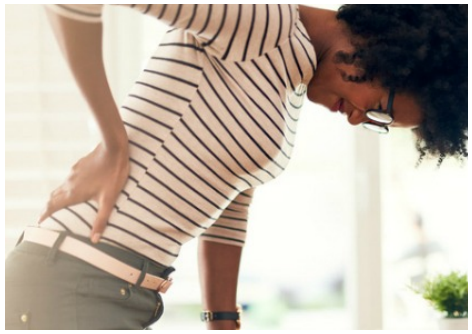
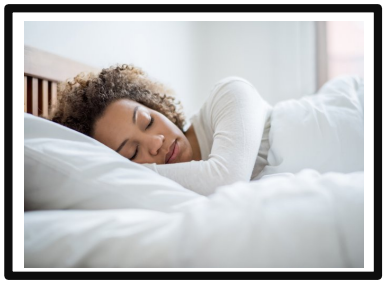

# Making sense of patient beliefs and behaviours

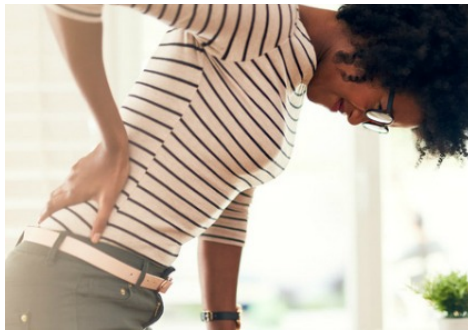
**Samantha Bunzli PhD**

**The University of Melbourne,**
**Department of Surgery**



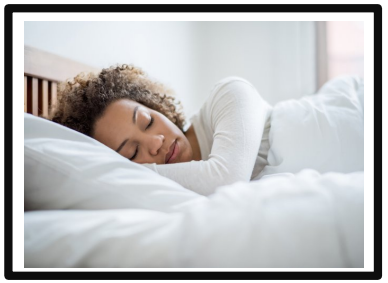
# What should I do about this pain?



