

A LITERATURE REVIEW AND PROPOSED FUTURE STUDY TO ANALYZE THE
EFFECTIVENESS OF UTILIZING PHYSICAL ACTIVITY AS A COUNSELLING MEDIUM

By

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Abstract

Research indicates that there is a strong correlation between positive mental health outcomes and physical activity. Studies have found that exercise has the potential to alter both physiological and neurological properties within the brain making it an ideal option as a preventative, treatment and maintenance modality. The following paper includes an extensive literature review and proposed future study that will aid in substantiating the hypothesis that utilizing exercise as a counselling medium in conjunction with other counselling techniques will help to: (a) increase the effectiveness of treatment; (b) decrease the duration of sessions required and; (c) provide greater long term sustainability for the client. In order to support this hypothesis literature was reviewed on the following: utilization and outcomes of non-traditional counselling mediums; physiological responses and requirements of physical activity; specifications for utilization of moderate-intensity exercises. The results from this review assisted in establishing the structural overview for the counselling medium and suggested future study as it is outlined in the final chapter.

Keywords: Counselling, Exercise, Holistic, Mental Health, Non-Traditional, Physical Activity, Therapeutic, Treatment

Chapter 1: Introducing the Utilization of Exercise as a Counselling Medium

The evolution of fitness can be attributed to humanity's need for survival and can be traced back to the beginning of humankind. During the [Paleolithic](#) and [Neolithic](#) Ages, physical fitness was all about survival. From 2500-250 B.C.E., people started relating physical activity with physical well-being. In China, through the philosophical teachings of [Confucius](#), they associated certain [diseases](#) with physical inactivity ("Physical Fitness", 2015).

The purpose and applicability of exercise and fitness has since evolved further to incorporate a variety of health benefits and functions. Most notably, in more recent years, exercise and fitness has been directly linked to the positive effectiveness of mental health. The Physical Activity Guidelines Advisory Committee, concluded that physical activity can actually protect against feelings of distress, enhance psychological well-being, protect against symptoms of anxiety and development of anxiety disorders, protect against depressive symptoms and development of major depressive disorder, and delay the effects of dementia and the cognitive decline associated with aging (Dunn & Jewell, 2010).

Yet despite the positive link between exercise and mental health, The Canadian Physical Activity Guidelines, which recommend adults (18– 64 years) get a minimum of 150 minutes of moderate- to vigorous-intensity aerobic physical activity per week, found that only 5% of Canadians actually meet this requirement (Pearce, 2008). Given that 20% of Canadians will experience a mental illness in their life (Canadian Mental Health Association, 2015) it would appear there is a gap between what we know about mental health and exercise and how we are currently utilizing this information. It is this suggested gap that will provide the focus for my Literature Review.

Each chapter of this review has been constructed to create a link between physical activity, mental health and counselling. The literature will aid in substantiating my hypothesis that utilizing exercise as a counselling medium in conjunction with other counselling techniques will help to: (a) increase the effectiveness of treatment; (b) decrease the duration of sessions required and; (c) provide greater long term sustainability for the client.

Chapter Outline

To further support this hypothesis the outline of this review will be as follows:

Chapter 1: Introducing the Utilization of Exercise as a Counselling Medium.

This chapter will provide an introduction to mental health, an overview of current therapeutic interventions, an introduction to the relationship between exercise and mental health, and a recommendation for a therapeutic intervention that will utilize exercise as a counselling medium. The purpose of this chapter will be to provide a general introduction to the varying topics throughout this literature review as well as highlight the linkages between them.

Chapter 2: Reviewing Other Related Non-Traditional Counselling Mediums.

The second chapter will provide a more in depth overview of current therapeutic interventions focusing, in particular, on those that are considered to be of a non-traditional framework. These interventions will utilize techniques that incorporate some form of movement, physical stimulation and/or subconscious exploration. The purpose of this chapter will be to provide evidentiary support for the use of non-traditional counselling methods in the treatment of various mental health diseases.

Chapter 3: Analyzing the Relationship between Exercise and Mental Health.

The third chapter will provide further exploration of current scientific evidence linking positive mental health with physical activity both as a preventative and treatment method. The purpose of this chapter is to further emphasize the link between mental health and physical activity as well as provide methodical validity to support my hypothesis and proposed future study.

Chapter 4: Appraising Exercise Techniques to Utilize as Counselling Mediums.

The fourth chapter will apply the methodical evidence found in chapter three, supporting the connection between physical activity and positive mental health, to outline various exercise techniques that could be utilized as counselling mediums. The purpose of this chapter is to provide a structural base for the exercise requirements and practices that would assistance in creating the framework for my proposed therapeutic intervention and future study.

Chapter 5: Proposing a Therapeutic Intervention and Future Study.

The fifth and final chapter will outline two specific proposals: The first being a therapeutic intervention utilizing physical activity as a counselling medium; the second being a structural framework for studying the effectiveness of utilizing said physical activity as a counselling medium. The purpose of this chapter is to apply the evidence collected throughout this literature review to support the construct of a method for further minimizing the gap between positive mental health and physical activity.

Mental Health

Overview.

According to the U.S. Department of Health and Human Services, (2016) Mental Health refers to our functioning on an emotional, psychological and social level. These functions can influence how we think, how we feel and how we act. Therefore if someone is suffering from a mental health disease it may affect the way that they process and respond to any given stimuli from stressful situations to decision making and can often have negative impacts on their mood and behavior. There are many contributing factors that can result in someone suffering from mental health problems. Some of those factors can include: biological such as genetics and family history of mental health disease; experiential such exposure to traumatic experiences or abuse; and societal such as exclusion, bias, financial burden, etc.

Much like these varying contributing factors there will also be varying degrees in which someone may experience a mental health disease this can range from minimal affect to debilitating. Like any other disease it is best treated when “caught” in the early stages. According to the U.S. Department of Health and Human Services, (2016, pg.1) if a person exhibits one or more of these symptoms it could be early warning signs of a mental health disorder:

- Eating or sleeping too much or too little;
- Pulling away from people and usual activities;
- Having low or no energy;
- Feeling numb or like nothing matters;
- Having unexplained aches and pains;
- Feeling helpless or hopeless;

- Smoking, drinking, or using drugs more than usual;
- Feeling unusually confused, forgetful, on edge, angry, upset, worried, or scared;
- Yelling or fighting with family and friends;
- Experiencing severe mood swings that cause problems in relationships;
- Having persistent thoughts and memories you can't get out of your head;
- Hearing voices or believing things that are not true;
- Thinking of harming yourself or others;
- The Inability to perform daily tasks like taking care of your kids or getting to work.

Statistics.

Although this list is not exclusive or inclusive of any one mental health disorder it does provide a benchmark for diagnosis. This benchmark is vital in helping health care providers to better understand and treat these diseases. Mental Health Disorders are considered to be one of the fastest growing and prevalent diseases of the twenty first century. The following statistics provided by the Canadian Mental Health Association, (2016, pg.1) provide support to this claim:

- 20% of Canadians will personally experience a mental illness in their lifetime.
- Approximately 8% of adults will experience major depression at some time in their lives.
- About 1% of Canadians will experience bipolar disorder (or “manic depression”).
- Schizophrenia also affects 1% of the Canadian population.
- Anxiety disorders affect 5% of the household population, causing mild to severe impairment.
- Suicide accounts for 24% of all deaths among 15-24 year olds and 16% among 25-44 year olds.
- Suicide is one of the leading causes of death in both men and women.

- The economic cost of mental illnesses in Canada for the health care system was estimated to be at least \$7.9 billion in 1998 – \$4.7 billion in care, and \$3.2 billion in disability and death.
- An additional \$6.3 billion was spent on uninsured mental health services and time off work for depression and distress that was not treated by the health care system.
- In 1999, 3.8% of all admissions in general hospitals (1.5 million hospital days) were due to anxiety disorders, bipolar disorders, schizophrenia, major depression, personality disorders, eating disorders and suicidal behavior.
- It is estimated that 10-20% of Canadian youth are affected by a mental illness or disorder – the single most disabling group of disorders worldwide.
- The total number of 12-19 year olds in Canada at risk for developing depression is a staggering 3.2 million.
- Once depression is recognized, help can make a difference for 80% of people who are affected, allowing them to get back to their regular activities.
- Mental illness is increasingly threatening the lives of our children; with Canada's youth suicide rate the third highest in the industrialized world.
- Suicide is among the leading causes of death in 15-24 year old Canadians, second only to accidents.

Diagnostic Tools.

Given that so many people from all different socioeconomic backgrounds from all over the world are susceptible to this disease and given that the signs and symptoms of a mental health disorder can be ambiguous, that begs the question, how do mental health care provider's best diagnose these disorders?

The testing modalities utilized today range in variety and comprehension. Some tests must be administered by health care professionals and others can be completed online by the individual themselves. They can range from disorder specific tests such as Beck's Depression Rating Scale to more general tests such as the Mental Health Meter, designed by the Canadian Mental Health Association, which provides you a list of your mental health strengths and weaknesses.

One diagnostic tool both widely recognized and utilized all around the world is the Diagnostic and Statistical Manual of Mental Disorders (DSM) which released its 5th edition in 2013. The latest version of the manual outlines and provides criteria for over 250 mental health disorders; however this manual has evolved over time and was not always so extensive.

