



Incorporating Positive Psychology into Musculoskeletal Pain Management

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Personal Disclosure

- Dr. Archer is an APTA board/committee member, Foundation for Physical Therapy board/committee member; PTJ editorial board member, and is a consultant for NeuroPoint Alliance, Pacira, and Palladian Health.
- Dr. Coronado has nothing to disclose.
- Dr. Ingman has nothing to disclose.

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Vanderbilt Institute for Clinical and Translational Research (VICTR)



Learning Objectives

- Understand the influence and interaction of negative and positive psychological factors on chronic musculoskeletal pain
- Differentiate psychological approaches used for promoting positive psychology
- Evaluate and be able to apply practical and evidence-based strategies for targeting positive psychology within orthopaedic physical therapy practice

Positive Psychological Factors in Musculoskeletal Pain

Rogelio A. Coronado, PT, PhD
Research Assistant Professor
Vanderbilt University Medical Center

Chronic Pain

- Chronic daily pain in U.S. affects > 40 million people
- ~26% (10.6 million people) report high-impact chronic pain
 - Headache/migraine, legs, low back, joints

Pitcher et al. 2018

Opioids

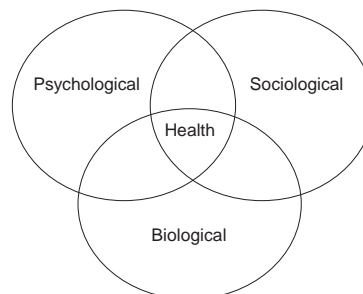
- Patients with chronic pain at-risk for prolonged opioid use
- Questionable utility of opioids for chronic pain when considering benefit-risk

Busse et al. 2018

**CDC Guideline for Prescribing Opioids for
 Chronic Pain — United States, 2016**

Guideline 1: *Nonpharmacologic therapy and nonopioid pharmacologic therapy are preferred for chronic pain.*

Biopsychosocial Model

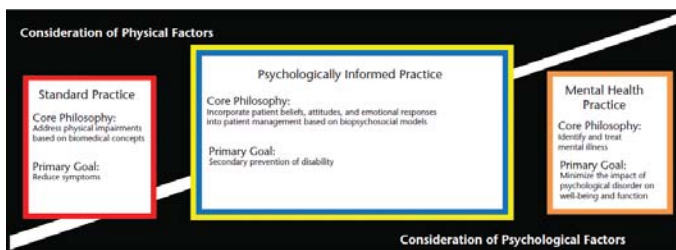


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Engel GL. Science. 1977.

Psychologically Informed Practice

Physical Therapy
 Volume 91 Number 5



Main and George. 2011.

“Fix What’s Wrong”

- Much like medicine and psychology, the historical focus of musculoskeletal PT has been on addressing the negative:
 - Symptoms
 - Dysfunction
 - Disease/disorder
 - Trauma
 - Distress
 - Pathoanatomy

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Good Reasons for Negative Focus

- Most urgent or salient
- Directly relates to suffering/relief
- Has lead to advancement in disease management
- Required for clinical documentation and payment

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Negative Psychological Factors

- Depression
- Anxiety
- Anger
- Negative affect
- Pain catastrophizing
- Fear of movement
- Activity avoidance



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Symptoms of Depression and Risk of New Episodes of Low Back Pain: A Systematic Review and Meta-Analysis

MAREN GUSTA Influence of Catastrophizing on Treatment Outcome in Patients With Nonspecific Low Back Pain

NA,² HIRA¹

A Systematic

Maria M. Wer
Johann Steure



The Spine Journal 14 (2004) 2659–2678



Clinical Study

Fear-avoidance beliefs—a moderator of treatment efficacy in patients with low back pain: a systematic review

Maria M. Werlt, MD^{a,b,c}, Eva Rasmussen-Barr, RPT, PhD^{d,e}, Ulrike Held, PhD^f, Sherri Weiser, PhD^g, Lucas M. Bachmann, MD, PhD^g, Florian Brunner, MD, PhD^h

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Psychological Screening

- Measures highlighted in Low Back Pain Clinical Practice Guidelines, include:
 - PHQ-2 (depression)
 - FABQ (fear-avoidance beliefs)
 - PCS (pain catastrophizing)
 - Orebro (psychological distress)
 - STarT Back (psychological distress)

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Delitto et al. 2012

Targeted Management Strategies

- Graded Exposure – *fear of movement*
- Pain Neuroscience Education – *fear-avoidance, pain catastrophizing, negative affect*
- Traditional Cognitive-Behavioral Strategies – *maladaptive thoughts and beliefs*

Why consider positive psychological factors?

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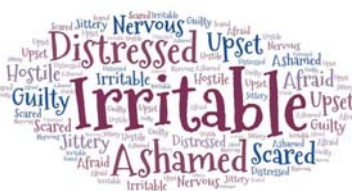
Point # 1



Positive Affect

Negative Affect

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Point # 1



Positive Affect

Negative Affect

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The scale consists of a number of words that describe different feelings and emotions. Read each item and then mark the appropriate answer in the space next to that word. Indicate to what extent you generally feel this way; that is, how you feel on average. Use the following scale to record your answers.

