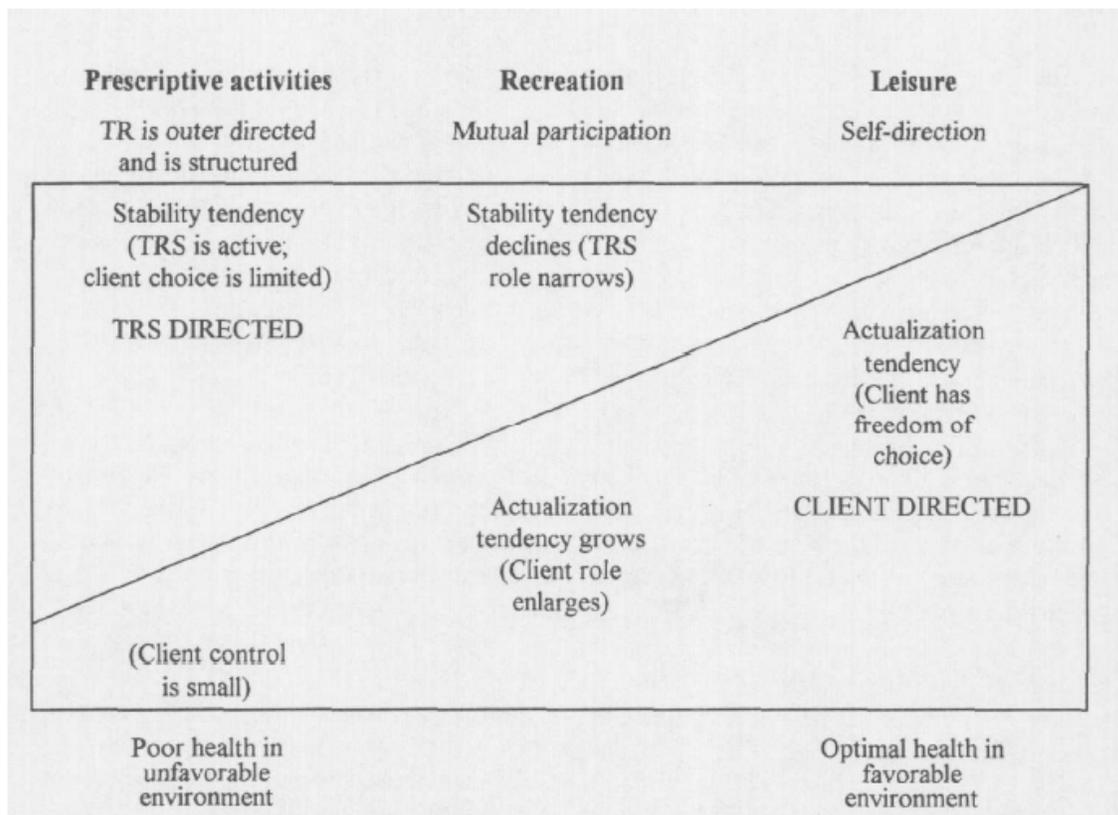


Figure 1. Health Protection/Health Promotion Model. Austin, D.R. (1998). The health protection/health promotion model. *Therapeutic Recreation Journal*, 32(2), 109.

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Referring to Figure 1, the HP/HP Model has three components that are placed along a continuum of “poor health on one end and optimal health on the other,” and the patient or client is placed on the continuum wherever they currently fit best (Austin, 1998, p. 112). Prescriptive activities, recreation, and leisure are the three components that patients or clients use as a means to reach health and wellness. The autonomy of the patient to make decisions about his or her own health increases as he or she moves along the continuum, and eventually assistance from the recreational therapist is not required. In regard to yoga as an RT intervention, the recreational therapist would prescribe yoga sessions for a patient or client on the poor health end of the continuum where yoga would be considered a prescriptive activity. Once the patient or client began to feel successful in his or her environment and began to acknowledge their skill level, the role of the recreational therapist would decrease. When the role of the recreational therapist decreases, the prescribed activity becomes recreation (Austin, 1998). Recreation, in this framework, could “...restore or refresh physically, mentally and spiritually” (Austin, 1998, p. 113). Once the patient or client begins to show mastery and displays the ability to engage in recreation for the sole purpose of engaging in that activity, the role of the therapist diminishes, and recreation becomes leisure. According to Crowe, Van Puymbroeck, and Schmid (2016), yoga can be considered leisure if an individual’s motives for participating in leisure mirror one’s motives for participating in yoga.

Investigating the Use of Yoga in RT Practice

Yoga is shown to elicit many benefits and health outcomes. PT, OT, and other medical professionals use yoga or recommend their patients participate in yoga. RT

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literature reports that yoga is a conventional RT intervention, however there is little evidence in the literature to support how recreational therapists are using yoga in RT practice (Bonadies, 2004). Research has not been conducted on the use of yoga in RT practice pertaining to the credentials of the yoga instructor, duration and frequency of sessions, style of yoga used in treatment, and how, where, and with what populations yoga is being used although the use of yoga as a therapeutic intervention in healthcare has been studied (Diorio, et al., 2015; Katzman et al., 2012; Van Puymbroeck et al., 2018; Yang, 2007). Therefore, the purpose of this study is to investigate these concepts in order to describe the use of yoga in RT practice.

CHAPTER THREE

METHODS

Using an exploratory research design, individual interviews were employed following a nation-wide survey, to describe how recreational therapists use yoga as a therapeutic intervention in healthcare. This study is part of a larger study understanding how yoga is used in healthcare. Specifically, this study aims to better understand and describe the populations in which recreational therapists are using yoga, when they choose to use yoga with different clients/patients in RT practice, what training these individuals have to use yoga with their patients, and their purpose for using yoga as part of RT practice.

Participants

After receiving IRB approval from the two universities involved in the study, purposive sampling was used to recruit participants for the study through the distribution of information via social media groups such as Bridge Builders to Healthcare, professional RT and yoga listservs, and emails to the members of the International Association of Yoga Therapists. Using snowball sampling, survey participants were encouraged to share the survey link with other professional colleagues who use yoga in clinical practice. The survey was open to all healthcare professionals, however for the purposes of this study, only information collected from recreational therapists was included. Individuals eligible for participation in this study were recreational therapists who have graduated from a RT program and have or currently use yoga in clinical

practice. To be included in these data analyses, participants must have completed both surveys and interviews.

Data Collection

Demographic data. During the nation-wide survey using Qualtrics, data specific to participant demographics, including professional credentials and work experience, personal and professional background, experience with yoga, and use of yoga in clinical practice, including when, with whom, and for what purpose they use yoga in clinical practice were collected.

Qualitative interviews. Individuals who identified that they were willing to participate in a follow-up semi-structured interview were contacted by a research assistant to receive verbal consent and schedule an interview. Once scheduled, interviews were completed by a research assistant via phone or email. Interviews conducted by phone were audio-recorded. The audio-recorded interviews were transcribed verbatim by the first author of this study and a research assistant. Responses to interview questions obtained via email were saved as originally received and were used verbatim for analyses. Prior to analysis, qualitative data were de-identified and labeled with pseudonyms to protect the privacy of the participants. The purpose of the individual interviews was to obtain more in-depth information regarding how, why, and in what way recreational therapists integrate yoga into their clinical practice. The semi-structured interview consisted of four questions that were used as guidelines for the interview; additional probes were asked by the research assistant to obtain more detailed information from participants (see Appendix B).

Data Analysis

Quantitative analysis. Demographic data were exported into SPSS 22.0 for data analysis. Descriptive statistics, including the calculation of frequencies and percentages of categorical variables, were used to describe the study participants.

Qualitative analysis. A combination of two types of content analysis were used to analyze qualitative data: conventional content analysis and summative content analysis (Hsieh & Shannon, 2005). Conventional content analysis is used when describing a topic with limited knowledge and research. When conducting conventional content analysis, researchers allow subcategories and categories to emerge from participant comments. In this study, each transcript was read multiple times in order to achieve a thorough understanding of the information shared by participants. Next, similar concepts from the data were grouped together into codes. Multiple codes were collected from the data that represent important concepts and put into subcategories based on similar qualities they possessed. Next, the subcategories were sorted into categories. After finalization of categories, summative content analysis was implemented to count the number of participant comments representative of specific subcategories and categories. Categories formulated from the data were put into a hierarchical structure and relationships between categories were determined (Hsieh & Shannon, 2005).