According to Kawa & Giordano (2012) the first version of the DSM was founded by the Bureau of the Census and the National Committee for Mental Hygiene, the American Medico-Psychological Association (now the American Psychiatric Association) in 1918 as a way to create standardized classification of psychopathological conditions. This resulted in the publication of the Statistical Manual for the Use of Institutions for the Insane which included a total of only 22 categories of which were mostly psychotic conditions associated with somatic etiology. This first edition of the DSM was used to help diagnose psychotic conditions for over 30 years until the first official edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-I), was released in 1952. This version included a total of 102 categories, far more than the first version, and was based on psychodynamic etiological explanations. Since then it has continued to evolve through several editions which included various additions and removals roughly every ten to fifteen years: DSM-II (1968); DSM-III (1980); DSM-III-R (1987); DSM-IV (1994); DSM-IV-TR (2000); DSM-5 (2013).

Although the DSM is considered to be an important and vital diagnostic tool in the mental health field it also comes with its fair share of controversy. The use of diagnostic material including the DSM is greatly debated due to the limitations of the tools. As quoted by Widiger and Samuel, (2005)

“in the more than 30 years since the introduction of the Feighner criteria by Robins and Guze, which eventually led to DSM-III, the goal of validating these syndromes and discovering common etiologies has remained elusive. Despite many proposed candidates, not one laboratory marker has been found to be specific in identifying any of the DSM-defined syndromes. Epidemiologic and clinical studies have shown extremely high rates of comorbidities among the disorders, undermining the hypothesis that the syndromes represent distinct etiologies. Furthermore, epidemiologic studies have shown a high degree of short-term diagnostic instability for many disorders. With regard to treatment, lack of treatment specificity is the rule rather than the exception (Kupfer, First, & Regier, 2002, p. xviii) (pg.1)”

Current Therapeutic Interventions.

It is this above mentioned lack of treatment specificity which drives the need to review our current practices and to better understand and alter our various treatment modalities. Current therapeutic interventions for mental health disorders can be broken down into three main categories: Pharmacological (medication); Psychological (counselling); and Physiological (somatic). These modalities can be used independently or in a combined mix dependent on the type, severity and responsiveness. For the purposes of this literature review I will be focusing on the Psychological (counselling) modalities.

As outlined by (Corey, 2013) traditional counselling interventions can be broken down into eleven categories or models of therapy: Psychoanalytic ; Adlerian; Existential; Person-Centered; Gestalt; Behavior; Cognitive Behavior; Reality; Feminist; Postmodern; Family Systems. Additionally most if not all of these modalities can be performed in: individual; couples, group and family therapies. So the question lies, with so many options that cover so many areas, where do the perceived gaps lie? As suggested by Hanna (2011) the counselling profession has a diverse set of specializations which range from career counselling to addictions counselling and everything in between. Furthermore within those specializations counselling can be further broken down to various contextual lenses and influences such as social justice, spirituality, feminism etc. The problem now is that the theories and techniques have become so convoluted that the focus is now exclusively on the integration of specific foci individually as opposed to the integration of growth to the profession as a whole.

It seems that in many cases we have forgotten that an individual is “more than just the sum of their parts” that we as humans are a unique and complicated species and thus we require a more holistic inclusion of treatment. This can be seen in the way that a psychological issue causes physiological pain or vice versa that a physiological pain can cause psychological issues.

Based on the discussions above, it could be suggested that our current health care system needs to close the gaps in service by treating clients in a way that is: more inclusive of the person as a whole and not just a singular aspect; incorporates the unique physical, mental and spiritual characteristics of a person; can provide clients with treatment methods that provide greater long term sustainability and utilization; does not treat one ailment with methods that incite others.

Exercise and Mental Health

One way in which we can begin to incorporate changes that will allow us to treat clients in a manner which is more inclusive and holistic is to utilize existing mediums that have proven benefits. One such approach is exercise. There is both a positive physiological and psychological affect that takes place when one partakes in physical activity although it is only in recent years that studies have begun to provide support for the latter.

A review of current research completed by Wolff, Gaudlitz, von Lindenberger, Plag, Heinz, and Ströhle, (2011) found that

“A wide range of biochemical and physiological changes and adaptations are related to acute bouts of exercise and regular exercise training. Some of these mechanisms affect mood (e.g., via serotonin, endorphins), and others have neuroprotective functions (e.g., normalization of brain-derived neurotrophic factor (BDNF) release), act as anxiolytic (e.g., release of atrial natriuretic peptide (ANP), or alter stress reactivity (hypothalamus–pituitary–adrenal (HPA) axis). On a psychological level, several mechanisms have been proposed, such as changes in body scheme and health attitudes/behaviors, learning and extinction, social reinforcement, experience of mastery, shift of external to more internal locus of control, or improved coping skills (pgS186).”

These findings not only support a positive connection between exercise and mental health but also provide evidence to suggest that the direct effects of exercise can alter both the biological and cognitive functioning and can be effective not only as a treatment method but also as a preventative and maintenance technique. This type of treatment modality could change the way in which health care providers view and treat mental health diseases.

One belief behind the correlation of positive mental health and exercise is that exercise forces a physiological change in the body which directly affects the brain. According to Widrich, (2014) when one's heart pressure begins to increase the body believes it is in a moment of stress triggering the fight or flight defense. When this defense is triggered two things begin to happen in the body: Endorphin levels begin to rise; and a protein called BDNF (Brain-Derived Neurotrophic Factor) is released into the body. Each of these changes serves a purpose in survival. The endorphin release acts as a block for pain receptors and the protein acts as a reset switch on your memory. That is why people often don't feel injuries during exercising and feel their mind is much clearer once they have finished.

Chapter Summary

While there is scientific evidence supporting the link between positive mental health and exercise it would seem that this is a vastly underutilized and underexplored potential tool for the health care field. It is this positive correlation and the perceived gaps as outlined above that are the basis for this literature review and for my proposed utilization of exercise as a progressive counselling medium.

Chapter 2: Reviewing Other Related Non-Traditional Counselling Methods

As outlined in chapter one, this chapter will provide an overview of various forms of other non-traditional counselling methods and techniques that are currently utilized in the mental health field. In particular the interventions focused on will incorporate some form of movement, physical stimulation and/or subconscious exploration. The purpose of this review is to provide evidentiary support for the use of non-traditional counselling methods in the treatment of various mental health diseases.

This information will help in supporting my hypothesis that utilizing exercise as a counselling medium in conjunction with other counselling techniques will help to: (a) increase the effectiveness of treatment, (b) decrease the duration of sessions required and (c) provide greater long term sustainability for the client.

The following is a list of counselling mediums that are considered to be of a non-traditional nature:

- Animal Assisted Therapy;
- Art Therapy;
- Dance Therapy;
- Equine-Facilitated Psychotherapy;
- Hypnotherapy;
- Laughter Therapy;
- Light Therapy;
- Music Therapy;
- Primal Therapy;
- Psychodrama;
- Wilderness Therapy;
- Yoga/Meditation.

These modalities are considered non-traditional for a variety of reasons but as a general rule it is mostly due to their work outside the boundaries of the more traditional counselling approaches. However, although considered non-traditional, most of these mediums do have elements of traditional counselling methods and were grown from the basic principles of many of the earlier known theories. For the purposes of this paper and in support of my hypothesis, this chapter will focus specifically on exploring the following three non-traditional counselling mediums: Dance Therapy; Animal Assisted Therapy; Mindfulness Therapy.

Dance Therapy

Dance is one of the few expressions that still exists today that is universally known and used across the world. Every person who inhabits this world has had the experience of dance whether through physical or visual participation. Although dance can often be unique to a specific culture, religion or geographic area it does not require a specific language or diversity to be understood or appreciated. Though the world of dance is continuously growing and changing the purpose of its use remains the same, as a tool for communication, expression, and healing.

History.

According to the Center for Health and Healing (2003) dance has been used for centuries as a form of communication. Often used to connect with both the living and the dead the art of dance is used as an expression of emotion, storytelling and treatment for illness. It was not until the Second World War however that dance began to be used in the treatment of mental health disease. Psychoanalytical therapists such as Freud and Jung believed that body, mind, and emotion were intertwined and that one had a direct effect on the others.

Illness, injury, emotional and physical trauma can all create an imbalance in the way a person functions and relates to the world around them. Dance therapy can assist in processing negative imbalances by allowing the client to express any challenges through the art of movement. This can help to bring to the surface issues that may not have previously been known to the client or counsellor. By bringing previously buried issues to the surface the client and counsellor can then begin to explore the true origin of the imbalance. Additionally the use of dance as a therapeutic intervention can also aid clients in becoming more connected to their deeper selves and providing them with a tool for becoming more self-aware.

Purpose.

As outlined above for some people it can be challenging to express oneself verbally or to process emotions or traumatic events through verbal communication. It may be that they do not feel comfortable or it may be that they do not know how but either way for those people an alternative method of communicating or processing is required so that any imbalances may be identified and treated. We know that dance therapy can offer this alternative by connecting subconscious expressions or behaviours to specific emotions, thoughts or events.

According to Koch, Fischman (2001) therapies that incorporate dance and or movement provide alternative insight into the way a client may process and relate to different situations or stimuli. Unlike verbal communication, non-verbal communication is often more difficult to hid or disguise and therefore is a more truthful expression of ones thoughts and emotions. Through this experience both the counsellor and client can become more aware of behavioural patterns identifying opportunities for growth and change.