1	2	3	4	5
Very slightly or not at all	A little	Moderately	Quite a bit	Extremely
_____	_____	_____	_____	_____
Interested	_____	Irritable	_____	_____
Distressed	_____	Alert	_____	_____
Excited	_____	Ashamed	_____	_____
Upset	_____	Inspired	_____	_____
Strong	_____	Nervous	_____	_____
Guilty	_____	Determined	_____	_____
Scared	_____	Assertive	_____	_____
Hostile	_____	Jittery	_____	_____
Enthusiastic	_____	Active	_____	_____
Proud	_____	Afraid	_____	_____

Watson et al. 1988

Point # 1

Positive Affect

Negative Affect

Goodness of fit statistics for CFA models of the original PANAS

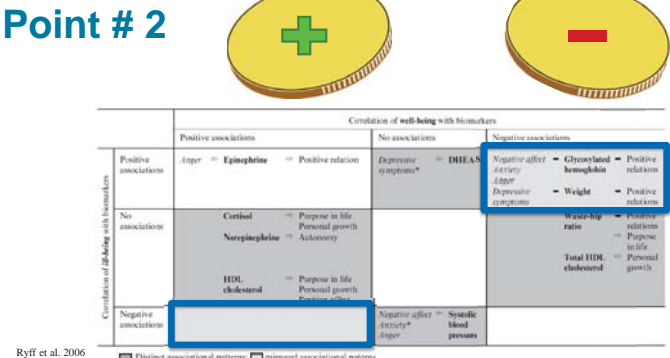
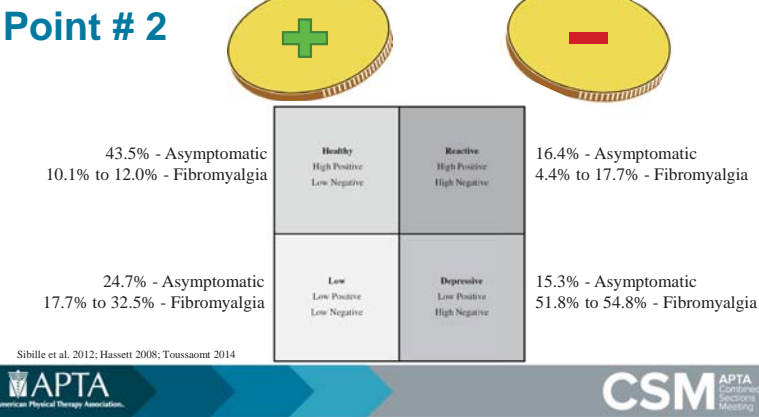
Model	S-B χ^2	χ^2	df	CFI	RMSEA	SRMR	Reference Model #	AS-B χ^2	Δ df	Δp
1a One-factor	406.4	404.0	120	.55	.10					
1b One-factor, correlated uniqueness	268.4	265.9	119	.75	.07					
1c One-factor, significantly correlated uniqueness only	239.4	234.6	116	.85	.05					
2a Two uncorrelated factors	344.1	303.4	170	.88	.07	.10				
2b Two uncorrelated factors, significantly correlated uniqueness only	280.2	411.8	165	.92	.05	.10				
3a Two correlated factors	335.9	490.7	169	.89	.06	.07				
3b Two correlated factors, significantly correlated uniqueness only	271.1	397.2	164	.93	.05	.07	2b	6.6	1	.01
4a Three correlated factors	289.1	423.0	167	.92	.06	.07				
4b Three correlated factors, significantly correlated uniqueness only	248.9	367.7	162	.94	.05	.06	3b	61.4	2	<.001

Merz et al. 2013

APTA

CSM

APTA Combined Sections Meeting



Final Point

- Psychological-based approaches largely focused on addressing negative factors have modest effect sizes and are not beneficial for everyone

Hofmann et al. 2012; Morley et al. 2013

A New Science of Human Strengths

- 1998 APA President's Address by Martin Seligman, PhD



Seligman, American Psychologist, 1999

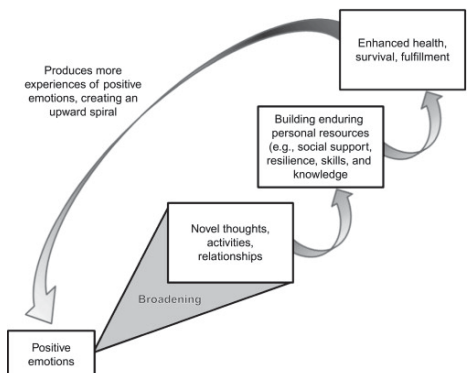


<https://positivepsychologyprogram.com/perma-model/>

“Build What’s Strong”

- Positive psychology is devoted to the study of positive individual attributes and strengths, well-being, and optimal functioning
- Shift from disease prevention → health promotion
- Shift from pathology/dysfunction → optimal functioning

Duckworth, Steen, and Seligman et al. 2006; Kobau et al. 2011



Fredrickson 2013

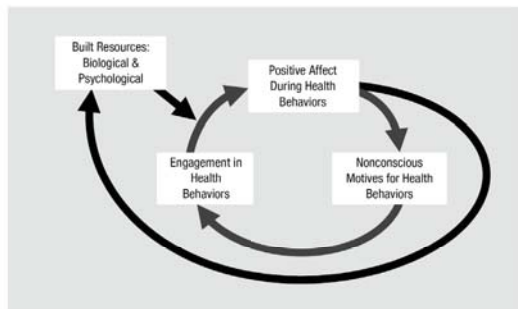
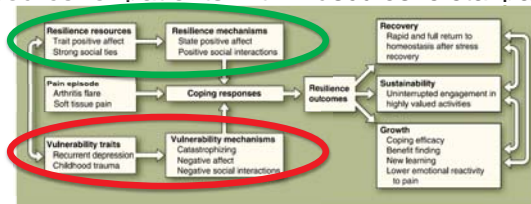


Fig. 1. Model articulated by the upward spiral theory of lifestyle change (Fredrickson, 2013; Van Cappellen et al., 2017).

