

RESEARCH

An Invitation to Live: Insights from an Older, Long-Term Practitioner of Tai Chi

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Background: Hundreds of randomized controlled studies have documented the effectiveness of Tai Chi (TC) to alleviate symptoms from varied medical conditions. Researchers, however, have called for alternate methods to discern participants' perspectives and to provide additional information regarding the TC protocols, TC teachers' qualifications, and the social contexts for learning and practicing TC.

Purpose: This naturalistic study was designed to explore the perspectives of an experienced TC practitioner and those of her TC teachers as they reflected upon her 9-year journey with TC as she faced varied medical crises.

Methods: Using an ethnographic approach, participant observation, the researcher observed participant's TC classes, conducted in-depth, semi-structured interviews with the participant and her teachers and informal interviews in the field.

Context: Participant was a 72-year-old female, who had suffered from spinal stenosis, hip arthritis, and bladder cancer. The participant attended two types of TC classes: a therapeutic Tai Chi (TTC) including a modified short form (10 forms) taught by a physical therapist and a traditional TC class including the Yang style short form taught by a Tai Chi practitioner with 50 years of experience.

Findings: 1) TCC provided explicit cues and links between TC and functional fitness, improving the participant's balance, daily life activities, and increased exercise efficacy and resilience; 2) TC provided a novel challenge motivating the participant's continued practice while learning complex TC movements. 3) Traditional TC classes provided a supportive community, facilitating a meditative stance, and enabled the participant to subdue the "monkey mind" of a terminal cancer diagnosis.

Keywords: Yang Style Tai Chi; Therapeutic Tai Chi; Meditative Movement; Functional Fitness; Physical Activity and Terminal Cancer; Participant Observation

Introduction

Tai Chi was all about doing what I could do on my own to keep active, because keeping active was going to keep me alive.

Ellen, a 72-year-old Tai Chi Practitioner

[When I first met] Ellen, she had a lot of physical challenges. Ellen was making a heroic effort to be able to do the form given her physical limitations. She doesn't do everything correctly because she cannot do everything correctly, but it doesn't fluster her. She just does what she does. I believe her when she says that Tai Chi is keeping her alive. Now, I realize that the rest of us that come to the studio are here in the same way that Ellen is—that our lives depend on it—not as dramatically as with Ellen, but Tai Chi has become part of our journey to stay engaged, to move, to be alive.

Stan, Ellen's Tai Chi Teacher

Ellen began her Tai Chi (TC) journey in 2009, at the suggestion of her physical therapist, who thought it would address painful and debilitating symptoms from spinal stenosis. During the intervening years, from 2009 to 2018, Ellen continued TC, averaging four sessions a week. She also had two hip replacements; a spinal surgery; and abdominal surgeries and chemotherapy to address metastatic bladder cancer. Ellen persisted with Tai Chi throughout her surgeries and treatments for cancer. In the following study, I present Ellen's unique perspectives as well as those of her TC teachers regarding the influence of TC on her health and well-being.

Literature Review

Randomized Controlled Trials

The practice of TC integrates flowing movements, heightened body awareness, imagery for facilitating movement, breathing patterns coordinated with movement, and relaxed alertness (Larkey et al. 2009; Payne & Crane-Godreau 2013; Wayne 2013; Wayne & Kaptchuk 2008a, 2008b). In the past few decades, traditional TC forms have been modified for use with aging or medically fragile populations. In a recent comprehensive review, Yang et al. (2015) evaluated 507 medical studies, documenting TC's usefulness for addressing symptoms for a wide range of medical conditions. In their review, however, Yang, et al. (2015) noted that the majority of clinical trials offered incomplete descriptions of the TC interventions and recommended that future researchers provide information regarding the type of TC style and forms, session frequency and duration; rationale for using a particular TC protocol; descriptions of the learning and practice methods; and instructor qualifications. Nevertheless, continuing research efforts regarding TC neglect the educational context of the TC intervention (Oh et al. 2018).

The Call for Alternative Forms of Investigation

Other researchers argued that alternative methodological approaches are needed to capture the full range of effects provided by TC (Verhoef Casebeer & Hilsden 2002; Verhoef Lewith & Ritenbaugh 2005; Wayne & Kaptchuk 2008a, Wayne & Kaptchuk 2008b). Wayne and Kaptchuk (2008a), leading researchers in translating Traditional Chinese Medicine (TCM) for a Western medicine audience, noted that "the richness and complexity of tai chi, including its integration of physical, cognitive, and ritualistic components, poses challenges to the reductionist (causal) approach of attributing observed outcomes to single, independent, component factors" (p. 100). Moreover, Wayne and Kaptchuk (2008b), allude to the neglect of the social context of learning TC, noting the need for "a pluralistic methodological approach to capture the richness of participants' experiences and teachers' intentions in interventions" (p. 195).

