

Sports Medicine

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The Sports Medicine Center at Children's Mercy



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The Influence of Physical Activity on Mental Health

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Introduction:

- Becky Wiseman, I am a Licensed Specialist Clinical Social Worker
- I have 24 years of experience working with adolescents and families
- For the last three years, I have been dedicated to Children's Mercy Sports Medicine Center providing mental health support to student athletes and families.
- Soccer mom and soccer wife



Objectives

- Describe the work that I do with athletes at the Sports Medicine Center
- Provide working definitions for anxiety and depression
- Discuss goals of treatment within the Sports Medicine Center
- Explore what research shows about the connection between physical activity and mental health/mood
- Discuss the concerns of a sedentary life among adolescents
- Explore current gaps in encouraging physical activity in mental health treatment
- Possible next steps

Work being done at Children's Mercy Sports Medicine Center

- Working with Athletes during adjustment to injury
 - Understanding their increase in anxiousness or depressed mood
 - Helping to develop new coping skills
 - Normalizing their experience
 - Readiness for return to play
 - Dealing with social issues created by injury



Work being done at Children's Mercy Sports Medicine Center

- Working with athletes who have not experienced injury, but are experiencing distress
- Distress can include anxiety, depressed mood, panic, relationship issues, low levels of confidence and trauma
- If kids are experiencing distress, it will affect all areas of their lives, including sports

Generalized Anxiety Disorder (GAD)

Characterized by chronic anxiety, exaggerated worry and tension, even when there is little or nothing to provoke it.

Signs and symptoms:

- Feeling apprehensive
- Feeling powerless
- Having a sense of impending danger, panic or doom
- Feeling unsafe in the environment

What GAD looks like in Children

- Worried about safety of self or others on the field
- Worried about being on time, forgetting items, or going to the wrong location
- Worried about failing in practice and/or games
- Worried about conditions for the practice and/or games
- Rapid breathing
- Sweating
- Increased heart rate
- Stomach issues

Social Anxiety Disorder

Characterized by overwhelming anxiety and excessive self-consciousness in social situations.

Signs and Symptoms:

- Avoidance of groups, crowds, and/or social situations
- Fear of casual conversations with others
- Fear of performing in front of others
- Worried about judgment from others
- Strong emotions related to social events

What Social Anxiety looks like in Children

- Overthinking or getting stuck in mistakes
- Negative self talk
- Fear of failing
- Fear of embarrassing self
- Fear of disappointing parents, coaches, or teammates
- Trouble focusing on performance
- Stomach issue
- Feeling hot
- Sweating
- Loss of energy

Depression

Characterized by persistent sadness and hopelessness.

Signs and Symptoms:

- Feeling sad, hopeless, or irritable a lot of the time
- Not wanting to do, or enjoy doing, fun things
- Showing changes in eating patterns-eating a lot more or a lot less than usual
- Showing changes in energy-being tired and sluggish or tense and restless
- Having a hard time paying attention
- Feeling worthless, useless, or guilty
- Showing self-injury and self-destructive behavior

What Depression looks like in Children

- Sadness
- Isolation from friends and family
- Disengagement in activities
- Always tired
- Struggles with sleep
- Low energy/Lack of motivation

Reducing the Negative Effects of Stress on the Student-Athlete

- One goal of treatment is to reduce the distress and suffering that the student athlete experiences due to stress and/or fear. Another goal of treatment is for the student athlete to feel capable of helping themselves during times of difficulty

Prevalence of Anxiety and Depression in Children

- 7.1% of children aged 3-17 years (approximately 4.4 million have diagnosed anxiety,
- 3.2% of children aged 3-17 years (approximately 1.9 million have diagnosed depression.
- Ever having been diagnosed with either anxiety or depression among children aged 6-17 years increased from 5.4% in 2003 to 8% in 2007 and to 8.4% in 2011-2012.

<https://www.cdc.gov/>

The Research

Physical Activity and the Effects on Mental Health

- Hundreds of studies have been conducted on the effects of physical activity on mental health and/or mood
- Research repeatedly suggest that regular physical activity can significantly improve mental health and lessen symptoms of depression, anxiety, and stress.

Mikkelsen, K., Stojanovaka, K., Polenakovic, M., Bosevski, V. (2017)

What type of Activity is Best?

- Overall, it does not seem that the nature of exercise being either aerobic or anaerobic is a significant factor as both forms of exercise can bring about an improvement in mental health.
- It was concluded that consistent exercise, even if the duration was as short as 15 mins, 3 times a week was significantly associated with lower risk of depressive symptoms.

What happens in the Mind/Body

- Hypothesis:

- 1) Endorphin- runners high
- 2) Thermogenic- Increase in body temperature
- 3) Mitochondrial- Energy production
- 4) Mammalian target of rapamycin (mTOR)- learning, memory, and antidepressant effect
- 5) Neurotransmitters- Serotonin and dopamine

Possible down-side?

- People who become exercise dependent and exercise obsessive are at risk of suffering exercise induced injury.
- Exercise Dependency can create adverse effects for the individual including high levels of anxiety and depressed mood.

Sedentary Behavior and Mental Health in Adolescents

- Findings of a research review indicated strong evidence for the positive relationship between depressive symptoms and screen time for leisure among adolescents.
- Moderate evidence was found for the relationship between self-esteem and sedentary behavior, indicating lower levels of self-esteem among those who reported higher levels of screen time.

Findings

- In 31 studies concerning the amount of screen time associated with high levels of psychological distress in adolescences, the researchers found :
 - 2 studies found weak quality of evidence
 - 17 studies found moderate quality of evidence
 - 12 studies found strong quality of evidence

What is Going Well

- Movement within the classrooms (younger children)
- Youth school programs (before and after school)
- Physical Education in school
- Recess and Intramurals
- School sponsored sports

Possible Gaps

Formal Treatment:

- No training on how to integrate physical activity into treatment plans.
- Difficult to start exercise program when experiencing depressed mood.
- Mental Health treatment typically exist in silos.

Everyday Life:

- Most physical activity-based programs end after elementary school.
- Emphasis on organized play.
- Parent and coach lead play.
- Sedentary behavior of adults.
- Screen driven learning

How can we improve?

- Educate younger children about their mental health.
- Educate children on how they can help maintain their own mental wellness. (3 things I do daily for my own wellness)
- Educate parents on mental health and how they can promote their children owning their mental wellness.
- Encourage children to engage in informal play.
- Stop fighting the screen, but rather help widen a child's world outside of screen time.

Resources <https://mentalhealthkc.org/mental-health-info/>

- **24/7/365 FREE MENTAL HEALTH ASSISTANCE**
 - **Missouri Crisis Line**
 - Jackson, Johnson, Cass, Lafayette, Platte, Clay and Ray Counties
 - **1-888-279-8188**
 - **Kansas Crisis Lines**
 - Johnson County
 - **913-268-0156**
 - Wyandotte County
 - **913-788-4200**
 - **Mental Health America Warmline:**
 - 913-281-2251
 - **National Suicide Prevention Hotline:**
 - 1-800-273-TALK (8255)
 - 1-800-SUICIDE (784-2433)
 - Text line 741 741

Questions???

Citations

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