Credibility and trustworthiness. Prior to analysis, the first author met with research team members to discuss guidelines regarding the transcription process (e.g. instructions for obtaining verbal consent, transcript formatting, de-identification, and protocol when a participant's answer is unclear). Completed transcripts were checked for

accuracy prior to analysis by re-listening to recorded interviews. In order to strengthen credibility during analysis and interpretation, the first author wrote personal biases, opinions, and experience pertaining to yoga and RT in a bracketing journal before data analysis. The first author and a research assistant analyzed qualitative data independent of one another. During analysis, the first author practiced reflexivity by documenting ideas related to potential patterns, concepts, and codes after each reading of the transcripts. The first author and research assistant worked together in order to determine appropriate titles for each category. Once categories and subcategories were finalized, the first author and research assistant met to discuss their agreement of qualitative categories and interpretation of results (Creswell, 2014). Finally, detailed descriptions were used to convey the findings of this study. Included in these detailed descriptions, if found, are also discrepant information or contradictory findings that counter the commonalities discovered.

CHAPTER FOUR

MANUSCRIPT

AN INVESTIGATION INTO THE USE OF YOGA IN RECREATIONAL THERAPY
PRACTICE

This article will be submitted to:

Therapeutic Recreation Journal

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Keywords: yoga, recreational therapy, healthcare, credentials, recreational therapist,
intervention

Abstract

Background. Yoga is used in healthcare with a variety of populations, but limited knowledge exists regarding credentials of yoga instructors, duration and frequency of sessions, style of yoga used in treatment, and how, where, and with what populations yoga is being used in Recreational Therapy (RT) practice. The purpose of this study was to investigate and describe how yoga is currently used in RT practice.

Method. As part of a nation-wide survey and individual interviews, this secondary analysis investigated how yoga is being used in RT practice across the United States.

Results. Sixteen recreational therapists completed both a nation-wide online survey and semi-structured interviews. Quantitative results describe the populations in which yoga is being used in RT practice, as well as the characteristics of recreational therapists who also are employing yoga in their RT practice. Then, conventional and summative content analysis identified four categories related to yoga in RT practice: recreational therapists' practices, treatment planning, outcomes, and yoga intervention.

Conclusions. Yoga is implemented with a variety of populations as part of RT practice. Yoga should be implemented by recreational therapists who are trained to teach yoga or provide population-specific yoga sessions to meet specific patient needs. Limitations of the study and implications are discussed.

Introduction

Originating in India and the Eastern world, the ancient practice of yoga, a connection of the mind (meditation/*dyhana*), postures (*asana*), and breathing techniques (*pranayama*), has been around for centuries (Cramer, Lauche, Langhorst, & Dobos, 2016; Yang, 2007). Around 300 BC, Patanjali became the first person to comprise yoga traditions into an applied, standardized system of practice and written text called the Yoga Sutras (Sengupta, 2012). The Yoga Sutras convey a common theme among Indian culture: one can achieve transcendent mindfulness and attention through the practice of yoga. Since Patanjali, multiple yoga teachers have emerged out of India, including Krishnamacharya, who instructed many of his students to introduce yoga to the public (Sengupta, 2012). Many of these students were men, and during the late 19th century, Indian yoga schools were strictly for boys (Sengupta, Chaudhuri, & Bhattacharya, 2013). Initially, yoga was practiced for religious and philosophical purposes only, however this ancient practice has migrated from the East to the West where it can be practiced without religious application (Collins, 1998; Sengupta, 2012).

Yoga was introduced to America during the 1800's through an English translation of the Bhagavad Gita, a Sanskrit scripture, which created controversy amongst Christians due to its non-Christian roots (Douglass, 2007). An Indian yoga practitioner, Swami Vivekananda, minimized these concerns by presenting yoga as a means to achieving physical and mental wellness (Douglass, 2007). He changed the American perspective of yoga from that of blasphemy to acceptance and interest by reporting that it was not just for Hindus but, "...something accessible to all, and of central value to anyone concerned

with health and freedom” (Douglass, 2007, p. 37). Yoga has become increasingly popular in the United States and is practiced by Americans mainly for physical and mental health reasons (Hart, 2008). Recently, researchers reported that approximately 21 million American adults practice yoga at least one time a year (Cramer et al., 2016).

Western medicine has started to recognize yoga as a suitable treatment to be integrated into healthcare due to its many health and wellness benefits (Collins, 1998; Douglass, 2007; Hart, 2008). “The ultimate aim of the medical sciences is the attainment of optimum physical and mental health for the individual. The ultimate aim of yogic practices is also the same, viz. physical and mental well-being” (Anand, 1991, p. 84). Yoga is considered a complementary health approach (CHA) by the National Center for Complementary and Integrative Health (National Center for Complementary and Integrative Health [NCCIH], 2017a). According to the NCCIH (2017a), mind and body practices are techniques taught by trained practitioners or teachers. Yoga is categorized in the mind and body subgroup as *dyhana*, *asana*, and *pranayama* integrate both the mind and body (NCCIH, 2017a). Due to the benefits yoga has shown to elicit, yoga is commonly used as a therapeutic intervention in healthcare among individuals with varying disorders and illnesses (e.g. Katzman et al., 2012; Khalsa, 2004; Libby, Reddy, Pilver, & Desai 2012; Van Puymbroeck, Burk, Shinew, Kuhlenschmidt, & Schmid, 2013; Van Puymbroeck et al., 2018; Yang, 2007).

Physicians are beginning to recommend yoga to their patients. However, different styles of yoga, as well as the special trainings and credentials of the yoga teacher are important considerations in the referral process (Forbes, 2010; Riley, 2004). Specialized

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training programs exist for individuals to obtain registered yoga teacher certifications (RYT-200, 300, or 500) or specific population trainings (e.g. children specific yoga). There is also a certification for individuals to become a certified yoga therapist (C-IAYT). Yoga therapists are certified to practice the discipline of yoga therapy, which intentionally treats physical, emotional and mental diagnoses through individualized yoga sessions (GoodTherapy, 2017; Hart, 2008; YogaTherapy.Health, n.d.), while yoga practice is more generally focused on personal well-being.

Three healthcare disciplines within rehabilitation that may use yoga as a therapeutic intervention are Physical Therapy (PT), Occupational Therapy (OT), and Recreational Therapy (RT). While there is limited evidence about yoga integrated into healthcare practice as usual care, a few studies exist. The use of yoga as an intervention was found feasible and beneficial in inpatient rehabilitation treatment (Schmid et al. 2015; Van Puymbroeck, Miller, Dickes, & Schmid, 2015). A combined form of yoga and PT, called integrated yoga and physical therapy (IYP), was found to be feasible for patients at an inpatient rehabilitation facility (Chobe, Bhargav, Raghuram, & Garner, 2016). IYP consists of yoga *asana*, *pranayama*, chanting, relaxation techniques, and PT interventions such as physiotherapy and ergometry (Chobe et al., 2016). Authors of a study on the effects of a yoga program for members of the military serving overseas stated that, “Yoga has been accepted by the occupational therapy profession as an evidenced-based treatment modality that, with proper training, can be incorporated into the therapeutic process as a preparatory or purposeful activity” (Stroller, Greuel, Cimini, Fowler, & Koomar, 2012, p. 66). In addition, recently researchers found that recreational

therapists might use yoga in conjunction with self-management strategies for individuals with chronic stroke (Bolster et al., 2018), and recreational therapists might use yoga to reduce depression, anxiety, and improve physical fitness with informal caregivers of individuals with chronic disease (Walter, Van Puymbroeck, Townsend, Linder, & Schmid, 2017). Importantly, though there is evidence that yoga is used in clinical practice in many healthcare professions (i.e. PT (Beazley, Patel, Davis, Vinson & Bolga, 2017; Galantino et al., 2004), OT (Mailoo, 2005; Stroller et al., 2012), and RT (Bonadies, 2004; Sareen et al., 2007)), there exists a gap in the literature pertaining to how yoga is used in RT practice.

