VANDERBILT UNIVERSITY
MEDICAL CENTER

My child doesn't (can't/won't) go to school!

Lynn S. Walker, Ph.D.
Division of Adolescent and Young Adult Health

Disclosure

In the past 12 months, I have had no relevant financial relationships with the manufacturer(s) of any commercial product(s) and/or provider(s) of commercial services discussed in this CME activity.

Objectives
Learn how to . . .

- Explain why it hurts if the tests are normal
- Identify obstacles to school attendance
- Implement strategies for return to school

A typical case

- Shawn is 10 years old, AP X 1 year
- Pain is worst in the morning.
- Loves school, excellent grades, popular, well-behaved

The Parent's Perspective

01/05/01 FAX

FROM: Mr. & Mrs. S.
TO: Dr. Lynn Walker

We have several questions that we think can be answered by fax.

Do you believe our son's problem is physical or a psychological problem?

If you feel it's a physical problem, then what do you hope to accomplish with him?

If you feel it's a psychological problem, what is your plan to help resolve it?

Specificity Theory of Pain

"The Pain Pathway," Rene Descartes, 1664

Acute Pain

- Well-defined source
- Resolves with healing
- Pain is adaptive

Chronic Pain, Functional Pain

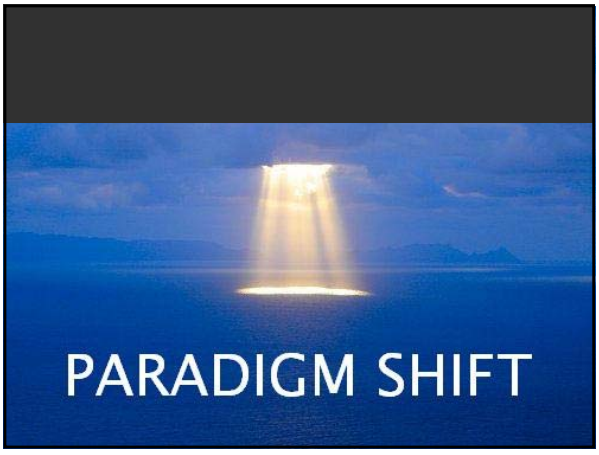
(e.g., Functional GI Disorders)

Medical evaluation:

- No identifiable source of pain
- "Nothing is wrong" – but impaired and complaining

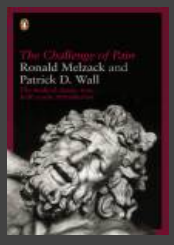
Implicit Message:

- "The pain is not real"
- "It's all in your head"
- "I can't help you "

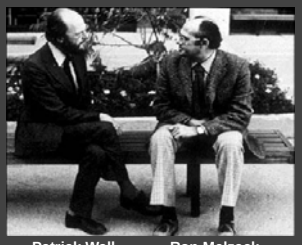


Gate Control Theory (1965)*

Ronald Melzack & Patrick Wall

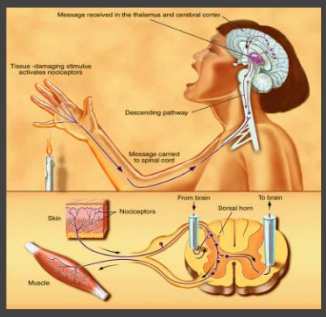


The Challenge of Pain



Patrick Wall Ron Melzack

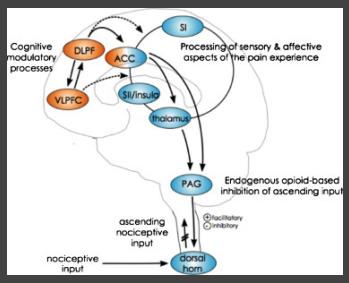
* Revised by Melzack (2001; 2005) ⟶ Neuromatrix theory of pain



Sources of Visceral Sensation

- **Peripheral**
  - Nociceptors in gut (respond to distension and chemical, osmotic, and thermal stimulation)
- **Central**
  - Spinal cord (dorsal horn and interneurons)
  - Higher centers of conscious perception (emotion, cognition, attention)

Pain Modulation in the Brain



Adapted from Wiech, K., Ploner, M., Tracey I., *Neurocognitive aspects of pain perception* Trends Cognit. Sci., 2008;12: 306–313.

