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Seven Dimensions of Wellness in Athletes with Upper Extremity Orthopedic Injuries: A Manual for Occupational Therapists

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Seven Dimensions of Wellness in Athletes with Upper Extremity Orthopedic Injuries: A Manual for Occupational Therapists

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ABSTRACT

Increased attention has been placed on sports and athletes within the United States cultural. The latest reports of the noted sports economist Andrew Zimbalist estimated that the annual revenue of only 4 North American sports amounts to approximately $15 billion (Markovits, 2010). Athletes with upper extremity orthopedic injuries have traditionally been treated by occupational hand therapists (Hanson, Nabavi, & Yuen, 2000) however; research does not adequately address their needs outside of physical injury and musculoskeletal gain. Evidence is lacking within the profession of occupational therapy that encompasses the athlete as an occupational being. An occupational being is a person who participates in everyday occupations as an essential aspect of life. The physical dimension of wellness has traditionally been at the forefront of occupational hand therapy neglecting all other areas of wellness (social, spiritual, environmental, occupational, emotional, and intellectual dimensions of wellness).

The Seven Dimensions of Wellness with Upper Extremity Orthopedic Injuries: A Manual for Occupational Therapists will provide occupational hand therapists with a resource to achieve successful outcomes with a client-centered Occupational Adaptation approach within a hand therapy facility. The manual was developed to guide intended to be used as a guide for therapists to implement at the beginning (initial evaluation), during (intervention), and at the end of therapy (discharge planning) to direct the client and therapist through a process of adaptation (rehabilitation) involving the Seven Dimensions of Wellness. The manual includes case studies, activities, and possible interventions associated with each dimension of wellness. The step-by-step instructions enable the therapist and the athlete to collaborate the treatment direction based on a combination of the athlete's concerns paired with the occupational therapists' professional knowledge. It

is hypothesized that athlete satisfaction and wellness recovery will be increased in treatment of athletes through guidance from this manual.

CHAPTER I

INTRODUCTION

Physical disabilities of athletes are easily detected and treatment typically consists of protocols that have been developed based on common findings and physician standards. The physical dimension of wellness has traditionally been at the forefront of occupational hand therapy. As health care treatment has progressed over time, the need for updating protocols and intervention approaches has become a priority. An innovative challenge for occupational-therapists practicing hand therapy will be to involve all dimensions of the athletes' wellness throughout the therapeutic process, rather than simply treating the physical impairment.

Occupational therapists have a riveting opportunity to contribute as architects of the contemporary/client-centered transition within their role in the healthcare profession. Implementing occupation based treatment in hand therapy settings has been linked to enhanced client outcomes when compared to treatment based on mechanical skills (Chan & Spencer, 2004). In order to move from a traditional approach of physical treatment to a contemporary approach of treating clients, the role of being an athlete must be examined further. The majority of research being done in the area of occupational hand therapy has focused on physical concerns. Jack and Estes (2010) emphasized the traditional mechanical skill approaches often obscure client-centered approaches within this era of healthcare.

The co-authors of *The Seven Dimensions of Wellness with Upper Extremity*

Orthopedic Injuries: A Manual for Occupational Therapists discovered a gap in literature available to healthcare professionals working in hand therapy that involved treating clients with upper extremity orthopedic injuries in a client-centered and holistic method. A majority of the resources available to occupational hand therapists supplied information solely on the physical needs of clients. The developed manual will provide occupational hand therapists with a resource to achieve successful outcomes with a client-centered occupational adaptation approach within a hand therapy facility. It is hypothesized that client satisfaction and wellness recovery will be increased in treatment of athletes through guidance from this manual. The athletes' role can lead therapists to set most individualized goals creating more successful outcomes. The manual was created to promote recovery based on the needs specific to athletes.

The Seven Dimensions of Wellness with Upper Extremity Orthopedic Injuries: A Manual for Occupational Therapists was created to promote the use of the Occupational Adaptation Frame of Reference when treating athletes with upper extremity hand injuries. This frame of reference has been effective with other populations (Schkade & Schultz, 1992) and the co-authors believed this frame of reference applies to athletes as well. The Occupational Adaptation Frame of Reference guided the development of this manual due to its focus on the client and their process of recovery through personal adaptations. Holistic and client-centered care as demonstrated through the Occupational Adaptation frame of reference is often not included in standard occupational hand therapy protocol. Jackson and Schkade (2001) suggested that clients benefit when the Occupational Adaptation framework is implemented.

The Seven Dimensions of Wellness (also referred to as The Six Dimensions of

Wellness and Wheel of Wellness) was used as a model of which to describe an individuals' foundation for wellness. (Witmer & Sweeney, 1992). Through this model a person is described as being made of seven dimensions: social, emotional, spiritual, environmental, occupational, intellectual, and physical aspects of wellness. The Seven Dimensions of Wellness encompasses a greater depth of the individuals' experience in all dimensions of his or her life.

The scholarly project includes five chapters and appendices for readers. Chapter II is comprised of the review of literature in which the authors examined existing evidence related to client care in orthopedic occupational therapy settings. The Occupational Adaptation frame of reference and The Seven Dimensions of Wellness have also been reviewed. Chapter III describes the process of the development of *The Seven Dimensions of Wellness with Upper Extremity Orthopedic Injuries: A Manual for Occupational Therapists*. Chapter IV includes the manual description and how to implement the manual properly. Chapter V describes the co-authors future plans to implement the manual successfully. The appendices include the full manual: *The Seven Dimensions of Wellness with Upper Extremity Orthopedic Injuries: A Manual for Occupational Therapists.*

CHAPTER II

REVIEW OF LITERATURE

Introduction

On a given day in 2010, in the United States approximately 106.5 million people watched a sporting event on television; this event is called the Super Bowl for the National Football League (USA Today, 2010). According to a nationally recognized periodical, the day of the super bowl February 7, 2010 has been marked as a day in history for leading as the United State's most watched television show beating the previous sitcom of Columbia Broadcast System M*A*S*H (USA Today, 2010). This significant statistic is evidence that sports are prevalent, valued, and thriving in the United States culture. Participation in sports occur at any level and are for anyone. According to the Official United States Bureau of Statistics (2010), in May 2009 there were 13,620 professional American athletes in addition to 179,830 coaches and scouts, and 14,860 umpires, referees, and officials. Plunkett Research Ltd. (2010), a recognized company for statistics, reported United States sporting equipment sales at retail sporting goods stores have been roughly $39 billion yearly (Plunkett Research, Ltd., 2010). Plunkett Research Ltd. also indicated a reasonable estimate of the total U.S. sports market would be $400 to $425 billion yearly (Plunkett Research, Ltd., 2010). With such an emphasis on sports in the United States culture, it is imperative that occupational therapists consider the implications that the role of an athlete may have on recovery following an injury.

The American Occupational Therapy Association's Centennial Vision is that occupational therapy will be recognized as a "powerful, widely recognized, science-driven, and evidence based profession with a globally connected and diverse workforce meeting society's occupational needs" (AOTA, 2007, p. 614). The Centennial Vision has provided a supporting description to the existing professional identity. Occupational therapy is a profession with a guiding force to provide people with knowledge and skills to participate in their daily occupations (daily activities). Occupations that people may participate have been categorized in the *Occupational Therapy Practice Framework: Domain and Process* (AOTA, 2008) within the areas of education, rest and sleep, education, play, leisure, and work (p. 630). Occupational therapy practitioners apply theory, evidence, knowledge, and skills regarding the therapeutic use of occupations to positively affect a client's health, well-being, and life satisfaction (AOTA, 2008). Occupational therapy provides services to a range of populations of people with individualized needs.

Occupational therapy can be an essential part of the healthcare team when treating an athlete with an array of possible injuries that influence his or her daily activities. Occupational therapists are in an excellent position to promote sports in rehabilitation because of their knowledge and skills in activity analysis, equipment adaptation, and psychosocial issues. Occupational therapists have a unique opportunity to use the occupation of sports to integrate the roots of the profession (i.e., occupation-based treatment) with the cultural demands of society (Hanson, Nabavi & Yuen, 2000). Occupational therapy research has involved clients with injuries ranging from spinal cord injuries (Hanson et al., 2000) to upper extremity orthopedic injuries (Schier & Chan,

2007) though, notably, the quantity of occupational therapy evidence is sparse. Existing evidence has supported occupational therapy intervention as an effective means for treatment of athletes. In the study by Hanson et al. (2000), involvement with sports correlated positively to the person's level of function within the community. A wide variety of research with occupational therapy and sports is focused primarily on musculoskeletal gain; however, Hanson et al. (2000) expressed the person as an athlete and his or her return to function and satisfaction with his or her life. Hanson et al. (2000) found that sports can facilitate a process of involvement if an interest in sports exists within the client; this client-centered approach is congruent with the essential beliefs purported by the profession of occupational therapy (Hanson et al., 2000). Hanson et al. (2000) also suggested engagement in sports has many advantages that provide positive outcomes in rehabilitation settings. Positive outcomes were discovered in a study involving subjects with upper extremity orthopedic conditions. Schier and Chan (2007) found that occupational therapy was perceived as beneficial to all hand therapy clients in regards to their recovery from an injury. The clients receiving hand therapy within this study setting were found to have increased satisfaction and recovery from his or her upper extremity injury.

The positive outcomes of occupational hand therapy may be achieved by addressing common subsequent issues secondary to physical injury. When researching athletes with common upper extremity injuries, Schier and Chan (2007) found that the subjects identified the following: loss of activities normally performed within a role, loss of independence, and role reversal in the case of increased dependence on children. All clients, at different times in their interviews, discussed feelings of hopelessness and

resignation (Schier & Chan, 2007). Occupational therapy may be a supportive component of the healthcare team when treating an athlete with upper extremity orthopedic injuries.

While occupational therapists from a broad range of practice settings may encounter an injured athlete, a probable setting for many clients is the orthopedic clinic; a setting in which the client is likely to work with an occupational therapist who specializes in care of clients with upper extremity orthopedic injuries. Commonly referred to in practice as "hand therapists," occupational therapist specializing in orthopedics work with clients with a wide variety of orthopedic injuries ranging from issues related to the shoulder, elbow, forearm, wrist, and hand including edema, fractures, adhesions or tightness, wounds and scars, cumulative trauma disorders, tendon injuries and conditions, muscular strains/tear/avulsions, and ligamentous injury and instability (Dimick et al., 2009). In a report of the *2008 Practice Analysis Study of Hand Therapy*, Dimick et al., (2009) defined a certified hand therapist as an occupational therapist or physical therapist who has completed extensive practice in treating upper extremity orthopedic conditions as well as successfully passed the comprehensive Hand Therapy Certification Examination (HTCE) (Dimick et al., 2009). According to 661 American respondents to a survey issued by Dimick et al. (2009), 89% were occupational therapists and 11% were physical therapists.

Of the 73 respondents from Canada, 51% were occupational therapists, 47% were physical therapists, and 3% had both occupational and physical therapy credentials. The overall composition was found to be 85% occupational therapists to 15% physical therapists in the population of certified hand therapy respondents within this survey

(Dimick et al., 2009). Overall, occupational therapists are the prominent profession practicing in hand therapy.

Intervention within orthopedic settings is often considered to be largely preparatory as common interventions often involve physical agent modalities, range of motion exercises, wound management, etc. Ideally, however, the focus of therapeutic interventions is primarily on how the impairment located within the hand, wrist, elbow, and shoulder girdle limits ones' ability to perform tasks and to participate in life situations (Dimick, et al., 2009). Dimick et al. (2009) defined hand therapy as the art and science of rehabilitation of the upper limb. The upper extremity includes the hand, wrist, elbow, and shoulder girdle. The merging of occupational therapy and physical therapy theory and practice combine comprehensive knowledge of the structures of the upper limb with function and activity. Hand therapy may enhance an individuals' ability to execute tasks and to participate fully in life situations (Dimick, et al., 2009). The definition of hand therapy includes the terms "function," "activity," and "participate fully in life situations" and yet in a survey of hand therapists' regarding their practice patterns when treating lateral epicondylitis, MacDermid, Wojkowski, Kargus, Marley, and Stevenson (2010) reported that the most frequently used treatments were education (regarding activity modification, risk factors, pain management, posture, ergonomic modification), home exercise program, splinting, stretching, massage, and ice. The aforementioned interventions are necessary in remediating client function, but working within the context of the clients "occupations" was not addressed. Traditionally, one may argue that occupational therapy in an orthopedic setting has been largely guided by the Biomechanical frame of reference though more contemporary approaches with a broad

consideration for health and wellness may be needed to maximize the athlete-client's success in occupational therapy and return to occupation.

Biomechanical & Other Traditional Approaches

Traditional treatment within healthcare is focused primarily on disease and illness as the focus for intervention. The specialization of hand therapy within the profession of occupational therapy has been dominated by biomedical approaches [traditional] and implementing occupation-centered approaches [contemporary] has been uncommon. Areas that appear to have been overlooked by occupational therapists include the client's occupational profile, environment, psychosocial factors, and the context in which the client performs his or her daily activities. Toth-Fejel et al. (1997) reported contextual and psychosocial factors are often missing from occupational therapy assessments. Toth-Fejel et al. (1997) suggested occupational therapists must determine how clients are performing in valued daily occupations and discover the client's self-identity through these occupations. This process can be accomplished by determining contextual features that affect daily occupations, modify those occupations to enable client to participate successfully, and give client on-the-spot feedback as he or she performs occupations (Toth-Fejel et al., 1997).

Within the field of occupational therapy, athletes have traditionally been treated by occupational hand therapists (Hanson, Nabavi, & Yuen, 2000) however; contemporary hand therapy does not adequately address the client's needs outside of physical injury and musculoskeletal gain. Interventions within the Biomechanical frame of reference focus primarily on how the impairment located within the hand, wrist, elbow, and shoulder girdle limits one's ability to perform tasks and to participate in life situations (Dimick, et

al., 2009). The Biomechanical frame of reference focuses on a client's remediation process in therapy. The treatment methods typically include strengthening, range of motion, and endurance training. The Biomechanical frame of reference contains six categories: *1. isolated versus coordinated movements 2. rhythmical versus arrythmical movements 3. linear versus diagonal movements 4. reciprocal versus asymmetrical movements 5. movements to increase versus movements to maintain range of motion 6. movements against excessive resistance versus maximal repetitions* (Cole & Tufano, 2008). The typical occupational hand therapy treatment within the Biomechanical frame of reference does not characteristically extend beyond physical treatment methods. Next, contemporary practice areas and approaches will be discussed in order to increase awareness of the difference between traditional versus contemporary occupational therapy practice.

Contemporary Health and Wellness Approaches

Contemporary treatment involves an expansion of preventative medicine to promote health and wellness. Myers, Sweeney, and Witmer (2000) found that more than half and as many as two thirds of all deaths in the United States were due to lifestyle factors that could be modified. The authors proposed a holistic model of wellness and prevention over the life span. A paradigm shift in medicine, which was initiated over a decade ago, is transitioning from disease and illness toward an emphasis on wellness and health (Myers et al., 2000). Currently, occupational hand therapists are met with a similar challenge of joining the contemporary trend of promoting health and wellness through client-centered practice.

Contemporary strategies within occupational therapy must be analyzed to develop awareness of possible challenges within this paradigm shift. Providing intervention that is holistic, client-centered, and occupation-based is not always attained due to the reimbursement guidelines currently directing medical professionals (Dale, Fabrizio, Adhlakha, Mahon, McGraw, Neyenhaus, et al., 2002). Five hand therapists who implemented the Occupational Adaptation frame of reference were studied to assess the therapists' ability to adapt to cost containment constraints while modifying and implementing innovative hand therapy interventions (Lucinda, Fabrizio, Adhlakha, Mahon, McGraw, Neyenhaus, et al. 2002). The therapists were able to implement client-centered treatment strategies based on the Occupational Adaptation frame of reference that fit within the facility budget and were reimbursable through third-party payers. The results indicated that occupational therapists made adaptations in their professional skills by learning new skills or improving existing skills in order to provide holistic services within a cost-contained environment (Lucinda et al., 2002).

In addition to cost-effectiveness within occupational therapy, the reimbursement of therapy services must be addressed. Burke and Cassidy (1991) indicated occupational therapy services that are client-centered contemporary strategies may not be possible due to reimbursement based on traditional client diagnosis-based approach. Burke and Cassidy (1991) created a challenge to all occupational therapists to create new treatment models that will meet reimbursable guidelines while maintaining strong commitment to individuals, holistic care, and occupational role performance (Burke & Cassidy, 1991). Similarly, in a case report, Toth-Fejel, Toth-Fejel, and Hedricks (1997) indicated third-party payers were becoming more interested in the final outcomes rather than incremental

change. It is essential that occupational hand therapy is able to provide contemporary holistic care to clients while meeting reimbursable guidelines.

Hand therapy services are often perceived as an area of practice in which mechanical skills over-shadow client-centered approaches due to strict reimbursement demands. Being able to provide skilled, holistic, client-centered care within this practice setting is a challenge that every therapist faces. Occupation-based treatment in the hand therapy setting has been linked to enhanced client outcomes in the past (Chan & Spencer, 2004). A case report published by Jack and Estes (2010) demonstrated how the shift from a biomechanical approach to a client-centered, occupation-based approach could be achieved in order to enhance client outcomes.