Investigating the Use of Yoga in RT Practice

While a few RT textbooks categorize yoga as a mind-body intervention (Van Puymbroeck & Schmid, 2016), a moving meditation facilitation technique (Austin, 2018), a stress management facilitation technique (Meckley, Dattilo, & Malley, 2011), and yoga is mentioned as a conventional RT intervention (Bonadies, 2004), there is little evidence in the literature to describe how recreational therapists are using yoga in RT practice. Furthermore, the literature recommends that practitioners who teach yoga to individuals with disabling conditions be both experienced with the population and a trained yoga teacher (Cohen et al., 2007; Douglass, 2009; Hart, 2008; Libby et al., 2012; Sareen et al., 2007; Sherman, Cherkin, Erro, Miglioretti, & Deyo, 2005), therefore it is important to understand the credentials of the individuals teaching yoga as part of RT practice. Further, it is recommended that any therapist have training and an understanding of yoga before using it as an intervention with their clients (Sareen et al., 2007). Research

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has not been conducted on the use of yoga in RT practice pertaining to the credentials of the yoga instructor, duration and frequency of individual and group sessions, style of yoga used in treatment, and how, where, and with what populations yoga is being used. Therefore, the purpose of this study is to investigate these concepts in order to describe the use of yoga in RT practice.

Methods

Using an exploratory research design, individual interviews were employed following a nation-wide survey to describe how recreational therapists use yoga as a therapeutic intervention in healthcare. This study is part of a larger study understanding how yoga is used in healthcare. Specifically, this secondary analysis aims to better understand and describe the populations in which recreational therapists are using yoga, when they choose to use yoga with different clients/patients in RT practice, what training these individuals have to use yoga with their patients, and their purpose for using yoga as part of RT practice.

Participants

After receiving IRB approval from the two universities involved in the study, purposive sampling was used to recruit participants for the study through the distribution of information via social media groups such as Bridge Builders to Healthcare, professional RT and yoga listservs, and emails to the members of the International Association of Yoga Therapists. Using snowball sampling, survey participants were encouraged to share the survey link with other professional colleagues who use yoga in clinical practice. The survey was open to all healthcare professionals, however for the

purposes of this study, only information collected from recreational therapists was included. Individuals eligible for participation in this study were recreational therapists who have graduated from a RT program and have or currently use yoga in clinical practice. To be included in these data analyses, participants must have completed both surveys and interviews.

Data Collection

Demographic data. Qualtrics was used for the nation-wide survey; data specific to participant demographics, including professional credentials and work experience. Recreational therapists' characteristics such as personal and professional background, experience with yoga, and use of yoga in clinical practice, including when, with whom, and for what purpose they use yoga in clinical practice were also collected.

Qualitative interviews. Individuals who identified that they were willing to participate in a follow-up semi-structured interview were contacted by a research assistant to receive verbal consent and schedule an interview. Once scheduled, interviews were completed by a research assistant via phone or email. Interviews conducted by phone were audio-recorded. The audio-recorded interviews were transcribed verbatim by the first author of this study and one research assistant. Responses to interview questions obtained via email were saved as originally received and were used verbatim for analyses. Prior to analysis, qualitative data were de-identified and labeled with pseudonyms to protect the privacy of the participants. The purpose of the individual interviews was to obtain more in-depth information regarding how, why, and in what way

recreational therapists integrate yoga into their clinical practice. The semi-structured interview consisted of four primary questions that were used as guidelines for the interview; additional probes were asked by the research assistant to obtain more detailed information from participants.

Data Analysis

Quantitative analysis. Demographic data, including characteristics of the recreational therapists were exported from Qualtrics into SPSS 22.0 for data analysis. Descriptive statistics, including the calculation of frequencies and percentages of categorical variables, were used to describe the study participants.

Qualitative analysis. A combination of two types of content analysis were used to analyze qualitative data: conventional content analysis and summative content analysis (Hsieh & Shannon, 2005). Conventional content analysis is used when describing a topic with limited existing knowledge and research. When conducting conventional content analysis, researchers allow subcategories and categories to emerge from participant comments. In this study, each transcript was read multiple times in order to achieve a thorough understanding of the information shared by participants. Next, similar concepts from the data were grouped together into codes. Multiple codes were collected from the data that represent important concepts and put into subcategories based on similar qualities they possessed. Next, the subcategories were sorted into categories. After finalization of categories, summative content analysis was implemented to count the number of participant comments representative of specific subcategories and categories.

Categories formulated from the data were put into a hierarchical structure and relationships between categories were determined (Hsieh & Shannon, 2005).

Credibility and trustworthiness. Prior to analysis, the first author met with research team members to discuss guidelines regarding the transcription process (e.g. instructions for obtaining verbal consent, transcript formatting, de-identification, and protocol when a participant's answer is unclear). Completed transcripts were checked for accuracy prior to analysis by re-listening to recorded interviews. In order to strengthen credibility during analysis and interpretation, the first author wrote personal biases, opinions, and experiences pertaining to yoga and RT in a bracketing journal before data analysis. The first author frequently checked the journal to identify bias that could have affected data analysis. The first author and a research assistant analyzed qualitative data independent of one another. During analysis, the first author practiced reflexivity by documenting ideas related to potential patterns, concepts, and codes after each reading of the transcripts. The first author and research assistant worked together in order to determine appropriate titles for each category. Once categories and subcategories were finalized, the first author and research assistant met to discuss their agreement of qualitative categories and interpretation of results (Creswell, 2014). Finally, detailed descriptions were used to convey the findings of this study. Included in these detailed descriptions, if found, are also discrepant information or contradictory findings that counter the commonalities discovered.

Results

Twenty-four surveys were attempted and 16 were included in the final analysis, due to the elimination of eight. Sixteen individuals completed both the survey and participated in an individual interview. Of these 16 surveys, 12 were completed online and four completed using an older hard copy version of the survey which had two fewer questions than the online version.

Demographic Data

The demographic data are summarized here, however, for additional details on the demographic data, see Table 1. Of the 16 recreational therapists who completed the survey, the majority were female (93.8%) and white (81.3%). The average age of participants was 39.4 ± 11.4 years. Participants indicated living in 13 states across the United States. All study participants were Certified Therapeutic Recreation Specialists (CTRS) working in RT. Half of study participants (50%) reported practicing RT four to 10 years. Fourteen participants (87.5%) indicated that they had their own personal yoga practice, and seven participants (43.8%) reported personally practicing yoga for 10 years or more. Three recreational therapists worked in skilled nursing facilities (18.8%), and some reported working with adult (43.8%) populations.

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Table 1

Participant Demographics (n=16)

Item	Mean \pm SD or n (%)
Age	39.4 \pm 11.4
Gender, female	15 (93.8)
Country, United States	16 (100)
Race	
White	13 (81.3)
Hispanic or Latino	2 (12.5)
Native Hawaiian or Pacific Islander	1 (6.3)
Credentials*	
Certified Therapeutic Recreation Specialist (CTRS)	16 (100)
Years of professional practice	
<1 – 3 years	2 (12.6)
4 – 10 years	8 (50.0)
10 – 20 years	3 (18.8)
>20 years	3 (18.8)
Personal yoga practice, yes	14 (87.5)
Personal yoga practice duration	
<1 year	1 (6.3)
1 – 3 years	3 (18.8)
4 – 10 years	3 (18.8)
10 – 20 + years	7 (43.8)
Setting*	
Skilled Nursing Facility (SNF)	3 (18.8)
Inpatient Rehab	2 (12.5)
Psychiatric Care	2 (12.5)
Community-based Program	1 (6.3)
Outpatient Rehab	1 (6.3)
Acute Care	1 (6.3)
Other	10 (62.5)
Client/Patient age group	
Adults (19 – 65)	7 (43.8)
Children and youth (0-18)	3 (18.8)
Older adults (65+)	3 (18.8)
All ages	3 (18.8)

Note. * participants selected all responses that applied

Additional demographic data are summarized here, however, for a detailed description of yoga in RT practice, see Table 2. All study participants indicated that they

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were currently using yoga with their clients. Less than half of participants (43.8%) indicated that they had been using yoga with their clients for four or more years. Ten study participants (62.5%) identified being a trained yoga instructor or teacher, and one identified as a yoga therapist (C-IAYT). If study participants indicated that they were a yoga teacher or therapist, they were asked to report how long they had taught yoga. Three study participants (18.8%) indicated being a yoga teacher or therapist for less than one year, and three other study participants (18.8%) indicated being a yoga teacher or therapist for four to ten years. More than half of participants (56.3%) reported that they started using yoga in clinical practice because their place of employment supported these or other integrative health practices. Most study participants reported using yoga with individuals who have mental health disorders (e.g. depression) (62.5%) and substance use disorders (50%).

