

Health Benefits of Taekwon-Do



FRAN MARSHALL (MNZAC)

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Introduction

The purpose of this study is to investigate the beneficial effects of regular Taekwon-Do training on reducing stress and anxiety levels in adults.

To date apart from Tai Chi, there have been no systemic reviews completed on how martial arts and Taekwon-Do in particular can be applied to health and fitness gains in clinical populations.

Studies on the health benefits of Tai Chi concluded,

“There is abundant evidence on the health and fitness effects of Tai Chi. Based on this, physicians can now offer evidence-based recommendations to their patients, noting that Tai Chi is still an area of active research, and patients should continue to receive follow-up for any clinical conditions”.¹

Therefore, could Taekwon-Do compliment or be an alternative therapy for some health conditions?

This research consists of a broad computerised literature search using key words like martial arts and health, Taekwon-Do, and stress, also interviewing adult students within my Taekwon-Do region and club.

Background

There are around 200 distinct disciplines of Martial Arts. Each discipline has specific schools called styles or systems, with each style having its own background of training and philosophy; however, all share the common goal of self-defence, that is defending oneself from physical threat.

In ancient times the ability to fight and self-defence were the main goals of training. In modern western society students do not expect to die for their country, nor have they need to defend themselves on a daily basis from physical attacks.

Today, as well as self-defence, people are joining Taekwon-Do clubs for many other reasons. These include self-improvement, fitness, sport, mental and physical discipline, self-confidence, stress relief and help through anger and grief. Our modern-day enemies are often far more internal than external, such as chronic stress, anxiety, low self-esteem and depression.

One of the greatest advantages of Taekwon-Do for health is that compared to drugs it is a relatively safe and inexpensive modality that can improve a person both physically and mentally.

¹ *The college of Family Physicians of Canada Patricia Huston & Bruce McFarlan.*

What is Stress?

Stress may be defined simply as: an internal reaction to external pressure.

Basically, people experience stress when they don't feel up to dealing with a situation – in other words, when the demands they face exceed their real or imagined capacity to deal with them.

Just about any emotional upheaval can trigger the stress response. The stress response is, in effect, a magnificent warning system that helps us to take note of situations that could threaten our happiness, self-esteem, and our mental and physical balance. In short bursts stress can be a good thing. It can help us prepare for competitions or exams and in fact some people seem to thrive on high stress conditions and activities such as sky diving, bungee jumping or delivering a speech.

Stress is likely to become a problem if you ignore the initial symptoms of stress and battle on in a state of prolonged or chronic stress. You will start to experience the damaging effects of longer term mental, emotional and physical strain.

Stress can result in physical manifestations via a cascading set of chemicals and hormonal changes.²

The stress response prepares the body to either stay and deal with a threat or to run away to safety, also known as the fight or flight response. This energy giving part of the nervous system provides the rapid energy transfusion we need when facing potential danger. Hormones (chemical messengers) are released into the blood stream and travel to other parts of the body to effect change. For example, "metabolism, heart rate, blood pressure and breathing are increased, while inessential activities such as digestion are curtailed to enable blood to be diverted to other parts of the body. Glycogen is converted into blood sugar to provide energy, and muscle tension increases." ²

Sometimes, when there are too many perceived or real emergencies, or a prolonged state of stress, the individual is unable to surmount their inner turmoil. After a very stressful event the body needs sufficient time to recover. It can take between 20 to 60 minutes for the body to return to its pre-stressed state.²

Whilst stress can be an unpleasant experience, it is not an illness. However, there are connections between stress and mental health conditions.

Researchers have shown that chronic stress generates long term changes in the brain that may explain why people suffering with chronic stress are prone to mental problems such as anxiety and depression. ³

² Overton A (2005) *Stress less make stress work for you, not against you.* Random House New Zealand

³ <https://news.berkeley.edu/2014/02/11/chronic-stress-predisposes-brain-to-mental-illness/>

The warning signs

Stress can influence all aspects of your life and this can include behaviour, the ability to think, emotions and physical health. Symptoms of stress can vary significantly between individuals and can effect us all differently. *Check out websites on Stress for warning signs.*

Taekwon-Do and stress reduction

There is a vast amount of evidence on the benefits of Taekwon-Do for health. Taekwon-Do is comprised of both psychological and physiological training and hence this requires a great expenditure of energy done with a high level of concentration. Both of these factors have a positive influence on stress management.