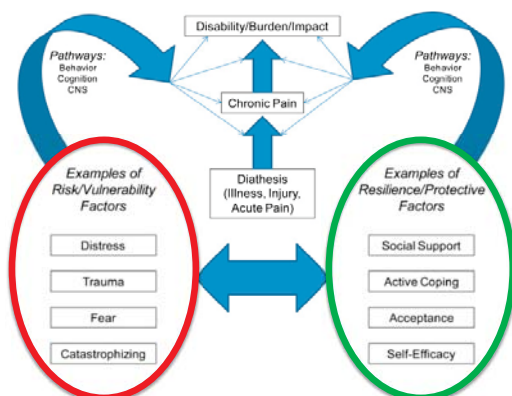
Fredrickson and Joiner 2018

Positive Psychology and Pain

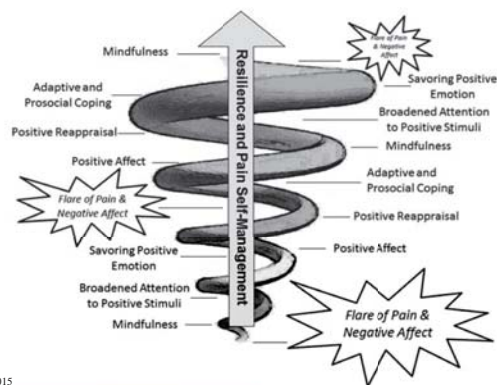
- Positive psychological factors can be a *protective* resource for patients with musculoskeletal pain



Sturgeon and Zautra 2010

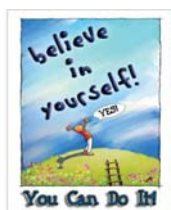


Edwards et al. 2016



Finan and Garland 2015

Positive Psychological Factors



- Self-efficacy
- Positive affect
- Optimism
- Resilience

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Bandura 1977

Self-Efficacy

- Expectations that one can execute a behavior required to produce an outcome
- Confidence and belief in one's capabilities

Pain Self-Efficacy Questionnaire

- PSEQ is a 10-item measure
- Sum of 10 items
- Higher scores reflect greater self-efficacy

Please rate how confident you are that you can do the following things at present, despite the pain. To indicate your answer circle one of the numbers on the scale under each item, where 0 = not at all confident and 6 = completely confident.

For example:

Not at all Confident 0 1 2 3 4 5 6 Completely confident

Remember, this questionnaire is not asking whether or not you have been doing these things, but rather how confident you are that you can do them at present, despite the pain.

1. I can enjoy things, despite the pain.

Not at all Confident 0 1 2 3 4 5 6 Completely confident

2. I can do most of the household chores (e.g., getting up, washing dishes, etc.) despite the pain.

Not at all Confident 0 1 2 3 4 5 6 Completely confident

3. I can socialize with my friends or family members as often as I used to do, despite the pain.

Not at all Confident 0 1 2 3 4 5 6 Completely confident

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Self-Efficacy and Musculoskeletal Pain

TABLE 7. Results From Multivariable Logistic Regression Analyses for Pain Intensity, Pain Interference, and Satisfaction With Pain Treatment (N = 233)

Risk Factor	Pain Intensity, OR (95% CI)	Pain Interference, OR (95% CI)	Satisfaction, OR (95% CI)
Age in yr	—	0.93 (0.86–1.02)	—
Male vs. female	—	0.16 (0.02–1.8)	—
>High school education vs. <High school	0.05 (0.003–0.73)	—	—
Pain intensity at hospital discharge	—	—	0.08 (0.007–0.83)*
Self-efficacy for pain management	0.87 (0.78–0.98)*	0.91 (0.82–1.01) [†]	1.04 (0.99–1.09) [†]
Depression	1.5 (1.3 [†] –2.1) [*]	1.9 (1.01–3.5) [*]	0.89 (0.75–1.1)
Posttraumatic stress disorder	0.99 (0.89–1.1)	0.96 (0.87–1.1)	1.0 (0.94–1.1)

* $p < 0.05$.

[†] $p < 0.10$.

Multivariable regression models included a random effect to account for clustering of visits by patient (i.e., repeat hospitalizations).

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Archer et al. 2012

Self-Efficacy and Musculoskeletal Pain

Identifying the independent baseline psychological constructs¹ related to RMDQ² score at 6 months: multivariate linear regression models.

	Regression coefficient (95% CI)	Standardized β coefficient (95% CI)
Initial multivariate model - all 11 univariately significant constructs (n = 724)		
Initial multivariate model	$R^2 = 55.8$	
Adj $R^2 = 54.5$		
IPQ-R		
Consequences	0.06 (-0.03, 0.16)	0.06
Functional representations	-0.004 (-0.09, 0.08)	-0.003
Personal control	-0.17 (-0.27, -0.08)	-0.11
Treatment control	0.05 (-0.07, 0.18)	0.03
Timeline - acute/chronic	0.21 (0.14, 0.28)	0.20
Identity	0.17 (0.09, 0.34)	0.06
Immunity attribution	0.10 (-0.07, 0.27)	0.03
Pain self-efficacy	-0.84 (-0.88, -0.81)	-0.35
Disability catastrophizing	-0.84 (-0.92, -0.76)	-0.35
Reduced multivariate model - all 4 constructs still significant in multivariate model (n = 701)		
Reduced multivariate model	$R^2 = 56.8$	
Adj $R^2 = 55.9$		
IPQ-R		
Personal control	-0.16 (-0.24, -0.07)	-0.10
Timeline - acute/chronic	0.21 (0.15, 0.27)	0.20
Identity	0.19 (0.10, 0.28)	0.06
Pain self-efficacy	-0.85 (-0.89, -0.82)	-0.35

¹ Psychological constructs with regression coefficients significant at $p < 0.01$ are in bold.
² Scores for each of the psychological constructs are subject to missing data and hence the models are fitted in different numbers of responders.
³ Roland Morris Disability Questionnaire.

Foster et al. 2010

Self-Efficacy and Chronic Pain Outcomes: A Meta-Analytic Review

Todd Jackson,^{1,2} Yalei Wang,¹ Yang Wang,¹ and Huiyong Fan¹

Abstract: A meta-analysis was performed to evaluate overall strengths of relation between self-efficacy (SE) and functioning (pain severity, functional impairment, affective distress) in chronic pain samples, as well as potential moderating effects of sociodemographic characteristics and methodologic factors on these associations. In sum, 86 samples (N = 15,616) fulfilled selection criteria for analysis. SE had negative overall correlations with impairment, affective distress, and pain severity although considerable heterogeneity was observed for all effect sizes. Age, pain duration, SE scale content (SE for functioning despite pain vs SE for pain control vs SE for managing other symptoms such as emotional distress) and type of impairment measure (self-report vs task performance) had significant moderating effects on SE-impairment associations. SE-affective distress relations were moderated by employment status and SE scale content. Finally, moderator analyses of studies having longitudinal designs indicated associations between baseline SE, and each outcome at follow-up remained significant in prospective studies that had statistically controlled for effects of baseline responses on that outcome. Hence, SE is a robust correlate of key outcome related to chronic pain and a potentially important risk/protective factor that has implications for subsequent functioning in affected groups.