Table 2

<i>Yoga Specific Information Related to RT Practice (n=16)</i>	
Item	n (%)
Years using yoga with clients	
<1 year	4 (25)
1 – 3 years	5 (31.3)
≥ 4 years	7 (43.8)
Trained yoga instructor/teacher, yes	10 (62.5)
Yoga therapist (C-IAYT), yes	1 (6.3)
Years trained as a yoga teacher/therapist duration	
<1 year	3 (18.8)
1 – 3 years	1 (6.3)
4 – 10 years	3 (18.8)
10 – 20 years	1 (6.3)
Did not respond	6 (37.5)
Not applicable	2 (12.5)
How participants started using yoga in RT*	
Supportive workplace	9 (56.3)
Personal yoga practice	8 (50)
Completed yoga continuing education courses	7 (43.8)
Observed others using yoga	3 (18.8)
Involved in yoga-related research	2 (12.5)
Learned about yoga in school	1 (6.3)
Other	2 (12.5)
Populations in which yoga is used*	
Mental Health Disorder (e.g. Anxiety, Depression)	10 (62.5)
Mental Health/Substance Use Disorders	8 (50)
Chronic Health Conditions (e.g. Heart Disease)	6 (37.5)
Physical Health Conditions (e.g. Traumatic Brain Injury)	6 (37.5)
Alzheimer's Disease/Dementia	2 (12.5)
Intellectual and Developmental Disability	1 (6.3)
Other	1 (6.3)

Note. * participants selected all responses that applied

Qualitative Results

Conventional content analysis revealed four broad categories from semi-structured interviews: 1) recreational therapists' practices; 2) treatment planning; 3)

outcomes; and 4) yoga intervention. Summative content analysis revealed 225 supportive comments related to these four categories. See Table 3 for subcategories and comment totals.

Table 3

<i>Content Analysis Comments</i>	
Categories	Subcategories
Recreational therapists' practices (9 comments)	
Treatment planning (131 comments)	<ol style="list-style-type: none"> 1. Session logistics (57 comments) 2. Preparatory steps (54 comments) 3. Yoga verbiage (20 comments)
Outcomes (35 comments)	
Yoga intervention (50 comments)	<ol style="list-style-type: none"> 1. Yoga training and population-specific yoga style (34 comments) 2. Participation (16 comments)

Recreational therapists' practices. This category represents participants' personal yoga practice. Nine recreational therapists stated that they used yoga in RT because they wanted their patients to experience similar benefits received from their own personal yoga practice experience (e.g. decreased stress and anxiety reduction). Kristin, a recreational therapist and RYT-200 with children's yoga training, described her personal yoga practice and providing yoga to patients:

...I believe that, you know, yoga for myself just specifically for self-care is... led me to a... greater outlook in looking at things differently... I believe that it has helped personally with my own anxiety and frustration and and [sic] it's just

calming.... I wanted to be able to share that with everybody else, so it started as [a] journey of self and turned into a journey of...wanting to give it to other people.

John, a recreational therapist and RYT-200 working in a long-term care facility for individuals with AIDS, commented on his yoga practice experience and providing yoga to patients:

I'm more on a personal experience [sic]...I started to kind of feel really stressed out...I always had kind of [an] interest in yoga and just the types of [sic] the relaxation piece of it...I saw the results pretty immediately...If it made me feel this way, I'm sure... the results would be very similar to the people I work with cause...you know anxiety and pain is a very high prevalence in the people with AIDS.

Treatment planning. This category represents comments related to yoga session logistics, how study participants planned for yoga sessions, and terms used to name yoga sessions. Three subcategories emerged from qualitative interviews related to treatment planning in RT: 1) session logistics; 2) preparatory steps; and 3) yoga verbiage.

Session logistics. Comments related to yoga session size, payment, and who taught the yoga sessions are included in this subcategory. All study participants indicated that yoga sessions were held in groups or in one-to-one sessions as needed. Offering group yoga sessions was consistent with RT practice in their settings, as participants identified that other RT interventions were also held as groups. Eight study participants specified that yoga group session sizes ranged from five to 15 participants and were

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offered on average once a week for 45 – 60 minutes. The number of attendees was associated with yoga room size and location of yoga sessions, and yoga sessions were held in a group room or other available areas in their facilities. Often these rooms were multi-purpose, and study participants such as Amanda, a recreational therapist and certified brain injury specialist working with veterans, specified that they had to move tables and chairs in order to create space for yoga sessions. Six study participants described using one-to-one yoga sessions for patients with specific needs (e.g. individuals with severe mental illness) or if patients needed additional assistance with poses or breathing techniques. Additionally, all study participants stated that they did not bill separately for yoga interventions. Participants indicated documenting for yoga as they would for all RT interventions (e.g. progress notes).

Eleven recreational therapists in this study personally taught the yoga sessions as part of RT practice. Five study participants who were not RYT-200's, reached out to community-based certified yoga teachers to teach yoga sessions. Two of these study participants reported that they transported their patients to local community yoga studios for weekly sessions or retreats. At these retreats, study participants reported that patients were offered yoga along with other wellness related interventions (e.g. tai chi and aromatherapy). Two study participants played yoga videos as a substitute for a live teacher. Judy, a recreational therapist working with older adults in a skilled nursing facility, reported that she used YouTube to play yoga tutorials led by a certified teacher. These study participants reported that they demonstrated the yoga postures as a second visual aid while following along with the video. Participants reported that they also

would stop the video at any time to modify, describe something in greater depth, or assist a patient.

Preparatory steps. Comments in this subcategory reflect how study participants use knowledge and information about patients to plan yoga sessions. Some study participants received referrals from physicians, physical therapists, or social workers recommending that a patient would benefit from participating in yoga for specific reasons related to their treatment plan. For example, Megan, a recreational therapist and C-IAYT, described implementing yoga for a patient with hypertension. The study participant explained that she did not include any inversions (e.g. headstand [*salamba shirshasana*]) in the yoga sequence because the participant should not “*have their head below their heart.*”

Individuals in this study who reported teaching yoga were knowledgeable and aware of patient needs and incorporated these characteristics when teaching a variety of populations. In the context of the interviews, most (12 of 16) participants described offering pose modifications, adaptations, and alternatives during yoga sessions (e.g. downward dog [*adho mukha svanasana*] at the wall). Megan described her experience providing modifications to veterans: “*All the poses are modified because they might be here for a mental health diagnosis, but they all have co-morbid physical things like a bad back....*” Judy described her experience implementing standing yoga poses with older adults to decrease fall risk: “*We’ve always had either like a chair or a walker in front of the participant so there was something for them to hold onto if they opted....*”

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This subcategory also encompasses comments related to educating patients about yoga and trying to mitigate any misconceptions attached to yoga. A common theme related to preparatory steps revealed that several study participants working with male populations recognized that some men perceived yoga as a woman's activity. It was clear that RT study participants viewed this idea as a misconception, and therefore, advocated for participation with their patients. For example, Joyce, a recreational therapist and RYT-200, described how she dispels myths about yoga with her patients:

I work with all men, and there is a stereotype that...yoga's [sic] for women...Just pointing out to the um [mumbled] guys like [sic] all the different people who've been able to use yoga um [sic] and just verify that, you know, it's not for like [sic] one specific body type... You make yoga fit the person; you don't make the person fit yoga.

Other patient misconceptions about yoga revealed that one must be flexible in order to practice yoga. Participants reported that when they hear these statements, they try to minimize or dispel these myths in order to encourage participation in yoga sessions. Sarah, a recreational therapist working with inmates with mental health conditions, commented on her experience dispelling myths: “Yoga...has like [sic] a stigma...I think some people might be...intimidated by it...try to get people past that intimidation of like oh I don't wanna [sic] do yoga I'm not flexible.” Study participants indicated the importance of explaining that yoga is for everyone, regardless of gender or ability level.

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Additionally, study participants encouraged safety in their yoga sessions by telling patients to “listen to their bodies” during yoga practice. As a result, patients were given the opportunity to learn which poses felt comfortable. Study participants instructed patients to stop practicing a pose if they felt any mental or physical discomfort. For example, Tammy, a recreational therapist working with veterans with substance use disorders, described what she teaches to patients during yoga sessions: *“I always make sure to preface it with: you do what’s comfortable to you, no new pain, if anything feels uncomfortable, stop.”*

Additionally, some comments related to the discharge planning phase of RT as study participants helped patients prepare for life after treatment. A few participants indicated that patients needed to understand the atmosphere and norms of a ‘regular’ community-based yoga class versus an RT yoga session. Study participants discussed the importance of providing detailed instructions during yoga sessions, so that their patients feel prepared for community-based yoga classes. Yoga sessions, as part of RT practice, are intentionally designed to accommodate patient diagnoses, specific needs, and meet treatment goals. Participants explained that community-based yoga classes were often not as inclusive and individualized as these RT yoga sessions. Study participants also taught patients to make adaptations and modifications on their own without aid from a yoga teacher. For example, Amelia, a recreational therapist and RYT-200 working with veterans, leads a weeklong therapeutic retreat consisting of a variety of therapeutic interventions (e.g. yoga). She described how she prepared her patients for community-based yoga classes:

...I know the participants I work with are coming out for a week [yoga retreat], and then they are going back home. So, they're not gonna [sic] stick with me. I'm not gonna [sic] be their regular yoga teacher. I try to do a lot of explaining just some basic stuff, so that they know how to make modifications on their own when they get to a regular class if their teacher doesn't help them make those modifications, so that yoga is comfortable for them.