Jack and Estes (2010) reported that the individual in the case report was first treated by a standard protocol consisting of a biomechanical frame of reference with profound emphasis on protecting surgical interventions, gaining and maintaining AROM (active range of motion) as well as PROM (passive range of motion), reducing edema, wound management, and providing scar management techniques (Jack & Estes, 2010). Interventions consisted of modalities, retrograde massage, and manual scar mobilizations along with therapeutic exercise. Dressing changes and debridement were performed to promote wound healing. Splint modifications were made after the edema initially subsided and pressure areas were noted. At the five week follow-up, it was noted that there was poor recovery of her injury as well as intermittent pain experienced by the client (Jack & Estes, 2010). The therapist altered treatment to include a new regiment of biomechanically based techniques such as ultrasound, aggressive scar massage, and electronic stimulation. At the next follow-up five weeks later, little had changed with

minimal improvements that could be documented. The client verbalized compliance with all tasks instructed to complete, but reported discouragement with the poor progress made at that point of time in treatment. She was frustrated that the occupational performance gains were not reflected in the Biomechanical goals or measures. The therapist decided that a shift to a more client-centered approach was needed (Jack & Estes, 2010).

Research by Dolecheck and Schkade (1999) supported engagement in meaningful occupations when the client was invested in the recovery process as better outcomes were achieved. When this client was faced with a life transition, such as surgical intervention, the Occupational Adaptation process is at risk for dysfunction. By using the holistic approach of Occupational Adaptation, clients may be facilitated to become their own agent of change which has been successfully implemented in a variety of settings and compared with other occupational therapy models (Gibson & Schkade, 1997; Jackson & Schkade, 2001; Johnson & Schkade, 2001).

The Canadian Occupational Performance Measure (COPM) has been administered in an effort to shift from a biomechanical approach to a more holistic, client-centered Occupational Adaptation approach. The COPM is a semi-structured interview where the client reports concerns and areas in which he or she would like to improve upon. Once he or she identifies the problems, the client then rates his or her perceived ability of current performance and satisfaction with performance. This tool is often used to help in treatment planning and reassessment as a clear outcome based assessment. This tool has been found to be valid and reliable as a measurement tool in a variety of settings (Watterson, Lowrie, Vockins, Ewer-Smith, & Cooper, 2004).

The COPM was used to gain insight as to which occupational tasks were most important to her. The client identified the desire to supinate, palm of her hand facing up, in order "to turn door knobs or get change from my purse" (Jack & Estes, 2010, p. 85). She identified the desire for functional pinch, "so I can get my own toothpaste out or squeeze a ketchup packet" (Jack & Estes, 2010, p. 85). The client also expressed a desire to hold a book and cup along with manipulating her car window controls. She was then asked to rate her current level of performance and satisfaction in which she rated very low (Jack & Estes, 2010).

Over the following six treatment sessions the client, working with the therapist, addressed each of her concern areas functionally and "in the context of performance" (Jack & Estes, p. 86, 2010). Using an Occupational Adaptation perspective the therapist realized that the client was simply trying to master her environment in order to experience efficiency and effectiveness in her performances. The use of dycem, a non-slip surface, and external rotation of the shoulder allowed her to manipulate door knobs. Paying with a debit card allowed her to pay for items without having to manipulate change. A lever was implemented as an adaptation to her car windows permitting her to maneuver them with relative ease. The client still verbalized disappointment with the loss of mobility within her wrist and index finger although stated she is attempting more occupational tasks than she did when using the biomechanical approach (Jack & Estes, 2010).

Reassessment of the COPM was completed and documented. Progress through biomechanical goals was minimal and increased client frustration was apparent. Most importantly the biomechanical (physical) approach failed to demonstrate functional gains

important to the client. After shifting to a client-centered, occupation-based approach, positive changes were distinguished. The Occupational Adaptation approach promoted the client's adaptation, improved her motivation and viewpoint, and provided clinically significant documentation addressing functional progress achieved (Jack & Estes, 2010).

Hand therapists are often faced with complex surgical situations where the biomechanical model and intervention tools are a necessity. The mechanical expertise and skills of occupational therapists working in hand therapy settings is essential in providing optimum client care, however, improved client outcomes may be seen by combining the Biomechanical approach with the Occupational Adaptation frame of reference. The implementations of both the biomechanical and Occupational Adaptation Frame of References allows for a more client-centered approach that facilitates the client's adaptation and strive for mastery while meeting more than just the physical needs.

The Seven Dimensions of Wellness is a model that describes each dimension (social, emotional, spiritual, environmental, occupational, intellectual, and physical dimensions) of the client's wellness. This model allows the occupational hand therapist to collaborate with the client to address each dimension of his or her wellness achieving a client-centered approach. The Seven Dimensions of Wellness will be explained in greater detail subsequently within Chapter II.

Occupational Adaptation Frame of Reference

Occupational therapy focuses on the holistic treatment of clients looking at the problem and how that problem will impact the way one interacts in his or her environment. Occupational therapy treats each client based on the individual needs of the person. Every person is unique and requires a separate approach. Frames of reference are

the theoretical tools that guide reasoning (AOTA, 2002) and are a useful as an instrument in determining how to approach each and every individual's intervention planning and implementation (Schkade & McClung, 2001).

The Occupational Adaptation Frame of Reference was published in 1992 by Janet Schkade and Sally Schultz (Schkade & Schultz, 1992). This frame of reference was created out of a need to establish a foundational guide for an upcoming research program at Texas Woman's University (Schkade & Schultz, 1992). Occupational Adaptation is a comprehensive systems frame of reference approach defined by two core components: 1) a common human phenomenon known as adaptation and 2) a framework that helps occupational therapists to plan, guide, and implement interventions (Schkade & McClung, 2001). The focus of this frame of reference was intended to be applied across the entire developmental lifespan holistically treating a wide variety of populations and therapeutic needs (Kramer, Hinojosa, & Royeen, 2003).

There are four key constructs that guide the reasoning processes of the practitioner using the Occupational Adaptation Frame of Reference including: *1) Occupations, 2) Adaptive capacity, 3) Relative mastery, and 4) Occupational adaptation process* (Cole & Tufano, 2008). Occupations must actively involve the person providing meaning to the individual including a process and a product that may be either tangible or intangible. An individual's adaptive capacity is referred to as "a person's ability to recognize the need for change, modification, or refinement (adaptation) in order to achieve relative mastery" (Cole & Tufano, 2008, p. 107). Occupational Adaptation is the state of competency in occupational functioning toward which human beings aspire (Schkade & Schultz, 1992). This understanding of adaptation is learned over a lifetime

and different for everyone. Some may identify a need for change early on while others may try the same method multiple times before realizing that a change (adaptation) needs to be made.

Relative mastery is defined as a "person's self-assessment of his or her occupational response" (Cole & Tufano, 2008, p. 108) in regards to efficiency, effectiveness, and satisfaction of a specific challenge. Finally, the Occupational Adaptation process occurs as a complex series of steps that occur when a person is faced with an occupational challenge (Cole & Tufano, 2008). This frame of reference provides a foundation to consider the relationship between the person, occupational environment, and the interaction that takes place between the person and environment (Cole & Tufano, 2008). Individuals are challenged on a daily basis to meet the internal and external demands created by his or her environment. The way in which one adapts to these challenges determines the success.

"Occupational adaptation is further presented as a holistic perspective that requires that all three person systems are involved in every occupational response" (Schkade & Schultz, 1992, p. 386). According to this frame of reference, people have an intrinsic drive for mastery that is believed to be influenced by three systems: sensorimotor, cognitive, and psychosocial (Schkade & McClung, 2001). It is also believed that each person desires some level of behavioral performance which is referred to as the *desire for mastery* (Schkade & McClung, 2001). The environment shapes the *demand for mastery* (Schkade & McClung, 2001) referring to the physical context of one's environment as well as family expectations. The *press for mastery* (Schkade & McClung, 2001) is the term used to describe the interaction between the person and

environment. This interaction continues over a lifetime constantly being challenged by new demands occurring within an individual's daily life (Schkade & McClung, 2001).

The press for mastery often times is looked at as the *occupational challenge* (Schkade & McClung, 2001). For example, within an individual's job as an athlete, he or she is challenged because of the particular role in which he or she plays, referring to the job. Occupational therapy refers to someone's *job* as his or her *occupation* of choice (Schkade & McClung, 2001). The challenge one faces during the occupation is termed the occupational challenge. In the previous example, the athlete's occupational role is that of an athlete. Occupational role expectations are what produce the need for Occupational Adaptation, which is the center of this frame of reference. Everything within the Occupational Adaptation Frame of Reference is directed around an individual's ability to adjust to his or her specific occupation. Occupational Adaptation calls this adjustment within an individual's occupation the *occupational adaptation* (Schkade & McClung, 2001).

The occupational challenge and the occupational role expectations are both affected by the occupational environment and the person. The occupational environment is simply the context in which a specific role is carried out. From an Occupational Adaptation frame of reference perspective, context can be any of the following systems including: work, leisure or play, or self-care (Schkade & McClung, 2001). Influences that make each environment unique are described under the physical, social, and cultural sub-systems. These sub-systems supply the external occupational role expectations. Conversely, the external expectations are the internal role expectations that each individual brings to any occupational challenge. Within occupational therapy practice, the

person is viewed as consisting of three distinct systems: sensorimotor, cognitive, and psychosocial. These systems are made unique by the sub-systems that are built within them: genetic, environmental, and phenomenological (Schkade & McClung, 2001).

Once the occupational challenge has been identified, how does the individual begin to produce the response? The individual needs to create a response, evaluate it, and then integrate it. These steps occur through the action of several sub-processes referred to by Occupational Adaptation as the *adaptive response generation sub-process, the adaptive response evaluation sub-process, and the adaptive response integration sub-process* (Schkade & McClung, 2001). Within these sub-processes, the individual is learning to create an adaptive response that is able to meet the needs of the problem. From a therapist's perspective, this is hopefully when the client will be able to anticipate the outcomes of responses generated from within. Being able to anticipate outcomes, regardless of a successful outcome, promotes more adaptive and masterful responses.

The response generation sub-process is broken into two components: the adaptive response mechanism and the adaptation gestalt (Schkade & McClung, 2001). The creation of the response begins when the adaptive response mechanism is activated (Schkade & McClung, 2001). Within the response mechanism is the energy that drives the process (adaptation energy), the specific patterns of responding to challenges (adaptive response modes), and the certain behavior types that an individual uses when attempting to respond adaptively (adaptive response behaviors) (Schkade & McClung, 2001). It is important to understand that each of these components making up the adaptive response mechanism work simultaneously and in no specific order.

Schkade and McClung (2001) refer to *adaptation energy* as the "fuel" (Schkade & McClung, 2001, p. 34) that drives the occupational adaptation process. This frame of reference views adaptation energy as something that is of limited supply and proposes using this energy through two levels of use: primary and secondary in an effort to be most "efficient, effective, and satisfying with client outcomes" (Schkade & McClung, 2001, p. 35). Primary adaptation energy is active when there is intentional and focused attention on the occupational challenge at hand (Schkade & McClung, 2001). Secondary adaptation energy occurs when that intentional or focused attention is directed away from the challenge (Schkade & McClung, 2001). Primary adaptation energy uses energy at a faster rate because of the nature of concentrating so heavily on the challenge (Schkade & McClung, 2001). While secondary adaptation energy conserves the energy as it is being used at a lower awareness level using energy at a slower rate (Schkade & McClung, 2001). We tend to approach problems at the primary level forcing ourselves to solve a problem at that moment. Due to this, we limit creative problem solving, which occurs at the level of secondary energy (Schkade & McClung, 2001). This may be effective, as the occupational challenge must be approached first from the level of primary energy. If the problem is not initially solved using primary energy it is then shifted to secondary energy when the individual changes focus of his or her primary energy to one's children or a football game for example. The occupational challenge is still being reviewed only under secondary energy where there is greater likelihood of intuitive solutions to be made (Schkade & McClung, 2001).

Adaptive response modes (Schkade & McClung, 2001) are another piece of the adaptive response mechanism. These are patterns of responding to occupational

challenges in the past that have received some degree of mastery. Adaptive response modes are classified as existing (those already within ones collection), modified (those that are made through changing an existing response), or new (those that come about because our existing or modified responses are not working) (Schkade & McClung, 2001). For example, clients will try to use existing response modes first to solve an occupational challenge as these can be easily retrieved and implemented with little primary energy. If there are no existing modes working then one moves to modifying an existing response mode. When this does not produce the desired result then one attempts to create a new response mode in hopes of solving the challenge (Schkade & McClung, 2001).

Adaptive response behaviors (Schkade & McClung, 2001) are the third feature of the adaptive response mechanism. These are behaviors that we use to respond adaptively to the occupational challenge at hand and are categorized as primitive, transitional, and mature (Schkade & McClung, 2001). Primitive responses are those that individuals commonly use when faced with extreme challenges trying to respond with some level of mastery. They are termed "hyperstable" (Schkade & McClung, 2001, p. 42) as the responses are unable to evolve into a more appropriate response for the individual. The transitional response is considered to be "hypermobile" (Schkade & McClung, 2001, p. 42) as they provide some level of variability in attempts to solve the challenge. The mature adaptive response behaviors are those that are focused on the person's goal, the behaviors make sense to the person, and are focused the outcomes the person wants to achieve. The mature response is the result of primitive and transitional attempts to meet the demands of the occupational challenge (Schkade & McClung, 2001).

The second and final component of the adaptive response generation sub-process is that of the adaptation gestalt (Schkade & McClung, 2001). The key concept to understanding this section is that within every person, sensorimotor, cognitive, and psychosocial components are present (Schkade & McClung, 2001). These components act in each response to occupational challenges. The adaptation gestalt takes the effort of the adaptive response mechanism to produce a plan for the response. Different tasks require unique plans designed to meet the needs of that task. For example, if a task is primarily sensorimotor, such as playing basketball, then sensorimotor should be dominating during the task. The cognitive system should be involved in providing memory as to the rules of the game affecting performance, and the psychosocial component is involved in arousal and motivation. Each person is diverse and requires a unique balance of these three components in order to succeed (Schkade & McClung, 2001).

After the occupational response has been attempted, the person needs to evaluate the outcome produced by the response. This takes place through what is referred to as the *adaptive response evaluation sub-process* (Schkade & McClung, 2001). In order for one to adapt past responses, that individual needs to evaluate those past responses in order to determine the effectiveness of those responses. If not evaluated, the individual will repeat previous responses regardless of whether the responses were useful in achieving the intended goal. Schkade and McClung (2001) wrote that "the leading edge of adaptation is awareness that the response needs to change for some perceived reason" (p. 62). Schkade and McClung (2001) suggested that one needs to evaluate the response through an individualized experience known as *relative mastery* (Schkade & McClung, 2001).

Relative mastery is made up of three components: efficiency, effectiveness, and satisfaction to self and society (Schkade & McClung, 2001). Each person may have separate views as to whether one has met the three components of relative mastery. For example, a quarterback for a high profile football team may have completed 24/29 pass attempts for three-hundred and twenty-five yards and three touchdowns. He was precise with his passes completing a high percentage of his attempts making him efficient. He felt effective as he completed three touchdowns with no interceptions and was personally satisfied after they won the game. His teammates and fans were also satisfied as they were pleased with the outcome of the game. The amount to which one is satisfied with the response is determined by the individuals internal expectations prior to taking part in the occupational challenge (Schkade & McClung, 2001).

Directly after the adaptive response evaluation sub-process comes the *adaptive response integration sub-process* (Schkade & McClung, 2001). Within the integration sub-process, the individual translates and stores the information learned in a form that can be later used when a similar occupational challenge arises (Schkade & McClung, 2001). Schkade and McClung (2001) suggested that one of three states of occupational functioning will be strengthened or reinforced due to the integration sub-process: occupational adaptation, homeostasis, or occupational dysfunction (Schkade & McClung, 2001). The state of functioning affected is determined by the individual's evaluation of the adaptive response. If the person feels that he or she produced a positive experience of relative mastery then the state of occupational adaptation will be affected. A dysadaptive state is determined when the individual feels that the response produced influenced relative mastery negatively (Schkade & McClung, 2001).

When applying Occupational Adaptation to client evaluation and intervention, Schkade and McClung (2001) suggested that every therapist must have three important tools in his or her repertoire. First, in order to complete any level of intervention one must have a solid knowledge base of the research and evidence that supports such a treatment approach (Schkade & McClung, 2001). The therapist must be able to analyze activities breaking them down into components such as sensorimotor, cognitive, and psychosocial. The knowledge tool is the foundation where each therapist looks to for information that can be relayed to a specific client's situation. Secondly, every occupational therapist should have a "bag of tricks" (Schkade & McClung, 2001, p. 86). This may include evaluations, intervention techniques, knowledge of assistive aids, and the ability to identify the need for environmental modifications (Schkade & McClung, 2001). The therapist needs to identify specific situations that fit the need for certain tools to better serve clients. The third tool described is that of therapeutic use of self. This could be defined as the therapist's ability to position oneself physically, cognitively, and psychosocially in order to facilitate positive change and progress within a client (Schkade & McClung, 2001). These tools are required for any licensed occupational therapist practicing, although if an occupational therapist chooses to practice from the Occupational Adaptation perspective, additional tools are required (Schkade & McClung, 2001).

