Exercise Assisted Psychotherapy

FOR THE TREATMENT OF ANXIETY, DEPRESSION, PTSD, PAIN AND OTHER MENTAL HEALTH DISORDERS

BY: DANIEL R. GAITA, MA, MSW, LISW-CP

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Background:

Daniel Gaita, MA, LISW-CP & Operation Vet Fit

- Dan has over 25 years of master level certified personal training experience.
- He is also a decorated US Marine (0861), combat veteran of operations in Somalia, Bosnia and Haiti (1992-2000)
- Undergraduate BA – Psychology (UCONN and WCSU - 2003)
- Masters Degree I – Organizational Leadership –(Gonzaga University – 2005)
- Masters Degree II – Clinical Social Work, Concentration: Military Families (Fordham and U of Southern Cal – 2017)
- Founded Operation Vet Fit, 2012. Currently the only veterans agency in the nation to not have suffered a veteran suicide. Now in over 10 years: **www.operationvetfit.org**

Terminal Learning Objectives

- To enable our clients and clinical professionals to safely, efficiently and effectively understand and incorporate exercise into their mental health treatment modalities.

Enabling Learning Objectives

- Research review of exercise benefits associated with mental health
- Current barriers to exercise prescription in mental health
- Exercise prescription for healthy populations
- Exercise prescription for special populations
- Tracking mental health progress with evidence based measures
- Tracking fitness progress with standard measures
- Strength and Conditioning, gold standard organizations
- Other personal training certification programs

Research Review - Exercise and Mental Health

Aquatics Exercise and Mental Health

Complementary Therapies in Medicine, Vol 66, June 2022

- Leisure swimmers scored higher for overall mental health compared to competitive swimmers.
- Medication for depression may be discontinued in replacement for consistent doses of swimming.
- Mental health can be influenced from exposure to water-based exercises.
- Moderate to high intensity of exercise is sufficient to elicit mental health changes.
- Findings can be extrapolated to a wide array of populations.

(Source: Jackson, Kang, Furness, & Kemp-Smith, 2022)

https://www.sciencedirect.com/science/article/pii/S096522992200022X

Research Review - Exercise and Mental Health – Continued

Physical Exercise and Mental Health Promotion of Teenagers

Journal of Healthcare Engineering, vol. 2022, Article ID 4750133, 4 pages, 2022.

- Physical exercise can not only improve the physical quality of individuals but also improve the communication ability between individuals and others and bring diversified fun to life and promote individuals to have better psychological quality.
- Physical exercise can constantly cultivate their good self-discipline ability and improve students' temperament.
- Physical exercise can improve young students' intelligence and promote their health, and it is also an important factor affecting their mental health.
- Regular physical exercise can make them feel comfortable physically and mentally.

(Source: Guo & Zhang, 2022)

https://doi.org/10.1155/2022/4750133

Research Review - Exercise and Mental Health – Continued

Physical Activity Levels and Mental Health Burden of Healthcare Workers During COVID-19 Lockdown

Stress & Health, July 2021

- Short-term reduction in physical activity levels during lockdown was associated with poorer psychological outcomes.
- Given the protection that exercise confers on depression, physical activity should be promoted at the workplace and at home to support healthcare workers to cope through this protracted health crisis.
- There was a significant inverse association between the number of days spent on physical activities per week and the severity of depression, stress and post-traumatic stress.
- Healthcare workers with the highest rates of depressive symptoms were those who had reported a three-day reduction in their weekly physical activity frequency.
- Decrease in time spent on moderate-to-vigorous physical activities, on the other hand, was significantly associated with an increase in odds of reporting moderate-to-severe depressive symptoms

(Source: Kua, Hamzah, Tan, Ong, Tan & Huang)

https://doi.org/10.1002/smi.3078

Research Review - Exercise and Mental Health – Continued

Exercise and Mental Health – Beneficial Effects

Sports Medicine, Vol. 9, 323-329

- Physical exercise is increasingly being advocated as a means to maintain and enhance good mental health
- Exercise is associated with improvements in mental health including mood state and self-esteem.
- Research on acute exercise indicates that 20 to 40 minutes of aerobic activity results in improvements in state anxiety and mood that persist for several hours.
- occur in both individuals with normal or elevated levels of anxiety, but appear to be limited to aerobic forms of exercise.
- for healthy individuals the principal psychological benefit of exercise may be that of prevention, whereas in those suffering from mild to moderate emotional illness exercise may function as a means of treatment.
- The influence of various programmatic aspects of exercise (i.e., mode, duration, frequency, intensity, setting) on changes in mental health have not been systematically investigated, and the proposed mechanisms by which exercise acts to affect mental health remain largely unsubstantiated.