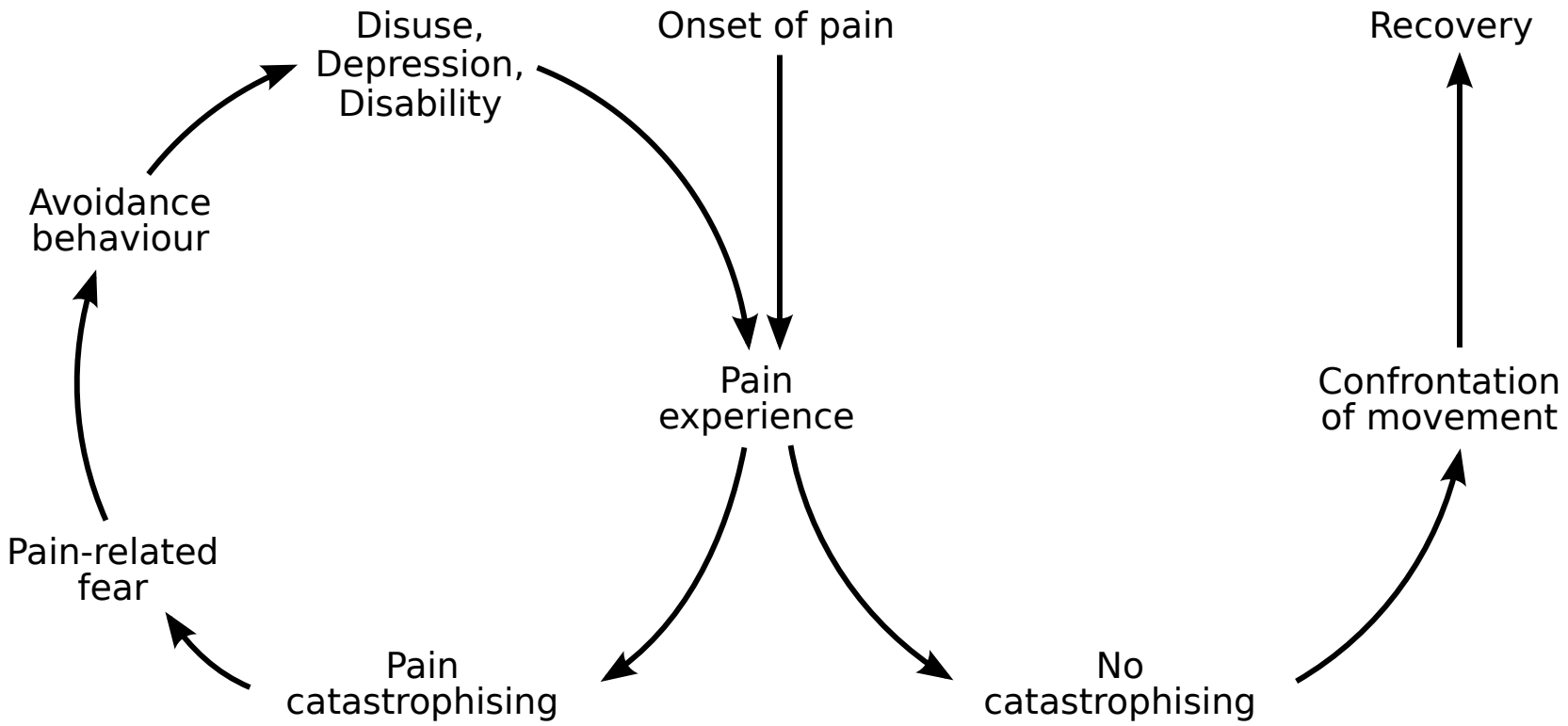


# Beliefs about the pain

(Waddell 1996)  (Lee et al. 2015)

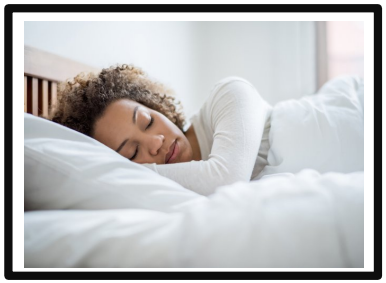


# Fear avoidance model

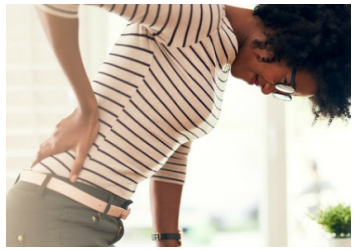



(Vlaeyen & Linton 2000)

Pain catastrophising



Fear avoidance beliefs



Pain catastrophising

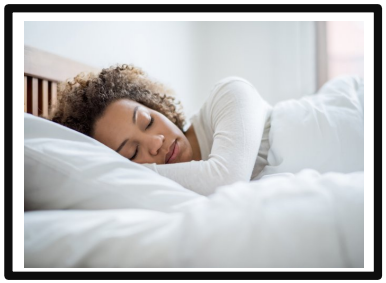
Recovery expectations

Self efficacy beliefs

Treatment expectations

Fear avoidance beliefs

Locus of control beliefs



# Many physios feel unprepared to manage patient beliefs

ELSEVIER

Journal of
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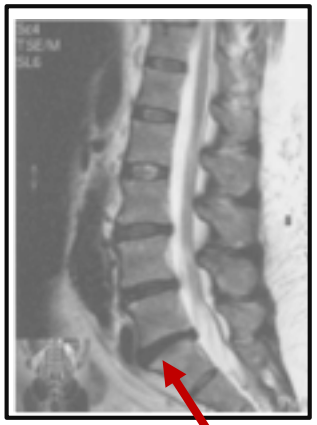
journal homepage: www.elsevier.com/locate/jphys

Research

## Physiotherapists may stigmatise or feel unprepared to treat people with low back pain and psychosocial factors that influence recovery: a systematic review

Aoife Synnott [a], Mary O'Keeffe [a], Samantha Bunzli [b], Wim Dankaerts [c], Peter O'Sullivan [b], Kieran O'Sullivan [a]

Journal of Physiotherapy 61 (2015) 68–76



Biomedical sign

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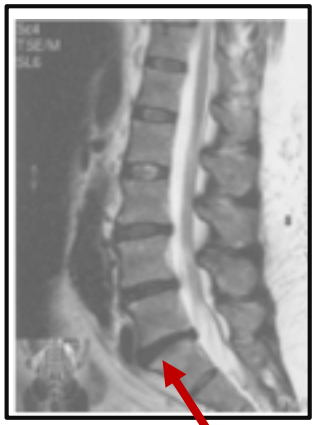

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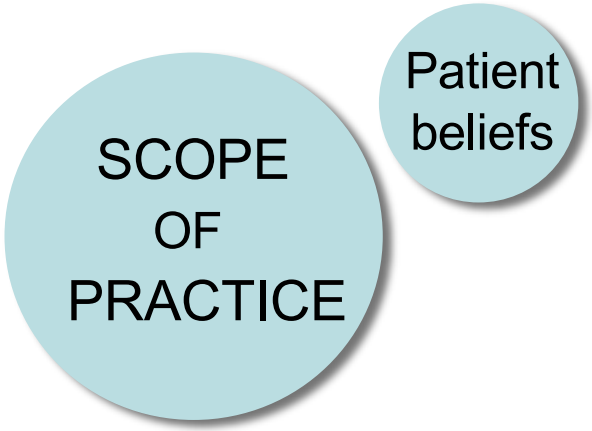