First and foremost, an in-depth understanding of the Occupational Adaptation frame of reference is required. Working within this perspective is truly a way of thinking and not just a set of skills required by the therapist. Occupational Adaptation helps the therapist ask the right questions to help facilitate growth within the client. This frame of

reference is based on the client being his or her own agent of change with the therapist facilitating the process of recovery. The client-therapist relationship must be collaborative in nature as this is how progress will be made. The therapist applying this frame of reference should seek to facilitate the client's internal adaptation skills. It is the job of the occupational therapist to set the stage for the client to complete his or her tasks guiding the clients with advice and allowing him or her to adapt as needed to meet the need of that occupational challenge.

Practice of the theoretical concepts of Occupational Adaptation can be met in several ways. In the article written by Schultz and Schkade (1992), the authors suggested occupational adaptation can be met through a therapy program including both occupation readiness and occupational activity (Schultz & Schkade, 1992). The Occupational Adaptation frame of reference focuses specifically on the client's internal occupational adaptation process. The frame of reference also provides new perspective for occupational therapists with a holistic approach (Schultz & Schkade, 1992). Occupational adaptation can be used in concert with other models to promote client-driven evaluation and intervention.

Seven Dimensions of Wellness

The Seven Dimensions of Wellness was used as a model of which to describe an individuals' foundation for wellness. Other sources describe this model as: Six Dimensions of Wellness and the Wheel of Wellness. The created manual *The Seven Dimensions of Wellness with Upper Extremity Orthopedic Injuries: A Manual for Occupational Therapists* was adapted from sources: Witmer & Sweeney (1992) and American Occupational Therapy Association (2008).

The Occupational Adaptation frame of reference takes into account the person as being the agent of change. The adaptation or change is described as a change in a functional state of the person as a result of movement toward relative mastery over occupational challenges. The Seven Dimensions of Wellness encompasses a greater depth of the experience of the individual in all dimensions of his or her life. The Occupational Adaptation Frame of Reference provides the base for understanding the process of change within the individual while The Seven Dimensions of Wellness supplement the frame of reference by adding significant detail into understanding of the athlete by investigating: social, emotional, spiritual, environmental, occupational, intellectual, and physical aspects of wellness. By investigating the seven dimensions of the athlete, the co-authors will be able to develop tools to share with occupational therapists to develop holistic treatment techniques for the athletes' specific and unique needs.

Social Dimension

The social dimension of wellness includes the relationships, social experiences, and collaboration of the individual with surrounding networks. Witmer and Sweeney (2001) defined social support as encompassing three types of support: *emotional support* (Witmer & Sweeney, 2001, p. 145) consists of attachment and ability to rely upon that individual, *tangible support* (Witmer & Sweeney, 2001, p. 145) involves providing material support in the form of gifts or services, and *informational support* (Witmer & Sweeney, 2001, p. 145) is defined as knowledge and feedback given to another individual. Donohue, Miller, Crammer, and Cross (2007) investigated the social aspects of athletes and how it impacts his or her performance within their sport. In addition, MacLean and

Hamm (2008) studied social aspects of athletes and found males and females value social experiences within a sport environment in different ways. The athletes who participated in the study by Donohue et al. (2007) reported overall mean percentage happiness in relationship scores were: coaches 72.0%, teammates 81.6%, peers 83.9%, and family relationships 90.2%. The authors wrote, "the family relationship was perceived by participants to be strongest, followed by the peer and teammate relationships. They were relatively least happy in the relationship with their coaches" (Donohue et al., 2007, p. 381). The results provided a background for how social networks are formed within an athlete's experience. These social networks determined what relationships the athlete perceived as most important which may influence his or her recovery process. It is significant to understand who will be the athlete's source of motivation and support when participating in a sport or recovering from an injury. Based on the findings of these Donohue et al. (2007), we concluded that family relationships ranked the highest, followed by peers, teammates, and coaches (Donohue et al., 2007).

The social dimension of wellness is also apparent in therapist-client relationships. As evidenced in work by Kirwan, Tooth, and Harkin (2002), healthcare professionals believed they have not given correct directions or information to complete home exercise programs appropriately and therefore have low compliance. Healthcare professionals need to explain the purpose behind home exercise programs. By providing explanations there may be an increase in participation and completion of these programs possibly resulting in increased positive outcomes.

Athletes at all levels of performance strive to return to the playing field to compete at their highest level. The injured athlete needs to concentrate on recovery while

having trust in his or her healthcare providers and the treatment approaches they have chosen (Kirwan, 2002). In order to achieve success when treating athletes through home programs, strong social support is required to ensure proper techniques and carry-out of the home program being prescribed.

Social wellness can be an experience derived in team situations. Grindstaff, Wrisberg and Ross (2010) investigated collegiate athletes' response to an injury within their daily circumstances. Several themes emerged when athletes were interviewed regarding social aspects associated with their injury. Throughout the participants' injury experience, two of the athletes mentioned having a decreased feeling of connectedness with teammates and coaches. Wann, Keenan, and Page (2009) discovered a form of social connectedness in the development of team identification for fans of professional athletes. Social connections may be formed through social identification of these teams. Athletes may be motivated to return back to sports with the social support of their fan base and teammates. Within the Grindstaff et al. (2010) study, the interviewer and athlete discussed examples of the meaning that came from the feeling of disconnectedness. The athletes occasionally communicated how surprised at how insignificant the situation was at the current time, yet how significantly it had affected them at the time of their injury. An interview of another athlete derived the following 'out of the loop' experience that gave her a feeling of being disconnected and devalued: "It sounds small, but it really upset me. The whole team got new shoes… and when I was supposed to go get mine they were like, "Oh we're not sure if you are supposed to get them." I mean it's a small thing, and it really is, they're just shoes and they are not that big of a deal to me. But it just makes you feel a little bit more out of the loop and a little bit more not a part of the team"

(Grindstaff et al., 2010, p. 132). Other participants in the study indicated that his or her injury experience included finding out which of his or her friends were truly friends. One athlete participant stated true friends were people that she could count on to help them with ordinary tasks like driving them to and from class or to the market, checking in on them from time to time, and keeping them updated on team activities (Grindstaff et al., 2010). Social experiences are a valued aspect of being a part of the team and give athletes satisfaction within his or her sport. Henriksen, Stambulova, Roessler (2010) also noted social skills to be significant in determining success within a team setting. These social relationships must be taken seriously when treating athletes with an injury that may result in impeding on their social abilities with peers, teammates, family, and coaches.

In addition to the theme of social wellness obtained in team experiences, a further theme emerged from the Grindstaff et al. (2010) study based on how an athlete's injury may affect their relationships. This theme addressed the multiple ways student athletes worked together with others during their injury and rehabilitation process. Several participants in the study reported that the information they acquired from a variation of sources (physicians, therapists, athletic trainers, internet, etc.) was an important part of their recovery experience. The information obtained was noteworthy due to the indication that athletes are going beyond only medical professions for assistance. For example, this study was the first to associate athletes' use of the internet to obtain information about their injury and upcoming surgery. In response to this finding, it may be imperative for medical professionals (physicians, athletic trainers, occupational therapists, physical therapists, etc.) to be proactive in assisting athletes to find credible and helpful sites providing the most accurate information regarding the injury (Grindstaff et al., 2010).

Emotional Dimension

The emotional dimension of wellness includes the psychological aspects involved in an individual's life. In the study conducted by (Dorn, 1992), the multidimensional nature of athletic involvement, which includes identity formation, was investigated. A significant increase was found in athletic identity for female gymnasts from retrospective age 10 years to retrospective age 15 years old. There was no significant difference in athletic identity level from retrospective age 15 to current age (Dorn, 1992). The theme of the article was to examine identity development as an essential part in the conceptualization of wellness. Dorn (1992) wrote, "it is imperative that we begin to assist clients in achieving this aspect of occupational wellness through the integration of career identity and personal identity" (Dorn, 1992, p. 176). Henriksen et al. (2010) found that happiness and life satisfaction are related directly to an individual's ability to participate in values roles. Roles incorporated into the identity of being an athlete may provide opportunities to increase a person's happiness and satisfaction with life.

In addition to the development of athletic identity of gymnasts, identities within athletic titles have been investigated. Respondents of the study conducted by Miller (2009) tended to report a stronger identity as an athlete rather than a jock. Thirty-two percent of the respondents indicated strong disagreement with questions regarding the title jock. Findings from the gender comparison reported that men showed a significantly stronger sport related identity and assigned higher perceived ratings to their primary sports. Men also scored higher on ego task orientation and conformity to masculine norms across all sub-scales. Women were more than half as likely as men to identify strongly as athletes but less than one third likely as men to identity strongly as jocks

(Miller, 2009). Houle, Brewer, and Kluck (2010) found that athletic identity of athletes increases primarily from late childhood to adolescence. Both men and women tend to gain their athletic identity at relatively young ages through exploring interest in sports until discontinuation of the sport takes place (Houle et al., 2010).

Emotional wellness may be incorporated into the treatment of athletes who may experience pressures associated with being an athlete. Pressure on performance during a sport is to be expected a factor when treating athletes. Pressure to perform at peak performance for long periods of time increases the risk of injury. Depending on how the injured athlete reacts to medical treatment, developing a positive or negative affect set plays a factor in recovery time. The results indicated that pressure experienced by the athletes who demonstrated peak competitive performance over long periods is one of the major factors contributing to injuries sustained in sport (Bauman, 2005). In addition, participants in a survey of athletes indicated that recovery time following an injury significantly decreased for those who scored high on the use of goal setting, positive self-talk, and mental imagery during rehabilitation while those who scored low in these areas demonstrated an increased recovery time taking longer to return to sport (Granito, Hogan, & Varnum, 1995). The following study highlighted that athletes are prone to injuries in the professional ranks. The stressful nature of the sport along with high expectations to play at peak levels of performance, make professional athletes more apt to a variety of injuries. The results of this study indicated that knee, ankle, and foot injuries made up the majority of injuries, but injuries of the hand, neck, shoulder, and back were common as well. Recovery varied according to type and severity of injury. The average time loss from basketball was consistent for each injury that occurred. This information provided

insight into the recovery process of athletes which suggests that protocols may be effective ways in treating athletic injuries (Henry, Lareau, & Neigut, 1982).

Emotional wellness includes the athlete's psychological processes. Following an injury, intercollegiate male athletes have shown an increase in depression and anxiety scores and reduced self- esteem. In a study by Brewer (1993), collegiate athletes were found to be more susceptible to negative consequences associated with elevated levels of athletic identity, such as depressive reactions to becoming injured. Research shows that athletes high in life stress and competitive anxiety, and low in positive coping strategies, exhibit higher injuries. Teaching the athlete how to monitor their stress and use relaxation techniques to decrease stress could decrease chances of injury. Feedback suggests that the supportive environment was helpful in recovery being able to talk with others experiencing the same issues (Granito et al., 1995).

Emotional wellness includes the clients' psychological constructs, psychological variables, and co-morbid psychiatric conditions. If unaware of these variables, clinicians may overlook potentially critical signs or symptoms that need to be addressed by trained psychology professionals. The author of a recent study suggested that early identification of complicating psychological and behavioral factors in clients with hand injury and pain will ultimately enhance treatment outcomes (Koestler, 2009). Himmelstein, Stanek, and Feuerstein (1995) stated that many individuals fail to return to work due to psychological factors after an injury, affirming the importance of treating the psychological factors as well as physical needs of each client. Hand therapists are in a unique position to identify these variables because of the greater amount of contact with the clients. By initiating activities early to promote positive coping with pain and dysfunction, the hand therapist

may be able to prevent some instances of chronic pain and disability (Koestler, 2009). Himmelstein et al. (1995) suggested that when an individual has difficulty coping with pain and loss of function after sustaining a work injury, extended disability may result. It is important to meet the needs of the client teaching effective coping techniques near the beginning of treatment to avoid such dysfunction.

Spiritual Dimension

The spiritual dimension of wellness may include religious beliefs, meaning of self, one's purpose in life, or sense of a higher power. When investigating the spiritual dimension of wellness, Witmer and Sweeney (1992), included a major life task as being spirituality. This would include an individual's practice of religious beliefs, values, and substance that is considered essential in existence of life. The spiritual beliefs are inner or higher consciousness that is in harmony with the forces of nature. The factors suggested in this life task are oneness or inner life, purposiveness, optimism, and values (Witmer & Sweeney, 1992). Another life task included in this study is love. This life task included intimate, trust, self-disclosing, cooperative, and long-term commitment (Witmer & Sweeney, 1992). The authors believe that spirituality is innate in all human beings. The authors stated, "spiritual wellness is a part of the human being that needs to be attended to and fostered as much as do the mind and body" (Chandler, Holden, & Kolander, 1992, p. 174).

Spiritual wellness has been evident in research completed on athletes. The study conducted by Grindstaff et al. (2010) investigated collegiate athletes' response to an injury within their daily circumstances. Within this study three of the five athletes found meaning in the belief of a higher purpose to their injury. This belief in a higher power

enabled them to integrate a more positive attitude throughout dealing with their injury. One participant in the study stated, "I mean I'm lucky to be able to play softball and be a Division I athlete; to have the opportunities that I have. People have a lot worse problems. I should be thankful for what I still have even though my teeth are wired shut and I have two plates in my chin" (Grindstaff et al., 2010, p. 129-130).

In adjunct to the theme of a higher purpose of an athletic injury, another theme that emerged from the Grindstaff et al. (2010) study involved religious faith. Two athlete participants in the study noted religious faith to be a major factor in their experience with their injury. What seemed to distinguish religious faith from higher meaning was the extent of its influence on participants' lives. One participant mentioned her faith during all the interviews and talked significantly about "viewing this experience from God's perspective and refraining from questioning His authority" (Grindstaff et al., 2010, p. 130). This participant and one other participant found meaning in the belief that their injury was part of God's plan for their lives (Grindstaff et al., 2010).

Spirituality is an essential part of treating an athlete holistically. The experience with spirituality will most likely differ between each individual. It is important to give definitions of spirituality and provide experiences with spirituality to obtain information on how the athlete is progressing through his or her experience and how spirituality is possibly influencing this progression.

Environmental Dimension

The next category of wellness is the environmental dimension. In a recent study lead by Henriksen, Stambulova, and Roessler (2010) the authors took a holistic ecological approach analyzing how a particular athlete developed talent based on the

environment. The authors indicated that research primarily focused on how talent of athlete and the training strategies achieved success as an athlete; however, both of those approaches focused more on the individual athlete than on the context of his or her development. This study investigated one particular environment of a track and field club and its successful history of creating top-level athletes. Research by Stambulova, Alfermann, Statler, and Côté (2009) highlighted the importance of the environmental context within athletic career development. Wylleman and Lavallee (2004) suggest that considering not only the athletic environment, but also the athlete's psychological, psycho-social, and academic environment is important when considering developmental transitions the athlete may go through.

Several aspects of the environment were noted to be responsible for the high success of this particular environment. As indicated by the authors, the club successfully helped a large number of athletes to make a successful transition into elite sports, the club is highly regarded by external partners, the prospects show good results in national youth competitions, and the club has a large group of highly committed and happy athletes with low drop-out. Strains such as training alone; negative relationships with training partners, competitors and other sporting people involved, and difficulties in maintaining personal relationships are identified as barriers to developed athletic abilities in environments. Kirwan et al. (2002) reported that the environment plays a large role in the recovery of athletes and compliance with advice and instructions given by their therapists. A number of environmental factors affect compliance such as: seeing different therapists on repeated visits combined with long waits at the clinic, having no individual appointment times, and inconvenient physical location of the clinic. Also, the noise levels, appearance

and comfort of the clinic, and the number of people present may have an effect on the extent to which patients comply with advice and instructions given by their therapists (Kirwan et al., 2002).

The track and field club that was investigated throughout the study was found to have reduced number of these hazardous barriers. This may explain why this club is successful in the recruitment, retention and advancement of athletes. Some clubs/teams are more successful than others in the recruitment, retention, and development of athletes transitioning to elite levels of performance (Henriksen et al., 2010). The club focused on maintaining cohesive groups of athletes who are also friends. Coaches within the track and field club encouraged prospect athletes to occasionally train with groups at a higher level, which may ease their transition. The coaches within this club also focused on the athletes' long-term development and evaluated their efforts and attitudes more often than skill level or results, which might minimize stress and burnout (Henriksen et al., 2010).

Occupational Dimension

The occupational dimension of wellness includes an individual's experience with occupations or daily activities. An athlete's career or participation in his or her sport is considered an occupation. The study by MacLean and Hamm (2008) indicated that competitive athletes signified the importance of public image (looking good) as their most important value, recreational participants identified companionship as the most important value, university students in physical education and sports management identified enjoyment as most important, and high school participants suggested health and fitness as the most important value associated with sport participation. Each group commonly suggested the enjoyment was very important in their reasons for participating

in their sport. Research by Mak and Day (2010), found that higher physical activity levels were positively associated with increased physical and social self-perceptions in adolescents suggesting that appearance and interactions with others is important for those who maintain physical activity through working out or by playing sports.