Applicability.

According to Levy (1992) in order to successfully utilize dance as a therapeutic tool one must ensure that the following is considered: dance is a form of communication; the body and mind directly influence one another; movements can act as manifestations of emotion; all movements have meaning. In considering these details we can then utilize dance as an outlet for expression that a client may not otherwise be able to access; and for insight that may not otherwise be seen.

Adler (2002) suggested that through the use of movement one can begin to elicit a free association and provide insight through images, metaphors and verbalizations. All of which can provide a non-verbal comprehension for the sensory-motor experience. Thus our movements are often a symbol of our subconscious mind. If we explore and understand the subconscious meanings behind our nonverbal behaviours we can begin to better understand the self.

According to Lyons-Ruth (1999) therapeutic processing requires revisiting experiences that have negatively impacted us and have created behavioural patterns that interfere with the self. Through the use of dance therapy those impacts can be identified and altered to create new meaning and patterns of behaviour. In utilizing a non-verbal approach the counsellor can aid the client in exploring themselves on a deeper and more intimate level.

As evidence from the above and other various literatures, the non-verbal approach to counselling can provide an even greater in depth understanding of a person's unique experience by providing insight into reactions, emotions and behaviours that might not have otherwise been present. However, although this non-traditional counselling technique provides us with this unique understanding it could be suggested that neither the traditional or non-traditional technique can do alone what they can do together.

As a health care provider, it has been my experience, that by utilizing non-verbal counselling techniques in combination with verbal counselling techniques that we can tap further into the unique characteristics, skills and abilities of the person(s) we are working with. It is through this exploration that health care providers can begin to provide a more authentic and wholesome counselling experience to their clients. By exploring the person as a whole, including their physical, emotional and spiritual selves, we can better understand their unique perspective to the world around them.

Animal Assisted Therapy

Animals have been used for centuries in various forms for various purposes including, travel, food, companionship and healing. Today animals are used for all those same purposes but in addition to traditional healing purposes animals such as dogs, cats and horses in particular are used to aid various health conditions. Some examples of these are: guide dogs who assist the visually impaired; hearing dogs who assist the hearing impaired; mobility dogs who assist the physically impaired; medical alert animals who assist in recognizing chemical changes in the body such as insulin levels or seizure imminence; psychiatric animals who assist people dealing with PTSD and other similar disorders; emotional support animals who assist people dealing with various mental health and psychiatric disorders.

History.

According to Serpell (2000) recorded use of pets as therapeutic agents dates back to 1699 when John Locke advocated "giving children dogs, squirrels, birds, or any such thing as to look after as a means of encouraging them to develop tender feelings and a sense of responsibility for others."

From there the use of animals for therapeutic purpose continued to become popular being used by various health providers and organizations. In 1792, it was recorded that farm animals were present at a Quaker retreat in England for the mental health benefit of residents, and in 1867 farm animals were used again at a Bethel Community in Germany. In the United States, animals were first used therapeutically in the 1940s at an Air Force Convalescent Hospital in New York City. The use of animals at these sites was to promote the patients' well-being by allowing them to observe, take care of, and touch the animals (Baun & McCabe, 2000).

While the use of animals for therapeutic purpose dates back to the 1600's it was not until the late twentieth century that research began to explore the specific correlations between animals and health. Many studies since then have been able to prove a positive link between animal assisted therapies and positive mental health. In particular it has been shown to improve both mood and depressive disorders. Due to these findings many health care professionals have been successfully utilizing animals in treating people with disorders such as autism, behavioral problems, and poor emotional well-being (Nimer & Lundahl, 2007).

Applicability.

One example of how Animal Assisted Therapies work is that of Equine Therapy. As described by CRC Health (2015) Equine Therapy requires that the client participate in tending activities such as grooming, feeding, haltering and leading the horse, all of which are supervised by both a mental health professional as well as a horse professional. Through these activities the health care professional can begin to observe and identify any issues in the way in which a client processes emotion, thought or behaviour. In identifying these issues the counsellor can begin to work with the client and tailor the experience to address specific needs.

Furthermore equine therapy provides the client with an opportunity to further develop skills such as accountability, responsibility, self-confidence, problem-solving skills, and self-control. In addition to the mental and emotional benefits of equine therapy, clients can also benefit from physical healing. As cited by Rovner (2012) "the beauty of the horse is that it can be therapeutic in so many different ways," says Breeanna Bornhorst, executive director of the Northern Virginia Therapeutic Riding Program in Clifton, Va. "Some of our riders might benefit from the connection and the relationship-building with the horse and with their environment. Other riders maybe will benefit physically, from the movements, and build that core strength, and body awareness and muscle memory (para.17)."

Purpose

Non-traditional therapeutic interventions like Equine Therapy can provide not only emotional but physical benefits for clients. As the correlation between mental and physical health is strongly linked, treatments such as this one can provide a more holistic approach for those suffering from various symptoms. For example people suffering with depression often experience physical symptoms of fatigue, loss of appetite or increase appetite, achiness in the body, frequent headaches etc. People suffering from anxiety often experience physical symptoms of nausea, hot or cold flashes, heart palpitations, trembling, sweating etc. In utilizing these types of mediums, i.e. animal assisted therapies such as Equine Therapy, as therapeutic interventions, both physical and emotional symptoms can be addressed and treated.

Mindfulness Therapy

Mindfulness can have a variety of meanings, purposes and executions depending on the person, the belief, the participants, the circumstances etc. The true definition of mindfulness according to Webster, 2015 is “the practice of maintaining a nonjudgmental state of heightened or complete awareness of one's thoughts, emotions, or experiences on a moment-to-moment basis.”

History.

Mindfulness has been most commonly linked to religious practices, yoga or stress management skills and is relatively new to North America. According to Brown, Marquis, & Guiffrida (2013) mindfulness practices have been used to ease psychological suffering for over 2,500 years. Many people believe that the origin of mindfulness comes from the teachings of Buddha however it has also been linked to yogic practices which date back thousands of years prior to Buddha. Although the practice of mindfulness has origins in Eastern spiritual teachings, the exercise of mindfulness is not just limited to that of spiritual or religious tradition. By its own conviction, mindfulness is accessible to any and all who chose to learn and practice it.

According to the Centre for Mindfulness Research and Practice (2015) although the practice of mindfulness originated in the East it has now become more popular as a Western practice. One of the first people to bring the Buddhist practice of mindfulness to Western culture was Thich Nhat Hanh. Once it had arrived many others began to take notice. One such person was Jon Kabat-Zinn who took a scientific lens on Buddhist mindfulness and studied it at the Stress Reduction Clinic at UMass Medical School in order to determine its effectiveness on cognition, emotion, and restlessness. Through his research evidence supporting a positive correlation between meditation and positive emotional regulation began to spread widely and

many psychologists began to take interest. Further research was conducted and the practice of mindfulness soon became one of the main techniques used in helping clients achieve metacognitive awareness: the awareness of the thought process.

Applicability.

According to Brown et al (2013) in order to successfully utilize mindfulness one must be able to: be open and aware of the present moment; and be accepting and non-judgemental of the experience. Again similar to that of Dance and Animal Assisted Therapies, Mindfulness Therapy works to bring the subconscious mind to consciousness by utilizing mindfulness techniques such as meditation, breathing exercises, body scanning, mindfulness stretching, and yoga. The purpose in creating a connection between the subconscious and conscious mind is to provide a more in depth understanding of the self and to reach a greater state of awareness. According to Rybak, (2013) through mindfulness one can begin to have a more comprehensive understanding of their reactions to different stressors in turn allowing them to better develop their responses and have a healthier overall sense of their emotional, intellectual, physical, and spiritual dimensions.

According to Greeson (2009) more recent research has found that the utilization of mindfulness practices can have significant and positive influences on both mental and physical health systems through the reduction of stress overall quality of life and sense of wellbeing improves. According to Jha et al (2010) a research study completed by Nyklicek and Kuijpers (2008) found that when one participates in mindfulness activities it has a direct effect on the level of stress, quality of life and sense of vitality. Participants who partook in mindfulness practice had lower levels of negative affect when facing high stress situations.

Purpose.

According to Rybak (2013) research conducted by Fredrickson et al. 2008 found that emotional functioning affects the way in which we process, respond and understand other aspects of life. Therefore, in order to live a more positive and satisfying life one must increase their emotional functioning. One of the ways in which this can be accomplished is through mindfulness practices. In today's society it seems to be more of a luxury than a necessity to be mindful of ourselves, our actions and our contributions to society. The fast paced life in which we live has created a barrier between our authentic and lived selves. Many people who are suffering from mental health disease and who are struggling daily are lacking awareness and understanding of themselves which in turn fosters their continued pain.

Chapter Summary

The world of health care is continuously growing and improving providing us with new and improved interventions that help to evolve our practices and guide our work. Many of the traditional therapeutic interventions have fostered further improvement and the creation of non-traditional approaches such as; Animal Assisted Therapy, Art Therapy, Dance Therapy, Hypnotherapy, Laughter Therapy, Light Therapy, Music Therapy, Primal Therapy, Psychodrama, Wilderness Therapy, Yoga/Meditation which are becoming more popular as health care continues to transform. Many of these non-traditional approaches have been built from a traditional framework but have been adapted to better align with what we know about health care today. It is this alignment that assists in providing a more holistic and positive treatment modality. For example all three of the non-traditional approaches reviewed above work to connect the subconscious mind to the conscience mind, utilize a physical aspect, and have health benefits that encompass not only the emotional but also the physical being.