(Source: Raglin)

https://link.springer.com/article/10.2165/00007256-199009060-00001

Research Review - Exercise and Mental Health – Continued

The Relation of Physical Activity and Exercise for Mental Health

Public Health Reports, Vol. 100, 195-202, 1985

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(Source: Taylor, Sallis & Needle)

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1424736/

Research Review - Exercise and Mental Health – Continued

Association Between Physical Exercise and Mental Health

Psychiatry, Vol. 5(9), 739-746, September 2018

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(Source: Chekroud, Gueorguieva, Zheutlin, Paulus, Krumholz, Krystal & Checkroud)

https://doi.org/10.1016/S2215-0366(18)30227-X

Research Review - Exercise and Mental Health – Continued

Exercise and Mental Health

Maturitas, Vol. 106, 48-56, December 2017

- Exercise improves (Reduces) anxiety, stress, depression.
- Exercise decreases inflammation (Pain).
- Exercise improves psychological, physiological and immunological functions.

(Source: Mikkelson, Stojanovska, Polenakovic, Bosevski & Apostolopoulos)

https://doi.org/10.1016/j.maturitas.2017.09.003

Research Review - Exercise and Mental Health – Continued

Physical Activity and Mental Health: The Assosication Between Exercise and Mood

Clinics, Vol. 60(1), 61-70, 2005

- Regular physical activity brings benefits to individuals with depressive and anxiety symptoms
- Physical activity has beneficial effects for the prevention and treatment of psychiatric diseases such as depressive and anxiety disorders.
- Evidence indicates that **moderate** exercise improves mood

(Source: Aurelio, Peluso & Andrade)

https://www.scielo.br/j/clin/a/nJtsYg7cXYppsF7VZ7hhHXw/?format=pdf&lang=en

Research Review - Exercise and Mental Health – Continued

Exercise and Mental Health: Many Reasons to Move

Neuropsychobiology, Vol. 59, 191-198, 2009

- Physical exercise might represent a potential adjunctive treatment for neuropsychiatric disorders and cognitive impairment
- Exercise helps delay the onset of neurodegenerative processes
- Neurotransmitter release, neurotrophic factor and neurogenesis, and cerebral blood flow alteration are some of the concepts involved.
- Exercise ensures successful brain functioning.

(Source: Deslandes, Moraes, Ferreira, Veiga, Silveira, Mouta, Pompeu & Coutimho)

https://doi.org/10.1159/000223730

Research Review - Exercise and Mental Health – Continued

Neuroscience of Exercise: From Neurobiology Mechanism to Mental Health

Neuropsychobiology, Vol. 68, 1-14, 2013

- Positive correlation between regular physical exercise and a reduction in depressive symptoms
- Both strength training and aerobic training have positive effects in the treatment of depression
- Shown to induce positive responses on depressive symptoms
- Exercise appear to exert both prophylactic and therapeutic effects on the development and progression of neurodegenerative dementia
- Participating in an exercise program that involves activities with moderate-to-vigorous intensity during middle age appears to have a neuroprotective effect of as high as 38%
- **Moderate**-intensity exercise programs result in improved behavioral, affective, mood or anxiety responses

(Source: Portugal, Cevada, Monteiro, Guimaraes, Rubini, Lattari, Blois & Deslandes)