With an increase of veterans returning from Afghanistan and Iraq, a recent study investigated sports as occupations for military service programs. These military officers experienced multisystem traumatic injuries. As part of a holistic rehabilitative care plan, occupational and physical therapists included adaptive sports within the developed programming. Occupational therapists within this study sought occupations for clients that combined motor and process skills that were involved in sports activities. This example illustrates how therapists using Occupational Adaptation approach their clients. In a comparison of Occupational Adaptation and the Biomechanical frame of reference through a single case study, results suggested client outcomes were better with increased client satisfaction using Occupational Adaptation frame of reference to guide therapy rather than the standard Biomechanical approach (Jack & Estes, 2010). Activity analyzes were also completed help each client select the appropriate sport, and how training would allow participation within their selected sport. The occupational therapists within this study guided clients toward the highest level of independence as possible for all areas of occupation, while considering their life roles. "The marine who once stood six foot two inches tall and identified himself as a threat to any opponent on the basketball court might suffer a sense of role loss after a firefight in Fallujah that cost him both legs above the knee" (Daugherty & Yancosek, 2007, p. 15). With adaptive sports, the marine may be able to participate in occupations that he was not otherwise able to after his firefighting

incidence. Life satisfaction can be directly related to one's ability to participate in valued occupations. Sports may be used to focus on abilities while deemphasizing disability (Daugherty & Yancosek, 2007).

Intellectual Dimension

Intellectual wellness is another category in The Seven Dimensions of Wellness. When investigating the life tasks of people, a life task included is self-regulation. In this life task an individual is able to direct, control, and manage the self in ways that are self-enhancing, but within the norms as prescribed by the larger society. The factors suggested in this life task include sense of worth, sense of control, realistic beliefs, spontaneity, and emotional responses, intellectual stimulation, problem solving, creativity, sense of humor, physical fitness, and health habits (Witmer & Sweeney, 1992).

Self-worth of athletes was examined by Chatzisarantis and Hagger (2007) in a recent study suggested that moral self-worth of athletes does not exist due to the frequency of which individuals engage in sports, but rather through the goals and values athletes expressed through sport participation. This finding proposes that athletes find self-worth through participation in their primary occupation of being an athlete regardless of the amount of time spent engaging in that occupation. Athletes self-worth may be shaped through the goals and values conveyed through participation in sport.

Cognition has been examined within certain populations of athletes. In a prospective study completed by Ravdin, Barr, Jordan, Lathan, and Relkin (2003), male professional boxers were examined within one month post sub-concussive sports-related head trauma. Head injuries are common within this population of athletes and it is vital to determine recovery after a head injury to determine readiness to participate in daily

occupations. In order to obtain significant information neuropsychological assessments were administered before and after the athletes' engagement in their sporting competition. The results of this study reflect the instability and inconsistency that characterizes the performance of athletes who have sustained a traumatic head injury. The authors of the study indicate repeated neuropsychological assessments of sports-related injuries in professional athletes need to be considered and also must influence the intensity of training. The authors also suggest cognitive testing one month following participation in a professional boxing match brought scores suggestive of recovery to a level above the athlete's baseline. Repetitive head injuries must be taken seriously and cognitive testing must be a standard measure to determine the athlete's return to participation within their sport (Ravdin et al., 2003).

Physical Dimension

An important and widely recognized aspect of an athlete is the physical dimension of wellness. Athletes experiencing debilitating injuries should seek immediate medical treatment to increase the chance of complete recovery. Education from the physician to the client and vice versa along with proper diagnosis and treatment protocols are the best ways to limit complications from treatment. Hand injuries should be treated with suspicion to avoid misdiagnosis and improper treatment (Hester & Blazar, 1999).

Football is recognized as being an intense and physical sport. The researchers found that National Football League football players experienced a rate of 10.6 injuries per 1,000 athlete exposures. Metacarpal injuries were overwhelmingly the most common hand injury comprising 77% of the total injuries at this location followed by hand contusions at 18%. Hand bursitis (44 days/injury), finger proximal interphalangeal

subluxations (41 days/injury), thumb sprains (35 days/injury), tendon lacerations (30 days/injury), and Bennett fractures (30 days/injury) led to the greatest amount of time missed from play (Mall, Carlisle, Matava, Powell, & Goldfarb, 2008). When treating an athlete the most common interventions for upper extremity injuries in athletes include ice and heat therapy modalities, rehabilitative exercises, and medication kept to a minimum and only four surgeries (two ankle and two knees) as indicated in the study by Henry, Lareau, and Neigut, (1982).

Another physical dimension includes vision. In the following study eye-care practitioners are trained to supply athletes with the best eyewear designs, performance tints, contact lenses, and protection for the eyes. Occupational therapists' jobs are not to fix the visual imperfections, but to assess and refer to trained professionals (Erickson, 2010).

Conclusion

Sports are a growing industry in the United State's culture. An increase in the number of athletes, participating in sports across the nation, may influence the practice of occupational hand therapy rehabilitation specialists needed to address athletes specifically. In order to effectively treat these athletes, the athletes' needs and wants must be clearly understood.

There is a distinct gap of information missing incorporating occupational hand therapy and its treatment of athletes through contemporary client-centered aspects investigating all aspects of the athlete. Physical disabilities of athletes are easily detected and treatment typically consists of protocols that have been developed based on common findings and physician standards. The concerning issue includes is that the physical

dimension of wellness has traditionally been at the forefront of occupational hand therapy, while neglecting all other imperative dimensions of a client's wellness.

The Seven Dimensions of Wellness encompasses the experience of the individual in all dimensions of his or her life. The Occupational Adaptation Frame of Reference provides the base for understanding the process of change within the individual while The Seven Dimensions of Wellness supplement the frame of reference by adding significant detail into understanding of the athlete by investigating: social, emotional, spiritual, environmental, occupational, intellectual, and physical aspects of wellness. A rising challenge for occupational hand therapists exists to meet contemporary client-centered strategies to provide successful treatment outcomes for athletes. After completion of an extensive literature review, the co-authors were able to develop *The Seven Dimensions of Wellness with Upper Extremity Orthopedic Injuries: A Manual for Occupational Therapists.* A detailed explanation of the process that went into the development of the manual is described in Chapter III.

CHAPTER III

METHODOLOGY

Chapter III is comprised of a broad account of the processes by which *The Seven Dimensions of Wellness with Upper Extremity Orthopedic Injuries: A Manual for Occupational Therapists* was created. This manual provides a guide for occupational therapists to utilize client-centered and holistic intervention methods for athletes. A comprehensive literature review was completed to guide the development of *The Seven Dimensions of Wellness with Upper Extremity Orthopedic Injuries: A Manual for Occupational Therapists.*

This manual was created from the co-authors' shared desire to become occupational therapists who are certified hand therapists. The authors intend on providing services to their future athlete clients by treating the individual in a client-centered manner. Client-centered treatment will be achieved by following the manual created throughout this process by addressing each of the seven dimensions of wellness included in the athletes' life. Holistic treatment with a client-centered approach incorporates treatment for all aspects of the person's life which can be provided through The Seven Dimensions of Wellness and the Occupational Adaptation frame of reference.

First, the authors conducted a thorough search for information on hand therapy interventions through scholarly resources. The research was conducted through the University of North Dakota search resources including: PubMed and Cumulative Index to Nursing and Allied Health Literature. Additional resources utilized through the co-

authors' search included: the American Occupational Therapy Association and the American Society of Hand Therapists. The authors discovered a gap in literature that involved treating clients with upper extremity orthopedic athletes in a client-centered and holistic method. A majority of the resources available to occupational hand therapists supplied information solely on the physical needs of clients. This led the co-authors to choose to create a manual for occupational hand therapists to supplement current trends of healthcare leading to increased utilization of holistic care of clients.

The literature reviewed throughout this process assisted the authors in the creation of an outline based on the following: The Seven Dimensions of Wellness (Witmer & Sweeney, 1992), traditional and contemporary treatment methods, and the Occupational Adaptation Frame of Reference (Schkade & Schultz, 1992). The Occupational Adaptation Frame of Reference was chosen due to the emphasis placed on the client's adaptation process and his or her involvement throughout the process. Occupational Adaptation views the client as the agent of change (Schkade & Schultz, 1992) which matched with the process incorporated into the manual developed by occupational hand therapists. The described topics were divided between authors based on interest. A collaborative combination of topics resulted in the literature review. Revision of the literature review was completed several times to ensure a well-written and accurate description of the available resources associated with *The Seven Dimensions of Wellness with Upper Extremity Orthopedic Injuries: A Manual for Occupational Therapists.*

The completion of the literature review gave the authors inspiration to develop the manual within chapter IV. The chapter IV outline included a pre and post intervention

survey and a section involving each of The Seven Dimensions of Wellness. After considering options and collaborative between authors chapter IV was revised.

The manual was revised to include steps describing the process by which the manual could be completed. The steps include the order in which they can be completed: 1. client completed a pre-intervention questionnaire 2. client rated his or her functional level on The Seven Dimensions of Wellness 3. client and therapist collaborated to develop the Seven Dimensions of Wellness based on high and low priority 4. goal development is completed with descriptions, case studies, long/short term goal examples, and related activity is provided 5. recommended assessments within each dimension including record sheet are provided 6. post-intervention questionnaire is completed by client 7. satisfaction questionnaire is completed by client 8. documents are filed by therapist for research purposes. A broad description of *The Seven Dimensions of Wellness with Upper Extremity Orthopedic Injuries: A Manual for Occupational Therapists* has been described in chapter IV.

CHAPTER IV

PRODUCT

The Seven Dimensions of Wellness with Upper Extremity Orthopedic Injuries: A Manual for Occupational Therapists was created to be used as a tool for occupational hand therapists to implement holistic and client-centered approaches for athlete clients. It is intended to be used as a guide for therapists to implement at the beginning (initial evaluation), during (intervention), and at the end of therapy (discharge planning) to direct the client and therapist through a process of adaptation (rehabilitation) involving the Seven Dimensions of Wellness. The ultimate goal of the manual is to provide resources that practicing occupational hand therapists may use in collaboration with the athlete to meet all of the athletes' distinctive needs within The Seven Dimensions of Wellness. It is particularly appropriate for occupational therapists treating clients with upper extremity orthopedic conditions and should be used to support and supplement best practice interventions aimed at remediating the client's physical dysfunction. The manual is appropriate for use in local or regional areas of the United States.

The development of *The Seven Dimensions of Wellness with Upper Extremity Orthopedic Injuries: A Manual for Occupational Therapists* was guided by the Occupational Adaptation Frame of Reference. The developed program identifies the athletes' occupational roles within The Seven Dimensions of Wellness and strategies may be implemented to progress the client through his or her adaptation process for recovery. The Seven Dimensions of Wellness encompasses a greater depth of the experience of the

individual in all dimensions of his or her life. The Seven Dimensions of Wellness supplement the frame of reference by adding significant detail into understanding of the athlete by investigating: social, emotional, spiritual, environmental, occupational, intellectual, and physical aspects of wellness. By investigating the seven dimensions of the athlete, the researchers will be able to develop tools to share with occupational therapists to develop holistic treatment techniques for the athletes' specific and unique needs. The Seven Dimensions of Wellness was used as a model of which to describe an individuals' foundation for wellness. (Other sources describe this model as: Six Dimensions of Wellness and Wheel of Wellness). The created manual was adapted from sources: Whitmer & Sweeney (1992) and American Occupational Therapy Association (2008).

The completion of the literature review gave the authors inspiration to develop the manual within chapter IV. The manual includes the steps describing the process by which the manual could be completed. These steps include the order in which they are executed: 1. client completed a pre-intervention questionnaire 2. client rated his or her functional level on The Seven Dimensions of Wellness 3. client and therapist collaborated to develop the Seven Dimensions of Wellness based on high and low priority 4. goal development is completed with descriptions, case studies, long/short term goal examples, and related activity is provided 5. recommended assessments within each dimension including record sheet are provided 6. post-intervention questionnaire is completed by client 7. satisfaction questionnaire is completed by client 8. documents are filed by therapist for research purposes.

In Chapter IV, the co-authors provided a brief description and the general purpose

of the product, *The Seven Dimensions of Wellness with Upper Extremity Orthopedic Injuries: A Manual for Occupational Therapist*. The steps of the created manual are listed in figure 1 and also in a narrative format with further descriptions to follow. The steps of the manual are listed to help guide the therapist and client to successfully navigate the manual in the correct sequence. *The Seven Dimensions of Wellness with Upper Extremity Orthopedic Injuries: A Manual for Occupational Therapists* is available in the appendices.

CHAPTER V

SUMMARY

The purpose of this scholarly project was to develop a manual for occupational hand therapists to use as a resource to achieve successful outcomes while treating athletes with a client-centered approach. The product addressed the need for a resource that incorporates all aspect of the athlete's wellness. The manual was developed to guide intended to be used as a guide for therapists to implement at the beginning (initial evaluation), during (intervention), and at the end of therapy (discharge planning) to direct the client and therapist through a process of adaptation (rehabilitation) involving the Seven Dimensions of Wellness. The manual includes case studies, activities, and possible interventions associated with each dimension of wellness. It is particularly appropriate for occupational therapists treating clients with upper extremity orthopedic conditions and should be used to support and supplement best practice interventions aimed at remediating the client's physical dysfunction.

The strengths of the manual include holistic intervention focusing on treating all the areas of need for each individual athlete. The therapist and client collaborate to create client-centered goals and interventions. The manual was created based on the foundation of the Occupational Adaptation Frame of Reference and The Seven Dimensions of Wellness. The opportunities from implementation of the manual include improving athletes' quality of life and overall wellness. The implementation of the manual will provide an opportunity for the co-authors to conduct research on the effectiveness of

client-centered therapy within this population. Occupational hand therapists will gain a valuable resource tool to utilize in their facility.

The roadblocks of the manual include the lack of research that has been conducted on the co-authors created manual at this time. Once the manual has been approved by the scholarly project advisor, research may begin to test reliability and validity of the manual. A post-intervention questionnaire, upon conclusion of therapy services, will measure the outcomes scores in comparison to the pre assessment scores. This outcome measure will allow therapists to track client-centered progress that covers all dimensions of the athlete. Effectiveness of the manual will also be tested through compilation of satisfaction questionnaires that will be completed by the athlete at the termination of occupational hand therapy.

There has not been a survey completed to gather the therapists' perceived need of the manual. If interest does not exist within the occupational hand therapy current practice, it may result in a roadblock to implementation of the manual. The co-authors are unaware of any current products in similar nature, but it remains a possibility that future products may be published reaching the same client population.

The co-authors plan to implement this manual to hand therapists throughout the tri-state area (North Dakota, South Dakota, and Minnesota). According to the American Society of Hand Therapy, 56 occupational hand therapists are employed within the local region (ASHT, 2010). Initially, the 56 hand therapists will be contacted to trial the effectiveness of the manual. The target market includes the practicing occupational hand therapists in the local region (tri-state area) and eventually expanding to occupational hand therapists on a national level. Further research will be conducted on the manual to

test reliability and validity. The results may be published in a peer-reviewed journal to add to the current body of research within occupational hand therapy.

It is to the co-authors aspiration that *The Seven Dimensions of Wellness with Upper Extremity Orthopedic Injuries: A Manual for Occupational Therapists* will become a valuable resource tool that will be implemented in occupational hand therapy practice settings. This experience has inspired the co-authors to want to become active members and researchers in their future occupational therapy hand therapy practice.

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APPENDIX

The subsequent appendix contains *The Seven Dimensions of Wellness with Upper Extremity Orthopedic Injuries: A Manual for Occupational Therapists.* The activities provided within the manual assess the athlete's needs based on The Seven Dimensions of Wellness. The step-by-step instructions enable the therapist and the athlete to collaborate the treatment direction based on a combination of the athlete's concerns paired with the occupational hand therapists' professional knowledge. The activities were selected based on the Occupational Adaptation Frame of Reference concepts. The activities provide opportunities and examples for the occupational hand therapist to refer to when considering direction of client-centered treatment. Step-by-step instructions provide adequate information on the process of the manual, training sessions for occupational hand therapists are not required for implementation of the manual.