Chapter 3: Analyzing the Relationship between Exercise and Mental Health

It is a widely known fact that exercise plays an important role in our overall physical health. But what many people do not realize is that exercise also plays an important role in or overall mental health. As is apparent in the literature reviewed in chapter two there is evidence that non-traditional methods of counselling such as those that, connect the subconscious mind to the conscience mind and utilize a physical aspect, have health benefits that encompass not only the physical but emotional being.

The following chapter will provide further evidence to those claims by reviewing and analyzing literature that links positive mental health outcomes with physical activity. The purpose of this analysis will be to:

- A. Support the use of exercise as a counselling medium;
- B. Provide a basis for the framework for my proposed therapeutic intervention;
- C. Highlight gaps in the current research.

According to Richardson et al (2005) there is strong evidence that supports a direct correlation between exercise and positive mental health outcomes. A review of schizophrenic interventions completed in 1999 found that secondary symptoms such as depression, low self-esteem, auditory hallucinations and social withdrawal could be improved with the use of exercise techniques. Richard also suggests that these same results can be seen by those suffering with other serious mental health diseases. In order to better understand the correlation between physical activity and positive mental health outcomes in this chapter I will explore current literature findings on the: Psychological Effects of Exercise, Exercise Requirements, and Exercise vs. Traditional Treatment Methods.

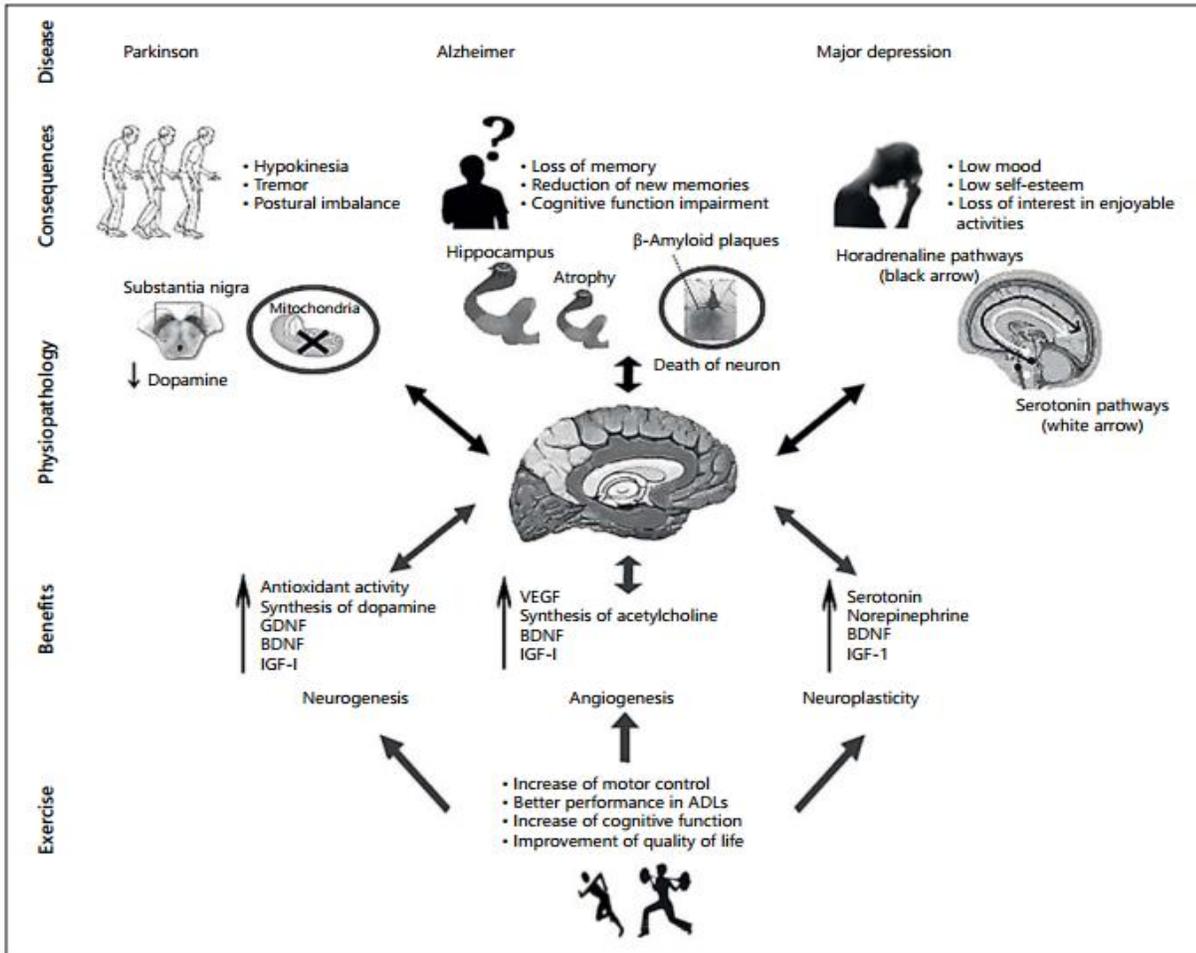
Psychological Effects of Exercise

As mentioned above there is a great deal of research that supports the positive effects of exercise on the physiological self however it is only in recent years that researchers have begun to study the effects of exercise on the psychological self. In order to better examine the relationship between exercise and mental health we must first understand how exercise directly affects ones psychological well-being, whereas psychological well-being refers to one's emotional and mental state. By better understanding the effects exercise has on the psychological self we can better understand how to utilize this medium as a treatment modality for mental health disease.

One study conducted by Matta Mello Portugal et al (2013) examined the effects of aerobic and strength training exercises on Major Depressive Disorder, Dementia/Alzheimer's and Parkinson's disease to determine how physical activity can alter these disorders. The results, see figure one below, determined that

“the reductions in dopamine and mitochondrial function, the generation of β -amyloid plaques and hippocampal atrophy and the decreases in the serotonin and noradrenaline levels (in the hippocampus, hypothalamus, amygdala, cortex and other parts of brain) are the primary alterations that result in PD, AD and MDD, respectively. Exercise training could be beneficial because neurotransmitters and neurotrophic factors are synthesized in response to physical exertion. These factors could delay the progression of neurodegenerative diseases and mental disorders. Moreover, exercise improves physical function and functional autonomy (pg.6).”

Figure One: Effects of exercise on neurodegenerative diseases and mental disorders. Reproduced from Matta Mello Portugal et al (2013, pg.6)



As demonstrated in the above figure, physical activity can have a direct effect on various functioning's and physiological responses of the brain. Through physical activity the Neurogenesis-production of neurons; angiogenesis- production of new blood cells; and neuroplasticity- change in brain functioning, are stimulated. Subsequently these stimuli aid in both preventing and treating various negative side effects that occur in those who may suffer or be suffering from various mental health diseases by blocking, killing or mending damaged physiopathology's.

The results of this study not only support the positive benefits of exercise on those that have already been diagnosed with a mental health disease but also suggest that exercise may be successful in the prevention and maintenance of various mental health diseases and in particular those that affect psychological elements such as mood and neuropathways.

Furthermore, according to Matta Mello Portugal et al (2013) similar studies have been conducted on animals and have shown that exercise stimulates the major CNS neurotransmitters which are associated with state of alertness (norepinephrine), pleasure (dopamine) and anxiety (serotonin). Changes to these neurotransmitters can trigger varying reactions in a person dependent on the level of activity and the subsequent activation of said transmitters. Additionally exercise also affects other neurochemical factors which can result in the release of opioids, endocannabinoids, and anxiolytic which are responsible for feelings of euphoria and decrease in pain receptors.

Results such as these suggest that the effects of exercise on mental health, although positive, range in affect and are likely dependent on a variety of contributing factors. Factors such as the severity of the disease, the type of exercise, duration of physical activity, and the intensity of which the activity is practiced. In order to better understand these factors we must review the literature to determine a baseline for utilization. In better understanding this baseline we can begin to build a framework of which to base our treatment modalities from.

Exercise Requirements

For the purposes of utilizing exercise as a counselling medium several baselines need to be determined. The following section will review literature that provides evidence to determine the duration, intensity and technique of which provides the most positive effect on one's overall health including, physical, mental and emotional.

Duration

Many forums suggest that for optimal physical health, the ideal duration of exercise is 30 minutes completed five to seven days a week. This however may not necessarily be the same duration needed to receive optimal physiological health.

In one study conducted by Szabo, Gaspar and Abraham (2013) researchers designed to determine the minimum number of minutes required to yield positive effect on over mental health, hypothesizing that even 3 minutes of regular exercise would be sufficient. Using two test groups, the first group participated in 3 minutes of an exercise intervention and the second group participated in 3 minutes of silence and rest. After comparing the results from each group, the researchers were able to determine that there was a positive, measurable difference, in the exercise group's subjective well-being whereas there was no measurable difference, in the rest group's subjective well-being.