Megan wanted her patients to be prepared for the difference in teaching style in community-based yoga classes. She described that she wanted patients to be careful attending classes not specialized for individuals with post-traumatic stress disorder (PTSD):

I let them know that this is modified yoga, and it's trauma sensitive. And I talk about the elements of what makes it trauma sensitive because I don't want them to go to [a local gym] or [a local gym] ...when they offer yoga classes thinking it's gonna [sic] be the same thing...I want them to know yoga.

Yoga verbiage. Comments in this theme are related to terms used to describe yoga sessions. Participants were asked if they called their yoga sessions “yoga” or used other terms to describe the intervention. Nine participants stated that they refer to their sessions solely as “yoga.” Study participants who use the term “yoga” indicated that they want their patients to understand and be comfortable with yoga without disguising it as something different. However, seven study participants stated that they call their yoga sessions “yoga” and/or other terms (i.e. breathing, stretching) to attract as many

individuals to group as possible (e.g. especially individuals who are hesitant to trying yoga). For example, Tammy revealed, *“I don’t call it yoga until we’re in the group. So, I say we’re gonna [sic] do a relaxation group...and then when we’re in there...I’ll say...in yoga this is called....”* Some study participants believed that the yoga verbiage used in RT practice should be more descriptive. For example, study participants felt that changing the language surrounding yoga, such as describing the benefits of yoga practice, could be beneficial for patients who are new or hesitant to practicing yoga. Tammy described how she explained yoga to veterans:

...Being able to describe things differently um [sic] and to be able to speak at a level or basically dialect of the person you’re treating...Explaining things differently because there were a lot of persons that I worked with who had very poor literacy...Yoga can be a big and confusing word...I think explaining [it] sometimes as ‘this is something that might help you um [sic] have less pain’...Explaining things in a different way...I think is probably the most important thing, in my opinion,...to introducing somebody to yoga.

Outcomes. Information in this category is related to targeted outcomes resulting from yoga sessions. The qualitative interviews highlighted many perceived patient health outcomes from yoga. The most prevalent were outcomes related to stress-reduction and relaxation. Twelve study participants indicated that yoga promotes a sense of calm and relaxation for their patients (i.e. an outlet to escape to during the day). For example, Mary, a recreational therapist working in inpatient psychiatry, stated, *“It definitely assists with um [sic] relaxation...They feel good. They’re happy it [yoga] happened...It’s a good*

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practice to help people calm down...It helps them find another way to kind of relax if they're starting to feel anxious or upset."

Further, study participants presented yoga to patients as a type of coping skill. Study participants described that patients used yogic techniques such as intentional breathing to manage stress and difficult emotions, such as frustration or anger, outside of RT sessions. Sally, a recreational therapist with children's yoga training working in inpatient psychiatry with children and adolescents, described a situation when one of her teenage patients used yoga as a coping skill to manage his emotions:

As his [the patient] admit [sic] came to a conclusion, the more patients were very agitating and attention seeking came in and some people were provoking him in group. He had a yoga mat that he borrowed for his room, and he left group to go and go [sic] do his breath work, I think he said, and do some of his poses and he came back, and he was like Miss Sally, I have to tell you what I did last night! I didn't blow up! I didn't need PRN medication, like [sic] I didn't have to go in like [sic] the seclusion or the restraint and take a time out!

Joyce described her experience teaching inmates with mental health conditions how to use the breath as a way to cope with stress:

They have to be able to deal with really stressful situations, whether that's dealing with their lawyer or in [sic] when they're in court um [mumbled] that can be [a] really stressful...situation so...I'll work with them on you know how how [sic] can you use yoga like to prepare for court? ...Can you do it [sic] some

breathing or stretching before court so you're focused? ...What if you disagree with something that someone says in the courtroom? Is there some deep breathing that we've practiced in group that you can actually use in the courtroom?

Study participants also reported that the yoga intervention produced more noticeable outcomes when patients frequently attended. It appeared that this was influenced by patients' length of stay and patients' desire to attend. For example, Jennifer, a recreational therapist with prison-specific yoga training who worked with males with mental health conditions living in prisons stated, "...*The guys who consistently show up...they get the most benefit [from yoga] if they're showing up consistently.*"

Other targeted outcomes of participating in yoga include physical benefits. Three study participants reported anecdotal increases in their patients' strength, and three study participants noticed positive changes in balance and flexibility. Jennifer stated, "*I mean I can physically see that they're able to do more in the poses...like their ability to stretch has increased or their ability to hold a balance pose has increased...increases flexibility.*" Additionally, Tammy described how patients told her that they fall asleep faster and have more restful sleep after participating in yoga. Other outcomes include improved self-confidence and concentration. Kristin stated, "*They [the children] feel really good, so I think it [yoga] helps increase self-confidence and self-esteem, but also helps with focus and...concentration as well.*"

Yoga intervention. This category describes study participants' opinions about attending yoga training, different styles of yoga used in RT practice, and participating in yoga sessions. Within the yoga intervention category, two subcategories emerged: 1) yoga training and population-specific yoga style and 2) participation.

Yoga training and population-specific yoga style. Comments in this theme reflect study participants beliefs about yoga training and the different yoga styles used in RT practice. Six participants identified being certified yoga teachers, seven identified not being certified yoga teachers, and three reported that they were working toward their yoga teacher certification (RYT-200). Eight participants identified that individuals teaching yoga to patients in RT should at least be a RYT-200 or working towards their certification. Participants who believed in obtaining RYT-200 certification described the amount of knowledge and experience gained from those trainings. Study participants reported that the certification allowed them to feel more confident providing yoga to their patients. Brittany, a recreational therapist and RYT-200, explained her opinion regarding yoga training in RT and her yoga teacher training experience:

...At least a 200 hour [RYT-200] I do believe that...I think it just helped my practice so much...it gave me so many more skills and confidence in teaching and an understanding and you know an understanding of yoga and the science [of yoga].

Participants also mentioned that after obtaining the 200-hour certification, they determined that they needed further education in yoga and that they had only 'scratched

the surface' of knowledge about yoga. For example, Megan explained her need for additional training to meet the needs of her patients:

...When I started to teach at the VA ... as a basic registered yoga teacher, it became very clear that I needed more training because the demographics that I'm working with had...more physical disabilities than what you are trained for the basic 200 hour teacher training.

Secondly, eight study participants reported that the yoga instructor should be educated or trained in using yoga with their specific population, which was viewed as being essential for providing quality care. Study participants spoke about feeling more competent to provide yoga to individuals with specific conditions if they had specialized yoga training. Sally, spoke about her experience attending population yoga-specific trainings:

I really passionately feel like whatever population or setting what you're in, you should seek out a training that [sic], maybe it could be a day long training or a three-day training, just to kinda [sic] get your feet wet and see how how [sic] to serve you're your clients best... I feel, at minimum, you know finding something [a training] specific to your population and setting is so important. For myself, with working with kids and teenagers um looking into trainings that were specific to that was so helpful.

Tina, a recreational therapist working with a variety of populations (e.g. individuals with mental health and substance use diagnoses) reported, "I also feel that

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those teaching [yoga] should have knowledge with the clientele that they are teaching to....” Study participants who believed in obtaining population-specific training made it clear that they wanted to feel safe and confident in themselves when working with specific populations. These individuals spoke about ‘knowing your population,’ meaning that the yoga teacher should understand the diagnoses and personalities of the patients practicing yoga.