The Seven Dimensions of Wellness with Upper Extremity Orthopedic Injuries: A Manual for Occupational Therapists

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Instructions: How to Successfully Navigate
The Seven Dimensions of Wellness with Upper Extremity Orthopedic Injuries: A Manual for Occupational Therapists

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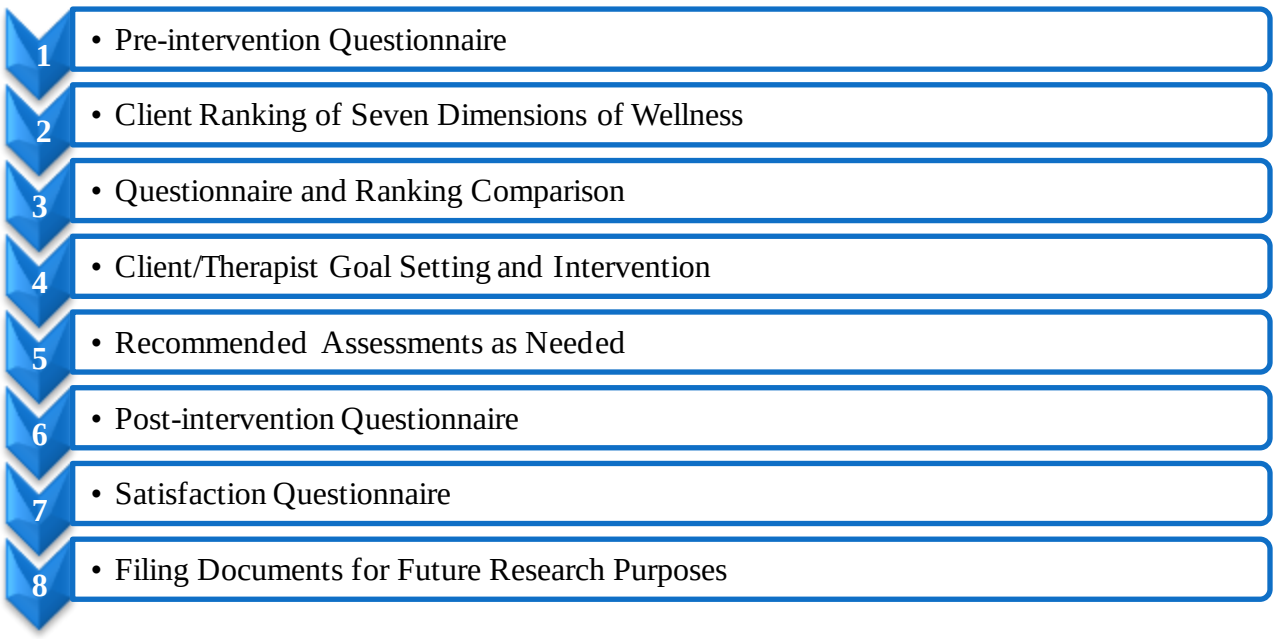
Overview: The Seven Dimensions of Wellness was used as a model of which to describe an individuals' foundation for wellness. Other sources describe this model as: Six Dimensions of Wellness and the Wheel of Wellness. The created manual *The Seven Dimensions of Wellness with Upper Extremity Orthopedic Injuries: A Manual for Occupational Therapists* was adapted from sources: Witmer & Sweeney (1992) and American Occupational Therapy Association (2008). The seven dimensions include: physical, emotional, social, occupational, spiritual, environmental, and intellectual. The step-by-step instructions enable the therapist and the athlete to collaborate the treatment direction based on a combination of the athlete's concerns paired with the occupational hand therapists' professional knowledge. The activities were selected based on the Occupational Adaptation Frame of Reference concepts. The activities provide opportunities and examples for the occupational hand therapist to refer to when considering direction of client-centered treatment. The following section will guide the occupational therapist and client in a collaborative process from the initial evaluation (pre-interview questionnaire) to the time of discharge.

Figure 1. Steps of the Manual's Process



The steps of the manual are described in further detail:

STEP 1: Provide the pre-intervention questionnaire to the client for completion. The client will rate on a scale of 1 to 4 (1: strongly disagree, 2: disagree, 3: agree, and 4:

strongly agree) on the questions provided regarding the Seven Dimensions of Wellness.

STEP 2: The Seven Dimensions of Wellness are described within step 2. The client will rank in order of importance as #1 being the most important (he or she believes he or she needs the most help in this area) to #7 being the least important (the client perceives the need for the least amount of help in this area). This will allow the occupational hand therapist to gain a better understanding on what areas are most important to the client in treatment.

STEP 3: Compare the questionnaire results (step 1) with the client's perception (step 2) of his or her needs within each dimension of wellness. The therapist and client will together determine the order of importance for each dimension of wellness to be incorporated into the treatment sessions. Please list the collaborative order of the dimensions of wellness (this will determine which dimensions of wellness are addressed first and with great emphasis in treatment sessions).

STEP 4: After completing the overall results of the collaborative approach (step 3), the next step is to create goals with the client based on the order of the dimensions. Start from the dimension of top priority and work down to the dimension of lowest priority while collaborating to set meaningful goals for the client. Interventions may be developed based on the goals developed in this step. Activities are listed to provide examples of ways therapists can implement strategies based on the dimensions of wellness.

STEP 5: After completing goal setting with the client, further assessments may be needed to investigate the client's needs or progress through therapy. If applicable, please

use the recommended assessments to assess the client in each of the high priority dimensions of wellness. It is suggested that the assessments be completed before and after therapeutic intervention. A record sheet is provided at the end of step five for the therapist to record results to measure outcomes.

STEP 6: After completing steps 1-5, the client will be provided with the post-intervention questionnaire. The client will rate on a scale of 1 to 4 (1: strongly disagree, 2: disagree, 3: agree, and 4: strongly agree) on the questions provided regarding the Seven Dimensions of Wellness.

STEP 7: The client will be asked to complete the Satisfaction Questionnaire at discharge to obtain valuable information regarding his or her satisfaction with services provided using *The Seven Dimensions of Wellness with Upper Extremity Orthopedic Injuries: A Manual for Occupational Therapists.*

STEP 8: The therapist will file pre and post intervention questionnaires as well as assessment record sheets for research purposes.

Pre-Intervention Questionnaire of the Seven Dimensions of Wellness

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Today's Date:_____ Client's Name:_____
Client's Date of Birth:_____ Medical Record Number:_____
Therapist: _____

STEP 1:

Provide the pre-intervention questionnaire to the client for completion. The client will rate on a scale of 1 to 4 (1: strongly disagree, 2: disagree, 3: agree, and 4: strongly agree) on the questions provided regarding the Seven Dimensions of Wellness. **Please circle your answer to the following questions:**

1. When participating in my sport, I often maintain an intense level of engagement focused on the sport alone.

Strongly disagree	*Disagree*	*Agree*	*Strongly Agree*
1	2	3	4

2. I feel a connection to the universe in any kind of way.

Strongly disagree	*Disagree*	*Agree*	*Strongly Agree*
1	2	3	4

3. I am able to maintain meaningful relationships with my teammates.

Strongly disagree	*Disagree*	*Agree*	*Strongly Agree*
1	2	3	4

4. I believe that I serve a purpose within my life.

Strongly disagree	*Disagree*	*Agree*	*Strongly Agree*
1	2	3	4

5. I am able to make goal-directed movements with parts of my body to physically engage in my sport.

Strongly disagree	*Disagree*	*Agree*	*Strongly Agree*
1	2	3	4

6. I have been provided adequate amounts of training space necessary for my athletic needs.

Strongly disagree	*Disagree*	*Agree*	*Strongly Agree*
1	2	3	4

7. I feel the sport I engage in and the activities that are associated with the sport are meaningful to me. Participation in my sport brings happiness into my life.

Strongly disagree	*Disagree*	*Agree*	*Strongly Agree*
1	2	3	4

8. I am able to solve problems in effective manners that arise in my sport.

Strongly disagree	*Disagree*	*Agree*	*Strongly Agree*
1	2	3	4

9. I have effective communication with my teammates, coaches, and sports staff.

Strongly disagree	*Disagree*	*Agree*	*Strongly Agree*
1	2	3	4

10. I apply effective coping strategies (ex: deep breathing, visual imagery) when in stressful situations.

Strongly disagree	*Disagree*	*Agree*	*Strongly Agree*
1	2	3	4

11. I have been provided adequate amounts of training equipment necessary for my athletic needs.

Strongly disagree	*Disagree*	*Agree*	*Strongly Agree*
1	2	3	4

12. At this time, my body is functioning at its optimal level.

Strongly disagree	*Disagree*	*Agree*	*Strongly Agree*
1	2	3	4

13. I attempt to keep a positive attitude after I am put in a challenging situation.

Strongly disagree	*Disagree*	*Agree*	*Strongly Agree*
1	2	3	4

14. I have developed a personal identity with the roles I uphold on my sports team.

Strongly disagree	*Disagree*	*Agree*	*Strongly Agree*
1	2	3	4

15. I am aware of the rules of the game and am able to sequence the steps of the sport.

Strongly disagree	*Disagree*	*Agree*	*Strongly Agree*
1	2	3	4

16. I seek advice and/or knowledge from teammates or coaches when needed.

Strongly disagree	*Disagree*	*Agree*	*Strongly Agree*
1	2	3	4

17. My coaches, teammates, and healthcare professionals are readily available for assistance within my training environment.

Strongly disagree	*Disagree*	*Agree*	*Strongly Agree*
1	2	3	4

18. In order to participate in my sport, I bring forth my skills and abilities to achieve success.

Strongly disagree	*Disagree*	*Agree*	*Strongly Agree*
1	2	3	4

19. I am aware of methods to prevent injuries within my sport (ex: stretching, taping, etc.).

Strongly disagree	*Disagree*	*Agree*	*Strongly Agree*
1	2	3	4

20. I am successful in moving and physically interacting with objects or people within my sport without pain or overwhelming exhaustion.

Strongly disagree	*Disagree*	*Agree*	*Strongly Agree*
1	2	3	4

21. I am able to process and seek help with any psychological variables (ex: depression, anxiety, mental illness, stress) that may be a part of my life.

Strongly disagree	*Disagree*	*Agree*	*Strongly Agree*
1	2	3	4

Scoring:
Add up the numbers from each category. The questions within each category are listed below. Rank the category with the highest score first and the lowest score last. The first category will be the category (dimension of wellness) that is of highest priority and the lowest number when the questions are added together (the client needs the most assistance in this area). The last category will be the category (dimension of wellness) that is of lowest priority and the highest number when the questions are added together (the client needs the least assistance in this area).

Social Results: Questions (3 + 9 + 16) = Score ____

Spiritual Results: Questions (2 + 4 + 13) = Score ____

Emotional Results: Questions (10 + 14 + 21) = Score ____

Environmental Results: Questions (6 + 11 + 17) = Score ____

Occupational Results: Questions (1 + 7 + 18) = Score ____

Intellectual Results: Questions (8 + 15 + 19) = Score ____

Physical Results: Questions (5 + 12 + 20) = Score ____

Overall Scores:

Lowest Score 1._____ **(Highest Priority Area)**

2._____

3._____

4._____

5._____

6._____

Highest Score 7._____ **(Lowest Priority Area)**

Client Ranking

Today's Date:_____ **Client's Name:**_____
Client's Date of Birth:_____ **Medical Record Number:**_____
Therapist: _____

STEP 2:

Therapist Instructions: The following diagram (figure 2) provides the client with information describing The Seven Dimensions of Wellness. Provide figure 2 and the 1-7 blank ranking sheet directly below figure 2 to the client. After the client reads and completes the categorization, proceed to step 3.

Client Directions: The Seven Dimensions of Wellness are described below; please **rank** in order of importance as **#1 being the *most important* (I need that most help in this area) to #7 being the *least important* (I need the least amount of help in this area).** This will allow the Occupational Hand Therapist to gain a better understanding on what areas are most important to you in treatment. *Example: Kaitlin ranked #1 the social dimension because she feels she is disconnected from teammates since she experienced a wrist fracture. Kaitlin ranked #7 as the spiritual dimension because she feels she needs no assistance with her spiritual wellness.*

Figure 2. Client's Perception

Social	• I am able to participate in positive team situations • I am able to accept knowledge/advice from coaches/teammates
Spirituality	• I believe I have a purpose in life • I am able to keep a positive attitude
Emotional	• I am able to display appropriate emotions in situations • I am able to express emotions and respond to other's emotions
Environmental	• I have a training environment that supports my needs for my sports training • I have expectations of persons, groups, and organizations
Occupational	• I am able to participate in activities with intense engagement • I have a personal identity that is defined by my occupations (activities)
Intellectual	• I am knowledgable and can carry out the rules of the sport • I am able to sequence and follow directions
Physical	• I can move my body at its optimal level of performance • I can participate in my sport without pain or increased fatigue

Most important for me to work on in therapy

1._____

2._____

3._____

4._____

5._____

6._____

Least important for me to work on in therapy

7._____

Client-Therapist Collaboration: Questionnaire & Ranking Comparison

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Today's Date:_____ **Client's Name:**_____
Client's Date of Birth:_____ **Medical Record Number:**_____
Therapist: _____

STEP 3:

Compare the *questionnaire results (Step 1)* with the *client's perception (Step 2)* of his or her needs within each dimension of wellness. The therapist and client will determine together the order of importance for each dimension of wellness to be incorporated in the intervention sessions. Please list the collaborative order of the dimensions of wellness (this will determine which dimensions of wellness are addressed first and with great emphasis in treatment sessions):

Overall Results: Collaborative Approach:

Dimension of Top Priority

1._____
2._____
3._____
4._____
5._____
6._____

Dimension of Lowest Priority

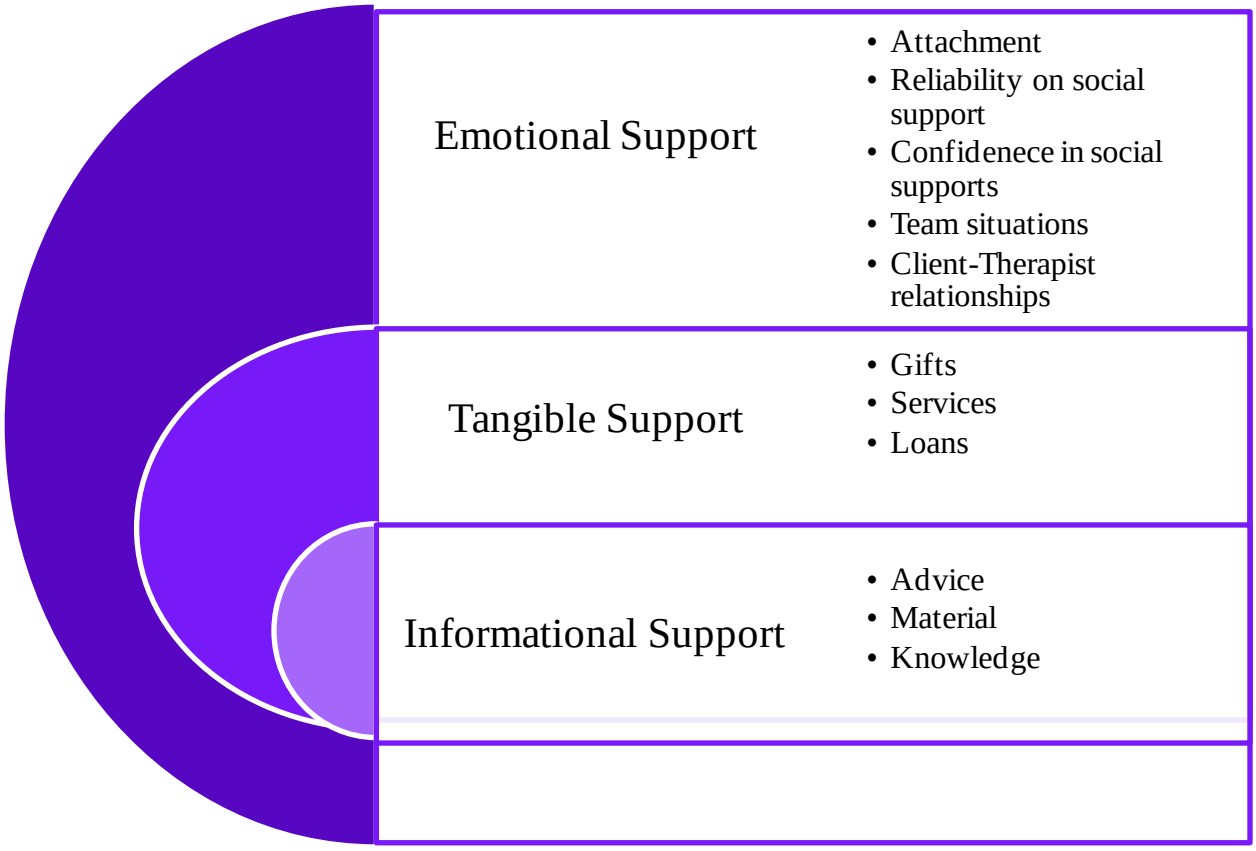
7._____

STEP 4:

After completing the overall results of the *collaborative approach*, the next step is to create goals with the client based on the order of the dimensions. Start from the dimension of top priority and work down to the dimension of lowest priority while collaborating to set *meaningful* goals for the client. Interventions may be developed based on the goals developed in this step. Activities are listed based on provided case scenarios to supply examples of ways therapists can implement strategies based on the dimensions of wellness.

Social Dimension

The social dimension of wellness includes the relationships, social experiences, and collaboration of the individual with surrounding networks.



Adapted from: Witmer, J.M., & Sweeney, T.J. (1992). A holistic model for wellness and prevention over the life span. *Journal of Counseling and Development, 71*, 140-148.

Adapted from: American Occupational Therapy Association. (2008). Occupational therapy practice framework: Domain and process (2nd ed.). *American Journal of Occupational Therapy, 62*, 625-683.

Social Dimension Tool

Therapist Instructions: Interventions may be developed based on the goals developed in this step. A case scenario, example goals, and a related activity is listed to supply examples of ways therapists can implement strategies based on the social dimension of wellness.

Social Case Study

Bryce is a twenty-six year old professional soccer player who sustained a right scaphoid fracture from a fall during practice. Bryce is the captain goalie of the team. The client underwent an open reduction and internal fixation (ORIF) of the fracture. Bryce was placed in a wrist/thumb cast after surgical removal. Bryce will not be able to play soccer for several months according to his physician. Bryce's soccer team recently made play-offs for the world cup. Since the injury Bryce has had a decreased mood and believes that he has let his team down.