Qualitative Sub-studies to Inform RCT Findings

The few efforts to explore participants' perspectives through qualitative studies have been conducted as sub-studies at the conclusion of the RCTs. Participants reported improved physical functioning and activity level (Desrochers et al. 2017; Kutner et al. 1997; Saravanakumar et al. 2018; Yang et al. 2011; Yeh et al. 2018). Researchers (Caldwell et al. 2009; Yeh et al. 2018) also linked participants' descriptions of the effects of TC to increased self-efficacy (Bandura 1982) and resilience (Richardson 2002), aligning TC effectiveness with contemporary psychological constructs regarding positive mental health.

Other researchers noted participants' descriptions as including enhanced awareness of the world around them and spiritual benefits (Docker 2006; Yang et al. 2011; Zheng 2014). A Layers Model was developed to capture both the range and sophistication of participants' responses (Yang et al. 2011), noting that some participants went beyond simple statements of physical benefits to descriptions of a complex layering of multiple benefits, such as enhanced emotional well-being, strengthening of social interactions with friends and family, and heightened spirituality.

In a naturalistic study, Docker (2006) studied older TC participants who had attended classes in a local health club. Docker conducted a mini-ethnography, observing three TC classes and interviewing seven TC practitioners. Docker (2006) emphasized participants' appreciation for the social and spiritual benefits of practicing together, noting participants' appreciation for the wholistic, mind-body connections emphasized during TC.

Rationale for Conducting a Naturalistic Study

An in-depth, naturalistic study of a single TC practitioner may reveal factors of interest to other TC practitioners and inform future research (Wayne & Kaptchuk 2008b). Unlike RCTs, a naturalistic inquiry offers insights into a phenomenon that the researcher does not control (Miles & Huberman 2014). The

researcher learns from the informants as they interact within their particular social setting. Underlying assumptions include (a) informants' perceptions of reality are socially constructed and holistic, (b) researchers and informants interact within the natural setting, (c) research is bounded in a particular time and place, (d) causal relationships are not generalizable to other settings, and (e) research is shaped by the values of the researcher and informants.

This investigation employed an ethnographic method of participant observation (Miles & Huberman 2014; Spradley 1980), taking place during a six-month period, January through July 2018. The following research questions provided the framework for the study:

- In what ways, if any, did Ellen view TC as improving her overall health and sense of well-being?
- In what ways, if any, did Ellen's teachers view TC as improving her overall health and well-being?

Methodology

Participant Observation

Observation

As a qualitative researcher and TC practitioner, I attended classes and practice sessions for two hours a week, for six months, accumulating 60 hours of observations. Observations were recorded in field notes, transcribed and coded immediately following observations. My moderate level of participation gave me access and understanding of Ellen's participation in the classes and practice sessions. This insider's point of view (Miles & Huberman 2014; Patton 2002) provided insight into the meaning and interpretations of the participants. As a participant observer, I needed to be aware of my own perceptions of TC and avoid overly identifying with Ellen's perspectives regarding the purposes and practice of TC, her teachers, and her fellow students.

Interviews

I conducted semi-structured interviews and informal conversational interviews with Ellen (Patton 2002; Rubin & Rubin 2012; Spradley 1980) and her TC teachers over a six-month period. I conducted three formal interviews with Ellen, twice during the first month of the study and once again toward the end of the study. Each of these in-depth interviews lasted approximately 2 hours and explored her experiences related to TC, her medical conditions, and her overall health and well-being. I posed open-ended questions as she identified key events and reflected on the meaning of these events. Each interview built on the previous interview and also addressed events or themes that had been identified during informal interviews and observations (Miles & Huberman 2014). I also conducted semi-structured interviews with teachers, each interviewing lasting about 90 minutes. At the conclusion of TC classes or practice rounds, I posed informal interview questions emerging from the sessions. Informal interviews lasted from 15 to 30 minutes. Through informal interviews, I was able to examine details as they arose and gain insights into Ellen's perceptions of the sessions (Patton 2002). These informal conversations were recorded in field notes.