Perspective: Meta-analysis indicated that SE has significant overall associations with impairment, affective distress, and pain severity within chronic pain samples and identified several factors that contribute to variability in effect sizes. Findings highlighted SE as a robust correlate and potentially important risk/protective factor for subsequent adjustment in affected groups.

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Positive Affect

- Positive feelings or attitude
- Can be a state and trait characteristic
- Linked to positive social interactions and behaviors

Positive and Negative Affect Schedule

- PANAS is a 20-item measure

The scale consists of a number of words that describe different feelings and emotions. Read each item and then mark the appropriate answer in the space next to that word. Indicate to what extent you generally feel this way; that is, how you feel on average. Use the following scale to record your answers.

1	2	3	4	5
Very slightly or not at all	A little	Moderately	Quite a bit	Extremely
_____	_____	_____	_____	_____
Interested				Irritable
_____	_____	_____	_____	_____
Distressed				Alert
_____	_____	_____	_____	_____
Excited				Ashamed
_____	_____	_____	_____	_____
Upset				Inspired
_____	_____	_____	_____	_____
Strong				Nervous
_____	_____	_____	_____	_____
Guilty				Determined
_____	_____	_____	_____	_____
Scared				Attentive
_____	_____	_____	_____	_____
Hostile				Irritable
_____	_____	_____	_____	_____
Enthusiastic				Active
_____	_____	_____	_____	_____
Proud				Afraid

Watson et al. 1988

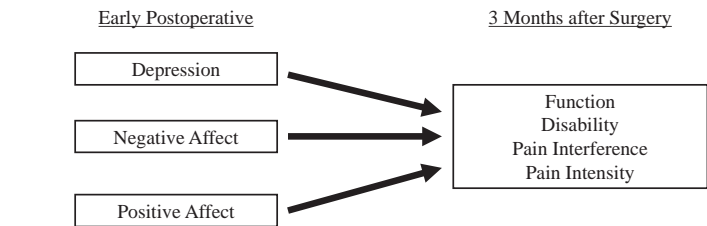
When It Hurts, a Positive Attitude May Help: Association of Positive Affect With Daily Walking in Knee Osteoarthritis. Results From a Multicenter Longitudinal Cohort Study

DANIEL K. WHITE,¹ JULIE J. KEYSOR,¹ TUHINA NEOGLI,¹ DAVID T. FELSON,² MICHAEL LAVALLEY,³ K. DOUG GROSS,² JINGBO NIU,¹ MICHAEL NEVITT,² CORA E. LEVINS,² JIM TORNER,² AND LISA FREDMAN¹

Results. Compared to respondents with low positive affect (27% of all respondents), those with high positive affect (63%) walked a similar number of steps per day, while those with depressive symptoms (10%) walked less (adjusted β -32.6 [95% confidence interval (95% CI) -458.9, 393.8] and -579.1 [95% CI -1,274.9, 116.7], respectively). There was a statistically significant interaction of positive affect by knee pain ($P = 0.0045$). Among the respondents with knee pain (39%), those with high positive affect walked significantly more steps per day (adjusted β 711.0 [95% CI 55.1, 1,366.9]) than those with low positive affect.

Conclusion. High positive affect was associated with more daily walking among adults with painful knee OA. Positive affect may be an important psychological factor to consider for promoting physical activity among people with painful knee OA.

Positive Affect and Musculoskeletal Pain



Seebach et al. 2012

Positive Affect and Musculoskeletal Pain

Multivariable mixed-model linear regression analyses for 6-week postoperative depression and 3-month postoperative outcomes (N = 128).

	Pain intensity β (95% CI)	Pain interference β (95% CI)	Disability β (95% CI)	Functional status β (95% CI)
Depression	0.14 (0.07 to 0.21) [*]	0.21 (0.11 to 0.31) [*]	1.8 (1.2 to 2.3) [*]	0.09 (-0.35 to 0.53)

Multivariable mixed-model linear regression analyses for 6-week postoperative positive and negative affect and 3-month postoperative outcomes (N = 128).

	Pain intensity β (95% CI)	Pain interference β (95% CI)	Disability β (95% CI)	Functional status β (95% CI)
Positive affect	-0.02 (-0.04 to 0.09)	-0.01 (-0.04 to 0.06)	-0.08 (-0.91 to 0.24)	0.52 (0.07 to 0.97) [*]
Negative affect	0.04 (-0.03 to 0.12)	0.10 (0.04 to 0.16) [*]	0.71 (0.26 to 1.2) [*]	-0.28 (-0.19 to 0.08)

Results suggest that positive affect and depression are important variables to target when seeking to improve postoperative outcomes in a spine surgery population. Recommendations include screening for positive affect and depression, and treating depression as well as focusing on rehabilitation strategies to bolster positive affect...."

Seebach et al. 2012

Optimism

- Generalized expectation of a good outcome
- Optimists are likely to engage in approach (vs. avoidance) oriented coping

Life Orientation Test - Revised

- LOT-R is a 10-item measure
- Sum of items 1, 3*, 4, 7*, 9*, 10 *reverse code
- Higher scores reflect higher optimism

Please answer the following questions about yourself by indicating the extent of your agreement using the following scale:

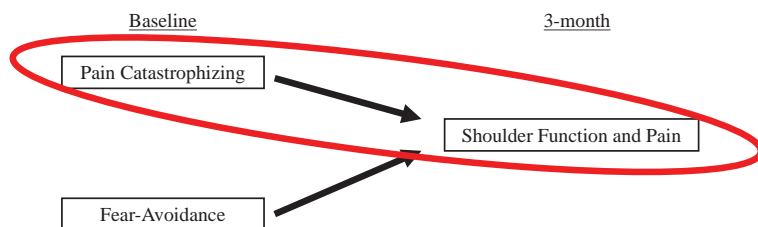
[0] = strongly disagree
[1] = disagree
[2] = neutral
[3] = agree
[4] = strongly agree

Be as honest as you can throughout, and try not to let your responses to one question influence your response to other questions. There are no right or wrong answers.