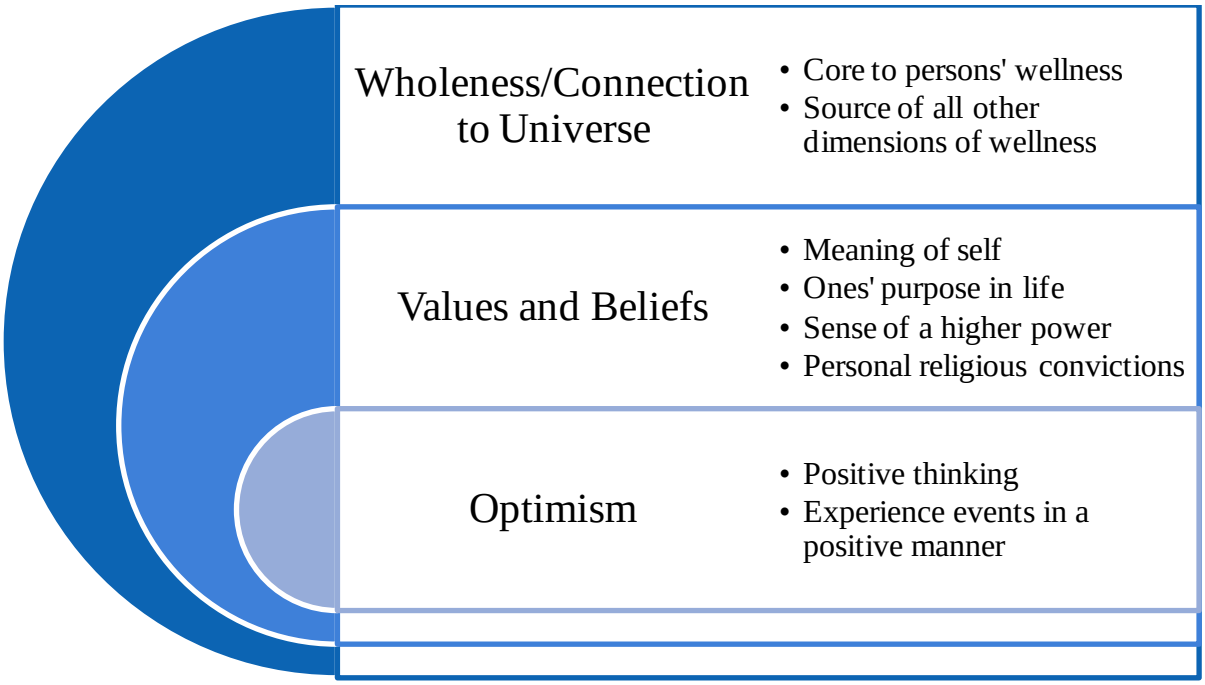
Long-Term Goal: Bryce will participate in therapy three times weekly at the same facility as his teammates in order to regain function of his right upper extremity in order to return to his sport.

Short-Term Goal: Bryce will attend 75% of weekly practices in order to stay connected with teammates reducing the risk of decreased mood.

Related Activity: Bryce will ask three teammates to assist him with his home exercise program every week. Each week, he will ask three new teammates to assist in the program. Through this process Bryce will "stay in touch" with his teammates. The teammates will also have increased awareness of Bryce's injury. The teammates will also be aware of his process of recovery and his effort to return to soccer.

Spirituality

The spiritual dimension of wellness may include religious beliefs, meaning of self, one's purpose in life, or sense of a higher power.



Adapted from: Witmer, J.M., & Sweeney, T.J. (1992). A holistic model for wellness and prevention over the life span. *Journal of Counseling and Development, 71,* 140-148.

Adapted from: American Occupational Therapy Association. (2008). Occupational therapy practice framework: Domain and process (2nd ed.). *American Journal of Occupational Therapy, 62,* 625-683.

Spirituality Dimension Tool

Therapist Instructions: Interventions may be developed based on the goals developed in this step. A case scenario, example goals, and a related activity is listed to supply examples of ways therapists can implement strategies based on the spirituality dimension of wellness.

Spirituality Case Study

Elizabeth is a 17 year-old gymnast who finds great joy in participating in her sport. Gymnastics is a sport that brings meaning and purpose into Elizabeth's life. She was committed to bringing forth her best effort through each practice and competition. She experienced a painful shoulder dislocation while competing in a vaulting competition. Since her injury, Elizabeth has lost a sense of purpose and belonging to the sport. Elizabeth now has a decreased mood and cannot find the energy or optimism to complete daily activities as she did in the past.

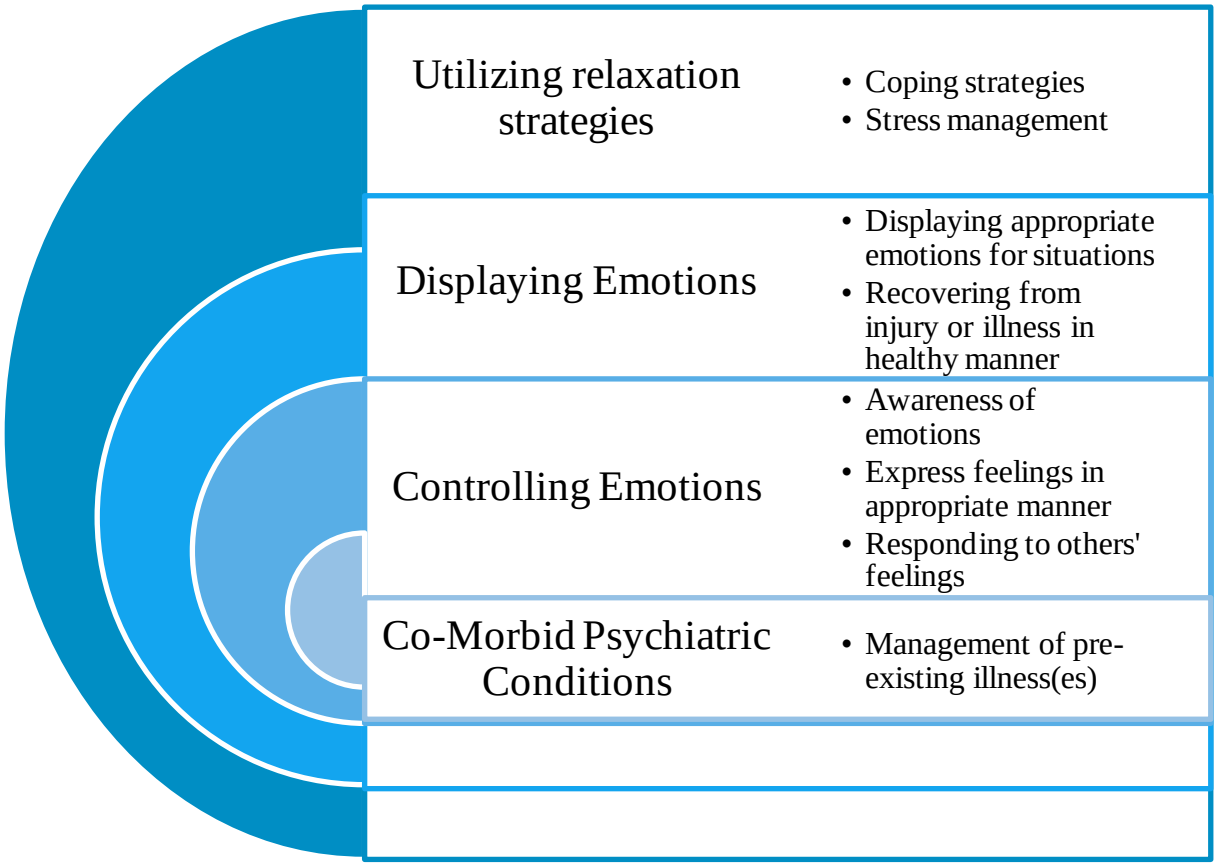
Long-Term Goal: Elizabeth will be able to regain purpose and belonging to gymnastics through attendance in two gymnastics practices weekly by four weeks.

Short-Term Goal: Elizabeth will be able to verbally identify three positive attributes regarding her current or past performance in gymnastics by one week.

Related Activity: Elizabeth will regain a sense of purpose and participation in gymnastics through participation in documenting the teams' statistics at each gymnastics meet. This activity will allow her to stay engaged in her teams' performance and make her feel like she is a contributing member. With improved participation, Elizabeth will gain an increased mood and find the energy to complete daily desired occupations as she did prior to her injury.

Emotional

The emotional dimension of wellness includes an individuals' ability to process, manage, and control emotions. Psychological aspects may also be evident in the emotional dimension.



Adapted from: Witmer, J.M., & Sweeney, T.J. (1992). A holistic model for wellness and prevention over the life span. *Journal of Counseling and Development, 71,* 140-148.

Adapted from: American Occupational Therapy Association. (2008). Occupational therapy practice framework: Domain and process (2nd ed.). *American Journal of Occupational Therapy, 62,* 625-683.

Emotional Dimension Tool

Therapist Instructions:
Interventions may be developed based on the goals developed in this step. A case scenario, example goals, and a related activity is listed to supply examples of ways therapists can implement strategies based on the emotional dimension of wellness.

Emotional Case Study

An aggressive 23 year-old hockey player named Ryan was responsible for a malicious hit which in turn resulted in a direct blow to his right index finger (digit 2) and was later diagnosed as a transverse fracture. Ryan has been known to have hostile and an easily frustrated personality. Ryan is seeking help to rehabilitate his 2nd digit as well as processing and managing emotions in a healthy manner.

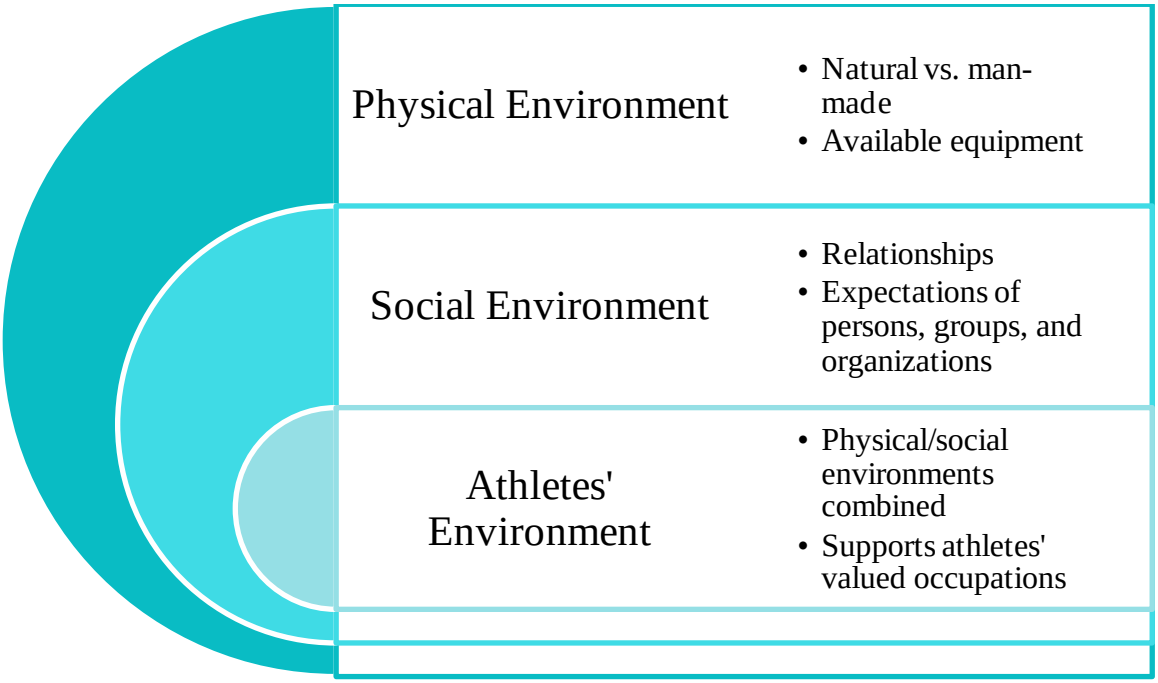
Long-Term Goal: Ryan will be able to process his emotions by identifying three healthy coping mechanisms to calm himself during a stressful situation by discharge.

Short-Term Goal: Ryan will be able to participate in two problem solving situations without becoming argumentative within one week.

Related Activity: Ryan will participate in visual imagery in conjunction with traditional digit fracture protocols during hand therapy treatment sessions to practice relaxing coping techniques.

Environmental

The environmental dimension of wellness consists of individuals' physical and social environments in which he or she interacts.



Adapted from: American Occupational Therapy Association. (2008). Occupational therapy practice framework: Domain and process (2nd ed.). *American Journal of Occupational Therapy*, *62*, 625-683.

Environmental Dimension Tool

Therapist Instructions: Interventions may be developed based on the goals developed in this step. A case scenario, example goals, and a related activity is listed to supply examples of ways therapists can implement strategies based on the environmental dimension of wellness.

Environmental Case Study

Ashley is a twenty-two year old female volleyball player who plays for a local university. She recently injured her left elbow while diving for a volleyball. The impact on her left elbow during the fall created a fluid-filled sac (bursa) inhibiting her ability to participate in her sport. Ashley is apprehensive about returning to play due to her injury. She is seeking assistance from the occupational therapist for adaptations that may be made to her uniform and environment that may allow her return to sport while protecting her left elbow.

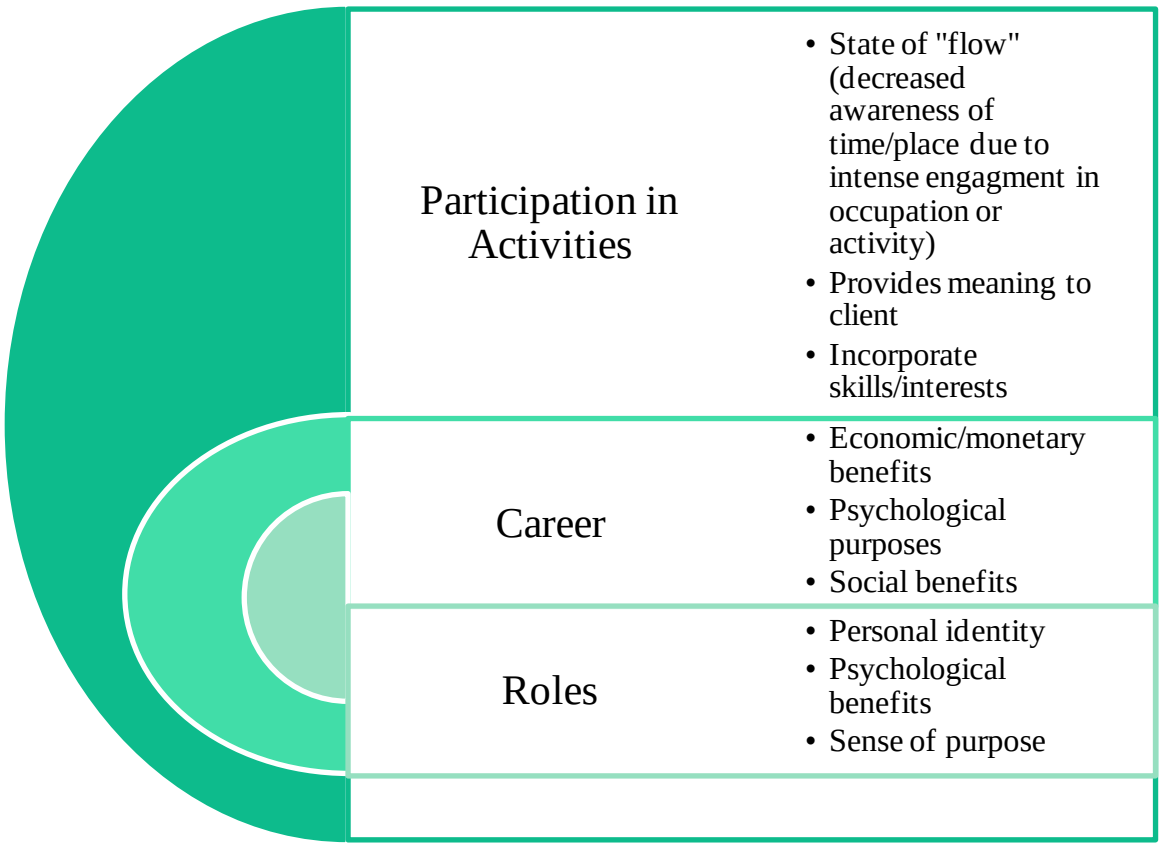
Long-Term Goal: Ashley will be able to participate in practice daily with modifications made to her uniform by four weeks.

Short-Term Goal: Ashley will verbally indicate three areas of concern about returning to volleyball with her current environment in one week.

Related Activity: Ashley will collaborate with the therapist to develop protective equipment (supportive padding) to her left elbow in order to safely participate in volleyball activities.

Occupational

The occupational dimension of wellness includes an individuals' experience with occupations or daily activities.



Adapted from: Witmer, J.M., & Sweeney, T.J. (1992). A holistic model for wellness and prevention over the life span. *Journal of Counseling and Development, 71,* 140-148.

Occupational Dimension Tool

Therapist Instructions: Interventions may be developed based on the goals developed in this step. A case scenario, example goals, and a related activity is listed to supply examples of ways therapists can implement strategies based on the occupational dimension of wellness.

Occupational Case Study

Lewis is a 28 year-old male professional dart thrower for the American Dart League. After a three week tournament, Lewis has experienced a tingling sensation and pain radiating from his wrist to upper arm. The pain appears to be worse at night and while throwing darts at practice. Extreme discomfort exists to the point where Lewis has limited practices to two times a week instead of his usual 10 practices weekly. Lewis has been diagnosed with carpel tunnel syndrome and has been referred to occupational hand therapy to decrease symptoms in order to practice in his daily occupation of dart throwing.

