Physical Activity and Mental Health: A Holistic Approach

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Today, there is a growing body of evidence that highlights the role that physical activity plays in affecting mental health and brain health. The interconnectivity between physical and mental health can help us to look at health in a more holistic way.

There is no doubt that physical activity is good for us. We know that physical activity can positively impact common health challenges, such as cardiovascular disease, diabetes, high blood pressure, cholesterol, stroke, cancers, osteoporosis, overweight/obesity, and arthritis (Kravitz, 2007). These conditions are commonly associated with health in the physical sense.

Mental health, on the other hand, has for many decades generally taken a “backseat” to physical health, when we think of how people can keep, improve, or manage their health. For example, while most people are aware that clinically diagnosed chronic stress, anxiety and depression can negatively affect their mental health, they are much less aware that normal everyday stress can also impact their physical health.

What’s in This Article for You?

• Being Physically Active Boosts Mental Health
• Highlights of Physical Activity and Mental Health Research
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According to FamilyDoctor.org (2010), when things happen in your life that disrupt your emotional balance and lead to strong negative feelings – such as sadness, anger, and exhaustion – there can be a number of associated physical symptoms. This may include back pain, chest pain, extreme tiredness, upset stomach, dry mouth, palpitations, trouble sleeping, poor memory, poor concentration and/or body aches.
Being Physically Active Boosts Mental Health

When people are physically active as a regular part of their lifestyle it can positively influence their mental health. This is common sense, which is backed up by research and promoted by many health-related agencies and organizations.

Biddle, Fox, & Boutcher (2000) suggest that physical activity has the potential to contribute to:

- enhancements in mood;
- improved self-perception and self esteem;
- prevention of mental health problems; and
- alleviation of symptoms associated with mental health problems.

Research also shows that physical activity influences mental health through decreased stress, decreased anxiety, decreased depression, increased positive mood, and increased cognitive function (Kravitz, 2007).

Highlights of Physical Activity and Mental Health Research

Generally, there is a direct relationship between physical activity and health; people who are more physically active have a higher health status. For instance, Warburton, Nicol, & Bredin (2006) point out that the greatest improvements in health status are seen in the least fit people, when they become physically active.

The evidence presented below is based on research that studies the associations between physical activity and mental health. These research findings outline the influence of physical activity on cognitive function, anxiety, stress, self-esteem, depression and mood.

Cognitive function: Performing moderate intensity physical activity for 30 – 40 minutes a day, 3 – 4 days per week will push back cognitive decline by 10 – 15 years.

- Ratey & Hagerman (2008) state: aerobic physical activities were seen as the most beneficial; but resistance physical activities can also be beneficial.

Anxiety: The most significant benefits have been seen in those who train aerobically for 10 – 15 weeks; however there is still debate surrounding whether low, moderate or high intensity aerobic physical activity is most beneficial. According to recent research, even a single 5-minute bout of physical activity can be enough to reduce a single anxiety episode (Kravitz, 2007).

Stress: Moderate aerobic physical activity performed 3 times a week for 20 minutes or more, for 12 weeks or longer, shows the most benefit (Kravitz, 2007). Aerobically fit individuals show a reduced stress response. Physical activity is more preventative than corrective when it is used to deal with stress that comes from lifestyle and work (Scully, Kremer, Meade, Graham, & Dudgeon, 1998).

Self-esteem: Aerobic physical activity appears to have a higher effect on self-esteem than other physical activity; however, at this time there is little research on self-esteem and other forms of physical activity (Scully et al., 1998). Studies show there is a stronger effect in self-esteem increases for those with lower self-esteem (Kravitz, 2007). Self-esteem is complex and research suggests there are many contributing sub-components, including perceived sport competence, physical condition, body image, and strength (Scully et al., 1998). Given all of these variables and a lack of clear direction for type and dose, it may be best to follow the current Canadian Physical Activity Guidelines.
Depression: Mead et al. (2009) reviewed data of 25 trials that showed physical activity seemed to improve the symptoms of depression. Subgroup analysis of Mead et al.’s (2009) research showed that moderate anti-depressant effects of physical activity were sustained from 4 to 26 months after the intervention, and that resistance and mixed physical activity reduced depressive symptoms more than aerobic physical activity alone (Gill, Womack, & Safranek, 2010).

One very small clinical trial noted larger decreases in depression scores with patients who were physically active 3 to 5 times per week for at least 30 minutes at 60 to 80% of their maximum heart rate compared to patients who were physically active only once a week (Gill et al., 2010).

While evidence suggests physical activity has an anti-depressant effect, there remains a lack of clear direction for type and dose. At this time, it may be best to follow the current Canadian Physical Activity Guidelines.

Mood: Even a single bout of low, moderate, or high intensity aerobic physical activity (for 25 – 60 minutes) can increase positive mood and decrease negative mood. The implications would suggest that making physical activity a habit would therefore positively influence mood state (Kravitz, 2007).

Aerobic activity and brain health: Although the brain size is small in terms of a person’s total body mass, it demands one-fifth of the body’s resources. These resources come to the brain through the blood. To obtain these resources, the brain takes 15% of cardiac output; this means the cardiovascular system (heart, lungs, and circulatory system) is vital to proper brain function. Kravitz (2010) suggests aerobic physical activity can help the brain, by increasing the blood flow, nutrient delivery, and growth factors which improve the health of the cells. This can help to increase brain plasticity, i.e., the changes the brain makes over time, including the brain’s ability to learn new things and make physical adaptations to ensure optimal functioning.

Suggested Strategies Towards Promotion of Holistic Health

In our view, mental health is an essential part of overall health, and should be a vital (and more recognized) part of our rationale for promoting active lifestyles among all age groups.

By following the Canadian Physical Activity Guidelines published by the Canadian Society of Exercise Physiologists (CSEP), a person can reduce health risks and get health benefits, including mental health benefits.

Here are a few more suggested strategies:

- **Educational materials and promotional messages** (e.g., by health and fitness practitioners, health-promoting organizations, etc.) should include emphasis on the mental health benefits that can be gained through increased physical activity.

- **Curriculum materials for a wide range of professionals and practitioners should outline the mental health benefits of physical activity.** This should include groups such as recreational professionals, physiotherapists, occupational therapists, kinesiologists, doctors, nurses and other health professionals.
All health-promoting organizations should inform their audiences about active, integrated lifestyles. Research demonstrates that integrated lifestyle approaches involving active living and emotional well-being change, can lessen, and even reverse the progression of chronic diseases and support health in all populations (Guarneri, Horrigan, & Pechura, 2010).

Since stress is common for most people, all types of health practitioners should discuss and share information with clients/patients about the benefits of physical activity in relation to stress management and mental health.

Supportive physical and social environments are required in order to promote physical activity; this can have positive impacts on the mental health of people living in a given community. For instance, communities with ample green space, parks, playgrounds, wide sidewalks and connecting paths can help individuals to be more active and boost social interaction among community members and neighbours.

Policies embracing a holistic approach to mental and physical health promotion should be considered and implemented in multiple settings such as workplaces, communities, and organizations.

In our view, the overall evidence is clear; when people are physically active, it can boost mental health! A healthier future for all people includes a holistic focus on physical and mental health.

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