1. In uncertain times, I usually expect the best.
2. It's easy for me to relax.
3. If something can go wrong with me, it will.
4. I'm always optimistic about my future.
5. I enjoy my friends a lot.
6. It's important for me to keep busy.
7. I hardly ever expect things to go my way.
8. I don't get upset too easily.
9. I rarely count on good things happening to me.
10. Overall, I expect more good things to happen to me than bad.

Scheier et al. 1994

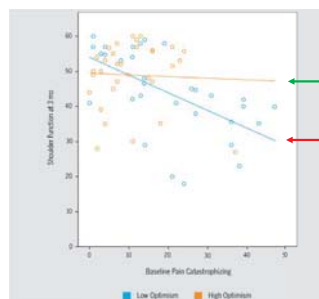
Optimism and Musculoskeletal Pain



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Coronado et al. 2017

Optimism and Musculoskeletal Pain

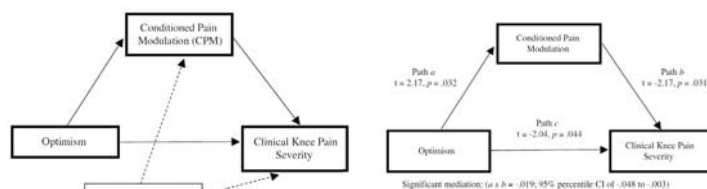


Participants with high optimism: no relationship between baseline pain catastrophizing and 3-month shoulder function

Participants with low optimism: baseline pain catastrophizing influences 3-month shoulder function

Coronado et al. 2017

Optimism and Musculoskeletal Pain



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Thompson et al. 2018

FIGURE 1. Mediation model representing the indirect association of optimism with clinical knee pain severity through conditioned pain modulation.

Resilience

- Ability to bounce back from negative event
- “Flourishing in the face of adversity”
- Resilient individuals handle adversity through up-regulation of positive emotions

Resilience Measures

- Connor-Davidson Resilience Scale
- Resilience Scale for Adults
- Brief Resilience Scale
- Pain Resilience Scale

Windle et al. 2011; Slepian et al. 2016

Brief Resilience Scale

- BRS is a 6-item measure
- Average of 6 items
- Higher scores reflect greater resilience

Please indicate the extent to which you agree with each of the following statements by using the following scale:

[1] = strongly disagree
[2] = disagree
[3] = neutral
[4] = agree
[5] = strongly agree

- _____ 1. I tend to bounce back quickly after hard times.
_____ 2. I have a hard time making it through stressful events.
_____ 3. It does not take me long to recover from a stressful event.
_____ 4. It is hard for me to snap back when something bad happens.
_____ 5. I usually come through difficult times with little trouble.
_____ 6. I tend to take a long time to get over set-backs in my life.

Smith et al. 2008

Resilience and Musculoskeletal Pain



Aim: Examine psychological correlates of widespread pain sensitivity

Coronado and George. 2018

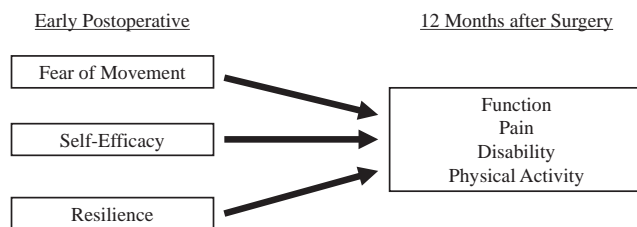
Unadjusted and adjusted odds ratios (OR) for self-report measures and the association with widespread pain sensitivity.

Measure	Unadjusted OR (95% CI)	Adjusted OR* (95% CI)
Pain Sensitization – Self-Report		
Central sensitization (CSI)	1.01 (0.97; 1.05)	1.00 (0.97; 1.05)
Pain sensitivity (PSQ, total)	1.21 (0.92; 1.59)	1.17 (0.87; 1.57)
Pain sensitivity (PSQ, minor)	1.15 (0.89; 1.50)	1.09 (0.82; 1.46)
Pain sensitivity (PSQ, major)	1.15 (0.89; 1.50)	1.09 (0.82; 1.46)
Resilience (BRS)	0.34 (0.16; 0.75)	0.41 (0.18; 0.94)
Psychological – Negative		
Depression (DASS-21)	1.03 (0.96; 1.09)	1.02 (0.95; 1.10)
Anxiety (DASS-21)	1.01 (0.92; 1.10)	1.00 (0.91; 1.11)
Stress (DASS-21)	1.02 (0.96; 1.08)	1.01 (0.95; 1.08)
Negative affect (PANAS)	1.03 (0.97; 1.10)	1.01 (0.94; 1.08)

Abbreviations: BRS = Brief Resilience Scale; CSI = Central Sensitization Inventory; DASS-21 = Depression Anxiety Stress Scale; PANAS = Positive and Negative Affect Schedule; PSQ = Pain Sensitivity Questionnaire.

* Adjusted for age, sex, and education.