Data Analysis

Formal interviews were audiotaped and shortly thereafter were transcribed. I shared transcriptions with participants for their review to clear up any questions emerging from the interview and discern their perceptions of the adequacy of the interviews. I maintained a notebook of researcher reflections and analyses in the margins of field notes, interviews and observation data. Analysis of the data entailed a multi-step process that involved both the author and participants. First, I coded the data to identify essential domains or categories, resulting in data reduction (Miles & Huberman 2014; Patton 2002).

These domains were charted to identify relationships across domains. For example, Ellen's teachers used the word stability frequently during classes. I constructed a chart for stability, noting how each teacher defined or demonstrated the meaning of the word. Teachers used different imagery to convey meaning and function, either in daily life or use in martial arts. I constructed numerous data charts and identified patterns emerging from the data.

After this initial identification of themes, I developed variations (Miles & Huberman 2014; Patton 2002) on each theme, seeking to understand the data from a variety of perspectives, to determine if the findings or themes were verified through this iterative process. I then wrote a textural description of the themes, identifying critical features of the participants' perspectives. I invited Ellen to review the adequacy of interpretations. Finally, I constructed an overall description and framework for the meanings discovered in the study (Miles & Huberman 2014; Patton 2002). An experienced qualitative researcher, with no previous

TC experience, was asked to examine data and findings, provide feedback, and confirm the adequacy of methods.¹

Trustworthiness

Several methods were used to ensure the trustworthiness (Lincoln & Guba 1985; Patton 2002) of the study. I worked closely with the interviewees to address the adequacy of the themes, as ongoing member check of the results. I spent an extended period of time in the setting, resulting in prolonged and persistent observation. An external qualitative researcher reviewed the appropriateness of the qualitative methods to address the research questions.

Subject

At the time of the study, Ellen was a 72-year-old female, married, with two grown children and four grandchildren. She was a Fulbright Scholar, completed a Ph.D. in English Education, and taught for several decades at a college in the Southeast. Her family members attained a minimum of four-year college degrees. She lived abroad, traveled extensively, and spoke several languages fluently.

Ellen's TC History

At age 63, Ellen's physician referred her to a physical therapist, Carlos, to improve her balance and decrease her pain. Carlos taught a simplified form of TC (Wolf Coogler & Xu 1997) that had been designed as part of large National Institutes of Health (NIH) study to address frailties of aging. This simplified form, Therapeutic TC (TTC), reduced the traditional 37 postures of the Yang form (Cheng 1981) to ten postures. After two years of attending TTC twice a week, Ellen enrolled in a local TC studio, where she learned the Yang 37-movement form developed by Professor Cheng Man-Ch'ing (Cheng 1981). Ellen participated in classes twice a week and attended practice rounds twice a week, a total of four TC sessions at the TC Center and one TTC session per week.

Ellen's TC Teachers

Carlos, Ellen's first TC teacher, and a PT, had been trained and certified in the TTC at Emory University (Wolf Coogler & Xu 1997). Peter, Ellen's traditional TC teacher, was the founder and owner of a traditional TC studio. Peter began TC in his late teens, during the 1970s, participating in Cheng Man-Ch'ing's studio in New York City. Peter's studio offers instruction in the Yang method and is associated with the Tai Chi Foundation based in New York. Peter also embraced Taoism, the Chinese historical, philosophical, and spiritual foundation of TC. Stan was an apprentice teacher in Peter's studio.

Findings

What can I learn that I can use to keep myself going? Tai Chi?

From an early age, Ellen was hampered by musculoskeletal pains. She described herself as a child-loving to run, play, ride bikes, and climb trees—yet struggling with chronic back pain. At 27, after the birth of her first child, Ellen began to experience “foot drop” and radiating pain due to compression of spinal nerves. She had her first surgery for spinal stenosis in her early thirties. Although she improved with surgery, eventually the weakness and pain returned. She had additional spinal surgeries, relapsing after a few years. In her fifties, Ellen found that the simple joys of a walk in her neighborhood caused her pain.

I was getting desperate.... As I aged, the more I walked, the less I could walk [because of back pain]. I was falling a lot in addition to my inability to walk distances. ... I needed to improve my balance because I had broken very many things – broken wrists and fingers and falls on my face on a number of different continents!

When Ellen began physical therapy, Carlos recommended joining TTC class. Ellen said, “he explained that TC would be really, really good, not only for my joints, but for my balance.” When asked why he had encouraged Ellen to begin TC, Carlos said Ellen needed to “improve her balance and get the rotation back in her hips.”