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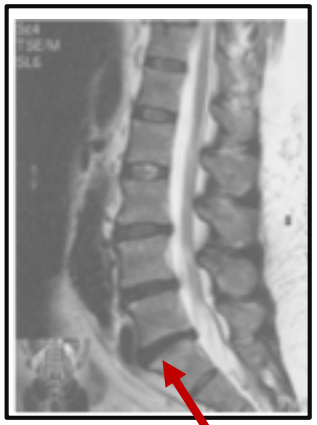

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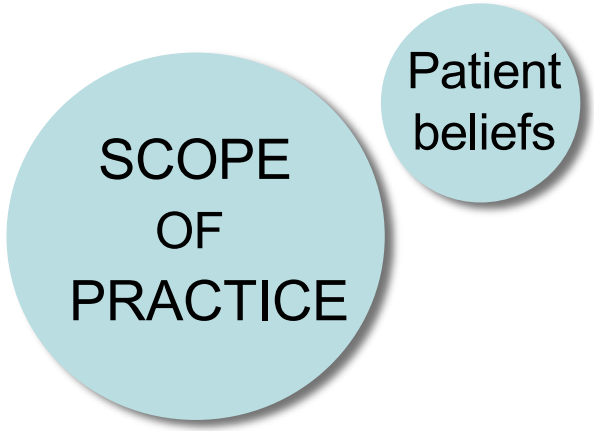


**stigma**

/ˈstɪgmə/

*noun*

1. a mark of disgrace associated with a particular quality, or person. "the stigma of mental disorder"

# Dominance of biomedical beliefs among patients


## Lives on Hold

## *A Qualitative Synthesis Exploring the Experience of Chronic Low-back Pain*

*Samantha Bunzli, Bphty(hon), PhD Candidate,* Rochelle Watkins, PhD,† Anne Smith, PhD,* Rob Schütze, MPsych (Clinical),‡ and Peter O'Sullivan, PhD**

(*Clin J Pain* 2013;29:907–916)

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- Patients feel legitimacy of their pain is doubted

# Dominance of biomedical beliefs among patients

The Clinical Journal of Pain

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- Patients believe there is a biomedical diagnosis waiting to be identified

# Dominance of biomedical beliefs among patients

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- A lack of diagnosis means can't enter linear pathway from diagnosis to treatment to cure

# Dominance of biomedical beliefs among patients

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- Biographical suspension: lives on hold

# Where do unhelpful beliefs come from?

BMJ Open **Beliefs underlying pain-related fear and how they evolve: a qualitative investigation in people with chronic back pain and high pain-related fear**

Samantha Bunzli,[1] Anne Smith,[1] Robert Schütze,[2] Peter O'Sullivan[1]

*BMJ Open 2015;5:e008847. doi:10.1136/bmjopen-2015- 008847c*

- Society:

**50%** believe pain in back means back is damaged

**90%** believe ignoring pain can damage back

**70%** believe ongoing weakness after episode of LBP

(Darlow 2014)

# Where do unhelpful beliefs come from?

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- Healthcare encounters:

**Explicit** advice: "The dr said I have to protect my back"

**Implicit** advice: "I was told to do these exercises, so my back must be weak"

**Mis-interpretation** of diagnostic labels and medical jargon

# Where do unhelpful beliefs come from?

"I will end up in a wheelchair"

- **Degeneration:** "It made me worry that, if it is carried through the genes, does that mean my son is going to end up with it?"

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- **Disc bulge:** "Surgery. That is the first thing that came to my mind when I heard disc bulge"

---

- **Neurological:** "It made me think that they didn't believe me… but I can't be a hypochondriac!"

"Now they think I'm f**ing balmy"

# Where do unhelpful beliefs come from?

- **Chronic**:

"Absolute, the pits"

"Couple of steps from a wheelchair"

---

- **Wear and tear**:

"Bones getting thinner"

"Its shrinkage and its unnatural… something's rotting away"

---

- **Neurological involvement:**

"Something's going wrong in your head"

"Could be a tumour"

"Death within 6 months"

(Barker et al. 2009)