https://doi.org/10.1159/000350946

Research Review - Exercise and Mental Health – Continued

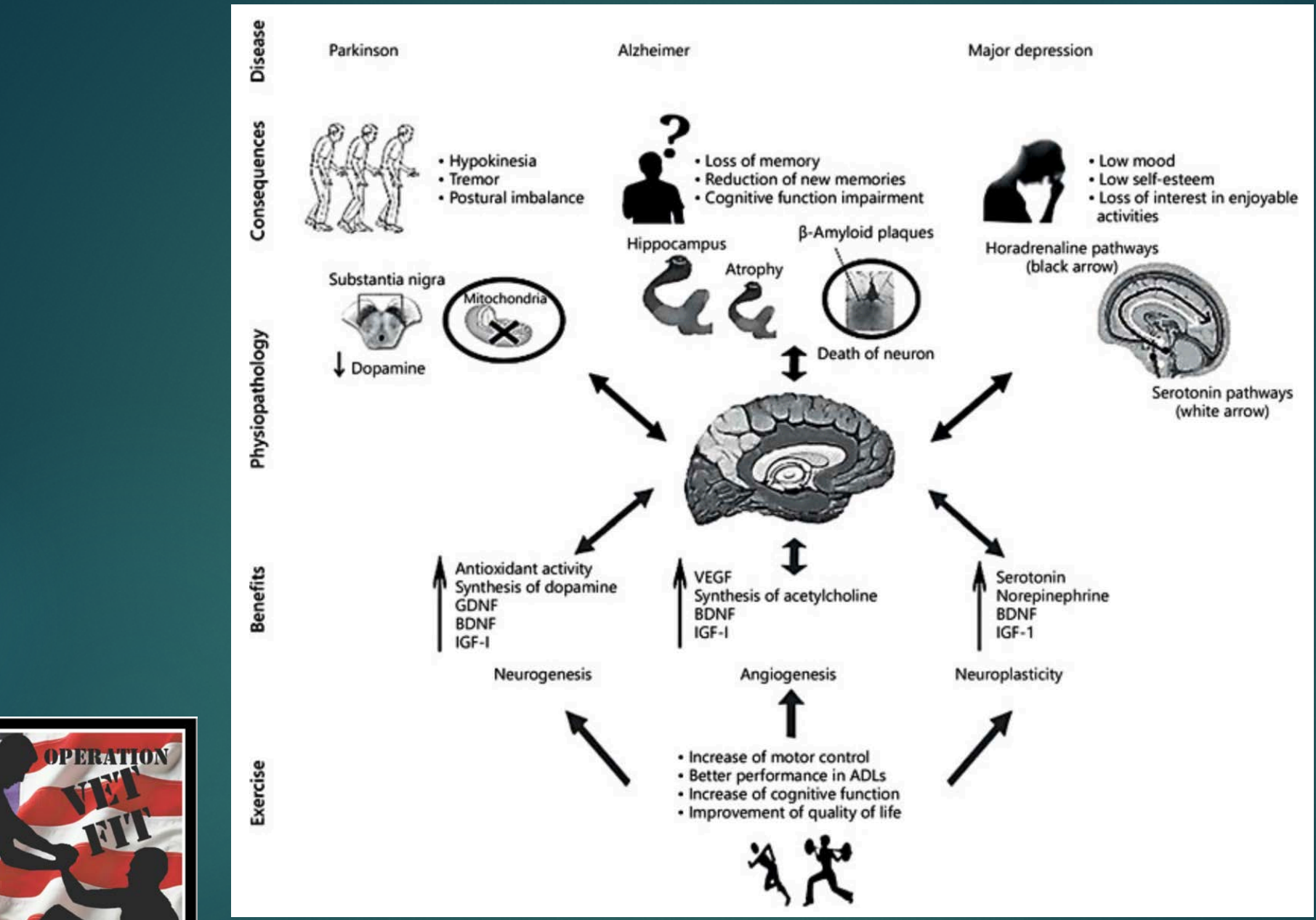
Exercise is the new primary prescription for those with mental health problems

Global Advances in Health and Medicine. May 2019

Positive correlation between regular physical exercise and a reduction in depressive symptoms

- *Adding exercise as a treatment for patients in psychiatric care facilities has positive benefits and is proving to be more effective than medications or psychotherapy alone.* Shown to induce positive responses on depressive symptoms
- *Exercise helps reduce mental health disorder symptoms such as anxiety, depression, anger and psychomotor agitation.*Participating in an exercise program that involves activities with moderate-to-vigorous intensity during middle age appears to have a neuroprotective effect of as high as 38%
- *Researchers say exercise also helps to develop a more balanced and integrated sense of self for those with mental health disorders.*

(Source: Tomasi, Gates, & Reyns doi:10.1177/2164956119848657



(Source: Portugal, Cevada, Monteiro, Guimaraes, Rubini, Lattari, Blois & Deslandes)

https://doi.org/10.1159/000350946

Current Barriers to Exercise Prescription in Mental Health

- Most mental health practitioners are not qualified fitness experts
- Most do not exercise regularly themselves
- Have not experienced the benefits of regular physical exercise
- Do not know how to provide a fitness assessment or training program
- Are not CPR/AED/First Aid certified
- Do not hold a valid certification for personal training
- Are not insured for personal training

Basic Exercise Prescription: Key terms in fitness training programs

- **Frequency** – How often should our clients exercise?
  - 4-6 Days per week (develop a daily habit, it's easier to maintain)
  - 3 days is not sufficient (our world and occupations are too sedentary)
  - 2 days on, 1 day **active rest -** repeat
- **Intensity** – How hard should they exert themselves when exercising?
  - Moderate Intensity – You can have a conversation during your workout
  - Start off slow and steady – Avoid injuries from pushing too hard too soon.
- **Duration** – How long should each exercise session be?
  - 15 minutes is a great starting point but the goal is 40-60 minutes
  - With longer 60-90 minute workouts every week or so
- **Mode** – What exercise activities can be prescribed
  - Swimming, team sports, weight lifting, cardiovascular machines, walking, biking, aerobics classes, Yoga, Pilates, Spin, etc.