¹ Rodman Webb, Ph.D., Professor Emeritus, Research and Evaluation Methodology, University of Florida, Gainesville, Florida. Dr. Webb is a noted educational sociologist and founder of the *International Journal of Qualitative Studies in Education*.

Ellen enjoyed TC from the beginning. She described her preference for TTC over traditional physical therapy exercises, saying, "PT exercises seemed rather mindless, repetitive and boring."

Ellen explained that TC was a solution to an ongoing dilemma: *how to keep moving as she aged without hurting herself.*

Tai Chi answered that important question for me: What can I learn that I can use to keep myself going? Because I was scared that my body was going to shut down when I could no longer walk, and my body would atrophy. I found something that worked, that made me feel that I could get better. Before, I was casting around [looking for ways to exercise], and I would overdo things and hurt myself. In my TTC, I was always getting feedback on how I was doing and what I could do to give me more physical capacity.

Ellen's pain and weakness diminished as TTC improved her body awareness, movement awareness, and functional fitness.

Body and Movement Awareness: Ellen Acquires Functional Fitness

Ellen was surprised at how little she had understood her balance problems and the myriad of causes for her joint pain. She explained that her TTC class began with the simplest of movements.

Carlos taught us some ways of coping with balance issues that were just downright teaching of basic rudimentary skills, like where to put your foot when you take a step. And I had never thought about those things. In the past, I would trip over that dragging foot and just fell. I really was not conscious of what I was doing with my body. And Tai Chi made me aware of how I could save myself from those things. Within a year, I saw marked improvement in my balance. It was more than skills acquisition.

Carlos believed that the TTC translated easily into functional movement patterns. During class, Carlos demonstrated the ways that TC movements enhanced every day activities. The class included students who had Parkinson's Disease, joint replacements, and other debilitating conditions. Carlos explained, "In TC, hips undergo a weight-bearing rotation. For example, when we do cloud hands, we are learning to turn using our hips not our spine." He modeled how TTC's one-legged stances replicated parts of a normal gait. Carlos would occasionally wander through class gently bumping students, saying, "imagine you are in the Mall and some rowdy kid just bumped into you." Students learned to bend at the hip, knee, and ankle joints, instead of the low back, when picking up objects from the floor, similar to TTC postures that developed flexibility in the leg joints. Carlos modified certain movements for particular individuals in the class. He continually emphasized the stabilizing and strengthening characteristics of TC practice. His class oscillated between practice rounds of the ten moves, then breaking the moves down into simpler steps and making connections to functional daily movements.

Ellen enjoyed the class, experienced physical benefits, and began to appreciate TC as a multidimensional challenge. She explained,

I saw the cumulative nature of the skills and the personal challenge. Tai Chi really got me slowed down and interested in how my body was moving, and how I could help myself keep living in the way I wanted to live. Before I started Tai chi, my joints hurt like bloody hell. And it took three or four years of Tai chi before I finally got my joints in the right positions ... My knees over my feet, my hips over my feet. The pain began to decrease as I practiced. I learned how to move better from practicing what I was taught.

Her PT also noted her overall improvement in balance, posture, ease of movement, as well as enjoyment of the class.

I wanted Ellen to enjoy the ability to feel movement, to sense her weight shift, to feel balanced. I wanted her to have a sense of straightness and a sense of wellbeing. Those are the main things that I wanted. I asked her, can you feel the weight on this leg? Can you feel that hip turning? I ask my students to be introspective and do body scans, "where am I in space? Is my tan tian [center of gravity] over that leg? Can I lift my whole leg up?" I wanted them to do those things and I also wanted them to enjoy it. And, that's kind of a hard thing, for some people, to enjoy exercise.

Ellen enjoyed TC and the ways that TTC translated into improved functional abilities. She learned quickly. With clear improvements in her daily life, Ellen's commitment to TC strengthened.

Gaining in Exercise Self-Efficacy and Increased Resilience

Ellen developed a kinesthetic understanding of how her body moved; she learned functional movement patterns, enhancing her daily life. TC gave her confidence in her body that other therapeutic interventions had failed to do. During the two years that Ellen had been in the TTC class, she had two full hip replacements and an additional back surgery.

After the surgeries, I could still do Tai Chi as long as I could stand on two feet. In Tai Chi, I could gradually get through an hour of standing and moving. By moving in Tai Chi, I could decrease the pain, so the more I moved, the less pain I experienced. And I think that made the rehabilitation for those hip replacements especially rapid.

TC practice helped her recover from three surgeries. She felt more confident and wanted to learn more about TC.