A good physical training session will lower levels of adrenaline and use up glucose released into the blood stream by the stress response, and this can result in long lasting muscle relaxation. Physical activity also strengthens muscle tissue, bone density and cardiovascular efficiency. During exercise your body releases endorphins, that essentially cause you to feel good. ⁴

I will cover this in more depth in the section on anxiety.

In Taekwon-Do, Focused breathing during training can allow the heart rate to slow into a healthy rhythm and relaxing into your sign wave during movements can help to defuse tension. Focusing on correct body movements during training can distract the mind from everyday concerns.

Psychologically Taekwon-Do practitioners are being challenged from the day they start training, learning to focus and self-manage, remain calm under pressure and make quick decisions in stressful situations. Taekwon-Do presents many challenges and the opportunity to confront fears e.g. having to break boards, possibly getting hurt in sparring, or preparing for a competition, and this can build self-esteem and confidence.

Taekwon-Do is the perfect activity to release tension in a controlled environment. The physical release of punching, kicking, and striking either in the air or against pads can work wonders for stress reduction. Taekwon-Do training helps to develop internal discipline and this can be beneficial for improving resilience.

In conclusion, Taekwon-Do training gives a sense of community, helps make new connections which can be harder to form as you get older. Building a network of friends can improve resilience to life's stressors: *"Your brain has neural circuits that thrive on positive social interaction. When they are not activated, your health suffers".* ⁴

One of our pioneers of Taekwon-Do, Willie Lim, often said:

"Honestly if it was just kick and punch, I would be long gone."

⁴ Pittman C M, PhD Karle E M, MLIS (2015) *Rewire your Anxious Brain how to use neuroscience of fear to end anxiety, panic & worry.* New Harbinger Publications, Inc.

What is Anxiety

Anxiety is a complex emotional response that's similar to fear. Fear and anxiety differ, however in that fear is typically associated with an identifiable threat, whereas anxiety occurs in the absence of immediate danger.

Anxiety is a vague term that covers a great deal of psychological ground. At the thinnest end of the wedge we might feel anxious before an exam. This is normal and no cause for concern. At the thickest end of the wedge, it can wreak havoc with our lives and paralyse us to the point of inaction. Anxiety can arrive as a symptom of another mental illness such as panic disorder, phobia or OCD (Obsessive compulsive disorder) ⁴

When anxiety is a person's primary symptom it may be referred to as GAD (generalised anxiety disorder). People with GAD feel anxious most days and often struggle to remember the last time they felt relaxed.

The brain experiences stress and anxiety in slightly different ways. Although they share the same real estate, anxiety is more parallel to fear:

*"In the past two decades, research on the neurological underpinnings of anxiety has been conducted in a variety of laboratories around the world. (Dias et al. 2013). Research on animals has uncovered new details about the neurological foundation of fear. Structures in the brain that detect threats and initiate protective responses have been identified. Coupled with other new technologies, when ... analysed this knowledge allowed neuroscientists to make connections between animal research and human research. This research has revealed that two fairly separate pathways in the brain can cause anxiety. One path begins in the cerebral cortex, the large, complex, grey part of the brain, and involves our perceptions and thoughts about situations. The other travels more directly through the amygdala, two small almond shaped structures, one on each side of the brain. The amygdala is responsible for triggering the ancient fight or flight response."*⁴

Both pathways play a role in anxiety. The cortex pathway is the one most people think of when they consider the cause of their anxiety, probably because it is the more conscious pathway. If you find yourself becoming preoccupied with worry, becoming stuck trying to find solutions, or getting hung up with self-doubt, you are probably experiencing the cortex pathway. The cortex pathway is generally associated with interpretations, images, worries and anticipatory thoughts, which create anxiety when no danger is present. Therapists assist people with modifying their thoughts to reduce this worry using Cognitive behavioural techniques and similar. Exercise also produces changes, by stimulating the cortex in a manner that produces more positive feelings. Those positive feelings are likely to help reduce anxiety.