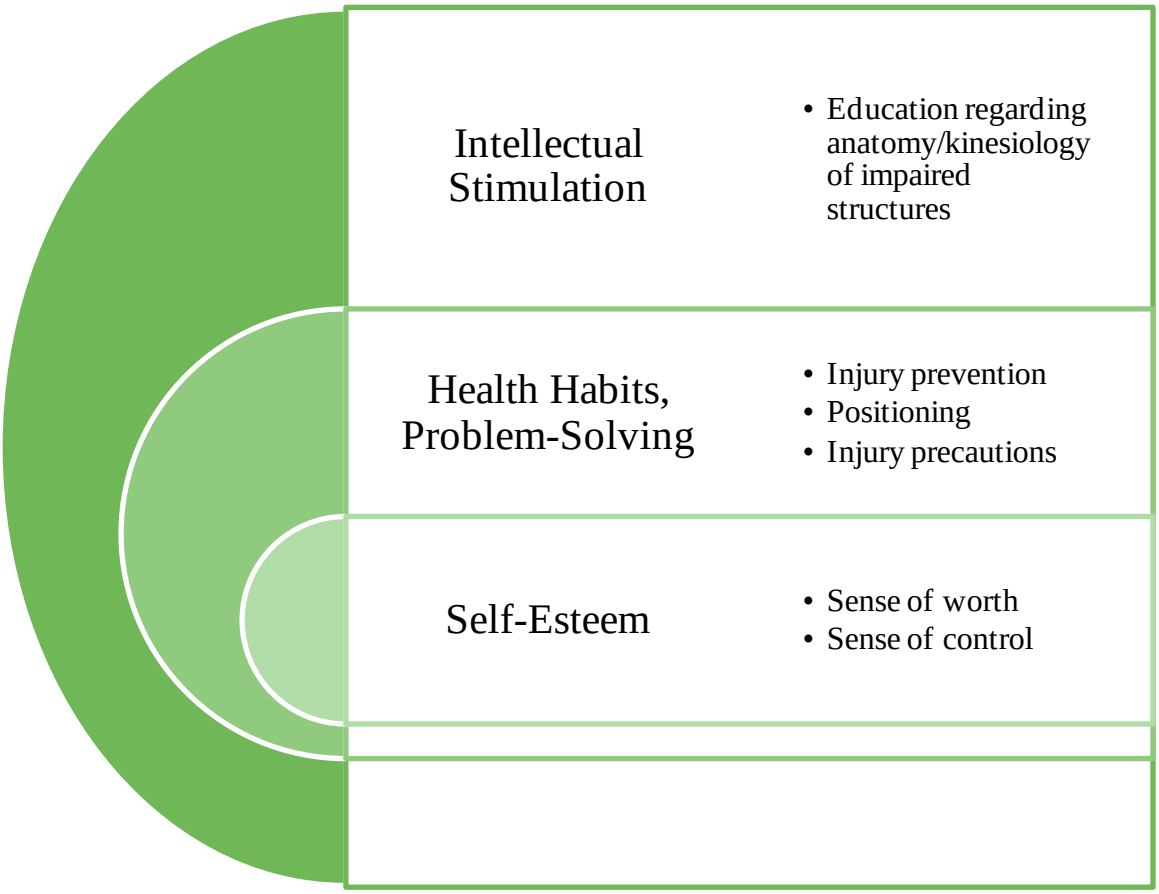
Long-Term Goal: Lewis will be able to participate in his professional occupation of dart throwing by making adaptations to his daily practice routines within four weeks.

Short-Term Goal: Lewis will have increased function for dart throwing with his left upper extremity as demonstrated by decreased pain and tingling within one week.

Related Activity: Lewis will be splinted for night use as well as an additional splint to wear when throwing darts. A wearing and maintenance schedule will be set up to ensure proper positioning and times to use splints. The splints will provide support and ease the pressure that builds within the carpel tunnel.

Intellectual

The intellectual dimension of wellness may include an individuals' sense of worth, sense of control, intellectual stimulation, problem solving, and creativity.



Adapted from: Witmer, J.M., & Sweeney, T.J. (1992). A holistic model for wellness and prevention over the life span. *Journal of Counseling and Development, 71,* 140-148.

Intellectual Dimension Tool

Therapist Instructions: Interventions may be developed based on the goals developed in this step. A case scenario, example goals, and a related activity is listed to supply examples of ways therapists can implement strategies based on the intellectual dimension of wellness.

Intellectual Case Study

Jamal is a right hand dominant 35 year-old Police Officer who is a committed power-lifter. He is diagnosed with and undergoes surgical repair for a right supraspinatus, subscapularis, biceps, and labrum tear, and bone spur excision. Jamal has been power lifting for 15 years and reports he has been taught the proper body mechanics to prevent injury. Due to his recent injury, Jamal will require further education on injury prevention and the precautions that may prevent further damage to his right shoulder upon successful recovery.

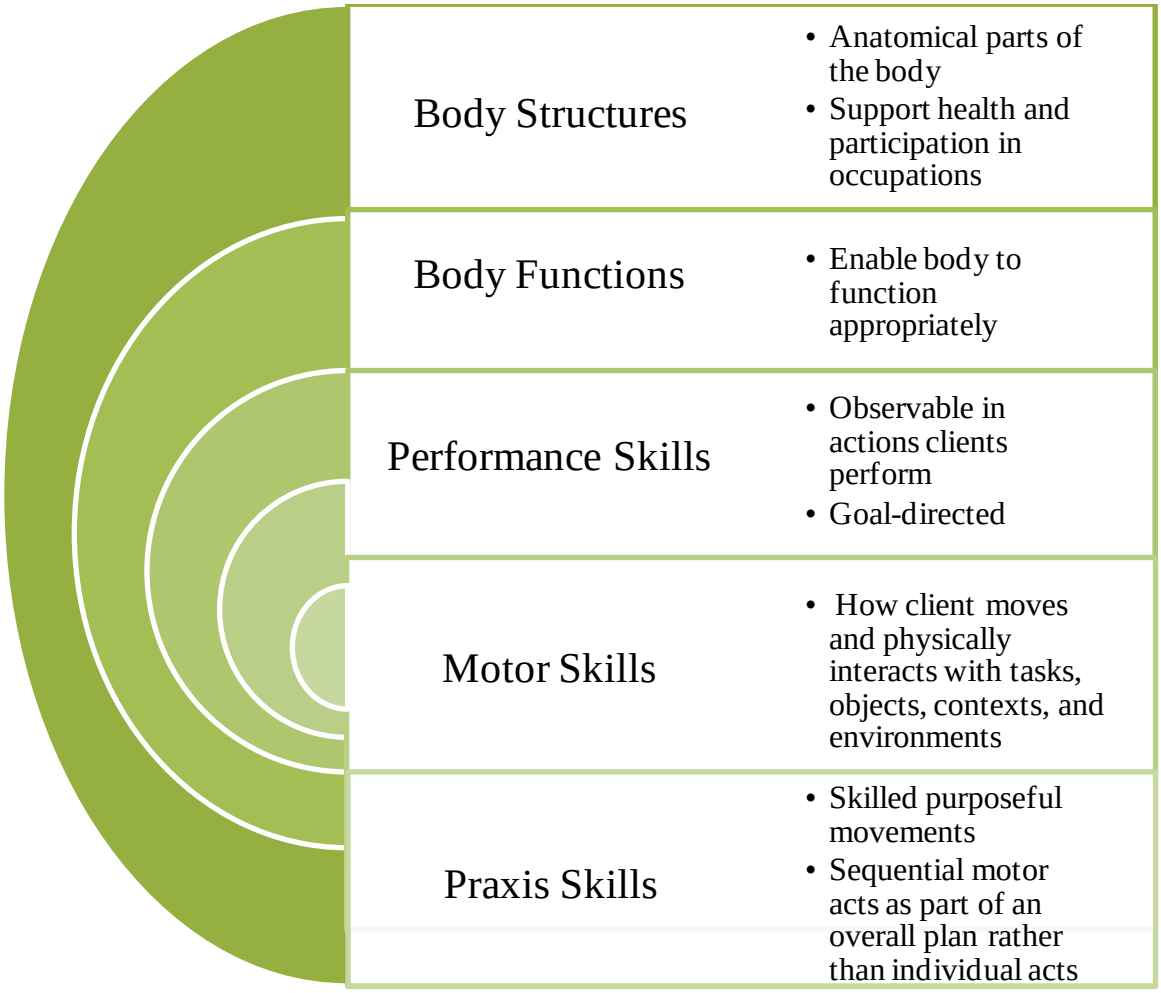
Long-Term Goal: Jamal will be able to return to a moderate level of lifting following recovery of injury utilizing proper education on body mechanics within eight to twelve weeks.

Short-Term Goal: Jamal will demonstrate three lifts using proper body mechanics by one week.

Related Activity: Jamal will be given educational materials regarding power lifting with recommendations for activities such as: stretching, nutritional information, and proper body mechanics. The information will be discussed each therapy session. Jamal will display an understanding of the materials discussed through physical and verbal demonstrations to the therapist.

Physical

The physical dimension of wellness includes an individuals' body structures and functions. This in turn affects the movements and interactions with the individuals' environment.



Adapted from: American Occupational Therapy Association. (2008). Occupational therapy practice framework: Domain and process (2nd ed.). *American Journal of Occupational Therapy, 62,* 625-683.

Physical Dimension Tool

Therapist Instructions: Interventions may be developed based on the goals developed in this step. A case scenario, example goals, and a related activity is listed to supply examples of ways therapists can implement strategies based on the physical dimension of wellness.

Physical Case Study

Mark, a professional rugby player, dislocated his thumb while playing in a rugby tournament. The ulnar collateral and the radial collateral ligaments were injured during the game. The physician indicated to Mark, thumb dislocations such as his will require surgery to restore stability to the joint. The ruptured ulnar collateral ligament became entangled in the soft tissue at the base of the thumb. This is known as a Stener lesion and required surgery due to the ligament's inability to heal on its own. The surgeon fixed the damaged ligament and put it back in place using sutures. Following surgery, the thumb was immobilized in a thumb spica for six weeks. Once the thumb spica was removed, the occupational therapist treated Mark's thumb to regain range of thumb motion, rebuild thumb muscle strength, and to resolve stiffness. The occupational therapist also created a splint for Mark to use during his rugby games and instructed Mark on taping techniques to improve the thumb's joint stability. Following Mark's thumb surgery and therapy, rehabilitation was complete in only 11 weeks.

Long-Term Goal: Mark will be able to return to playing rugby with supportive thumb spica splint by eight to twelve weeks.

Short-Term Goal: Mark will demonstrate the ability to increase lateral pinch by five pounds of pressure in order to grasp a rugby ball by four weeks.

Related Activity: Mark will participate initially in passive range of motion moving towards active assistive range of motion and ending with active range of motion as pain and stiffness decrease. Mark will be fitted with a thumb spica splint to support the dislocated thumb in recovery.

STEP 5:

After completing goal setting with the client, further assessments in each dimension of wellness may be needed to investigate the client's needs or progress through therapy. The recommended assessments were selected as they related well with each dimension of wellness providing the therapist with further tools helping to determine client needs. If applicable, please use the recommended assessments to assess the client in each of the high priority dimensions of wellness. It is suggested that the assessments be completed before and after therapeutic intervention. A record sheet is provided at the end of step five for the therapist to record results to measure outcomes.

Recommended Social Assessments:

1. **Assessment of Communication and Interaction Skills, Version 4.0 (ACIS), 1998**
   Authors: Kirsty Fosyth, Marcelle Salamy, Sandy Simon, and Gary Kielhofner
   Purpose: Designed to gather data on the communication and interaction skills of people engaged in tasks or activities in group settings.
   Population: Adults (communication/interaction of any illness or disability)
   Time Required: 20-60 minutes
   Cost: $11.00-50.00
   Source: Model of Human Occupation Clearinghouse
   Department of Occupational Therapy
   University of Illinois at Chicago
   1919 West Taylor St.
   Chicago, IL 60612
   (Asher, 2007)

2. **Interpersonal Behavior Survey, 1986**
   Authors: Maurice Lorr and Richard Youniss
   Purpose: A personality test which measures typical ways people relate to others, their impulse control, and ways of dealing with work/play. Can be used for people to increase their self-understanding, personal guidance, or as a tool for designing therapeutic interventions.
   Population: Youth (14 and older) and adults
   Time Required: 30 minutes
   Cost: $51.00-150.00
   Source: Western Psychological Services
   12031 Wilshire Blvd.
   Los Angeles, CA 90025-1251
   Telephone: 800-648-8857
   E-mail: custvc@wpspublish.com
   (Asher, 2007)

3. **Aggression Questionnaire, 2000**

Authors: Arnold Buss and Warren
Purpose: Instrument designed to assess anger and aggression. Identifies responses in order to channel emotions in safe and constructive manner.
Population: Children to adults (must have third grade reading level)
Time Required: 10 minutes or less, scoring 10 minutes
Cost: $51.00-150.00
Source: Western Psychological Services
12031 Wilshire Blvd.
Los Angeles, CA 90025-1251
Telephone: 800-648-8857
Web site: www.wpspublish.com
(Asher, 2007)

Recommended Spiritual Assessments:

1. **Canadian Occupational Performance Measure, 4th Edition, 2005**
   Authors: Mary Law, Sue Baptiste, Anne Carswell, Mary Ann McColl, Helene Polatajko, and Nancy Pollock
   Purpose: Individualized clinical outcome measure designed to detect change in a client's self-perception of occupational performance over time.
   Population: Clients across developmental stages (aged 7+)
   Time Required: 30-40 minutes
   Cost: $151.00-500.00
   Source: Canadian Association of Occupational Therapists
   CTTC Building
   3400-1125 Colonel By Drive
   Ottawa, ON K1S 5R1
   Canada
   Telephone: 800-434-2268, extension 236
   (Asher, 2007)

2. **Volitional Questionnaire, Version 4.0, 2003**
   Authors: Carmen Gloria de las Heras, Rebecca Geist, Gary Kielhofner, Yanling Li, Semonti Basu, Ana Kafkes, and Rebecca Geist
   Purpose: Assessment of volition (goals, interests, and values) with an interaction with the environment. This assessment identifies optima conditions and supports needed for their expression.
   Population: Older children-adults (may have mild to significant impairments of cognitive, verbal, or physical abilities)
   Time Required: 30-45 minutes
   Cost: $11.00-50.00
   Source: Model of Human Occupation Clearinghouse
   Department of Occupational Therapy
   University of Illinois at Chicago
   1919 West Taylor St.
   Chicago, IL 60612-7250
   Telephone: 312-413-7469
   E-mail: moho_c@yahoo.com
   Website: www.moho.uic.edu
   (Asher, 2007)

Recommended Emotional Assessments:

1. **Adult Self-Perception Profile, 1988**
   Authors: Bonnie Messer, and Susan Harter
   Purpose: Assessment measuring self-worth and self-perception
   Population: Adults 18 and older
   Time Required: 20 minutes
   Cost: $11.00-50.00
   Source: University of Denver
   Department of Psychology
   2155 S. Race St.
   Denver, CO 80208
   Telephone: 303-871-2478
   Website: www.du.edu/maps/frontier.html
   (Asher, 2007)

2. **Beck Depression Inventory, 2nd Edition, 1996**
   Authors: Aaron Beck, Robert Steer, and Gregory Brown
   Purpose: Assessment measures the severity of depression
   Population: Adolescents and adults
   Time Required: 5-10 minutes
   Cost: $51.00-150.00
   Source: Psychological Corporation
   19500 Bulverde Rd.
   San Antonio, TX 78259
   Telephone: 800-211-8378
   Website: www.harcourtassessment.com
   (Asher, 2007)

3. **Depression and Anxiety in Youth Scale, 1994**
   Authors: Phyllis Newcomer, Edna Barenbaum, and Brain Bryant
   Purpose: Identifies major depression and anxiety to determine needs for further assessment and intervention
   Population: Children and adolescents aged 6 to 19
   Time Required: 30 minutes
   Cost: $51.00-150.00
   Source: Pro-Ed, Inc.
   8700 Shoal Creek Blvd.
   Austin, TX 78757
   Telephone: 800-897-3202
   Website: www.proedinc.com
   (Asher, 2007)

Recommended Environmental Assessments:

1. **Safety Assessment of Function and the Environment for Rehabilitation, Version 3, 2006**

   Authors: Teresa Chu, Rosemary Oliver, Patti Ascott, Lin Ch'un Choo, Thelma Davis, Arvinder Gaya, Pam Goldsilver, Margot McWhiter, and Lori Letts
   Purpose: Assesses a person's ability to safely carry out functional activities in the home and plan interventions for the environment
   Population: Adults
   Time Required: 45-60 minutes
   Cost: $51.00-150.00
   Source: COTAHeatlth
   700 Lawrence Ave. West #362
   Toronto, ON M6A 3B4 Canada
   Telephone: 416-785-9230 extension: 1111
   Website: www.cotahealth.ca
   (Asher, 2007)