With her PT's encouragement, Ellen enrolled in traditional TC class to learn the Yang style short form. Ellen demonstrated exercise self-efficacy: she believed that she could learn the complex forms.

I really got excited about (traditional) Tai Chi because there was so much more movement and variety in the forms. My physical disabilities or my inabilities, became apparent. It took me four years to learn all of the short form. It took a long time. But, I loved the movement. I was also exceedingly impressed by how difficult it was to remember the movements. Although I still had some musculoskeletal issues from the hip replacements and spine surgeries, I liked the challenge. I didn't know where the journey would take me, or what the arrival would be. I was a bit afraid, but I liked the bar being set higher than I expected.

With improved balance, strength and flexibility from TTC, Ellen was able to learn the complex set of forms. Carlos noted her enthusiasm for learning TC, saying, "She's alive, she's moving, she's engaged. Tai Chi does that for her. It's moving art, it's moving meditation, it's movement period."

Ellen believed that the challenge of TC motivated her to continue whenever she faced a setback from another musculoskeletal issue. She demonstrated growing exercise resiliency.

I was proving to myself that I could make my life better, and that I could improve my physical ability to cope with stuff [that had been getting harder to do], like coming back from an operation and learning to climb stairs again. As the years rolled along with all my different medical issues while studying Tai Chi, I would come back from whatever surgery or problem, and, in a few weeks, I realized that I was in a much better shape.

Ellen had greater self-efficacy and resiliency despite chronic degenerative spinal and joint disease.

Polishing her Stone: The Mental and Physical Discipline of TC

Ellen was curious about the martial aspects of TC. Her traditional TC instructors, however, downplayed the notion of practicing TC as though she were aggressively confronting an adversary. Her instructors, for example, talked about the meaning of a posture, "Repel Monkeys," as an effort to rid yourself of "monkey-mind" and address the inner states of mind that inhibit your awareness of the world within and around you. In TC class, mind-over-body was replaced by a different mind-body relationship. As Ellen noted, "I learned that the mind-body connection is about relaxation coupled with awareness." Her sense of equanimity and resilience was enhanced through taming "the monkey mind."

According to Carlos, Ellen was on a constant journey to improve herself through dedicated practice.

It is a sense of improvement that goes back to polishing your stone, which is a martial arts concept... You compete with yourself. You don't compete with your opponent. So, you're always polishing your stone. The stone being you.

Peter, her traditional teacher, emphasized Cheng Man-Ch'ing's approach to TC, noting,

Cheng Man-Ch'ing offered a deeper reality of what it was to be a fully healthy human being, which included a caring, compassionate aspect with no desire to actually hurt somebody else but also allowing you to be in a position that you're not available to be hurt.

For Ellen, TC offered the possibility of altering the terms of her struggle, providing respite from pain, through a path of careful thought, clear observation, and daily practice (Cheng, 1981). Stan noted Ellen's persistence,

Just silently doing the rounds day in and day out has made a difference. Ellen does practice rounds twice a week. We do about eight rounds during practice. So, doing practice rounds twice a week for an hour, that's 16 rounds. She attends two classes here, and she still takes a class with her physical therapist, so she is basically doing Tai Chi five days a week, four sessions here and one session with her PT group. She never asks questions during class, but, she is straighter, she is more certain of herself. Her form looks better. She is relaxed in a way that hardly any of us are.

TC classes and practice rounds became as fundamental to Ellen's daily life as going to work had been before her retirement. Ellen also noted that the martial arts aspect of TC had taught her "to be rooted and to yield—to do both. It prepared me for the vicissitudes of life."

Communal Learning: Being Centered while Being Connected

Ellen explained that learning TC with her group required an awareness of and responsiveness to those around you.

Tai Chi is an activity where you sense and respond to the needs of others. In class, the people that you want to be around are those who realize when you take a step back in Repel Monkeys, that even though you're going backwards, that they take that step with you. There is an integrity in what we do. You respond as the group moves, and you give space as the group moves. You are in relationship to the group and, well, I'm not much of a group person. But this is a group I want to be a part of because I can be a part of the whole, I don't have to lead it, I don't have to invent it, and I don't have to control it. I value the people who try to be a part of the group because the essence of the activity is the group.

Ellen notes that she can know others in the class, sense their presence, in a way that is atypical of ordinary social interaction. Peter explained the phenomenon from a Taoist perspective.