# Where do unhelpful beliefs come from?


## What Do People Who Score Highly on the Tampa Scale of Kinesiophobia Really Believe?

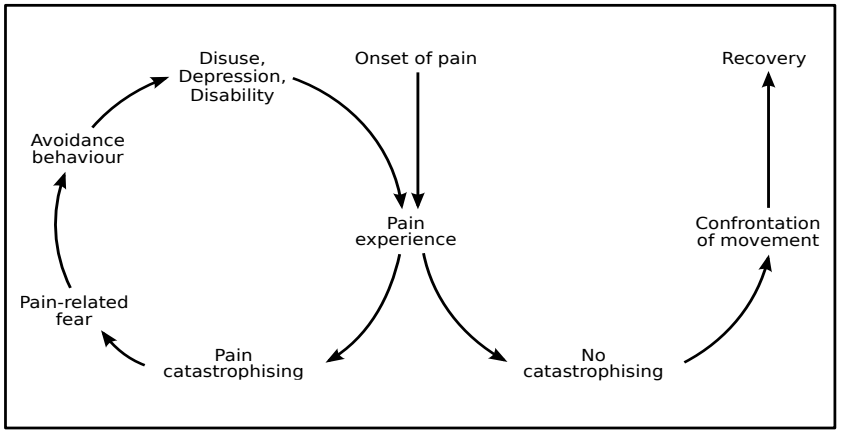
### *A Mixed Methods Investigation in People With Chronic Nonspecific Low Back Pain*

*Samantha Bunzli, Bphty (hons),* Anne Smith, PhD,* Rochelle Watkins, PhD,†*
*Robert Schütze, MPsych(Clinical),‡*
*and Peter O'Sullivan, PhD**

(*Clin J Pain* 2015;31:621–632)

- Trying to make sense of pain experience that doesn't make sense
- Not all people with high pain-related fear and avoidance behaviours appear 'phobic'

# What can we take from these studies?




Fear Avoidance Model based on ‘phobic’ literature

**BUT** Negative beliefs about persistent pain are common, culturally endorsed

**AND** 50% of people presenting to physio with LBP have elevated fear and display fear avoidance behaviours

→ Need for a clinically useful framework to understand fear

# Common Sense Model (Leventhal 1980)

What is it?
What caused it?
What will happen?
Can I control it?
How long will it last?

Effective?

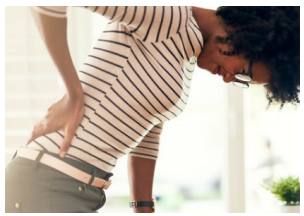
(Leventhal 1980)

# Common Sense Model: Context, Context, Context


- Content of beliefs differ between people, but mechanisms the same
- Content of beliefs is constantly updated
- Content of beliefs is symptom specific

(Leventhal 1980)

# Common sense approach to understanding LBP behaviour



**Identity:**
Bulging disc?

**Timeline:**
A couple of weeks

**Cause:**
Bending lifting

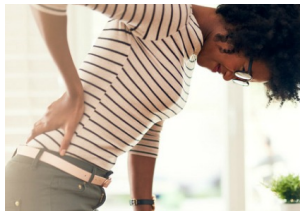
Goal:
prevent damage

**Control:**
Rest, avoidance

**Consequences:**
Wheelchair

(Bunzli et al. 2017)

# “This makes sense to me”



no ↑ pain =
no ↑ damage

**Identity:**
Bulging disc?

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A couple of weeks

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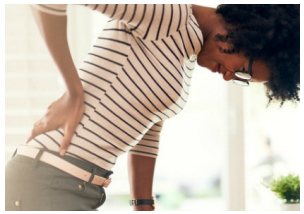
Avoidance behaviour is a common sense response to threatening pain representation

# ... 2 weeks later



**Identity:**
Weak back

**Timeline:**
Expect full recovery

**Cause:**
Injury

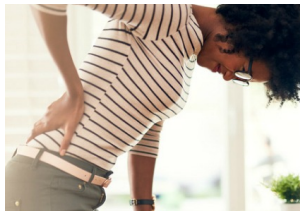
Goal:
Strengthen weak back

**Control:**
Exercise
Avoid lifting / bending

**Consequences:**
Re-injure in the future

AUSTRALIAN PHYSIOTHERAPY ASSOCIATION

# ... 2 weeks later



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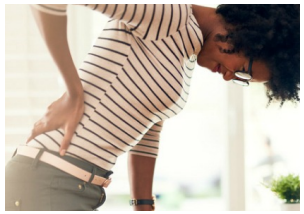
AUSTRALIAN PHYSIOTHERAPY ASSOCIATION

Behaviour is a common sense response to threatening pain representation

# ... 12 weeks later



**Identity:**
Disc damage?

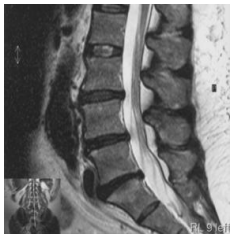
**Timeline:**
When will this get better?