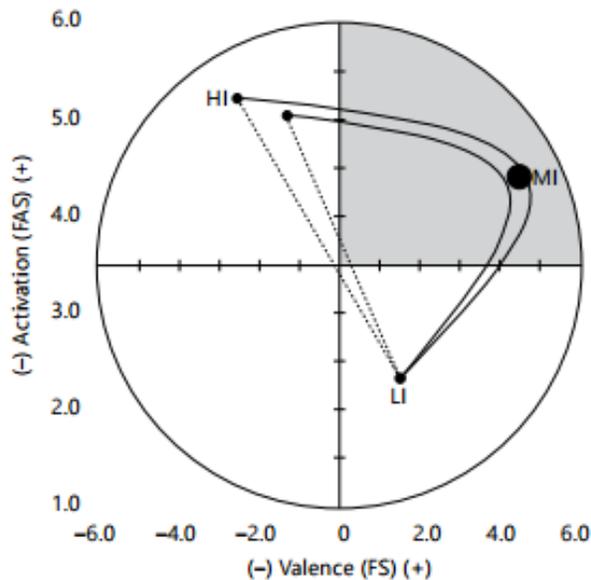
These results suggest that if even a single bout of minimal physical activity, such as three minutes, can yield a positive effect on someone's subjective wellbeing than regularly practiced exercise at even ten, fifteen or twenty minutes could greatly improve overall health.

Intensity

Another factor to consider, in understanding the effects of exercise on mental health outcomes, is that of the intensity of the activity. Similarly to that of physical results, physiological results will vary depending on the type and intensity of the exercise.

According to Matta Mello Portugal et al (2013) in comparing various levels of exercise intensities, optimization occurs at a moderate level. As demonstrated in figure two below, “two theories (inverted-U and inverted-J) suggest the same optimal point (MI). The lines represent the inverted-U and inverted-J forms, which are modulated by the light intensity (LI), moderate intensity (MI), and high intensity (HI) of the exercise. The gray area represents the positive affect activation that could promote well-being and adherence to an exercise program (pg.7).”

Figure Two: Kinetics of the affective response to exercise in the circumflex model (inverted-U and inverted-J) Matta Mello Portugal et al (2013, pg.7)



This information suggests that although there is some positive affect in participating in low and high intensity exercises. The low intensity exercise does not yield enough positive effect and high intensity exercise surpasses optimization therefore also resulting in a less positive effect.

According to Robbins, (2013) The Center for Disease Control and Prevention outlines the method for determining the intensity of your workout as the talk test. For light exercise you should be able to participate in the activity while singing a song. For moderate exercise you should still be able to talk while participating in the activity but would no longer be able to sing.

Although various physical activities would fall within these descriptions not every activity will produce the same physiological or psychological results. A study conducted by Asztalos, et al, (2009) sampled 1919 adults aged 20-65 to determine their perceived stress and psychological dis-tress responses to five different Physical Activities. These activities included: housework, leisure transportation, biking to/from work, walking to/from work, and sports participation. The participants were separated by gender, age, and occupational category to account for multiple logistic regressions. The researchers hypothesized that each physical activity would illicit different responses from each participant however the results revealed that the only physical activity that had an effect on level of stress throughout all groups was sports participation.

Exercise VS. Traditional Treatment Methods

In order to further analyze the relationship between exercise and mental health we also need to look at a comparison of exercise as a treatment method versus traditional treatment methods of mental health diseases. In providing this comparison we can equate results from exercise based studies to those of traditional treatment studies to determine answers such as: What are the succession rates? How are different treatments administered? What are the effects of these treatments on one's physical, mental and spiritual being? Which treatments are least invasive? What are the side effects of treatment? Which treatments provided long term sustainability?

Traditional treatment methods for patients suffering with mental health disorders are a combination of psychotherapy and prescription medications. These combinations range in variation depending on various factors unique to the individual patient. Some of these unique factors would include the nature of the disease, the severity of symptoms, the effect on daily functioning, medical history and other prescription drugs use and even the influence of the views of the physicians and therapists treating the patient.

Although the combination of these treatment methods should be unique to the specific client, their symptoms and their disease, the National Institute of Mental Health the National Survey on Drug Use and Health (2008) reports that over half of adults in the United States, 58.7%, suffer from a mental health disorder. Out of those people 52.6% of them are treated with prescription medication. This is a higher percentage than even the two other treatment methods combined, 7.5% treated with inpatient services and 40.5% treated with outpatient services.

Despite the many benefits of utilizing prescription drugs in treating mental health and other health disorders there are also many negative side effects. These side effects can often cause further health issues in addition to the primary or original condition. The use of prescription drugs also increases the risk of addiction in patients.

According to the National Institute of Drug Abuse (2015) many people believe that prescription and OTC drugs are safer than illicit drugs but in fact they can be just as addictive and dangerous. Prescription drugs have just as many adverse health effects, including risk of overdose, especially when taken in combination with other drugs and alcohol. This range of side effects can run from mild to severe and can cause interference in basic daily functioning.

Many prescription drugs prescribed to clients suffering from mental health disease have these same unpleasant side effects; because of that these patients tend to abuse drugs to alleviate those effects. One example of this, as given by Patterson (2012) is if a schizophrenic patient took medication for hallucinations but that medication caused them to have depressive symptoms so in order to treat the depressive symptoms the patient begins to smoke marijuana the marijuana gives them hallucinations and so they continue to take the medication which then causes depression and so the cycle continues.

It is this exact cycle of cause and effect that highlights the gaps in which we currently utilize treatment methods for both physical and psychological diseases. According to Walsh, (2007) today's health care system is lacking in its mental health treatment approaches missing a large contributing factor to overall wellbeing-lifestyle. Specifically Walsh believes that "mental health professionals have underestimated the importance of unhealthy lifestyle factors in contributing to multiple psychopathologies, as well as the importance of healthy lifestyles for treating multiple psychopathologies, for fostering psychological and social well-being, and for preserving and optimizing cognitive capacities and neural function."

Walsh also highlights Borgonovi's (2009) idea that Therapeutic Lifestyle Changes (TLC's) have almost no negative side effects or complications and that unlike traditional treatment methods such as psychotherapy and pharmacotherapy, they are free of stigma and can even confer social benefits and social esteem. Furthermore, Hamer and Chida, (2009), Pagnoni and Cekic (2007) and Raji et al., (2010) (as cited by Walsh, 2007) suggested that "some TLC's such as, exercise, diet, and meditation—may also be neuroprotective and reduce the risk of subsequent age-related cognitive losses and corresponding neural shrinkage."

Similarly Matta Mello Portugal et al (2013) suggests that with recent increases in mental health disease there is a need to increase research that focuses on appropriate treatment methods to improve overall health for those suffering. The current dependence on prescription medication as a primary treatment method and the subsequent side effects is contributing to failures in patient compliance. Therefore highlighting the need to reduce costs of medication and hospitalization and enhance quality of life for those suffering from mental health diseases.

Chapter Summary

Although research in this area is still relatively new, there is strong evidence to support the correlation and subsequent use of exercise in the prevention and treatment of mental health diseases. Findings suggest that a minimum of three minutes of moderate exercise on a regular basis can have a positive effect on overall physical and psychological health and wellbeing.

Additionally it is evident that current treatment methods are not meeting the needs of those suffering with these types of disease as the reliance on pharmacological treatments is high and the negative side effects even higher. As suggested in other sections of this paper there is a need to incorporate more non-traditional treatment methods, such as physical activity, which provide a more natural and holistic approach to treating those suffering from mental health and other diseases.

Although the results reviewed in this chapter are promising further research is required to determine more specific information about the use of exercise as a treatment method and therapeutic intervention.

Chapter 4: Appraising Exercise Techniques to Utilize as Counselling Mediums

Exercise and physical activity span a wide range of actions, behaviours and movements but not every exercise will be appropriate for use as a counselling medium. Many factors will need to be taken in to consideration in deciding which activities would provide optimal benefit. The purpose of this chapter will be to provide an outline of specifications for activities utilized as well as provide evidentiary support for their use as a counselling medium.

To further substantiate my hypothesis that utilizing exercise as a counselling medium in conjunction with other counselling techniques is effective in helping to: (a) increase the effectiveness of treatment, (b) decrease the duration of sessions required and (c) provide greater long term sustainability for the client, this chapter will appraise only those exercise techniques that have the potential to be utilized in a counselling framework.

That framework can be met by outlining the specifications needed to meet the criterion which is as follows:

- a) can be completed during a counselling session (i.e. participants are able to complete the exercises while maintaining the ability to talk);
- b) can be completed by clients of various ability (i.e. clients with disabilities, clients with health related issues etc.);
- c) can be completed by the client on their own (i.e. the client can practice these exercises by themselves and on their own time as a sustainable coping mechanism);
- d) has little to no cost (i.e. can be done at home, for free, or is available, accessible and affordable to all clients);
- e) has little to no safety concerns (i.e. can be performed by clients with little to no risk of injury, without the need for supervision and by anyone who may possess physical challenges).

These specifications have been created with various factors in mind but in particular that they meet the following two requirements:

That they are a light to moderate level of intensity which is outlined in chapter three as being the optimal level for positive results. Light exercise according to Robbins (2013) is defined by the Centre for Disease Control and Prevention as exercising at a level that is less than 50% of your maximum heart rate which can be calculated by subtracting your age from 220. Moderate exercise according to Travers (2015) is considered to be any activity that gets your heart rate over 50 and up to 60 percent higher than its rate when you are at rest.