2. **Social Climate Scale: Family Environment Scale, 3rd Edition, 1994**

   Authors: Rudolf Moos and Bernice Moos
   Purpose: Questionnaire that assesses social-environmental characteristics of families, strengths, problems, and influences
   Population: Adolescents and adults (11+)
   Time Required: 15-20 minutes
   Cost: $11.00-50.00
   Source: Mind Garden
   855 Oak Grove Ave.
   Menlo Park, CA 94025
   Telephone: 650-322-6300
   Website: www.mindgarden.com
   (Asher, 2007)

Recommended Occupational Assessments

1. **Canadian Occupational Performance Measure, 4th Edition, 2005**
   Authors: Mary Law, Sue Baptiste, Anne Carswell, Mary Ann McColl, Helene Polatajko, and Nancy Pollock
   Purpose: Individualized clinical outcome measure designed to detect change in a client's self-perception of occupational performance over time.
   Population: Clients across developmental stages (aged 7+)
   Time Required: 30-40 minutes
   Cost: $151.00-500.00
   Source: Canadian Association of Occupational Therapists
   CTTC Building
   3400-1125 Colonel By Drive
   Ottawa, ON K1S 5R1
   Canada
   Telephone: 800-434-2268, extension 236
   (Asher, 2007)

2. **Model of Human Occupational Screening Tool, Version 2.0, 2006**
   Authors: Sue Parkinson, Kirsty Forsyth, and Gary Kielhofner
   Purpose: A screening tool to determine the need for occupational therapy services and document occupational functioning using concepts from the Model of Human Occupation
   Population: Clients with mental health issues, clients who have difficulty expressing concerns
   Time Required: Can be spread out over time, 10-20 minutes for scoring
   Cost: $11.00-50.00
   Source: Model of Human Occupation Clearinghouse
   Department of Occupational Therapy
   University of Illinois at Chicago
   1919 West Taylor St.
   Chicago, IL 60612-7250
   Telephone: 312-413-7469
   E-mail: moho_c@yahoo.com
   Website: www.moho.uic.edu
   (Asher, 2007)

3. **Occupational Circumstances Assessment Interview Rating Scale, Version 4.0, 1989**
   Authors: Kirsty Forsyth, Shilpa Deshpande, Gary Kielhofner, Chris Henriksson, Lena Haglund, Linda Olson, Sarah Skinner, and Supriya Kulkarni
   Purpose: A structure for gathering, analyzing, and reporting data on the client's occupational adaptation
   Population: Short-term psychiatric clients
   Time Required: 20-35 minutes
   Cost: $11.00-50.00
   Source: Model of Human Occupation Clearinghouse
   Department of Occupational Therapy
   University of Illinois at Chicago
   1919 West Taylor St.
   Chicago, IL 60612-7250
   Telephone: 312-413-7469
   E-mail: moho_c@yahoo.com
   Website: www.moho.uic.edu
   (Asher, 2007)

4. **Occupational Questionnaire, 1986**
   Authors: Nancy Riopel and Gary Kielhofner
   Purpose: Collects data on a client's use of time in daily activities and brings in their values, interests, and personal causation
   Population: Adolescents and adults
   Cost: $0-10.00
   Source: Model of Human Occupation Clearinghouse
   Department of Occupational Therapy
   University of Illinois at Chicago
   1919 West Taylor St.
   Chicago, IL 60612-7250
   Telephone: 312-413-7469
   E-mail: moho_c@yahoo.com
   Website: www.moho.uic.edu
   (Asher, 2007)

5. **Role Change Assessment, Version 2.0, 1995**
   Authors: Joan Rogers, and Margo Holm
   Purpose: Assesses role function and role change experienced
   Population: Older adults
   Cost: $0-10.00
   Source: Margo Holm or Joan Rogers
   School of Health and Rehabilitative Sciences
   University of Pittsburgh
   5014 Forbes Tower
   Pittsburgh, PA 15260
   E-mail: mbholm@pitt.edu or jcr@pitt.edu
   (Asher, 2007)

Recommended Intellectual Assessments

1. **Allen Cognitive Level Test, 1990**
   Authors: Claudia Kay Allen
   Purpose: Estimates the client's cognitive functioning and capacity to learn
   Population: Adults with psychiatric illness or cognitive impairment following an acquired brain injury
   Time Required: 20 minutes
   Cost: $51.00-150.00
   Source: S & S Worldwide
   P.O. Box 513
   Colchester, CT 06415-0513
   Telephone: 800-288-9941
   Website: www.ssww.com
   (Asher, 2007)

2. **Autobiographical Memory Interview, 1990**
   Authors: Michael Kopelman, Barbara Wilson, and Alan Baddeley
   Purpose: Assesses the client's personal memory to help understand the nature of any memory deficit
   Population: Adults (18+) who have memory problems due to traumatic brain injury, cerebrovascular accident, etc.
   Time Required: 30 minutes
   Cost: $51.00-150.00
   Source: Northern Speech Services, Inc.
   117 North Elm. St.
   P.O. Box 1247
   Gaylord, MI 49735
   Telephone: 888-337-3866
   Website: www.nss-nrs.com
   (Asher, 2007)

3. **Cognitive Assessment of Minnesota, 1993**
   Authors: Ruth Rustad, Terry DeGroot, Margaret Jungkunz, Karen Freeberg, Laureen Borowick, and Ann Wanttie
   Purpose: Assesses a wide range of cognitive skills graded from simple to complex. Functional skills are emphasized to identify specific problems.
   Population: Adults following acquired brain injury, stroke, tumor, and anoxia
   Time Required: 40 minutes
   Cost: $51.00-150.00
   Source: Harcourt Assessment, Inc.
   19500 Bulverde Rd.
   San Antonio, TX 78259
   Telephone: 800-211-8378
   Website: www.harcourtassessment.com
   (Asher, 2007)

Recommended Physical Assessments

1. **Functional Dexterity Test, 2003**
   Authors: Dorit Aaron, and Caroline Jansen
   Purpose: Gathers information regarding functional dexterity in activities that require a dynamic three-jaw chuck prehension pattern
   Population: Adults (20-70) who have hand injuries
   Time Required: 15 minutes
   Cost: $11.00-50.00
   Source: Aaron, D., & Jansen, C. (2003). Development of the functional dexterity test (FDT): Construction, validity, reliability, and normative data. *Journal of Hand Therapy, 16*, 12-21.
   (Asher, 2007)

2. **Grooved Pegboard Test, 2004**
   Authors: Ronal Trites
   Purpose: Manipulative dexterity and finger speed are measured
   Population: Children and adults (5+)
   Time Required: 10-15 minutes
   Cost: $51.00-150.00
   Source: Lafayette Instrument Company
   3700 Sagamore Parkway North
   P.O. Box 5729
   Lafayette, IN 47903
   Website: www.lafayetteinstrument.com
   (Asher, 2007)

3. **Arthritis Hand Function Test, 1991**
   Author: Cathrine Backman, Hazel Mackie, and Jackie Harris
   Purpose: Measure strength and dexterity of hand function
   Population: Adults (20+) who have osteoarthritis or rheumatoid arthritis
   Time Required: 20 minutes
   Cost: $11.00-50.00
   Source: backman@interchange.ubc.ca
   (Asher, 2007)

4. **McGill Pain Questionnaire, 1987**
   Author: Ronald Melzack
   Purpose: Questionnaire that provides a consistent method of measuring a person's subjective pain experience
   Population: Adult clients with pain
   Time Required: 15-20 minutes
   Cost: $0.00-10.00
   Source: www.chcr.brown.edu/pcoc/Physical.htm, www.ama-cmeonline.com/pain_mgmt/module09/pop_up/pop_mcgill.htm
   (Asher, 2007)

Assessment Record (Progression) Sheet:

Today's Date:_____ **Client's Name:**_____
Client's Date of Birth:_____ **Medical Record Number:**_____
Therapist: _____

Please record assessment results from before and after therapeutic intervention. This will allow researchers to track the results of the program.

Social Assessments

1. **Assessment of Communication and Interaction Skills, Version 4.0 (ACIS), 1998**
   Pre Score:_____ Post Score: _____
   Other comments:_____
   _____
   _____
2. **Interpersonal Behavior Survey, 1986**
   Pre Score:_____ Post Score: _____
   Other comments:_____
   _____
   _____
3. **Aggression Questionnaire, 2000**
   Pre Score:_____ Post Score: _____
   Other comments:_____
   _____
   _____

Spiritual Assessments

1. **Canadian Occupational Performance Measure, 4th Edition, 2005**
   Pre Score:_____ Post Score: _____
   Other comments:_____
   _____
   _____
2. **Volitional Questionnaire, Version 4.0, 2003**
   Pre Score:_____ Post Score: _____
   Other comments:_____
   _____
   _____

Emotional Assessments

1. **Adult Self-Perception Profile, 1988**
   Pre Score:_____ Post Score: _____
   Other comments:_____
   _____
   _____
2. **Beck Depression Inventory, 2nd Edition, 1996**
   Pre Score:_____ Post Score: _____
   Other comments:_____
   _____
   _____
3. **Depression and Anxiety in Youth Scale, 1994**
   Pre Score:_____ Post Score: _____
   Other comments:_____
   _____
   _____

Environmental Assessments

1. **Safety Assessment of Function and the Environment for Rehabilitation, Version 3, 2006**
   Pre Score:_____ Post Score: _____
   Other comments:_____
   _____
   _____
2. **Social Climate Scale: Family Environment Scale, 3rd Edition, 1994**
   Pre Score:_____ Post Score: _____
   Other comments:_____
   _____
   _____

Occupational Assessments

1. **Canadian Occupational Performance Measure, 4th Edition, 2005**
   Pre Score:_____ Post Score: _____
   Other comments:_____
   _____
   _____
2. **Model of Human Occupational Screening Tool, Version 2.0, 2006**
   Pre Score:_____ Post Score: _____
   Other comments:_____
   _____
   _____
3. **Occupational Circumstances Assessment Interview Rating Scale, Version 4.0, 1989**
   Pre Score:_____ Post Score: _____
   Other comments:_____
   _____
   _____

4. **Occupational Questionnaire, 1986**
   Pre Score:_____ Post Score: _____
   Other comments:_____
   _____
   _____

5. **Role Change Assessment, Version 2.0, 1995**
   Pre Score:_____ Post Score: _____
   Other comments:_____
   _____
   _____

Intellectual Assessments

1. **Allen Cognitive Level Test, 1990**
   Pre Score:_____ Post Score: _____
   Other comments:_____
   _____
   _____

2. **Autobiographical Memory Interview, 1990**
   Pre Score:_____ Post Score: _____
   Other comments:_____
   _____
   _____

3. **Cognitive Assessment of Minnesota, 1993**
   Pre Score:_____ Post Score: _____
   Other comments:_____
   _____
   _____

Physical Assessments

1. **Functional Dexterity Test, 2003**
   Pre Score:_____ Post Score: _____
   Other comments:_____
   _____
   _____

2. **Grooved Pegboard Test, 2004**
   Pre Score:_____ Post Score: _____
   Other comments:_____
   _____
   _____

3. **Arthritis Hand Function Test, 1991**
   Pre Score:_____ Post Score: _____
   Other comments:_____
   _____
   _____

4. McGill Pain Questionnaire, 1987

Pre Score:_____ Post Score: _____

Other comments:_____

_____

_____

Post-Intervention Questionnaire of the Seven Dimensions of Wellness

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Today's Date:_____ Client's Name:_____
Client's Date of Birth:_____ Medical Record Number:_____
Therapist: _____

STEP 6:

Provide the post-intervention questionnaire to the client for completion. The client will rate on a scale of 1 to 4 (1: strongly disagree, 2: disagree, 3: agree, and 4: strongly agree) on the questions provided regarding the Seven Dimensions of Wellness. **Please circle your answer to the following questions**:

1. When participating in my sport, I often maintain an intense level of engagement focused on the sport alone.

Strongly disagree	*Disagree*	*Agree*	*Strongly Agree*
1	2	3	4

2. I feel a connection to the universe in any kind of way.

Strongly disagree	*Disagree*	*Agree*	*Strongly Agree*
1	2	3	4

3. I am able to maintain meaningful relationships with my teammates.

Strongly disagree	*Disagree*	*Agree*	*Strongly Agree*
1	2	3	4

4. I believe that I serve a purpose within my life.

Strongly disagree	*Disagree*	*Agree*	*Strongly Agree*
1	2	3	4

5. I am able to make goal-directed movements with parts of my body to physically engage in my sport.

Strongly disagree	*Disagree*	*Agree*	*Strongly Agree*
1	2	3	4

6. I have been provided adequate amounts of training space necessary for my athletic needs.

Strongly disagree	*Disagree*	*Agree*	*Strongly Agree*
1	2	3	4

7. I feel the sport I engage in and the activities that are associated with the sport are meaningful to me. Participation in my sport brings happiness into my life.

Strongly disagree	*Disagree*	*Agree*	*Strongly Agree*
1	2	3	4

8. I am able to solve problems in effective manners that arise in my sport.

Strongly disagree	*Disagree*	*Agree*	*Strongly Agree*
1	2	3	4

9. I have effective communication with my teammates, coaches, and sports staff.

Strongly disagree	*Disagree*	*Agree*	*Strongly Agree*
1	2	3	4

10. I apply effective coping strategies (ex: deep breathing, visual imagery) when in stressful situations.

Strongly disagree	*Disagree*	*Agree*	*Strongly Agree*
1	2	3	4

11. I have been provided adequate amounts of training equipment necessary for my athletic needs.

Strongly disagree	*Disagree*	*Agree*	*Strongly Agree*
1	2	3	4

12. At this time, my body is functioning at its optimal level.

Strongly disagree	*Disagree*	*Agree*	*Strongly Agree*
1	2	3	4

13. I attempt to keep a positive attitude after I am put in a challenging situation.

Strongly disagree	*Disagree*	*Agree*	*Strongly Agree*
1	2	3	4

14. I have developed a personal identity with the roles I uphold on my sports team.

Strongly disagree	*Disagree*	*Agree*	*Strongly Agree*
1	2	3	4

15. I am aware of the rules of the game and am able to sequence the steps of the sport.

Strongly disagree	*Disagree*	*Agree*	*Strongly Agree*

1 2 3 4

16. I seek advice and/or knowledge from teammates or coaches when needed.

Strongly disagree	*Disagree*	*Agree*	*Strongly Agree*
1	2	3	4

17. My coaches, teammates, and healthcare professionals are readily available for assistance within my training environment.

Strongly disagree	*Disagree*	*Agree*	*Strongly Agree*
1	2	3	4

18. In order to participate in my sport, I bring forth my skills and abilities to achieve success.

Strongly disagree	*Disagree*	*Agree*	*Strongly Agree*
1	2	3	4

19. I am aware of methods to prevent injuries within my sport (ex: stretching, taping, etc.).

Strongly disagree	*Disagree*	*Agree*	*Strongly Agree*
1	2	3	4

20. I am successful in moving and physically interacting with objects or people within my sport without pain or overwhelming exhaustion.

Strongly disagree	*Disagree*	*Agree*	*Strongly Agree*
1	2	3	4

21. I am able to process and seek help with any psychological variables (ex: depression, anxiety, mental illness, stress) that may be a part of my life.

Strongly disagree	*Disagree*	*Agree*	*Strongly Agree*
1	2	3	4

Scoring:
Add up the numbers from each category. The questions within each category are listed below. Rank the category with the highest score first and the lowest score last. The first category will be the category (dimension of wellness) that is of highest priority and the lowest number when the questions are added together (the client needs the most assistance in this area). The last category will be the category (dimension of wellness) that is of lowest priority and the highest number when the questions are added together (the client needs the least assistance in this area).

Social Results: Questions (3 + 9 + 16) = Score ____

Spiritual Results: Questions (2 + 4 + 13) = Score ____

Emotional Results: Questions (10 + 14 + 21) = Score ____

Environmental Results: Questions (6 + 11 + 17) = Score ____

Occupational Results: Questions (1 + 7 + 18) = Score ____

Intellectual Results: Questions (8 + 15 + 19) = Score ____

Physical Results: Questions (5 + 12 + 20) = Score ____

Overall Scores:

Lowest Score 1._____ **(Highest Priority Area)**

2._____

3._____

4._____

5._____

6._____

Highest Score 7._____ **(Lowest Priority Area)**

Satisfaction Questionnaire: Discharge

Today's Date:_____ **Client's Name:**_____
Client's Date of Birth:_____ **Medical Record Number:**_____
Therapist: _____

STEP 7:

The client will be asked to complete the Satisfaction Questionnaire at discharge to obtain valuable information regarding their satisfaction with services provided using *The Seven Dimensions of Wellness with Upper Extremity Orthopedic Injuries: A Manual for Occupational Therapists.*

1. In my opinion, I received the highest quality of occupational Hand Therapy services available.

Strongly disagree	*Disagree*	*Agree*	*Strongly Agree*
1	2	3	4

2. My therapist was supportive and engaged me within the therapy sessions.

Strongly disagree	*Disagree*	*Agree*	*Strongly Agree*
1	2	3	4

3. The occupational hand therapy sessions focused on my concern areas regarding social, emotional, spiritual, environmental, occupational, intellectual, and physical wellness.

Strongly disagree	*Disagree*	*Agree*	*Strongly Agree*
1	2	3	4

4. I would recommend this course of treatment in occupational hand therapy to other athletes with similar concerns.

Strongly disagree	*Disagree*	*Agree*	*Strongly Agree*
1	2	3	4

Additional comments/concerns:

_____
_____
_____
_____
_____

*****Comments and questions may be directed to:**

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