There is our individual self, and there is the reality of being profoundly one with every other human being; that humanity itself is an organism as well as we are as individual organisms. And that when we enter into that space [during Tai Chi rounds], you have an expansion of mind and an expansion of energy which is available to you If you're healing, you have access to a larger energy than you would have at home practicing by yourself. There is not any scientific instrument to measure that as we understand it right now, but it's profoundly experienceable.

Peter often referred to the Universal Mind as a Taoist principle. At the end of class, Peter invited students to "enter the Tao", a process of merging or becoming aware of the life-sustaining force, the origin of all creation. Through this merger, individuals achieve harmony with nature, self, and others. Peter described Tai Chi as the practice of generating and circulating Qi.

Ellen, however, described herself as an atheist, who did not believe in the "Universal Mind." She speculated about her sense of wellbeing while practicing TC,

There is something real in [the Tai Chi] experience that happens in our bodies as a result, either in our minds or the way we move, that induces the sense of wellbeing, that creates a real difference in how we live. What I am describing could be interpreted as spiritual. [But,] for me, Tai Chi is not about God, or a universal energy or universal mind.

Nevertheless, Peter explained, "Ellen doesn't have to believe" to benefit from the energetic connections among the group. He noted that the spiritual sense could not be explained in words, but that those who experience it are aware of its universal nature. He explained, "a Baptist practitioner could sit down with a

Zen practitioner, could sit down with a Sufi person. And if they were all entering into the same experience and they said it in their language, the other person would smile and nod and understand exactly.” Ellen did not believe she could articulate the words, but she thought that science would eventually find the words, to describe the sense of well-being she experienced during TC.

The Monkey Mind of the Cancer World

As Ellen began her fifth year of TC, she was diagnosed with metastatic bladder cancer. She continued her TC practice as she went through multiple medical appointments to determine the extent of her disease, discuss the efficacy of different treatment modalities, and make difficult medical choices. Carlos remembered those weeks.

She was meeting lots of different challenges... It was beyond having a urostomy and the chemotherapy. For her, it continued to be more than that, more than the discussion of the medical choices and treatment options. During that time, Tai Chi was an anchor that she could hang onto, because it did so many different things for her. And, it strengthened her for the treatments that were coming her way.

Ellen explained that regular practice with fellow students gave her a stable structure to ground herself as she entered the “Cancer World.”

In Cancer World, I had a cycle of commitments. It was all encompassing. And, then I would get online and read about my diagnosis. [Your medical condition] becomes who you are. And, once you have entered the Cancer World, you are excused from any other responsibilities in life. My physicians told me *not* to do Tai Chi. My job was to show up for this constant cycle of treatments and not to do anything that might interfere with treatments or add complications to an already complicated medical scenario.

Ellen’s TC practice, however, countered the gravitational pull of Cancer World. She “showed up” for her medical treatments, but negotiated terms for treatment. She communicated with her physicians regarding quality of life and made her boundaries clear. Ellen believed that the martial arts component of TC enabled her to engage the medical community, without surrendering her sense of self. Her “monkey mind” now included the psychological aspects of being diagnosed with cancer. Yet, she “rooted” and “yielded” as her medical situation constantly shifted.

Ellen said TC helped her manage the nausea, fatigue, and weakness of chemotherapy surgeries, but TC was also a source of joy and further exploration. Carlos explained,

Ellen is on this journey and there is this sense of progress, there’s the sense of accomplishment. There’s something she can be proud of, and I find that compelling because she feels that way even though [the medical community] sees her as a stage four cancer person.

Ellen believed that a key factor in her desire to keep moving—to stay engaged in her daily life and to participate in joy filled activities—was her ability to leave the “patient persona” behind as she exited the doors of the medical facilities. TC practice was essential to maintaining her sense of self in the midst of the medical drama unfolding in her life. An occasional surgery or medical procedure kept her away for a few days or weeks, but eventually she returned to her weekly schedule. Chemotherapy rarely kept her away. Peter explained,

From a Tai Chi point of view, you relax and accept things as they are [and recognize] that every moment is an option to go towards life or away from life. Ellen was offered that invitation to go towards life and that included the bonding of a body of people working together and being seen and accepted and cared about [in this community].

Ellen also believed she had a responsibility to her group to participate as fully as possible. She could feel exceedingly tired and nauseated while climbing the steps to the studio, but once she entered and practice began, her symptoms dissipated. As a TC class or practice rounds began, the mood of the group gradually shifted as participants relaxed and focused. Ellen also began to tell others, “Tai Chi is keeping me alive.” Stan remarked on Ellen’s participation in rounds.