That the counsellor can participate in the activity so the counsellor can remain in a collaborative position with the client. According to Bertolino, O'Hanlon (2002) the relationship between the counsellor and the client, also referred to as the therapeutic relationship, is the second largest contributing factor to outcome. Research findings have shown that the way in which a client perceives the relationship with their counsellor has a direct effect on their perception of improvement. Therefore we can surmise that if the counsellor is perceived by the client as being on the "outside" of the experience there is a potential for negative impacts to both the therapeutic relationship as well as the effectiveness of the exercise.

Taking into consideration those specifications and factors the following three exercise techniques meet the criteria for use as a counselling medium: Aerobics; Walking; and Yoga. In order to best appraise these techniques as well as provide a rationalization for their use as a counselling medium the following sections of this chapter will provide an overview of their history and an outline for their applicability as a therapeutic medium.

Aerobics

Aerobics is not just any one type of exercise but instead is actually incorporated through a variety of exercise techniques. According to Collins (2015) Aerobics can be defined as any exercise at a low intensity for a long period of time. For example any rhythmic exercise lasting 15 minutes or longer is considered to be Aerobics. However in addition to participating in a rhythmic exercise a person must also maintain 60 to 80 percent of their maximum heart rate to meet an “Aerobics” status.

History.

Aerobic exercise was first brought to main stream public in the 1960’s. From there it has grown and evolved into what we know it as today. According to Collins (2015) it was Dr. Kenneth Cooper who first developed Aerobics in the 1960’s as an attempt to help prevent coronary artery diseases for those in the military. After Dr. Cooper published a book simply titled “Aerobics” dancer Jackie Sorenson took his theory and further developed the practice through dance routines which she created in hopes of improving cardio fitness. This was the second known type of Aerobics and was coined “Dance Aerobics”.

Between 1978 and 1987 Aerobics began to grow in popularity throughout the US and the estimated number of people engaging in aerobic exercise grew from 6 to 19 million. During that same timeframe, in 1983, sports marketers Howard and Karen Schwartz created a third form of Aerobics labelled “Sport Aerobics”. This form of Aerobics was created as part of a competitive sports program as a way for students and instructors to compare their abilities against peers (The Association of National Aerobic Championships, 2016). In 1984 the Sport Fitness International Organization took this new Aerobics framework and created the first national Aerobic Championship. Since then “Sport Aerobics” has been renamed as “Gymnastics”.

Shortly after the introduction of “Sport Aerobics” in 1989 a third type of Aerobics was created by gymnast Gin Miller who had injured her knee and needed a low-impact exercise for rehabilitation. By using a combination of step movements timed to music “Step Aerobics” was born. Since then we have seen Aerobics incorporated into all forms of exercise from swimming to dance. What first began as a form of medical treatment grew to be one of the biggest exercise crazes of all times.

Applicability.

As aerobics is multifaceted and extends over various forms of exercise technique, not all aerobic exercises will be appropriate for the purposes of a counselling medium. For example Gymnastics would not be an appropriate medium as it does not follow the specifications as outlined in the beginning of this chapter i.e. b) can be completed by clients of various ability. This type of aerobics would take specific ability and effort to participate in and would not be modifiable dependant on the participant. However both dance and water aerobics do have the potential to be utilized as counselling mediums due to the flexibility in their application. That being said there are several key factors that need to be considered when utilizing these methods.

Dance Aerobics.

Dance Aerobics although applicable for most people may not work for everyone. Traditional dance aerobics utilizes most if not all of the large muscle groups including the legs, arms, and core. Those that have a disability or health related issues may have a harder time participating in this activity however modifications can be made for those that have certain limitations by varying the routine to utilize applicable engagements for that particular person. As an example someone who may not have the use of their legs could still utilize dance movements through their mid-section and arms.

In addition to its flexibility in movement there is also flexibility in its application. Unlike some other exercises there is very little equipment required and therefore it can be completed almost anywhere from the home, to the office, to the great outdoors. Although some modifications may need to be made for those that have disabilities or health issues, the overall flexibility makes it an ideal exercise technique as a counselling medium for a majority of clients.

Water Aerobics.

Water aerobics incorporates many of the same movements that Dance Aerobics utilizes but is considered to be of lower impact to the body. According to Cespedes (2013) the American Council on Exercise concludes that exercising in water makes you feel lighter than you are. When exercising in water the body does not experience the same impacts as it does when exercising on firm ground. Therefore this type of exercise is ideal for those who are suffering from injuries or joint issues such as arthritis.

This exercise medium however does have some limitations. For example to engage in this technique it would require the use of a pool or body of water and could only be successfully implemented in that one setting. Additionally it would have to be assumed that both the counsellor and client have some level of comfort with water. Outside of those limitations however this exercise is an ideal technique for a counselling medium in particular for those with various disabilities or health issues.

In utilizing this medium the facilitator would need to consider and complete the following: premeditation and preparation for sessions such as securing locations, equipment etc. and providing education around health benefits and risks as well as processes and utilization. Given these steps are completed this technique could prove to be successful in providing a counselling medium that directly addresses both the mental and physical wellbeing as well as construct a healthy and sustainable coping mechanism, outside of counselling, for the client.

Walking

It is difficult to narrow down the specific history of “walking” as it has been an innate ability that all human kind has exhibited for centuries. However there is some history to the history of walking. According to (Bumgardner, 2016) some of that history can be marked as follows “4 million years BC or thereabouts (subject to scientific and philosophical debate): Australopithecus afarensis begins the fad of two-legged walking, the defining trait of family Hominidae. Two-legged walking frees up the hands to use for making tools, tying shoes, etc.; 8,000 - 10,000 years BB (before Birkenstocks): North American natives make and wear sandals. Sling backs and slip-ons are the most popular styles; 100 AD: Emperor Hadrian tours his whole empire on foot, marching 21 miles a day in full armor. The Romans define a mile, with 1000 military paces (a pace is two steps) equal to a mile (para.2, 3, 4).”

History.

Although the above information provides us with some milestones in the history of walking, for the purposes of this paper we will be focused on the history and use of walking as an exercise form. Much like the history of walking itself, the history of walking for exercise has revolutionized over time. Although walking was the main form of transportation for thousands of years according to Kiczek (2010) walking was not introduced as an exercise form until the 1960’s when President John F. Kennedy who supported a platform of physical activity and health for Americans’ and their youth began to implement physical activity programs in schools and communities, issuing various challenges to the population at large to improve their health and well-being. In particular it was his challenge to the military to complete the previous 1908 executive order from Theodore Roosevelt “that all Marines should be able to cover 50 miles in three days as proof of their fitness” that truly began the walking fad. Many of the general public

joined in on the challenge to test their own physical fitness. From there the use of walking for physical fitness continued to grow in popularity and evolved further to incorporate several different formats. According to Dr. Chhabra (2014) there are four main types of walking exercises: Lifestyle, Fitness, Power, and Ski.

Lifestyle Walking.

Lifestyle walking is defined as a basic leisurely pace. This is the pace in which you would do most of your moving much like that of walking from one place to another within your home or work or even a stroll outside. During this type of walk your heart rate would remain low and would be able to hold a conversation.

Fitness Walking.

Fitness walking is defined as a brisk pace. This is the pace which you may utilize if you are in a rush moving quickly from one place to another, not quite at a jog but more than a leisurely walk. During this type of walk your heart rate would begin to accelerate however you would still be able to maintain a conversation.

Power Walking.

Power walking is defined as a step up from fitness walking. This is the pace you would utilize in engaging in physical activity. You are moving quicker and taking shorter steps and you may even combine it with strength training techniques. During this type of walk your heart rate would be higher and you may have difficulties having a conversation.

Ski Walking.

Ski walking is defined as taking long strides while utilizing ski poles. This is similar to power walking just executed differently.

Applicability.

Walking is something that the majority of the population already does on a daily basis and is something that could easily be implemented as a counselling medium with little to no prerequisites required for either the counsellor or the client. Although the level of walking ability may vary depending on the client this technique is something that could easily be applied in a counselling setting.

Even for those who are unable or struggle to walk the act of doing so can be incorporated through the various types of walking as outlined above and with the aid of various walking tools. Some of the walking tools available are wheelchairs, walkers, crutches, walking sticks etc. The type of walking utilized as a counselling medium can be modified depending on the client's physical or even emotional needs. Additionally much like aerobic dancing, walking can be completed in almost any setting from indoors to outdoors. Its complete flexibility from type to pace to location to available aids makes it the ideal exercise medium for counselling.

Yoga

Unlike walking Yoga has a more precise and specific history however similarly to Aerobics, Yoga has a large variety of methods and practices which were born from the original provision. According to Dr. Saraswati (2011) "Yoga means 'union' or 'connection'. In Sanskrit, the word 'yoga' is used to signify any form of connection. Yoga is both a state of connection and a body of techniques that allow us to connect to anything. Conscious connection to something allows us to feel and experience that thing, person, or experience. The experience of connection is a state of yoga, a joyful and blissful, fulfilling experience (para.1, 2)."

History.