Finally, not everyone felt the importance of attending a yoga teacher training or obtaining population-specific yoga training. Four study participants stated that in order to practice yoga in RT, the instructor only needed to have experience teaching yoga. Some study participants stated that if the instructor felt comfortable in their own personal yoga practice, it would be acceptable to teach yoga to patients in RT. Mary described her opinion about the level of necessary yoga experience needed in order to teach yoga as part of RT practice:

...I think as long as somebody at least knows how to modify it and knows how to explain it in a way that people are safe...if you go to enough classes and you feel comfortable in your own practice, I think it's really helpful when you're trying to lead someone into...doing it.

While most participants did not specify the specific style of yoga (i.e. Hatha or Vinyasa yoga) they use with their patients, 14 study participants identified that the yoga implemented was intentionally developed for a specific population. Six study participants reported implementing chair yoga with older adult populations, as they considered it to be

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a modified practice suitable for these individuals. Four study participants who worked with children reported implementing a lighthearted, fun, and more interactive style of yoga. Kristin revealed: *“Creativity is essential, especially with children, so I incorporate dance/movement, playful music, bubbles, Play-Doh, art, etc. to enhance the group and keep them engaged; satisfying their short attention span.”* Most study participants who worked with children and adolescents obtained children specific yoga certifications (e.g. CRYT and ChildLight Yoga training). These participants reported wanting to feel safe and confident when providing services for patients.

Four study participants intentionally planned for their yoga sessions to be trauma-sensitive. Study participants described trauma-sensitive yoga as a practice intentionally designed for individuals with mental and emotional health conditions related to trauma. Study participants teaching trauma-sensitive yoga monitored their patients’ emotional responses to certain poses that may trigger past traumas and provided appropriate space in between yoga mats allowing the patients to feel safer during yoga practice. Amelia described her experience implementing trauma sensitive yoga:

I am dealing with people who have experienced trauma...and that trauma is, you know, a part of their body so, making sure that I’m sensitive about the poses that we do in an emotional standpoint...I’m pretty careful to either avoid, or when I chose them [poses], it’s very intentional and very careful.

Participation. The participation subcategory reflects comments related to participating in yoga sessions. More than half of study participants reported that

attendance in yoga sessions was optional. For example, some study participants reported strongly encouraging their participants to join yoga as a part of RT treatment, and that those who needed encouragement were hesitant or new to yoga practice. Other study participants explained that there was a waiting list to join the session.

Study participants promoted autonomous participation during yoga sessions by providing choices to participate in the planned yoga sequence or engage in other yoga postures during the session. Sally described what she says to patients who are hesitant about participating in yoga:

I may encourage that person like [sic] you don't have to participate the whole time...I'll model for them like a child's pose or just sitting in easy pose or laying in savasana and tell them that that's okay; that they can do that.

Discussion

The literature recommends that practitioners who teach yoga to individuals with disabling conditions be both experienced with the population and a trained yoga teacher (Cohen et al., 2007; Douglass, 2009; Hart, 2008; Libby et al., 2012; Sareen et al., 2007; Sherman, Cherkin, Erro, Miglioretti, & Deyo, 2005), while data from this study that describes the study participants' also identified this as important. By having personal yoga practices and identifying as trained yoga teachers, recreational therapists are providing evidenced-based treatment to their patients. Yoga is utilized as an intervention with a variety of populations in healthcare (Diorio et al., 2015; Katzman et al., 2012; Van Puymbroeck et al., 2018; Yang, 2007) and is mentioned as conventional RT intervention

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in the literature (Bonadies, 2004). Relatedly, findings from this study demonstrate that yoga is being implemented in RT practice with a variety of populations including individuals with mental health conditions and substance use disorders.

Four categories were identified in the qualitative results, revealing findings pertaining to how yoga is used in RT practice. These categories were formulated from multiple primary themes created from similar concepts within the data. Sareen et al. (2007) recommends that recreational therapists understand yoga before providing it to patients. Findings from this study indicated that having a personal yoga practice may be related with providing yoga in RT treatment. For example, many recreational therapists reported using yoga in RT based on outcomes they experienced from yoga practice, such as stress reduction.

Additional specific findings from this study are similar to the study conducted by Libby et al. (2012) in that all study participants delivered yoga in group sessions with a majority of sessions lasting one hour. Also, findings align with Van Puymbroeck et al. (2015) who reported that yoga was a feasible intervention to conduct in healthcare due to its integration into many different healthcare settings such as hospitals and prisons.

According to Cramer et al. (2016), 21 million American adults practice yoga at least once a year, and most of these practitioners are women. Findings from this study revealed misconceptions related to yoga, such as men thinking that yoga is a woman's activity. Male patient perceptions of yoga may be related to the way yoga is marketed and practiced in America. Since more women than men practice yoga in America, this may be

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the reason that male patients see yoga as a feminine form of exercise. Further, since only three yoga teachers in this study were male, men may also have these preconceived opinions because of the mostly woman led yoga sessions in this study. In order to manage these myths, RT practitioners could educate their male patients about yoga's origins. For example, yoga was exclusively offered to young Indian boys in the late 19th century (Sengupta et al., 2013).

Qualitative findings also indicated that the word "yoga" was used to describe RT yoga sessions. When yoga was introduced to America, it was not accepted in the Christian dominated American population (Douglass, 2007). Since then, yoga has become increasingly popular in the United States and is practiced by Americans mainly for physical and mental health reasons (Hart, 2008). Due to this increased acceptance and popularity of yoga, study participants may have felt more comfortable identifying their yoga sessions as "yoga" instead of naming it something else, such as stretching or relaxation.

In accordance with outcomes related to mental and physical benefits found in yoga literature, study participants identified various patient outcomes resulting from yoga interventions (Katzman et al., 2012; Khalsa, 2004; Libby, Reddy, Pilver, & Desai 2012; Van Puymbroeck, Burk, Shinew, Kuhlenschmidt, & Schmid, 2013; Van Puymbroeck et al., 2018; Yang, 2007). An increase in relaxation and stress management were the two main perceived outcomes of this study. Additionally, yoga was utilized to enhance coping skills. The utilization of yoga as a coping skill may relate to yoga's beneficial outcomes in this study of improved relaxation and stress management. Study participants

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mentioned that patients were taught to practice yogic techniques when faced with difficult emotions or situations. Yoga *asana* and *pranayama* were described as a way to help patients learn to control their own bodies, therefore controlling their reactions in stressful situations. Relatedly, researchers suggest that yoga can be an effective form of coping (Crowe, Van Puymbroeck, & Schmid, 2016).

Most study participants placed value on obtaining yoga teaching credentials and/or participating in yoga trainings. In order to appropriately and safely provide yoga to patients, study participants indicated the importance of obtaining appropriate credentials (RYT-200 or population-specific training) in addition to the CTRS certification. Obtaining population-specific training (e.g. yoga for individuals who have experienced trauma or yoga for children) aligns with the previously mentioned literature (Cohen et al., 2007; Douglass, 2009; Hart, 2008; Libby et al., 2012; Sareen et al., 2007; Sherman, Cherkin, Erro, Miglioretti, & Deyo, 2005) regarding the need to know how to use yoga safely and appropriately with patients.

Study participants incorporated professional knowledge when implementing yoga with patients. Study participants utilized supportive terminology during yoga sessions by encouraging patients to “listen to their bodies.” By advocating for safe personal yoga practice, study participants hoped for continued client safety in yoga after treatment. Also, findings revealed that providing appropriate styles of yoga, modifications, adaptations, and variations dovetails specifically with recreational therapists’ knowledge of activity analyses as well as applying RT knowledge of working with individuals with disabilities (Stumbo & Peterson, 2009). In this study, recreational therapists reported

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efforts to intentionally provide outcome-based yoga sessions and include all patients who may benefit from yoga by specifically planning sessions designed to aid in the treatment of patient diagnoses. Yoga styles that were suitable for specific populations, such as chair yoga with older adults and trauma-sensitive yoga for individuals with PTSD, were implemented in RT practice. Further, by promoting autonomous participation in yoga sessions, recreational therapists demonstrated characteristics of inclusiveness that are foundational concepts of RT education (Stumbo & Peterson, 2009). These findings support the literature which recommends that practitioners should have knowledge related to specific health conditions in order to provide appropriate yoga interventions to these populations (Cohen et al., 2007; Douglass, 2009; Hart, 2008; Libby et al., 2012; Sareen et al., 2007; Sherman, Cherkin, Erro, Miglioretti, & Deyo, 2005).