If you feel like your anxiety has no apparent cause, doesn't make sense and comes out of the blue very quickly, you are more than likely experiencing the effects of anxiety arising from the amygdala pathway. Your experience of the amygdala is likely to be based on the experience of its effects on you. It is the amygdala that causes the physical sensations of anxiety to occur. In less than a tenth of a second the amygdala can provide a surge of

*adrenalin, increasing blood pressure and heart rate. Being aware of the amygdala's ability to take over is crucial for anyone struggling with anxiety, it's a reminder that the brain is hard wired to allow the amygdala to seize control in times of danger. Because of this hard wiring it is difficult to directly use reason-based thought processes arising in the higher levels of cortex to control amygdala-based anxiety.*⁴

Each pathway can cause the amygdala to create anxiety.

*" Whether you are responding from the fight flight or freeze response from the amygdala, you can teach it alternatives. This is called Neuroplasticity, the brains ability to adapt to change. The basic premise of Neuroscience is "Neurons that fire together wire together". This means that the more we repeat a thought, feeling or behaviour the stronger the neural pathways become. So, to overcome anxiety you will need to make and strengthen new less worried and anxious pathways. Your Amygdala can be trained to respond in more beneficial ways some of which are using relaxation techniques, exposure and exercise".*⁴

Combating Anxiety with Taekwon-Do

The simplest and most straightforward way Taekwon-Do practice can help those with anxiety is giving them a physical outlet.

*As previously mentioned, exercise is one of the most powerful and proven forms of relief for anxiety and depression reduction. A variety of studies have demonstrated that aerobic exercise can ease anxiety (Conn, 2010; DeBoer et al, 2012). Reductions in anxiety are measurable after only 20 minutes of exercise (Johnsgard, 2004) and this is less time than it takes for most medications to begin working.*²

*"Endorphin" is a shortened name for "endogenous morphine" meaning "morphine-like substances produced naturally in the body" and these compounds can reduce pain and produce a sense of wellbeing through their effects on the brain.*⁴

*Studies performed on animals have helped us understand what may be happening in the brain after exercise. When laboratory rats are offered free access to a running wheel, they generally make use of it and it has been found that exercising rats have elevated levels of endorphins in their brains and these levels remain elevated for hours after exercise, only returning to typical levels after about ninety-six hours. (Hoffman 1997).*⁴

The finding that the effects of exercise on the brain can last much longer than the duration of the exercise period, and may in fact persist for days, makes it quite possible that training hard for more than an hour can raise your endorphin level not just for the class but long after.

*Other research on rats has found that exercise changes the chemistry of the amygdala including altered levels of neurotransmitters, norepinephrine and serotonin (Dun et al, 1996), resulting in a calmer amygdala that's less likely to create an anxiety response.*⁵

This calming effect on the amygdala after regular exercise has been found in humans as well as in rats and mice (Brookes et al, 2001).⁵

Distraction is also an effective way to rid yourself of anxious thinking. One of the best kinds of distraction is play. So many anxious people are preoccupied by seriousness and therefore have difficulty loosening up and having fun. Taekwondo invites you to have fun encouraging time to partner up and use games as a warm up. It also has the serious side where you need to focus and concentrate. Whatever the activity asked of you the focus is on your own personal training.

Mindfulness-the cultivation of awareness of the experiences we are having here and now-has been a tradition of ancient religions such as Buddhism for two-and -a -half thousand years. Focusing our attention on what is actually happening right now, rather than being caught up with all the thoughts and self- talk that constantly compete for our attention and often drown out the present moment. Taekwon-Do is the perfect solution for keeping those distracting thoughts away.

“I work hard, I run around a lot for other people, I never seem to stop. Sounds familiar? Well when I get to training and walk through that door, that’s where my shit stops. I walk in and am met with smiles, warmth and laughter. My Instructor is telling me what to do and I’m focused on ME!! Just me, my learning, my growth, my health and wellbeing, my journey and where ever that is leading me. It has so much more to offer me and me to offer it, I’m protective of it and will fight to the bitter end if anyone, ANYONE, tries to take it away from me.”