**Cause:**
Movement

Goal:
Fix this damage

**Control:**
Surgery?

**Consequences:**
Wheelchair



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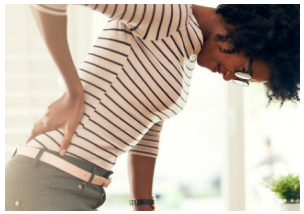

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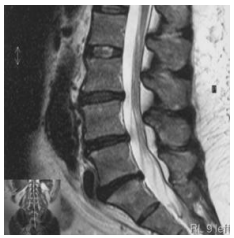
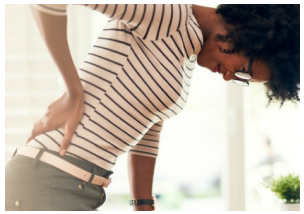


"Your spine shows degenerative changes. But surgery is not an option."

# ... 12 weeks later



**Identity:**

Degeneration

**Timeline:**

Learn to live with this?

**Cause:**

Too much stress on back

Goal:

Prevent more damage

**Control:**

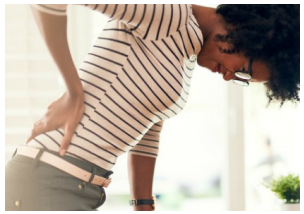
Unpredictable uncontrollable

**Consequences:**

Wheelchair

Can't do what I want to

# ... 12 weeks later



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**Timeline:**
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Goal:
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**Cause:**
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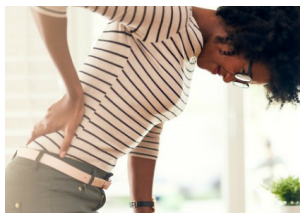
**Control:**
Unpredictable uncontrollable

**Consequences:**
Wheelchair
Can't do what I want to

# “Hang on, this doesn’t make sense”



↑pain

**Timeline:**
Learn to live with this?

**Identity:**
Degeneration

**Cause:**
Too much stress on back

Goal:
Prevent more damage

**Control:**
Unpredictable uncontrollable

**Consequences:**
Wheelchair
Can’t do what I want to

# Common Sense Model

What is it?
What caused it?
What will happen?
Can I control it?
How long will it last?

Effective?

(Leventhal 1980)

# “I cant make sense of this”

pain

**Timeline:**
Learn to live with this?

**Identity:**
Degeneration

**Cause:**
Too much stress on back

Goal:
Prevent more damage

**Control:**
Unpredictable controllable

**Consequences:**
Wheelchair
Can’t do what I want to

Fear and distress an emotional response to a pain experience that doesn’t make sense

A **Common Sense Model** perspective can…

- Help physiotherapists **understand** the key beliefs driving behavior in people with musculoskeletal pain
- Inform **behaviour change** interventions

**Behaviour change intervention informed by the CSM**

1. **Understand** how this person represents their pain symptoms

## Identity:

Do you have a diagnosis for your pain?
Can you explain to me what this means?
Have you had any scans on your back?

## Timeline:

How long do you expect your pain will last?
How hopeful are you for the future?
What will it take to make your pain better?

## Cause:

Do you know what causes your pain?
How predictable is your pain?

## Control:

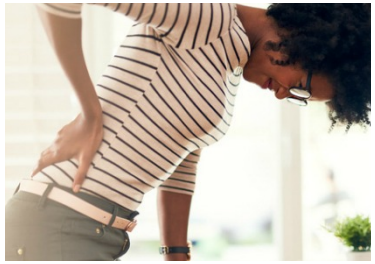
Can you prevent your pain from flaring up?
Can you control pain once it has flared up?

## Consequences:

What do you think the consequences of the pain/diagnosis are?

**Behaviour change intervention informed by the CSM**

1. **Understand** how this person represents their pain symptoms
2. Provide them with a biopsychosocial **explanation** for their pain that addresses 5 key belief dimensions



**Identity:**
Sensitisation of spinal structures

**Timeline:**
Gain control within realistic time frame

**Cause:**
Adopting provocative behaviours
Fear, stress
Disrupted sleep

**Control:**
Movement control
Body relaxation
Cognitive reframing

**Consequences:**
Pain and disability

**Behaviour change intervention informed by the CSM**

1. **Understand** how this person represents their pain symptoms
2. Provide them with a biopsychosocial **explanation** for their pain that addresses 5 key belief dimensions
3. **Exposure** techniques to provide opportunities for disconfirming old beliefs and adopting new beliefs

**Behaviour change intervention informed by the CSM**

1. **Understand** how this person represents their pain symptoms
2. Provide them with a biopsychosocial **explanation** for their pain that addresses 5 key belief dimensions
3. **Exposure** techniques to provide opportunities for disconfirming old beliefs and adopting new beliefs
4. Provide them with adaptive strategies to get **control** over symptoms

Control over pain experience

**Identity:**

Sensitisation of spinal structures

**Timeline:**

Gain control within realistic time frame

**Control:**

Movement control
Body relaxation
Cognitive reframing

**Cause:**

Adopting provocative behaviours
Fear, stress
Disrupted sleep

**Consequences:**

Pain and disability

Repeated over time, the experience of control over symptoms means the representation is deemed useful. The beliefs are confirmed and pain experience makes sense.