Limitations

As with all studies, there are several potential limitations that should be considered. Due to the small sample size of this study, results of the study are not generalizable. Additionally, terminology used in surveys may have been misinterpreted by participants. Results from survey responses demonstrated varied interpretations of specific words (e.g. the words “credentials”, “training”, “yoga teacher”, and “yoga instructor”.) More specifically, interpretations of the word “yoga teacher” were the most varied. For example,, more participants indicated being a trained yoga instructor/teacher than those who provided yoga related credentials. Further, when asked to indicate how long participants had been a trained yoga instructor/teacher, the number indicating a duration did not match the number who indicated being a trained teacher. When creating

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surveys for future studies, researchers should be mindful of using similar wording throughout the survey and ask for all study-related credentials and credential abbreviation meanings. Another limitation in this study were the limited number of available survey response items. For example, not all RT settings were included in available survey response items (e.g. prisons). Also, terminology used in qualitative interview questions may have been misinterpreted by interviewees, thus creating a potentially misguided response. For example, the word “practice” is used several times throughout the interview. It is possible that interviewees varied in their interpretation of that term, confusing personal yoga practice, with yoga practice in clinical professional settings, and community practice (i.e., their personal instruction or participation of yoga in community studios). Finally, the first author of this study did not conduct the semi-structured interviews and did not transcribe three of the interviews. In future research, the first author should be involved in all aspects of data collection and transcription in order to ask participants to elaborate on certain topics and to be more immersed in the data as recommended by the literature (Hsieh & Shannon, 2005).

Summary

Many research studies have identified the benefits of incorporating yoga in healthcare (Diorio, et al., 2015; Katzman et al., 2012; Van Puymbroeck et al., 2018; Yang, 2007), however foundational knowledge (i.e. credentials of yoga instructors and style of yoga) about yoga in RT was scarce. Findings from this study revealed that recreational therapists are using yoga as an intervention as part of RT practice. Yoga is an appropriate intervention to be implemented with a variety of populations in RT. Finally,

yoga should be implemented by recreational therapists who are trained to teach yoga or provide population-specific yoga sessions to meet specific patient outcomes.

Implications for Future Research and Practice

Study participants indicated working in a variety of settings with a variety of populations. Future research should investigate setting-specific RT yoga sessions, in order to gain deeper insight into the benefits of yoga used with a variety of populations, such as Veterans in inpatient mental health settings. Misconceptions attached to yoga practice may effect patient participation, therefore, future research should investigate how these misconceptions effect yoga practice, Limited information was obtained in this study pertaining to the specific styles of yoga implemented in RT. Future research should examine which styles of yoga are commonly used within RT practice in relation to popular styles such as Vinyasa and Hatha. Further, it would be interesting to investigate how previous RT knowledge and training guides yoga practice when working with patients in healthcare facilities.

Recreational therapists working with a variety of populations may use these findings to assist with planning yoga sessions. For example, group yoga sessions may be most effective in RT practice due to the prevalence of group RT sessions in the field. Recreational therapists should assess the feasibility of conducting group yoga sessions with patients. Also, due to the growing popularity of yoga in America, recreational therapists should consider naming their yoga sessions “yoga” for the opportunity to educate patients about this beneficial practice. Practitioners should make sure the

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intervention is implemented by someone who is appropriately trained to use yoga with specific populations or a RYT-200 and can accommodate for the needs of individuals with specific diagnoses. If a recreational therapist is not a RYT-200 or trained to provide yoga to specific populations, collaboration with a yoga teacher who is trained, or utilization of online resources is recommended. Recreational therapists should plan to incorporate professional knowledge and use modifications, adaptations and an appropriate style of yoga for their population. For example, when working with individuals who have experienced trauma, a more spacious environment would help create a calming atmosphere for these populations.

CHAPTER FIVE

CONCLUSION

RT is a field that addresses the physical and mental health of individuals with health conditions by using recreation and leisure activities as therapy to promote quality of life, well-being, independent functioning, and to reduce limitations to life activities (ATRA, n.d.). There is a dearth of information in the RT literature that describes how yoga is used in practice. While statements have been made that RT has used CHA as an intervention in the treatment of patients (Bonadies, 2004; Sareen et al., 2007), and yoga is mentioned as a conventional RT intervention, there is little evidence in the literature to support how recreational therapists are using yoga in RT practice (Bonadies, 2004). Although a few RT textbooks categorize yoga as a mind-body intervention (Van Puymbroeck & Schmid, 2016), a moving meditation facilitation technique (Austin, 2018), and a stress management facilitation technique (Meckley et al., 2011), it is unknown how these techniques are used with patients.

The purpose of this study was to investigate how yoga was being used in RT practice. An in-depth study, exploring the credentials of yoga instructors in RT, duration and frequency of sessions, style of yoga used in treatment, and how, where, and with what populations yoga was being implemented, needed to be conducted. It is important for the field of RT to understand how yoga is being implemented in order to lay a foundation for the use of yoga as an appropriate therapeutic intervention.

Summary of Major Findings

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Using an exploratory research design, this study investigated how yoga is being used in RT practice across the United States.

Findings from this study demonstrate that yoga is being implemented in RT practice with a variety of populations including individuals with mental health conditions and substance use disorders. By identifying as trained yoga teachers and having personal yoga practices, recreational therapists are providing evidenced-based care to their patients.

In addition, this study investigated detailed information pertaining to the use of yoga in RT practice. Four categories that emerged from the semi-structured interviews related to recreational therapists' practices, treatment planning, outcomes, and yoga intervention. These findings suggest that having a personal yoga practice may be related with providing yoga in RT treatment. Also, one-hour group yoga sessions held once a week are most common and feasible in these RT settings. Further, study participants advocated for male participation in their yoga sessions and strongly attempted to minimize misconceptions attached to yoga. The participants also identified specific beneficial outcomes as a result of yoga interventions (e.g. relaxation and improved flexibility). Study participants identified the use of yogic techniques as an effective form of coping with stress and difficult emotions. Additionally, obtaining population specific yoga credentials appeared to important and beneficial in providing yoga to patients with specific diagnoses. Study participants implemented yoga styles and modifications that best aligned with their patient's treatment goals and diagnoses. Finally, providing patient-

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centered yoga sessions suggests that study participants incorporate their professional knowledge and training into the services they provide to clients.

Contributions and Implications

This in-depth, exploratory study was the first of its kind to be conducted in the field of RT. Overall, yoga was found to be an appropriate intervention to be implemented as part of RT practice, and recreational therapists may use the findings of this study to inform the implementation of yoga with patients. Detailed responses pertaining to how yoga was used in RT provide new knowledge and insight to the field of RT. This study found that yoga was implemented in a variety of healthcare settings ranging from long term care facilities to prisons. Practitioners in RT should also have experience practicing or an understanding of yoga before implementing this intervention with patients.

Furthermore, RT professionals could use the findings of this study to select trained and qualified yoga teachers to teach patients at their facilities. According to the findings of this study, recreational therapists implementing or wanting to implement yoga in RT practice should obtain population specific yoga training and be knowledgeable of the populations they are working with in order to provide evidence-based and safe yoga interventions. Although few participants specified the style of yoga used in treatment, population specific styles of yoga were appropriately provided to these populations (e.g. chair yoga for older adults). As a result, recreational therapists should consider choosing yoga styles that align best with patient diagnoses and outcomes.

Challenges

Originally, 21 surveys were included in quantitative analysis, however after meeting with a research assistant, we decided to eliminate survey data that did not have qualitative data. Including surveys that did not have interviews in analysis, created conflicting findings between quantitative and qualitative results. By eliminating eight surveys, we were able to better understand the findings of the study. The quantitative data explained the demographics of our participants. Therefore, we were able to explore the qualitative data in more depth and realized that this study is more of a description of how recreational therapists are using yoga as part of RT practice. As a result of this change, quantitative data were reanalyzed in SPSS.

Further, a research assistant conducted semi-structured interviews while the first author transcribed 13 of 16 interviews and analyzed all qualitative and quantitative data. During qualitative analysis, some subcategories were difficult to explain due to the lack of information provided in interviews. This type of information warranted follow-up questions or probes to “dig deeper” into the details of the participant’s response. In future research, the first author should be involved in all aspects of data collection and transcription in order to ask participants to elaborate on certain topics and to be more immersed in the data as recommended by the literature (Hsieh & Shannon, 2005), or better training could be provided for the research assistant in regard to probes and obtaining more information from study participants.