Jackie Bebbington 3rd Degree

“As a mother of three children and a person who works in a role where I spend most of my day caring for others wellbeing, I find my Taekwon Do sessions a reflective and mentally refreshing time. The opportunity to focus solely on myself, my own progress and development, is something I truly cherish. Having had an injury recently that kept me away from training, I found it had a significant impact on my overall mood and ability to cope with the challenges of being a working mum.”

Fiona Jones 2nd Gup

“Taekwon-Do for me has proven over the years to be a great leveller of my life’s ups & downs. Nothing in the World matters when someone is trying to punch you really hard in the face. It focuses your mind. Instructing also has great therapeutic benefits for me. A Dojang full of loyal students focuses your mind just as much as that punch. That class time in whatever role I have played has always provided me with total respite, it allows you to see things afterwards, in a different light. “

Master Steve Pellow 7th Degree

⁵Arden J B. (2015) *Brain2Brain Enhancing Client change Through the Persuasive Power of Neuroscience*. John Wiley & Sons, Inc.

Conclusion

A landmark inquiry has found New Zealand's mental health services are overwhelmed and geared towards crisis care rather than the wider population who are experiencing increasing rates of depression, trauma and substance abuse. A 200-page report – titled He Ara Oranga (Pathways to Wellness)⁷ concluded.

The New Zealand government needed to widen provision of mental health care from 3% of the population in critical need to “the missing middle” – the 20% of the population who struggle with “common, disabling problems” such as anxiety.⁷

*We can't medicate or treat our way out of the epidemic of mental distress.
He Ara Oranga mental health report NZ⁷*

“New Zealand has deliberately focused on services for people with the most serious needs, but this has resulted in an incomplete system with very few services for those with less severe needs, even when they are highly distressed,”⁷ the report said.

“Anxiety and depression disorders are major public health problems and desirable change in lifestyle such as physical exercise, can have great potential in prevention and treatment. There is growing evidence that physically active people are at a reduced risk of developing depression and that exercise interventions are associated with significant benefits for patients with mild to moderate forms of depression as well as reducing anxiety. These findings have led to the proposal that exercise may serve as an alternative or a supplement to traditional forms of therapy”.⁶

As a student training for 12 years Taekwon-Do has taught me so much and has become a huge part of my life providing a great compliment to my work, as a form of therapy in the management of my own stress levels and working through my own anxiety. My involvement has also taught me that attitude and the values of the leadership within our Taekwon-Do organisation are fundamental to its success in the promotion of good mental health.

As a therapist I am mindful of the importance of social integration, that feeling valued and included as a human being remains an important solution to mental wellness. I work with many clients who fall into the “missing middle” as stated in the mental health report, who are managing on the surface, although they are highly distressed. Having a mental illness of any kind is a challenge. Not only can it affect daily living it can also alter the trajectory of one's life plans. I take pride in helping people live the way they want to live, to begin to find confidence again and return to fully engaging in life. I have been privileged to witness and hear about the valuable influence Taekwon-Do has made to people's lives in promoting positive mental health.

One of my clients who struggled through anxiety and depression wrote.

“Thanks for recommending Taekwon-Do to me it saved my life.” (Personal communication)

Dr Robert Arner wrote a great article on the health benefits of Taekwon-Do training, it can be found on Pages 37-41 of the condensed encyclopaedia of Taekwon-Do 1999 edition.

It would be negligent to rule out a Doctor's visit. Your G.P will advise you if therapy is recommended. Still, I believe it is possible to take steps to increase your personal resilience. A sense of optimism is central, seeing obstacles as challenges rather than threats, seeing difficulties simply as a part of life will help increase your sense of self-worth and build your resilience. Taekwon-Do is a safe place to challenge yourself. Therefore, if you are looking for an alternative or compliment to therapy there is every reason that you would benefit from the practice of Taekwon-Do. I highly recommend it.

Finally, to quote Sir Winston Churchill.

"Attitude is a little thing that makes a BIG difference." "Success is not final, failure is not fatal, it is the courage to continue that counts." "If you're going through hell, keep going." "Everyone has his day, and some days last longer than others."

⁶ Nordic journal of psychiatry vol 62 no sup 47 physical activity in the prevention and treatment of anxiety and depression.