[ CLINICAL COMMENTARY ]

SAMANTHA BUNZLI, PT, PhD[1] • ANNE SMITH, PT, PhD[2] • ROBERT SCHÜTZE, MPsych (Clinical)[3]
IVAN LIN, PT, PhD[4] • PETER O'SULLIVAN, PT, PhD[2]

# Making Sense of Low Back Pain and Pain-Related Fear

| SEPTEMBER 2017 | VOLUME 47 | NUMBER 9 | JOURNAL OF ORTHOPAEDIC & SPORTS PHYSICAL THERAPY

- Avoidance behaviour can be a **common sense response** to a threatening pain experience
- Fear and distress can be responses to a pain experience that **doesn't make sense**
- Physios play a role in managing these emotional responses by **helping people to make sense** of their pain experience
- Common sense perspective can **reduce stigma** away from 'phobic' patient

[ CLINICAL COMMENTARY ]

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# Making Sense of Low Back Pain and Pain-Related Fear

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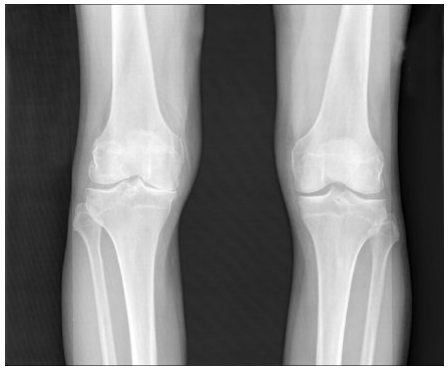
## Case study example:

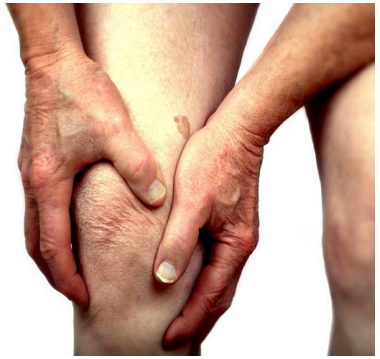
A patient with chronic low back pain: How they represented their pain pre and post Cognitive Functional Therapy Intervention

(O'Sullivan et al. 2018)

| | **Pre** CFT | **Post** CFT |
|---|---|---|
| **Identity** | “I have damage to two of the discs” | “The pain is tension in my body and my back not moving properly” |
| **Cause** | “It’s caused by degeneration, so my spine is deteriorating” | “I think pain causes tension and tension causes pain” I am continually hurting myself by not moving properly” |
| **Conseq-uence** | “When it hurts, I think I am doing more damage to my back. I think it is getting worse, crumbling, breaking down” | “I went from being terrified of hurting myself anytime I moved to realizing that moving was the very thing I needed to do" |
| **Control / curability** | “There is damage to the discs, but it seems it is impossible to fix damage” | “The first session (the physio) said we can fix this. There are people with back scans far worse than yours who have no pain issues. You need to learn how to move again’” |
| **Timeline** | “I am mentally preparing to be stuck with this for life” | “I think that it is possible that I can get to the point where there won’t be pain” |
| **Action** | “I would never bend over to pick something up. I try and brace myself or avoid doing things that aggravate it” | “When he got me to touch my toes on the first day, it wasn’t just that I had done it. I could have done it and made the pain worse. But my back wasn’t hurting. And I had done it on my own, without him” |
| **Coherency** | “I find all of this a very confusing experience” | “The single most important thing he said to me was, ‘Don’t be frightened of pain: it does not mean damage.’ And when I experienced it for myself, it changed my mindset instantly. It suddenly all made sense” |

# Knee osteoarthritis





- Best practice guidelines recommend non-surgical treatments for knee OA
- TKR for end-stage knee OA when non-surgical options exhausted.
- Number of TKRs increasing year on year
- Uptake of non-surgical treatments for knee OA is low.