When Ellen comes here, she is Ellen, even though we are somewhat aware of the other issues. She brings a grounding to us that people can feel... It's just an honor to be with somebody who is committed in the best possible spirit. And I think we all treasure that without really thinking about it. It's something that's there. And I would imagine that most of us realize that most likely, if we go to rounds, Ellen's going to be there.

Peter explained that the TC community viewed Ellen, "...as living. The other group (medical community) viewed her as dying."

Two years ago, Ellen was admitted to hospice care in her home. She had kidney failure; her physicians tried an intervention which they believed would extend her life for a few weeks, enabling her to say her "good-byes." Unexpectedly, Ellen's condition improved. Peter and another student visited her home. As Ellen grew stronger, she participated in a few practice rounds in her living room. Her kidneys gradually recovered, and she was discharged from hospice care. Her physicians tried an experimental immunotherapy. As the treatments continued, evidence of her cancer disappeared, and her physicians said she was in remission. Throughout the two years of immunotherapy, she participated in TC at the same level as in previous years, four to five times a week. Ellen said,

Tai Chi is fun. I am still moving, and I am not in pain. I am doing something to improve myself and my situation. The journey is worthwhile and the point of arrival is something yet to be seen. The ideal, the perfection that one is seeking, while not attainable, is worthwhile.

Ellen gratefully acknowledged her oncology team, but credited TC for the stamina to persist. Stan, who supervised practice rounds during the past few years, described Ellen's perseverance.

And here comes Ellen. She is more faithful than anybody. She's here every single time. She is just doing the rounds like everyone else. And I think she's at an energy level, an anchor in the room that is as important as the teachers or anyone else in the room. Her presence and her intention, I think, are as strong or stronger as any of ours. She has that ability to calm herself enough to be in her center.

As Ellen's TC instructors had explained, practitioners' intentions are more significant than perfecting their forms. Ellen agreed. Despite physical limitations, her intentions and active participation kept her moving toward life.

Discussion

The results of this naturalistic study revealed that Ellen experienced many of the positive effects cited in other qualitative studies. Ellen described improved physical functioning, increased activity level, improved body and movement awareness, greater relaxation and alertness, enhanced social functioning, as well as greater exercise self-efficacy and resilience. What, then, can we learn from Ellen that differs from other reports in the TC medical literature? What can we learn from her teachers' intentions and the social context of learning TC?

Explicitly linking TC movements to functional fitness

Carlos, Ellen's first teacher, was trained in the TTC protocol (Hain et al. 1999; Wolf et al. 1997). He had a clear understanding of Ellen's musculoskeletal issues and could directly address those needs, modifying for Ellen during class. As Ellen learned the functional fitness applications of TC, she relieved the constant stress on her low back, strengthened her lower body, and acquired greater flexibility. The combination of TC instruction, with explicit modeling in a variety of modalities, improved Ellen's kinesthetic and intellectual awareness of how her body moved in space. Ellen developed the vocabulary of functional fitness as she developed her TC vocabulary. The class took place in a physical therapy clinic with other students experiencing a broad variety of musculoskeletal issues. The focus on functional fitness was made meaningful for each student, given their particular set of issues.

The TTC protocol was developed and used in studies documenting its efficacy for movement disorders, in the 1990s. In more recent TC studies, researchers used interventions, without clear definitions of forms, without explicit rationales linking the forms to activities of daily living (Yeng 2015). Revisiting the TTC protocol, with explicit links to functional fitness, could prove useful to TC instructors concerned with musculoskeletal and balance issues. This finding clearly supports the contentions of Yeng et al. (2015) that

researchers need to be clear about specific characteristics of the modified TC form, with explicit rationale for the form addressing specific medical issues, describing the instructor's qualifications, and the context for learning and practicing. The Academy of Integrative Health and Medicine has also recommended that guidelines and accreditation procedures be addressed for TC providers (Oh et al. 2018).