The history and practice of yoga is unlike any other exercise modality today. This technique is a practice of connectedness that spans the physical, emotional and spiritual being. According to Burgin (2015) there is debate about how far back the history of yoga can be tracked some believing it dates back 5,000 years and others believing it could be up to 10,000 years old. Despite the timeframe of its birth yoga can be separated into four main periods: Pre-classical, Classical, Post-Classical, and Modern.

Pre-Classical Yoga.

Pre-classical yoga was created by the Indus-Sarasvati civilization in Northern India over 5,000 years ago. It was formed from the belief that internalizing ritual sacrifice of the ego would result in a deeper self-knowledge, action (karma yoga) and wisdom (jnana yoga).

Classical Yoga.

Classical yoga was created by taking all of the various beliefs and techniques formed through the pre-classical era and combining them into one practice. This practice consisted of an eight limbed path containing steps and stages that would result in an overall enlightenment.

Post-Classical Yoga.

Post-classical yoga was then created by taking the basic practices of the earlier eras and focusing on the body as a means for enlightenment and rejuvenation. From this the infamous Tantra Yoga was born. This type of yoga was based on the exploration of the physical-spiritual connections and the body

Modern Yoga.

Modern yoga was then created as the popularity began to grow in western cultures. Utilizing a combination of different era's, teachings, and techniques today's yoga is an amalgamation of all that has come before with all that is western culture.

Applicability.

Similarly to aerobics yoga is multifaceted and not all forms of it would be appropriate for use as a counselling medium. That being said some forms of yoga that are already being used for therapeutic practice include mindfulness, deep breathing and other relaxation techniques. For the purposes of this literature review and for the purposes of its use as a counselling medium the applicability will refer to its form as an exercise technique and therefore encompasses the “whole” as a practice.

Taking that into consideration there would be several key factors to consider when utilizing yoga as a counselling medium. For starters, much like aerobics yoga practice often involves the use of all major muscles including the arms, legs and core however this too can be modified dependant on the abilities of the participant. Poses can be altered or change altogether so that only those accessible to the participant would be utilized. Additionally yoga practice can be done at various levels of effort, in various locations and with little to no equipment requirements making it a flexible and applicable counselling medium.

It would however also require a certain level of premeditation and preparation. Similarly to the requirements of utilizing aerobics, utilizing yoga would require a certain level of preparation. As outlined in the aerobics section in utilizing this medium the facilitator would need to consider and complete the following: premeditation and preparation for sessions such as securing locations, equipment etc. and providing education around health benefits and risks as well as processes and utilization. Given the nature of yoga and the successful utilization of several of its forms already as counselling techniques, if these steps are completed, yoga could prove to be as successful an exercise medium as walking or aerobics.

Chapter Summary

Although not an extensive list the three modalities outlined in this chapter: Aerobics, Walking, and Yoga would be the most effective exercises for utilization as a counselling medium. Not only do they meet the specifications as outlined in this chapter but research shows that by partaking in any one of these three exercise mediums there is a positive effect on one's mental health. A study conducted by Wei, Kilpatrick, Naquin, & Cole (2006) compared the psychological effects of walking, water aerobics and yoga on college students enrolled in stress management classes. In particular they looked specifically at the effects these exercise modalities had on anxiety, exertion, pain, arousal, and mood. The findings indicated that "anxiety was reduced for all modalities, with greatest reduction for water aerobics. Exertion was similar for all modalities suggesting all trials were of similar intensity. Pain was greatest for yoga when compared to the other modalities. Arousal was lowest after yoga and mood was more positive after walking and water aerobics. And that overall all modalities provide psychological benefit (para.1)."

The results from this research study and the studies cited previously in this literature review, provides us with evidence that supports the use of exercise as a prevention, treatment and maintenance tool for mental health and other health related diseases. And yet as of today these potential treatment methods are vastly underutilized in the health care field. It is not enough for health care providers to tell a client that they should exercise. We need to do more to educate, demonstrate and utilize these tools in our treatments. These modalities are not only cheaper and more accessible as treatment methods for our clients but they are also less harmful and provide longer term sustainability and better overall health outcomes.

Ch 5: Proposing a Therapeutic Intervention and Suggested Future Study

According to Statistics Canada (2012) 2.8 million people or 10.1% of the Canadian population 15 and older reported that in the previous year they had suffered from symptoms of at least one of the following six mental health disorders: major depressive disorder, bipolar disorder, generalized anxiety disorder, abuse or dependence of alcohol and/or drugs.

Additionally, 4.9 million people or 17% of the Canadian population 15 and older also reported having a need for mental health care. Out of that populace only 67% of people felt they had their needs met while 21% of people only felt their needs had been partially met and 12% felt their needs were not met at all, although they had received some treatment.

These statistics highlight not only the need for greater and more accessible mental health care treatments but for greater more inclusive treatment modalities. Modalities which have the ability to treat the person as a whole from their physical, to their emotional, to their spiritual health. It is this perceived need that is the motivation for this literature review.

Throughout the last four chapters the literature reviewed has provided evidence to support my hypothesis that utilizing exercise as a counselling medium in conjunction with other counselling techniques has the potential to help to: (a) increase the effectiveness of treatment; (b) decrease the duration of sessions required and; (c) provide greater long term sustainability for the client.

Based on this evidence the following chapter will outline a proposed therapeutic intervention in which physical activity and movement will be utilizing with traditional interventions to provide a more holistic approach to counselling, as well as, outline a proposed future study which would measure the effectiveness of this type of intervention in the treatment of mental health disorders.

Holistic Movement Therapy

Definition.

Holistic Movement Therapy, as created and defined by me, will be a unique combination of both traditional and non-traditional counselling mediums. The goal of this intervention will be to provide a more wholesome approach to the prevention, treatment and maintenance of mental health and other health related disorders by utilizing a physical, emotional and spiritual element. Meriam Webster Dictionary (2016) defines “holistic” as “relating to or concerned with complete systems rather than with individual parts” and “movement” as “the act or process of moving people or things from one place or position to another.”

When in combination with one another, and for the specific purposes of this treatment modality, Holistic Movement will be defined as: The act and process of relating ones complete system within the movements from one place or position to another encompassing the whole rather than the individual parts. Furthermore Holistic Movement Therapy will be defined as: A mental health treatment modality that utilizes elements of physical movement as well as emotional and subconscious exploration in combination with traditional counselling techniques and practices.

Framework.

Holistic Movement Therapy will be constructed of several vital components, combining both traditional and non-traditional counselling mediums into one all-encompassing modality that addresses ones physical, emotional and spiritual wellbeing. The following structure will provide the framework for counsellors to utilize this medium.

Overview.

Holistic Movement Therapy is specifically designed to be utilized as a counselling medium for clients struggling with mood disorders such as anxiety, depression, etc. as well as addictions such as alcohol, drugs, food etc. Although this modality is designed for those specific mental health disorders its use could certainly be extended to further applications. As mentioned above Holistic Movement Therapy will utilize a combination of traditional and nontraditional modalities in order to treat the client in their entirety. The traditional components will consist of: Narrative; CBT; Solution Focused; and Mindfulness. Existential Therapy will be incorporated when and where appropriate. The non-traditional components will consist of: Walking- around a track, through a forest, inside, outside etc.; Aerobic Exercise- at a gym, open office space or home; or Yoga- at a gym, open office space or home. All non-traditional components will be executed in a quiet, private and safe location.

Structure.

Ideally Holistic Movement Therapy would take place over a period of three months or 6-12 sessions at 1.5 hours each session. The reason for the extended session length is to accommodate the pre and post exercise requirements and setup without losing any therapeutic time. The initial and last sessions would be conducted in a traditional format i.e. would not consist of any exercise routines. The reason for this is to allow appropriate time and space for the counsellor and client to complete housekeeping, education and debriefing requirements. The following is a brief outline for the application of this modality (assuming 8 sessions):

1. *Session One*: Basic Introductions to each other and to the process. Applicable paperwork completed. Education provided on exercise specifications.
2. *Session Two*: Exercise medium executed. Use of narrative techniques to begin the process. Mindfulness to end.

3. *Session Three:* Exercise medium executed. Use of narrative techniques to continue to process. Mindfulness to end.
4. *Session Four:* Exercise medium executed. Use of narrative and CBT techniques. Mindfulness to end.
5. *Session Five:* Exercise medium executed. Use of narrative and CBT techniques. Mindfulness to end.
6. *Session Six:* Exercise medium executed. Use of CBT and Solution focused techniques. Mindfulness to end.
7. *Session Seven:* Exercise medium executed. Use of CBT and Solution focused techniques. Mindfulness to end.
8. *Session Eight:* Debrief of the process. Future plans for success. Applicable paperwork completed. Applicable resources offered. Follow up booked.

Assumptions.

Holistic Movement Therapy will function based on the following assumptions:

1. The participants, including both the counsellor and client, have the physical ability to participate in the chosen movement activity or exercise;
2. The participants, including both the counsellor and client, have a knowledge of the safety requirements and risks for the chosen movement activity or exercise;
3. The client understands the purpose of the treatment modality and is in full agreeance of its use;
4. All exercise locations will be reviewed, arranged, and secured prior to the beginning of sessions;

Future Research

In the following sections I will provide an in depth proposal and framework for a research study which will analyze and compare the specific results of both exercise and traditional counselling modalities in the treatment of anxious and depressive disorders. In order to provide a thorough and extensive framework for this proposal the following sections will be reviewed: Research Design and Methodology including the specifications, participants, recruitment, materials and ethical considerations; Research Data including the collection, analysis of said data; Research Limitations.