(Victorian model of care for osteoarthritis. MOVE muscle, bone and joint health;2018)

(Hinman et al. 2015)

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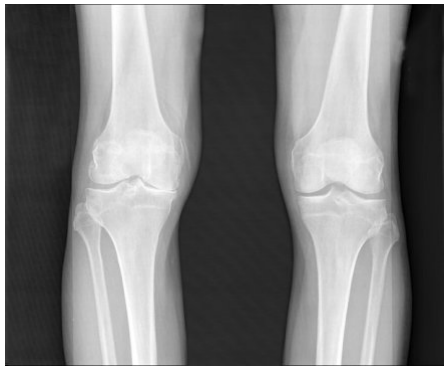

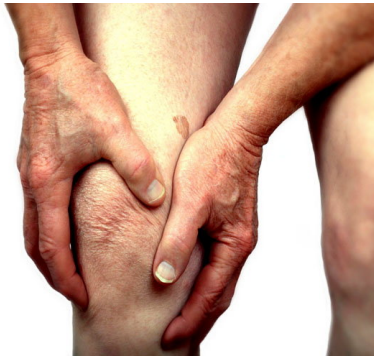

## In Australia:

| Table 1: Patients on the waiting list for TKR | | | |
|---|---|---|---|
| **Strongly Recommended** | **Current use** | **Stopped using** | **Never used** |
| Land based exercise | 43 (47%) | 20 (22%) | 28 (31%) |
| Aquatic exercise | 16 (18%) | 21 (23%) | 54 (59%) |
| Weight loss | 18 (20%) | 28 (30%) | 45 (50%) |

# Are illness perceptions a barrier to uptake of evidence based interventions for knee osteoarthritis? A qualitative study

Samantha Bunzli, Penny O'Brien, Darshini Ayton, Michelle Dowsey, Jane Gunn, Jo-Anne Manski-Nankervis

Under review

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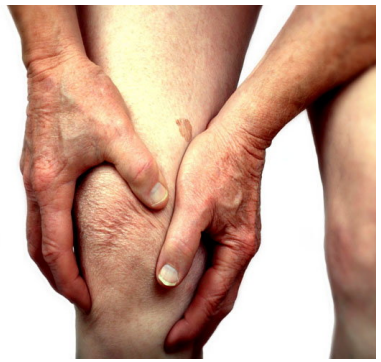
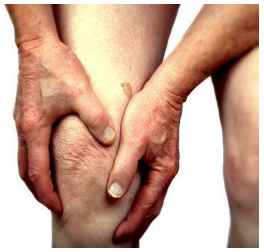


## Identity beliefs: Bone on bone

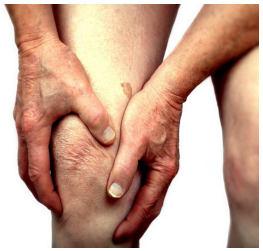
*"My knee joint is just an empty shell"*



*"It's two bald* ***bones rubbing*** *together"*

*"I can remember the exact moment that my knee became* ***bone on bone.*** *I was walking well one moment and the next moment – bang! You could actually feel it grinding"*

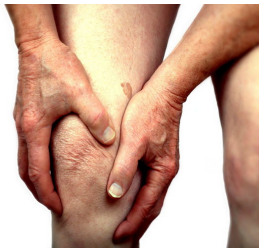
# Causal beliefs: Loading the knee



*"I used to have a fruit shop and I used to jump up and down off the truck. I don't think that all that* ***loading*** *did the joint any good. That probably started the arthritis at that stage"*

*"Putting on weight doesn't help your knees. Because the you've got to carry it around"*

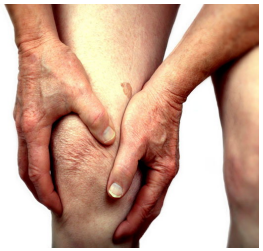
# Consequence beliefs: Collapse/damage



*"Sometimes if I turn the wrong way you'll hear this big crack. And then it's as if it* ***pops out*** *of its socket"*

*"I try not to put extra load through my knee, because there is no cartilage left and I don't want to* ***damage*** *the bone"*

# Timeline beliefs: Downward trajectory

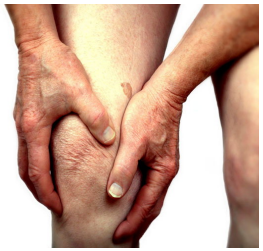


"*If I keep going the way I am going, it's just going to* ***get worse****. Because it will just rub, rub away.*"

"*The knee has already* ***past it's used by date***"

# Controllability beliefs: need to replace cartilage

*"A doctor said to me years ago 'once they're worn out, they're worn out, there's* ***nothing else you can do****"*



*"It's* ***too far gone*** *now, I can't do anything. Physiotherapy can't replace cartilage"*