Basic Exercise Prescription: Key terms in fitness training programs continued

- **Sets** – A movement(s) of a specific exercise.
  - Example: Doing 10 rush ups would be 1 set of push ups.
  - Example: 3 sets of Bench Press is good for the chest, triceps and posterior deltoid
- **Reps** – The number of times you complete a specific movement.
  - Example: Those 10 push up above would be referred to as 10 reps
  - Example: Doing 3 sets of 8-12 reps of a seated row helps strengthen the Back, Biceps and posterior deltoid.
- **% of 1 Rep Max** – Used to establish a clients ideal resistance on a specific movement.
  - Example: If the client can lift 100lbs 1 time, that is their 1 rep max. Healthy adults may lift at 85% or their 1 rep max while a beginner would start at perhaps 25-50% of their 1 rep max.
- **Rest** – The period taken between sets to allow for muscle recovery and flushing of lactic acid. Typically rest periods would range between :30 seconds to 3 minutes depending on the activity, intensity or goal.

Basic Exercise Prescription: Key terms in fitness training programs continued

- **D.O.M.S** – Delayed Onset Muscle Soreness
  - The typical soreness a person feels for a week or two when they start an exercise program
  - Usually felt with 24 hours, peaks at about 48-72 hours and resolves within 5 days
  - DOMS is not an injury, but rather the result of tiny myofibril tears in the muscles which results in the body repairing itself and increasing the cross sectional area of the muscle. AKA muscle hypertrophy. "Gains"
- **Periodization** – The use of timed cycles (days, weeks, months, years) by which exercise intensity is increased or decreased to maintain performance gains and avoid overtraining injuries
  - Typically broken down into (Micro, Meso & Macro cycles)

Exercise prescription: For healthy populations

During the Biopsychosocial assessment, ask your clients about their exercise habits. Specifically their current frequency, intensity, duration and modes.

- This will help establish a baseline to work from
- Ask about any **injuries** (arthritis, diabetes, cancer, surgeries etc) Healthy populations are able to enjoy more exercise frequency, intensity and duration
- To avoid boredom and enjoy continual results without training plateaus, programs should be designed to change over time, to evolve through a process called **periodization**. Results are not linear
- **Limitations** on exercise are guided by the client. If it hurts them and is not enjoyable, replace it with something that will foster program adherence
  - Example: *"Running hurts my knees"* – Have you tried walking, swimming, rowing, biking or the elliptical instead?

Exercise prescription: For special populations

- Medications, injuries, diabetes, arthritis, COPD, cardiovascular disease, cancer.... all impact both adherence to and safety during exercise.
  - Modifications to frequency, intensity, duration and modes of exercise should be cleared by their physician or qualified medical professional.
    - Activities to be avoided should be made very clear by the clients medical doctor.
  - Blood pressure and heart rate monitoring are vital, pre and post exercise.
    - Various medications impact both BP and HR during and after exercise. These too should be discussed with the clients doctor and guidance provided by the doctor.

Tracking progress with evidence based measures

- As with all clinical psychotherapy services, evidence based measures should be used to track baseline and progress
  - The standard instruments used within our agency:
    - **GAD 7** – Anxiety (Spitzer, R.L., Kroenke, K., Williams, J.B.W, Löwe, B. A. (2006)
    - **PHQ-9** – Depression (Kroenke, K. , Spitzer, R. L. and Williams, J. B. (2001)
    - **PCL-5** – PTSD (Weathers, F. W., Litz, B. T., Keane, T. M., Palmieri, P. A., Marx, B. P., & Schnurr, P. P. (2013)
    - UPAT – Universal Pain Assessment Tool

Tracking fitness progress with standardized measures

- **Aerobic Fitness** – Measured in VO2 Max, heart rate based
- **Muscular Strength** – Measured in improvements in strength over time, % of one rep max and other tools
- **Muscular Endurance** – The ability to do more for longer with your muscles
- **Flexibility** – Vital for pain reduction, balance, and reduction of injury probability
- **Body Composition** – Measured in body fat or Height/Weight (BMI)

Strength and Conditioning: "Gold Standard" Organizations for professional certification

- **There are many personal training and fitness certifications. All will help, but these are the ones the others use for their information:**
  - **National Strength and Conditioning Association (NSCA)**
    - https://www.nsca.com
  - **American College of Sports Medicine (ACSM)**
    - https://www.acsm.org

Other Personal Training Certification Programs

- While the NSCA and ACSM represent the best in the industry, others are less expensive and less intensive. They include:
  - AAAI/ISMA - https://aaai-ismafitness.com
  - ISSA - https://www.issaonline.com
  - NASM - https://nasm.org
  - AFPA - https://www.afpafitness.com
  - ACE- https://www.acefitness.org