Three Components of Pain

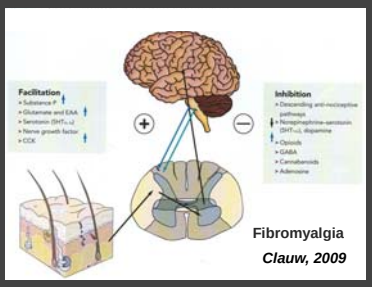
- **Nociception (sensory)**
  - **Stimulation of nerves (nociceptors) that convey information about potential tissue damage**
- **Emotion**
  - **Immediate reaction to nociception (e.g, fear, anger). Emotional response is automatic, involuntary.**
- **Cognition**
  - **Meaning attached to the emotional experience (can trigger more emotional reactions).**

It's makes common sense!

Harry still got a sick, burning feeling of shame in his stomach every time he thought about it.

J.K. Rowling, Harry Potter

"The Pain Signature": Neural influences on pain and sensory processing

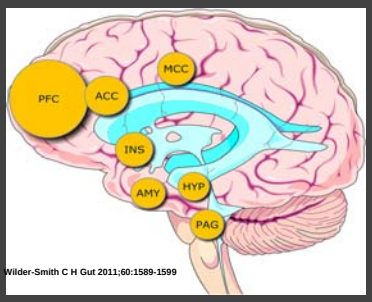


Fibromyalgia

Clauw, 2009

IBS vs Healthy Controls:

Areas showing consistent activation differences during imaging studies of rectal pain or discomfort



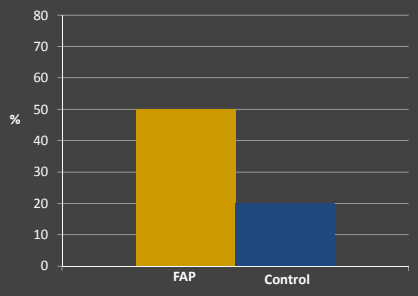
Wilder-Smith C H Gut 2011;60:1589-1599

GUT

Our thoughts and emotions influence our experience of pain.

ANXIETY produces thoughts and emotions that intensify distress and undermine coping

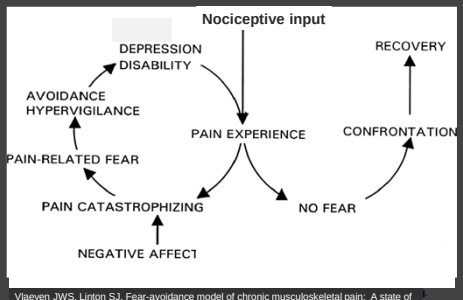
Lifetime Incidence of Anxiety Disorder:
FAP Patients vs. Controls
(Shelby et al, Pediatrics, in press)



Common Anxiety Disorders in FAP Patients vs. Controls

	FAP	Controls
Social Anxiety	26 %	6%
Generalized Anxiety	18%	6%
Separation Anxiety	9%	4%
Post-Traumatic Stress	9%	3%
Panic	7%	1%

Fear-avoidance model of pain
(Vlaeyen & Linton)



Vlaeyen JWS, Linton SJ. Fear-avoidance model of chronic musculoskeletal pain: A state of the art. PAIN 2000 April 85(3); 317-332.

FAP – Social Anxiety – Withdrawal – Disability

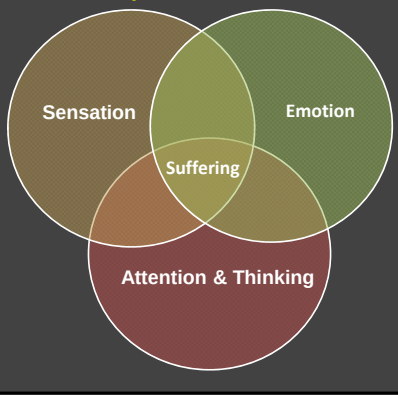
Note from 10-year old boy to his mother on the night before his return to school after FAP medical evaluation:

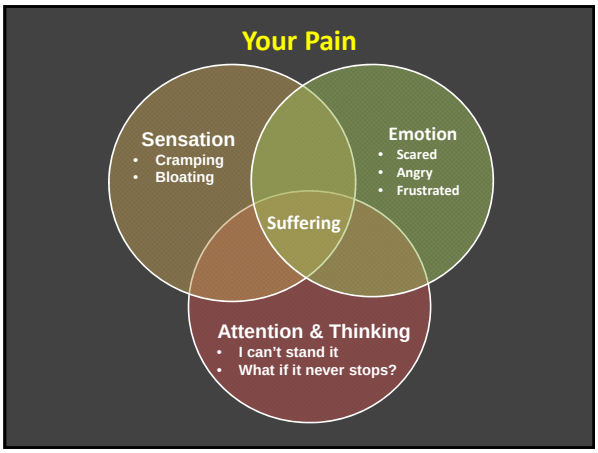
This is coming from Love.
I don't want to go because I'm scared.
I don't know why but I am.
So just let me sleep in.

I don't care if I don't get a scooter but I never want to go back.

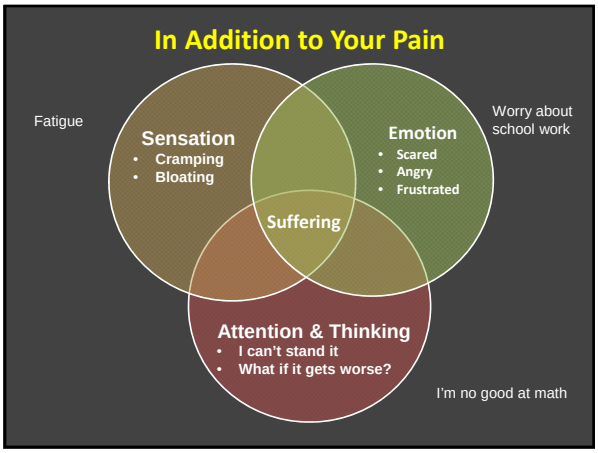
Explaining functional abdominal pain to families

Components of Pain

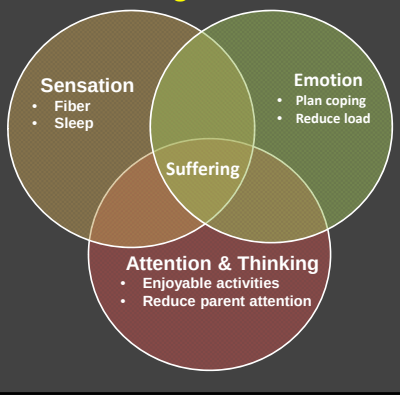




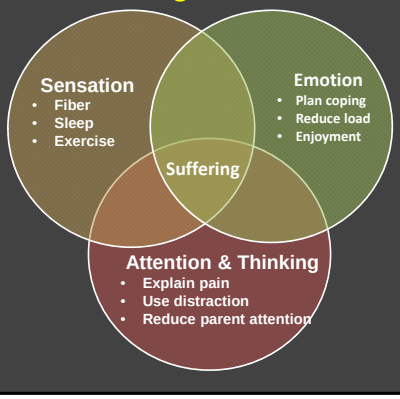
Identifying Obstacles to School Attendance



Treating Your Pain



Treating Your Pain



Implementing Strategies for School Attendance

Patient Education: Volume Control Metaphor

- You can control the messages that go from your brain to your body
- Your mind is like a stereo that can turn the volume up or down on pain signals sent by neurotransmitters.

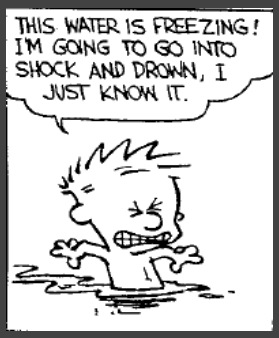
Turning down the pain volume

- Relaxation
- Activities and people you enjoy
- Having a positive attitude

Turning up the pain volume

- Tension, stress
- Worry about pain
- Isolation, inactivity

Catastrophizing Thoughts



Parent Catastrophizing:

"You could catch pneumonia, run up a terrible hospital bill, linger a few months, and die"

Whatif

(from A Light in the Attic by Shel Silverstein)

Last night, while I lay thinking here,
Some Whatifs crawled inside my ear
And pranced and partied all night long
And sang their same old Whatif song:
Whatif I'm dumb in school?
Whatif they've closed the swimming pool?
Whatif I start to cry?
Whatif I get sick and die?