*"A mechanical problem requires a mechanical fix"*

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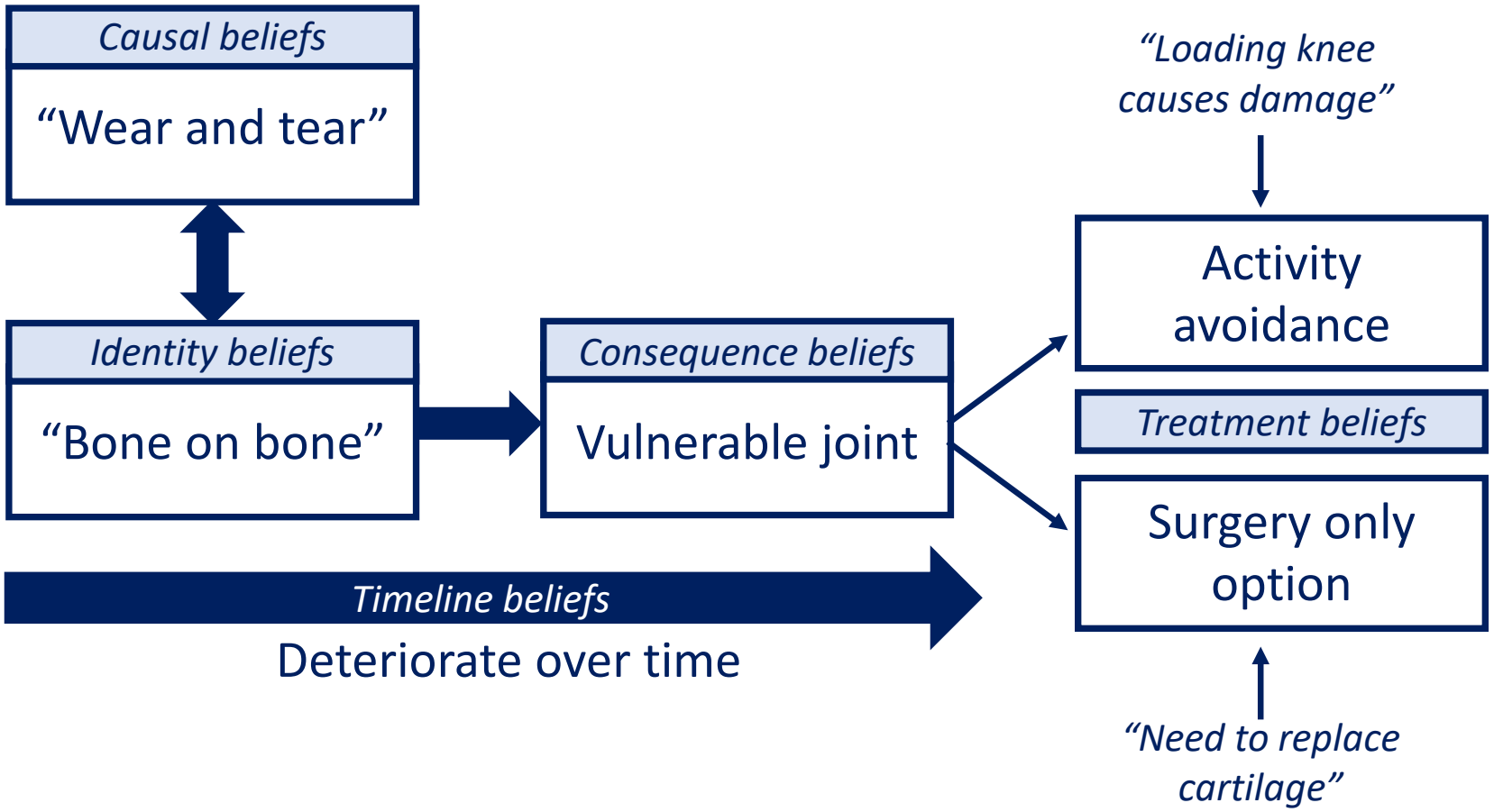


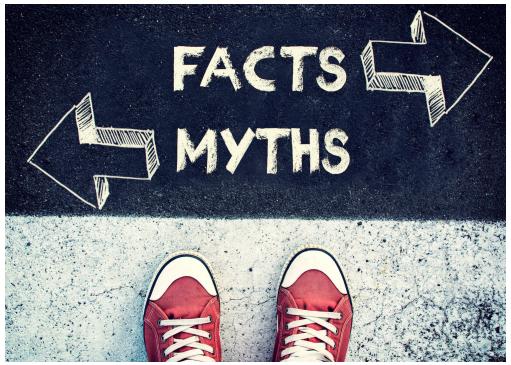

"Bone on bone" is a barrier to uptake of evidence based care

## Myth #1

Osteoarthritis only gets worse over time

## Myth #2

Impact through your knee damages your joint




## Myth #3

Physio can't replace cartilage, so there's no point

## Myth #4

A knee replacement is needed to cure my knee pain

## Fact #1

Multiple trajectories of osteoarthritis exist (Collins 2014)

## Fact #2

Loading exercise not harmful for articular cartilage (Bricca 2018)

## Fact #3

GLA:D® average pain reduction of 25% (Skou 2017)

## Fact #4

57% report some pain 12-months post TKR (Mannion 2009)

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