Resilience and Musculoskeletal Pain



Coronado et al. Manuscript in progress

Resilience and Musculoskeletal Pain

Higher levels of *resilience* and *self-efficacy* were associated with higher physical function and lower disability and pain at 12 months

Higher *resilience* was associated with greater physical activity at 12 months

	beta [95% CI]	Semi-partial r	p-value
Physical Function: PROMIS			
Resilience: BRS	2.42 [0.98; 3.86]	0.19	0.001
Self-efficacy: PSEQ	0.12 [0.04; 0.19]	0.17	0.002
Fear of movement: TSK	-0.14 [-0.30; 0.02]	-0.10	0.08
Pain Interference: PROMIS			
Resilience: BRS	-2.22 [-3.79; -0.64]	-0.18	0.006
Self-efficacy: PSEQ	-0.11 [-0.20; -0.02]	-0.14	0.01
Fear of movement: TSK	0.08 [-0.11; 0.27]	0.05	0.41
Disability: ODI			
Resilience: BRS	-3.89 [-6.80; -0.99]	-0.14	0.009
Self-efficacy: PSEQ	-0.25 [-0.41; -0.08]	-0.15	0.003
Fear of movement: TSK	0.17 [-0.15; 0.49]	0.06	0.30
Back Pain Intensity: NRS			
Resilience: BRS	-0.53 [-0.96; -0.10]	-0.14	0.02
Self-efficacy: PSEQ	-0.02 [-0.05; 0.00]	-0.12	0.03
Fear of movement: TSK	0.05 [0.00; 0.10]	0.12	0.03
Physical Activity: Activity Counts			
Resilience: BRS	36.70 [8.53; 64.87]	0.12	0.01
Self-efficacy: PSEQ	0.19 [-1.19; 1.57]	0.01	0.79
Fear of movement: TSK	0.36 [-2.59; 3.36]	0.01	0.80

Coronado et al. Manuscript in progress

Take Home Message #1

- Positive factors like self-efficacy, positive affect, optimism, and resilience are important determinants of musculoskeletal pain outcomes

Next Steps

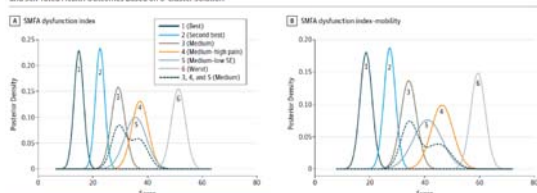
- Multidimensional screening tools that examine both positive and negative psychological factors for estimating prognosis or guiding treatment

Association Between 6-Week Postdischarge Risk Classification and 12-Month Outcomes After Orthopedic Trauma

Renan C. Castillo, PhD, MS; Yanjie Huang, ScD; Daniel Scharfstein, ScD; Katherine Frey, PhD, MS, MPH; Michael J. Bosse, MD; Andrew N. Pollak, MD; Heather A. Vallier, MD; Kristin R. Archer, PhD, DPT; Robert A. Hynes, MD; Anna B. Newcomb, PhD, MSW; Ellen J. Mackenzie, PhD; Stephen Wegener, PhD, and the Major Extremity Trauma Research Consortium (METRC)

MAIN OUTCOMES AND MEASURES At 6 weeks after discharge, patients completed standardized measures for 5 risk factors (pain intensity, depression, posttraumatic stress disorder, alcohol abuse, and tobacco use) and 4 protective factors (resilience, social support, self-efficacy for return to usual activity, and self-efficacy for managing the financial demands of recovery). Latent class analysis was used to classify participants into clusters, which were evaluated against measures of function, depression, posttraumatic stress disorder, and self-rated health collected at 12 months.

Figure. Posterior Distribution of 12-Month Short Musculoskeletal Function Assessment (SMFA) and Self-rated Health Outcomes Based on 6-Cluster Solution



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CONCLUSIONS AND RELEVANCE This study demonstrates that during early recovery, patients with orthopedic trauma can be classified into risk and protective clusters that account for a substantial amount of the variance in 12-month functional and health outcomes. Early screening and classification may allow a personalized approach to postsurgical care that conserves resources and targets appropriate levels of care to more patients.

Take Home Message #2

- Interventions aimed at boosting positive psychological attributes may be beneficial within a comprehensive and/or personalized pain management approach

Thank you!



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Health Coaching in Physical Therapy Practice using Motivational Interviewing Skills

Mary Sue Ingman PT, DSc, CHWC
Associate Professor
St. Catherine University

Health and Wellness Coaching

- “Health and Wellness Coaches **partner with clients** seeking self-directed, lasting changes, aligned with their values, which promote health and wellness and, thereby, **enhance well-being**.”
- In the course of their work health and wellness **coaches display unconditional positive regard** for their clients and a **belief in their capacity for change**, and honoring that **each client is an expert** on his or her life, while ensuring that **all interactions are respectful and non-judgmental**” International Consortium for Health and Wellness Coaching

PT/PTA’s Role in Health Coaching

- “Physical therapists can effectively counsel patients with respect to lifestyle behavior change, at least in the short term. They can be effective health counselors individually or within an interprofessional team” Frerichs et al A systematic review and implications. *Physiother Theory Pract.* 2012
- **Integrate** into clinical practice
 - PTs coaching pts with RA to increase physical activity Nessen et al *PTJ* 2014
 - Integrated into practice with veterans. Collins et al *Global Advances in Health and Medicine* 2018
 - Lots of examples cited in *PT in Motion* April 2012
 - Others cited in this presentation
- **Post discharge** – Wellness model; private pay
- **Employer offering** – There is a need for smaller employers

Expert vs Coach Approach Frates et al 2011

EXPERT APPROACH	COACH APPROACH
Treats patients	Helps patients help themselves
Educates	Builds motivation, confidence, and engagement
Relies on skills and knowledge of expert	Relies on patient self-awareness and insights
Strives to have all the answers	Strives to help patients find their own answers
Focuses on the problem	Focuses on what is working well
Advises	Collaborates

A PT with a Coaching mindset and “way of being”

- Adding communication tools
- To enhance your therapeutic dialogue with your patients

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Coaching is Grounded in Behavioral Change Theories and Communication Techniques ie MI

- Self-Determination Theory (SDT): three psychological needs should be met to build self-determination
 - autonomy, competence, relatedness
 - These are the end goals of a coaching approach
- Social Cognitive Theory (SCT): human behavior is determined by three factors
 - Self Efficacy

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Coaching is Grounded in Behavioral Change Theories and Communication Techniques ie MI

- Transtheoretical model of change (TTM): five stages of change
 - precontemplation, contemplation, preparation, action, maintenance
- Appreciative Inquiry (AI): approach for motivating change; focuses on exploring and amplifying the best in a person or situation