Qualitative data analysis methods and presentation changed during the course of this study. Initially, this study used conventional content analysis to analyze qualitative interview data. After many rounds of coding, the first author and a research assistant met

in order to finalize qualitative data. We determined that the participant comments that created the codes, subcategories, and categories, were not substantive enough for a true conventional content analysis. Although these comments provided answers into the research question, they were not as descriptive as other conventional content analysis studies. For this reason, summative content analysis was used to count the number of comments included in subcategories. Because of the addition of summative content analysis, the qualitative data table presentation was revised to display the total number of comments within each subcategory and category.

Qualitative subcategories were condensed which also led to revisions of the data table. Originally, multiple layers of subcategories were included in the four broad categories. After meeting with a research assistant, we determined that some subcategories were descriptors of other subcategories and decided to exclude them from the table.

Additionally, names and location of subcategories and categories changed numerous times throughout analysis. The first author changed the names of subcategories and categories in order to accurately describe the content described in each category. For example, the yoga training and population-specific yoga style subcategory was originally named, “CTRS’s yoga experience and beliefs”, but after moving some of the subcategories in this category to other categories a change in its title was necessary.

As the first author, I introduced bias into this study. I am a recreational therapist and a yoga teacher. I also, have a personal yoga practice and was involved in data collection from a different part of this study (yoga in OT). My own opinions about yoga

trainings, credentials, and knowledge of other participant responses in this study (occupational therapists' interviews) could have influenced the data. However, I kept a bracketing and reflexivity journal to eliminate as much bias as much as possible. I also met with research assistants to discuss my opinions of the data during analysis. In future studies, it would be interesting to see if results about yoga trainings would be similar if conducted by an individual who does not practice yoga.

APPENDICES

Appendix A: Online Survey Questions

Yoga in Clinical Practice

1. Your age (as of today): _____
2. Your gender: Male Female Other: _____
3. In which country do you reside? _____
4. In which state do you currently reside? _____
5. Which single race group best describes you?
 African American or Black American Indian or Alaska Native Asian Hispanic or Latinx
 Native Hawaiian or Pacific Islander White Other _____
6. What is your area of practice?
 Occupational Therapy Physical Therapy Recreational Therapy Social Work
 Nurse Medical Doctor Other (please specify): _____
 Speech-Language Pathology
7. What are your credentials? _____
8. How many years have you been a practicing professional in your field?
 Less than 1 year 1 to 3 years 4 to 10 years 11-20 years More than 20 years
9. What setting(s) do you work in? (Select all that apply)
 Acute Care Inpatient Rehabilitation Skilled Nursing Facility Outpatient Rehabilitation
 Community-based Program Psychiatric Care Other (please specify): _____
10. What age group do you work with?
 Children and youth (ages 0-18) Adults (age 19-65) Older adults (age 65+) All ages
11. Are you currently using yoga practices with your clients (including physical postures, breathing, relaxation, mindfulness)?

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Yes No

12. How many years have you been using yoga with your clients?
 Less than 1 year 1 to 3 years 4 to 10 years 11-20 years More than 20 years
 Not applicable/I do not use yoga with clients

13. How did you start using yoga in clinical practice? (select all that apply)
 I learned about this in school I was involved in yoga related research I started doing yoga myself
 I saw others using yoga with clients My work supported the use of yoga and/or other integrative health I completed continuing education courses about yoga Other (please specify): _____

14. Are you a trained yoga instructor/teacher?
 Yes No

15. Are you a yoga therapist (credentialed by the International Association of Yoga Therapists)?
 Yes No

16. If so, how long have you been a yoga teacher/therapist?
 Less than 1 year 1 to 3 years 4 to 10 years 11-20 years More than 20 years
 Not applicable/I am not a trained yoga teacher or yoga therapist

17. Do you practice yoga yourself?
 Yes No

18. If so, how long have you been practicing?
 Less than 1 year 1 to 3 years 4 to 10 years 11-20 years More than 20 years
 Not applicable/I do not practice yoga myself

19. What diagnoses do you primarily work with? (Select all that apply)

<input type="checkbox"/> Alzheimer's Disease/Dementia	<input type="checkbox"/> Intellectual and Developmental Disability	<input type="checkbox"/> Chronic Pain (e.g., Fibromyalgia, Neuropathy)	<input type="checkbox"/> Parkinson's Disease	<input type="checkbox"/> Traumatic Brain Injury
<input type="checkbox"/> Arthritis (e.g., RA, OA)	<input type="checkbox"/> Diabetes	<input type="checkbox"/> Mental Health Disorders (e.g., Anxiety, Depression)	<input type="checkbox"/> Pulmonary Disorders (e.g., Chronic Obstructive Pulmonary Disease)	<input type="checkbox"/> Mental Health/Substance Use Disorders
<input type="checkbox"/> Cancer	<input type="checkbox"/> Heart Disease	<input type="checkbox"/> Multiple Sclerosis	<input type="checkbox"/> Stroke	<input type="checkbox"/> Other (please specify):

20. Which of these diagnoses do you typically use yoga practices with?

<input type="checkbox"/> Alzheimer's Disease/Dementia	<input type="checkbox"/> Intellectual and Developmental Disability	<input type="checkbox"/> Chronic Pain (e.g., Fibromyalgia, Neuropathy)	<input type="checkbox"/> Parkinson's Disease	<input type="checkbox"/> Traumatic Brain Injury
<input type="checkbox"/> Arthritis (e.g., RA, OA)	<input type="checkbox"/> Diabetes	<input type="checkbox"/> Mental Health Disorders (e.g., Anxiety, Depression)	<input type="checkbox"/> Pulmonary Disorders (e.g., Chronic Obstructive Pulmonary Disease)	<input type="checkbox"/> Mental Health/Substance Use Disorders
<input type="checkbox"/> Cancer	<input type="checkbox"/> Heart Disease	<input type="checkbox"/> Multiple Sclerosis	<input type="checkbox"/> Stroke	<input type="checkbox"/> Other (please specify):

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- 21. When do you choose to use yoga with a client?
- 22. When you use yoga practices in a treatment session, do you inform the client by using the word “yoga” or do you refer to it as something else (i.e., balance exercises, breathing techniques, etc.)?
- 23. How do you document the use of yoga with your clients?
- 24. What are your “tips of the trade” when incorporating yoga into clinical practice?
- 25. Is there anything else you want to tell us about using yoga with your clients?
- 26. May we contact you for a follow-up interview or other research, to learn more about how you use yoga in clinical practice?

Note: Contact information will be shared with research collaborators at Colorado State University.

Yes (If yes please fill out the following information) No

Name: _____

Email: _____

Mailing Address: _____

Phone: () - -

If you are aware of other professionals using yoga in clinical practice who would be interested in participating in this survey, please forward them this survey link:

[\(Insert Qualtrics survey link\)](#)

Thank you for your participation!| _____

Appendix B: Semi-Structured Interview Questions

Interview Guideline

Note: this is a guideline and questions may change based on responses or clinical specialty/populations.

Thank you for taking time to talk with me about integrating yoga into your clinical practice.

Before we begin, I have a few basic questions for you:

1. Please tell me about your clinical degree and your credentials (time since degree, field, BS, MS, etc)
 - a. Time since degree:
 - b. Clinical Field (i.e. OT, PT, RT, nurse, social worker, MD, other):
 - c. Credentials/degrees (i.e. BS, BA, MS, MOT, OTD, PhD, DPT, MD, other):
 - d. What is your age?
2. Describe the client population you most often work with when using yoga.
3. In just a few sentences, tell me how or why you started using yoga within your clinical field or practice.
 - a. Tell me about your own personal yoga practice or training.
 - b. How long have you been using yoga in your clinical practice?
 - c. Are you a yoga teacher? If yes, what kind and for how long?
4. Tell me how you are using yoga as a part of your treatment or practice? (majority of the interview should be focused on these questions)
 - a. Tell me about your training to use yoga in your practice.
 - b. How do you know who to use yoga with? Which patients does it work well with?

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- c. How do you introduce yoga into practice?
 - i. Can you call it yoga or do you have to reframe your language?
- d. What does yoga look like when you include it?
 - i. Group?
 - ii. 1:1?
- e. Tell me about the concerns you have for safety and what precautions you may take to safely use yoga in your practice?
- f. How do you bill or charge when you use yoga? (thinking about documentation)
- g. Tell me about the outcomes or how you think using yoga improves your client/patient outcomes. What are the benefits?
- h. What training do you think other clinicians should have before using yoga with clients or patients?
- i. Finally, tell me any other ‘tips of the trade’ you would want us to know about to integrate yoga into clinical practice.

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