Research Design and Methodology.

Method.

In order to obtain the most accurate results several elements and considerations will need to exist within the confines of this study. These elements include but are not limited to:

1. The research will be experimental in nature. Therefore there will be a random assignment of participations to an experimental as well as a control group. The experimental group will receive exercise as part of their counselling. The control group will not. Neither group will be aware of the aims of the study;
2. One counsellor will conduct all sessions to ensure consistency in the execution of each modality and within each therapeutic relationship;
3. Participants will exist only as individuals (No couple, family or group sessions);
4. Each session will last exactly one hour;
5. A total of ten consecutive sessions per participant will be conducted;
6. Mood and satisfaction questionnaires will be completed at the beginning and end of every session as well as at the beginning and end of the study;
7. One interviewer, not the counsellor, will conduct both the entry and exit interviews;
8. No monetary exchanges will take place.

Participants.

Participants will only be considered eligible for this study if they meet the following criteria:

1. Are between the ages of 18-60;
2. Live within a 25 mile radius of the testing sites;
3. Have a vehicle or access to transportation;
4. Does not have a personal relationship with any of the researchers;
5. Participant is currently suffering from either anxious or depressive symptoms with no other major concurrent disorders;
6. Participants mental health concerns are in and around a moderate level and do not have any suicidal ideations/thoughts;
7. Participants are not currently or will not be for the duration of the study be taking any prescription medications to treat their anxious or depressive symptoms;
8. Participants are not currently or will not be for the duration of the study engaged in any regular exercise program or training;
9. Participants are not currently or will not be for the duration of the study seeing any other mental health care professionals.

This study should aim to utilize a minimum of 60 participants with a maximum of 100.

The participants should be evenly distributed through the following levels and groupings: 30-50 participants would be separated out for the Level One- male and female grouping which will further be separated into 15-25 participants for each of the exercise (E) and traditional (T) treatment groups. From there the participants will be grouped into anxious (A) or depressive (D) categories and lastly for the exercise treatment group only they will be separated into walking (W), aerobics (AE) or yoga (Y) groupings. See the following chart for visual representation.

Level One	Males				Females					
Level Two	E		T		E		T			
Level Three	A	D	A	D	A	D	A	D		
Level Four	W	AE	Y	NA		W	AE	Y	NA	

Recruitment.

Given the number of participants, the specifications and targeted audience required for this study, several locations and tactics will be utilized in order to acquire the desired quantity.

The following is an outline for recruitment efforts:

Approaches.

- Fliers sent all households in the surrounding areas;
- Set up a booth at relevant trade's shows;
- Advertising in local newspapers and radio stations;
- Advertising on social media platforms;
- Referrals from Doctors and other health care providers.

Locations.

- Medical Centre's (Doctors, Dentists, Chiropractors, Massage Therapists etc.);
- Shopping Centre's;
- Grocery Stores;
- Gas Stations;
- Educational Facilities.

Materials.

This research study will require the use of some but not many required and related materials. As the study being conducted would be majority service based the material requirements are minimal. Material as the word is being used here will be defined as any major or relevant tangible items that are required to complete the study as accurately and effectively as possible. The following table provides an extensive list of those requirements and to which group they are applicable, either the Exercise (E) or Traditional (T) treatment group.

Materials	Group "E"	Group "T"
Consent, Non-disclosure, Data Sharing Forms	X	X
Health Status Form	X	X
Confidentiality Agreement	X	X
Client Case Notes	X	X
Mood Questionnaires	X	X
Satisfaction Questionnaires	X	X
Counselling Office Space		X
Exercise Locations (open office, pool, outdoor space or area)	X	
Exercise Instructions	X	
Exercise Equipment (yoga mats, weights, swimming gear etc.)	X	

Research Data.

As this research study has a human element it is important to create a separation from fact and opinion, bias, judgment etc. Therefore each stage of the study will be conducted as follows:

1. *Researcher One*: Recruiter;
2. *Researcher Two*: Counsellor;
3. *Researcher Three*: Interviewer/Collector;
4. *Researcher One*: Analyst.

Data Collection.

As the experimental portion of this study would be conducted as qualitative the main method of data collection would be both individual interviews and observation. Both Researcher Two and Three will participate in the data collection stages. These stages will be outlined as follows:

1. Entry interview-to be conducted before any sessions have begun to determine the overall mood and health baseline of the participant;
2. Pre and post questionnaires- to be conducted before and after every session to create comparable data;
3. Session notes-to be completed during each session to provide details on observable only behaviors, actions, emotions;
4. Exit interview-to be conducted after all sessions have been completed to determine new overall mood and health baseline of the participant.

Data Analysis.

The data analysis, as outlined above, will be conducted by the primary researcher. Much of this data analysis will consist of comparative examination. Several data comparisons will need to take place in order to determine the overall results and effectiveness of exercise as a counselling medium comparative to that of a traditional counselling methodology. In order to determine that effectiveness the following comparisons will be completed:

- Entry Interview vs. Exit Interview (all participants)
- Entry Interview vs. Exit Interview (exercise vs traditional)
- Pre vs. Post Questionnaires (all participants)
- Pre vs. Post Questionnaires (exercise vs traditional)
- Session Note Progress (all participants)
- Session Note Progress (exercise vs traditional)

Ethical Considerations.

When conducting any research, but in particular that which involves utilizing human subjects, it is important to both outline and understand any ethical considerations. First and foremost it will be important to understand and integrate the code of ethics as it is outlined by the governing body which in the case would be the Canadian Counselling and Psychotherapy Association (https://www.ccpa-accp.ca/wp-content/uploads/2014/10/CodeofEthics_en.pdf).

In addition to those considerations there is also a variety of research specific ethics to consider. According to the Purdue Online Writing Lab, 2016 the following is a comprehensive list of those considerations:

1. You should have the permission of the people who you will be studying to conduct research involving them;
2. You don't want to do anything that would cause physical or emotional harm to your subjects. This could be something as simple as being careful how you word sensitive or difficult questions during your interviews;

3. Objectivity vs. subjectivity in your research is another important consideration. Be sure your own personal biases and opinions do not get in the way of your research and that you give both sides fair consideration;
4. Many types of research, such as surveys or observations, should be conducted under the assumption that you will keep your findings anonymous. Many interviews, however, are not done under the condition of anonymity. You should let your subjects know whether your research results will be anonymous or not;
5. When you are doing research, be sure you are not taking advantage of easy-to-access groups of people (such as children at a daycare) simply because they are easy to access. You should choose your subjects based on what would most benefit your research;
6. When reporting your results be sure that you accurately represent what you observed or what you were told. Do not take interview responses out of context and do not discuss small parts of observations without putting them into the appropriate context.

Research Limitations.

As in all research studies there are limitations in the process that create some considerations to the accuracy of the findings. In this study specifically the following is a list of some but not all potential limitations:

1. Sample size;
2. Complexity of the participant pool;
3. Number of counselling techniques utilized;
4. Extratherapeutic factors;
5. Therapeutic relationship;
6. Researcher bias';
7. Participant bias';
8. Comparative level of physical ability in the exercise treatment group;
9. Skill level of researchers;
10. Weather, time of day and or month when each session is conducted compared to those of other participants

Chapter Summary

Although current research highlights a positive link between mental health and physical activity there is still much to be learned about how we can better utilize this information in the health care field. More information is needed around specific correlations, usages and results i.e. which specific activity provides the greatest positive effect on which specific mental health diseases; what are the required specifications for utilizing said exercises and how can they be best applied; etc.

Additionally, research studies such as that outlined in this chapter, are also needed in order to further examine the utilization of physical activity or also referred to as a lifestyle change, in the direct treatment of mental health diseases. Though this type of study would be complex, the subsequent results would provide a great deal of insight and guidance into the use of exercise as a counselling medium. The findings would provide substantive and comparable results to that of traditional vs. non-traditional therapeutic interventions. This information could then be utilized to inform further new and progressive treatment practices for mental health care providers.

Conclusion

Mental Health Diseases are some of the fastest growing diseases of the 21st century and yet many people suffering from these diseases will go untreated. According to Kirkey (2012) with the National Post 20% of Canadians will experience a mental health disease in their lifetime and yet only 33% of adults and 25% of children in Canada will receive mental health services. Public health spending in Canada is among the lowest in developed nations with only seven cents of every public health dollar going towards mental health care.

These diseases do not discriminate against age, gender, race, religion, ethnicity, etc. and is therefore something that all people from all walks of life are susceptible to. Whether it is directly or indirectly every individual will be affected by mental health disease at some point in their life. There is a need to provide better, more accessible and reliable treatment methods to those suffering from these diseases.

As highlighted throughout this paper one way in which the mental health field can begin to provide more accessible and reliable treatment methods is through the use of physical activity. Research suggests that there is a strong correlation between mental health outcomes and physical activity. In incorporating more non-traditional methods such as physical activity and lifestyle changes into the current health care system, clients and patients can begin to receive treatment that focuses on the whole instead of the parts. This type of treatment methodology will help to provide a more holistic approach that will increase the effectiveness, decrease dependency and provide greater long term sustainability.

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