Parent as "Health Coach"

- Coping with pain as a life skill
- Promote child competencies
- Reduce attention to symptoms
  (schedule limited time to ask about pain)

Substitute Positive Self-talk for Catastrophizing about Pain

- Parent and child identify "What if . . ." statements about pain, etc.
- Substitute positive images and memories of past success
- Introduce self-encouragement
  ("I can do it")

Belly Breathing

1. Sit or lay in a relaxed position.
2. Place one hand on the upper chest, and place the other hand on the stomach just below your rib cage.
3. Take a deep breath. Notice if the hand on your chest moves but the hand on your stomach remains still. This is how we often breathe—with our chest.
4. Now, take breaths that only move your stomach. **The goal of belly breathing is to keep the hand on your chest still and the one on your stomach rising and falling.**

Progressive Muscle Relaxation

- Tense and relax each muscle group
- Become aware of muscle tension and how to relax
- Scripts are available for children (e.g., "Squeeze a lemon in your hand")

Obstacle: Make-up Work

- Fears: Cannot do it; No time for play
- Strategies:
  - Break work into small components
  - Limit time spent on schoolwork
  - Negotiate with school for reduced load

Obstacle: School Bathrooms

- Fears: No privacy; will be late to class
- Strategies:
  - Free access to bathroom during class
  - Letter to school

Obstacle: Anticipate pain at school

- Fears: Unable to cope; no escape; no support
- Strategies
  - Gradually increase attendance
  - Plan in case of pain
  - Teach pain coping skills

Plan return to school to increase sense of control

- Teach breathing exercises
- Plan for make-up work
- Arrange bathroom pass

GOAL

Immediate success, however small,

in order to

break the cycle of repeated failure

and

build child and parent confidence

Some Patients Need Mental Health Referral

Myths about Referral to Behavioral Health Providers

- Parents do not believe that psychosocial factors contribute to their child's pain
- Parents do not believe that behavioral interventions will help their child

Percentage of Mothers of RAP Patients who endorsed Psychosocial Causes

(n = 98; Claar & Walker, 1999)

50%	Child is nervous or worried
32%	Child is stressed
30%	Child puts pressure on self
29%	Child overly sensitive to pain
12%	Child has emotional problems

Therefore,

use parent's terminology

in discussing psychosocial factors:

"Worry" "Pressure"

Percentage of Mothers of RAP Patients who endorsed Psychosocial Remedies (n = 98; Claar & Walker, 1999)

53% Learning how to relax
32% Less stress
18% Counseling

Therefore,

use parent's terminology

in making a referral:

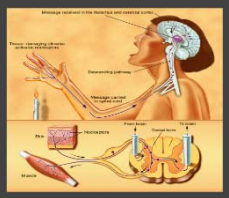
"Relaxation & stress management"

Mothers' Beliefs About Causes of their Children's Abdominal Pain
(n = 98; Claar & Walker, 1999)

13.3% Physical causes only
18.4% Psychosocial causes only
52.0% Both physical & psychosocial
16.3% Don't know

17th Century → 21st Century

Specificity Theory



Gate Control; Neuromatrix Theories

Acknowledgements

NIH RO1 HD23264
Vanderbilt Kennedy Center (P30 HD15052)
Digestive Disease Research Center (P30 DK058404)
Vanderbilt CTSA (UL1 RR024975)

Judy Garber, PhD
Craig A. Smith, PhD
Stephen Bruehl, PhD
D. Brent Polk, MD
Sari Acra, MD
John W. Greene, MD
Andre Diedrich, MD
Kirsten Haman, PhD
Carlo DiLorenzo MD
John Campo, MD
Bruce Naliboff, PhD

Julia Anderson, MD
Sara Horst, MD
Sara Rippel, MD
Martina Puzanovova, MD
Christine Dengler-Crish,PhD
Joy Beck, PhD.
Sara E. Williams, PhD
Kari Freeman, PhD
Kezia Shirkey, PhD
Grace Shelby, MS
Amanda Sherman, MS
Kelsey Laird, BS

VANDERBILT UNIVERSITY
MEDICAL CENTER

Questions and Comments?

lynn.walker@vanderbilt.edu