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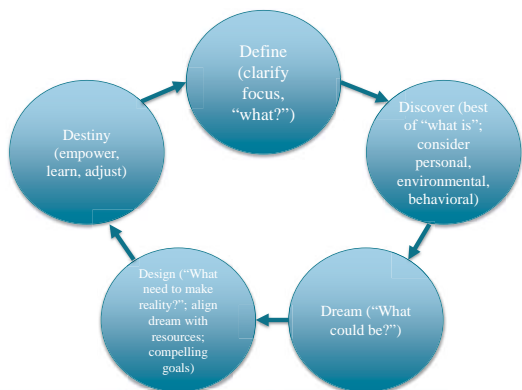


Appreciative Inquiry (AI)

- Focuses on exploring and amplifying the best in a person or situation
- Do not focus on weaknesses, barriers, problems to fix
- Clients encouraged to acknowledge strengths and imagine possibilities
- Fosters positive change talk

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Motivational Interviewing

Rollnick and Miller (2008)

Motivational Interviewing/Conversation The What

- A **Guiding** style of assisting a person in changing a behavior vs a **Directive** style
- Purpose is to active one's own motivation for and commitment to change
- A model for discovering motivation and building self-efficacy

Expert and Coach

EXPERT	COACH
Direct	Guide
Prescribe	Empower
Educate	Listen for their wisdom and reflect it back to them

Motivational Interviewing/Conversation

The What

- Listen for and support “Change Talk” vs “Resistance Talk”

Motivational Interviewing/Conversation

The How

- Open ended question
- Affirmations
- Reflective Listening
- Summary statements



Open Ended Questions

- Evokes motivation
- MI principles suggest using at least 50% of time – Who, What, How, When, Where, Why (with caution)
- Examples
 - What was the best experience with your HEP this week?
 - What will your life be like in 1 year if you make this change?
 - What previous successes have you had in making a difficult change?

Affirm

- A statement that recognizes and acknowledges the good
- It can help to build and maintain rapport
- Examples
 - “You clearly have the determination”
 - “Your intentions were good even though you had set backs in reaching your goal”



Reflective Listening

- Your best guess at what the person is saying
- It allows you to state your interpretation of what they said and to get confirmation in order to avoid assumptions
- State as a statement vs a question
- Ask yourself if you are listening or waiting to talk
- WAIT –Why Am I Talking

Summarize

- Pull together what you have heard so far
- Do it often



Motivational Interviewing/Conversation The How

- On a scale of 0-10; with 0 as *not at all important* and 10 as *extremely important*, how important would you say it is for you to _____?”
- “Why are you at a _____ and not a 0?”
- “On a scale of 0-10; where 0 is *not at all confident* and 10 is *certain*, how confident are you that you could _____ if you decided?”
- “Why are you at a _____ and not a 0?”

Instead of doing this	Try this
Explaining WHY pt. should change	Listen with goal of understanding the dilemma. GIVE NO ADVICE until asked
Describing specific benefits of changing	Ask :What might be the benefits to you of changing?
Telling them HOW to change	Ask: How might you do this so it fits into your life?
Emphasizing how important it is to change	Ask: How would your life be different if you changed?
Telling or inspiring pt. to change	Ask: How can this change help you realize your values?

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Instead of asking	Try this
Do you like to exercise?	What do you enjoy most about exercise?
When did you exercise last?	What is the best experience that you have had with exercise in the past week?
Do you think your health is at risk if you don't lose weight?	What will your life look like in 5 years if you don't lose weight?
Are you getting enough sleep?	How would your life be different if you were to get 8 hours of sleep every night?
Do you want to quit smoking?	What are the good things about smoking? What are the not so good things about smoking?

What are the most important ingredients in ANY conversation about changing or adhering to something?

- Empathy
- Genuine curiosity
- Listen for and support Change Talk
- Roll with resistance
- Respect patient's autonomy

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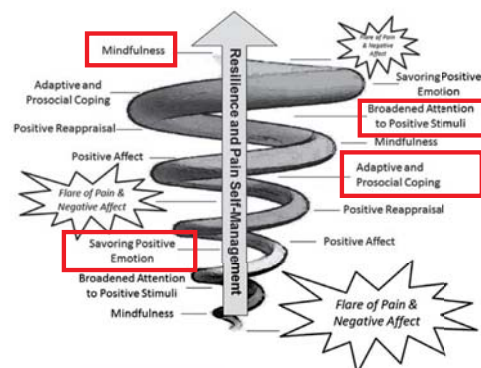
Psychosocial Strategies for Promoting Positive Psychology in the Clinic

Kristin Archer, PhD, DPT
Associate Professor and Vice Chair of Research
Vanderbilt University Medical Center

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Learning Objectives

- Evaluate and be able to apply practical and evidence-based strategies for targeting positive psychology within orthopaedic physical therapy practice



Finan and Garland 2015

Mindfulness

- Bring one's attention to moment-to-moment experiences – promote well-being
 - *Present-mindedness*
- Acceptance without judgement
 - Thoughts and feelings

Hardison and Roll. Am J Occup Ther. 2016

Mindfulness Meditation: Overview

Mindfulness practices differ, most include 3 tenets:

Observing the present moment by attending to the objective qualities

Maintaining one's attention to a single focus (breath, feeling, movement) without judgment

Remaining open to what arises in that moment

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Kabat-Zinn 1982, Reiner 2013

Mindfulness Meditation Strategies

- Mindful breathing
- Visualization
- Body scan
- Intention for the day
- Mindful exercise/activities

Mindfulness Meditation Strategies

- **Mindful Breathing** (start 5 minutes)
 - Attention on breath
 - Count with breath
 - Accept thoughts and feelings
 - Thoughts wander – bring yourself back to breathing

Practice: Now close your eyes if you are comfortable doing so. Take a deep breath in through your nose slowly for a count of three and bring air down to your waist as your hands rise. 1.....2.....3.....Then exhale from your mouth, with a sigh of relief, and feel your hands fall. 1.....2.....3.....4.....Notice if your

Mindful Breathing

Concentration phase

Stage 1: 10-minute breath counting (week 1)

Sitting on a chair, or on the floor, in a quiet room with a straight back, arms relaxed on the lap and eyes and mouth closed, breath normally in through the nose and then count 'one' on the out-breath. When 'ten' is reached return to 'one'. If at any point during this 10-min period, the concentration of counting is lost due to a distracting thought or feeling then return to 'one' and start again.