TC: Challenging, multi-faceted activity requiring the support of experienced teachers

Similar to other practitioners, Ellen viewed TC as a “novel” and engaging alternative to physical therapy or other forms of Western exercise (Saravanakumar et al. 2018). TC has also been praised for the ease and safety of implementation with chronically ill and elderly patients (Wayne et al. 2014). However, Wayne et al (2014) reviewed studies employing simplified forms of TC, rather than the longer, more traditional forms. Ellen's greater understanding of her body and functional fitness, gained through TTC, preceded traditional forms. Nevertheless, for Ellen, TTC was not easy to learn, given her musculoskeletal issues. Ellen's introduction to TC was facilitated by Carlos' modifications for her specific conditions. Carlos had years of experience as a physical therapist. To use educational terms, Ellen benefited from Carlos' ability to coach and scaffold instruction in her proximal zone of development (Vygotsky 1978). He was able to facilitate her progression to more difficult postures included in the traditional TC. When Ellen entered a traditional TC class, she knew the modifications necessary for safe practice for her musculoskeletal issues. Teachers' qualifications and experiences may be a factor in beginning students' capacity to be engaged and progress to greater challenges.

Peter expected her to learn complex physical routines that took years to learn, within the context of a supportive group. Ellen responded positively to the notion that she could accomplish more than she had envisioned. Nevertheless, Peter emphasized intention over perfection in form and persistent practice over talent. Ellen's teachers, with their years of experience, modified for Ellen in different ways: Carlos, through specific modifications to enhance function, and Peter, through a focus on intention and energy, to develop a TC stance toward life. Ellen's persistence with TC extended far beyond the short-term participation typical of TC interventions reported in the research literature (Yeng et al. 2015). In Ellen's case, TC would be characterized as ease of implementation only in the sense that no equipment was required and could be enacted while standing. Ellen's continued engagement with TC and accruing long-term benefits would not have been possible without supportive, experienced teachers, capable of modifying for her unique medical situations.

TC as communally shared, meditative movement

Ellen learned and practiced TC in sessions with others. She rarely practiced alone. Her description of TC social relationships focused almost exclusively on the experiences of learning and practicing within class rather than developing friendly relationships before and after class. In medical studies, researchers reported a social connection among participants that also functioned similar to support groups (Yeh et al. 2018). These participants had similar medical conditions and discussed ways their symptoms affected their lives. Ellen, however, bonded with her group through traditional TC methods – a heightened awareness and responsiveness to one other within the group – resulting in shared, flowing movement. Ellen found this phenomenon compelling, but was unable to articulate precisely the nature of the shared connections and wondered if this quality accounted, in part, for others' perceptions of TC as a spiritual practice. Ellen believed that science would eventually be able to describe these benefits in terms other than the “Universal Mind.” Researchers in psychology and neuroscience have also noted the ways that humans co-regulate, calming themselves by restoring “homeostatic functioning of their nervous systems, a healthy alternative to chronic arousal and dysfunction” (Payne et al. 2015). Meditative movement, such as Yoga, TC, and Qigong, have been proposed as examples of Eastern traditions, providing opportunities for co-regulation, by directing attention to interoceptive, proprioceptive, and kinesthetic cues (Larkey et al. 2009; Payne & Crane-Godreau 2013). This collective “coregulation” among participants differs from the supportive social networks described in the medical research literature. This avenue of research, regarding meditative movement, indicates another benefit of TC, worthy of continued investigation.

Taming the Monkey Mind through TC

Ellen believed that the martial arts aspect of TC enabled her to maintain a strong sense of self as she made critical life and death decisions, during her ordeal with a terminal cancer diagnosis. According to Jutel and Nettleton (2011), a medical diagnosis serves as an explanatory framework for the medical community, guiding their decisions for patient care. However, as Ellen described, a diagnosis can also

“become who you are.” As Ellen’s case demonstrated, individuals can sustain alternative frameworks for their lives while in the midst of painful, ongoing medical treatments. TC’s disciplined approach, as “knowing when to root and to yield,” provided Ellen with the ongoing option of turning toward life, connecting energetically with the world around her. Ellen’s experiences might offer researchers and practitioners an understanding of ways that individuals maintain a balanced and proactive movement toward life while facing death.

Final Thoughts

This study illustrates one way that qualitative research could be an avenue for a fuller understanding of patients’ TC perspectives. Ellen’s teachers presented TC as an ongoing challenge, preparing her to engage more fully in life. Her instructors had varied backgrounds, instructional styles, and orientations toward TC; they enriched Ellen’s life and met differing needs as she faced chronic medical crises. Perhaps Ellen’s word, “vitality,” stated the clearest benefit of TC and the ways TC “kept her alive.” Clearly, TC offers a multitude of research opportunities among different fields of study with differing methodological approaches to explore the benefits to participants.

Ethics and Consent

The study received ethical approval from the Institutional Review Board (IRB) at the University of Florida, Gainesville, Florida.

Competing Interests

The author has no competing interests to declare.

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