Stage 2: Breath concentration (week 2)

Sitting in the same posture in the same environment focus attention on breath and instead of counting notice which nostril it is entering and the sensation the breath causes at the area inside the nostrils, e.g. warm, cool, ticklish, annoying, painful or even nothing at all. If a thought or feeling distracts this attention gently focus the attention back to the breath.

Stage 3: 20-minute sensation concentration/awareness (week 3)

In the same posture and the same environment, focus attention to the area just below the tip of the nose and become attentive/aware of the sensation here along with any sensation brought about by the flow of the breath. If a thought or feeling distracts this attention/awareness gently focus the attention/awareness back to the sensation.

Awareness phase

Stage 4: Patchwork surface sensation awareness (week 4)

In the same posture and the same environment, take the awareness to one cheek, then the other cheek, then the chin, then the neck and so on, patch by patch, until all of the body has been covered. If a thought or feeling distracts from this awareness then gently allow the awareness to come back to the sensation patch that was last reached.

Mindfulness Meditation Strategies

- **Visualization**
 - Imagine a scene and “step into” that feeling/ experience (sounds, movement, scent in air)
 - Relax and breathe
 - Close your eyes and create a vivid image
 - Maintain a positive attitude
 - Have realistic expectations
 - Use all senses to make image as real as possible

Mindfulness Meditation Strategies

- **Body Scan**

- Bring attention to parts of body and sensations
 - Beginning at toes, any tension in your feet
 - Move on to your calves and legs
 - Pay attention to how they feel, where they are resting
 - Move on to your abdomen, lower back, and your shoulders
 - Pay attention to how they feel, where they are resting
 - Ask yourself if you can gently relax or soften them

Mindfulness Meditation Strategies

- **Word or Phrase for the Day**

A good way to be present-minded is to set an intention every day.

Wake up, and before you get out of bed, take one deep, controlled breath. Then spend a few moments to set your intention for the day. Let yourself see and feel your intention. Write down your intention, put in your phone or add to your digital calendar.

Today, I am all about:

- Breathing
- Be kind to myself
- Spending time with family

Mindfulness Meditation Strategies

1. **One Bite at a Time**

The Goal: To experience one moment at a time and become aware of impatience

The Exercise: After you take a bite of food, put the spoon or fork back down in the bowl or on the plate. Place your awareness in your mouth until that one bite has been enjoyed and swallowed. Only then pick up the utensil and take another bite.

3. **Home Exercise Program**

The Goal: To be present and aware of your body during each exercise

The Exercise: Pay attention to each exercise movement, the feeling of your body and the count of each repetition.



Cognitive-Behavioral Strategies

- **Behavioral**
 - Graded activity hierarchy
 - Goal setting
 - Scheduling pleasurable activities
- **Cognitive**
 - Positive/productive self-talk

Graded Activity Hierarchy

Activity	Difficulty Scale (0-10)
Gardening	10
Yard work	
Going back to work	
Swimming	
Riding a bicycle	
Painting/Home repairs	9
Cleaning windows	
Lifting heavy objects	
Making the bed	
Walking the dog	
Climbing stairs	8
Driving a car	
Loading a dishwasher	
Vacuuming	
Lifting light objects	
Carrying a trash bag	
Doing laundry	7
Dressing a child	
Washing dishes	
Ironing	6
Brushing teeth	5

Activity	Difficulty Scale (0-10)
	Most Difficult 10
	9
	8
	7
	6
	5
	4
	3
	2
	1
	Least Difficult 0



Goal Setting

- Specific, measurable, realistic
- Confidence scale
 - Patient needs to feel confident (0-10 scale)
 - How confident are you...on a scale from 0 to 10
 - 0 is not confident at all
 - 10 is completely confident
 - If below 8 – set a new goal or revise goal

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Goal Setting

- Verbal commitment from the patient
- Written commitment from the patient

Week	Activity	Goal	Confidence Level (0-10)



Goal Setting

- Confident and committed patient is more likely to accomplish their goals
- When reach goals – provide affirmation (MI)
- Problem Solving
 - Potential obstacles to completing goal
 - Potential solutions to overcome obstacles

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Scheduling Pleasurable Activities

- List some activities that you like and enjoy doing
 - (walk, shopping, reading, movie)
- Which ones are you able to do now?
- Create a schedule for the next week (day/time)
- Track activities

Pleasant Events	DAYS						
	1	2	3	4	5	6	7
1. Gardening	√				√		√
2. Watching a sunset	√				√		√
3. Going out to lunch			√				√
4. Visiting with friends		√				√	
5. Going to a museum						√	
6. Baking							
7. Reading for fun	√	√	√		√		√
8. Buying flowers							
9. Shopping			√			√	
10. Listening to music			√		√	√	
TOTALS	3	2	4	0	4	5	3

Productive Self-Talk

The most important coach during the recovery process is you. You speak to yourself more often than any other person. You coach yourself all day long. The way you speak to yourself is either helping your recovery or, if overly critical, can chip away at your ability to feel confident about your recovery.

How am I going to remind myself to use more productive self-talk?

- Take screen shot and put on phone
- Post this sheet or sticky note in visible place

More Productive Self-Talk
"It will get better"
"I will work hard."

Motivational Interviewing

- Delivery of mindfulness and cognitive/ behavioral skills
 - Open-ended questions
 - Affirmations
 - Reflections
 - Summary
- Not changing clinical style, but sharpening communication "tools"



Fixing one, two, or even three tires on car with four flat tires will not get you anywhere.

Thank you!



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