Managing Psychological Factors in Patients with Musculoskeletal Disorders:

"What to do when they have mental impairment too?

Joe Godges DPT, MA

As primary caregivers in prevention of musculoskeletal pain and disability, there is a growing evidence that secondary prevention of costly and disabling musculoskeletal-related pain requires healthcare professionals to 1) identify those patients at risk for becoming disabled with spinal pain, and 2) implement intervention strategies targeted to address the cognitive-behavioral disorders that coexist with the physical impairments associated with musculoskeletal pain. Physical therapists are the practitioners best equipped to be the leaders is preventing musculoskeletal pain and disability. The focus of this presentation is to introduce and train PTs in the evaluation and treatment skills to take this lead.

Description of Session:
This session will enable participants to improve their effectiveness with physical therapy management of patients who have mental disorders coexisting with their physical disorders. The focus of instruction will assist the participant to integrate basic principles of psychotherapy into physical therapy clinical practice, equipping physical therapists with the ability to

- identify those patients at risk for becoming disabled with neck and back pain
- implement intervention strategies targeted to address the cognitive-behavioral disorders that coexist with the physical impairments

Physical therapists are the practitioners best equipped to be the leaders in preventing disability associated with musculoskeletal pain. The focus of this presentation is to introduce and train PTs in the evaluation and treatment skills to take this lead.

Upon completion of this seminar, the participant should be able to:
1. Identify psychological impairments associated with commonly diagnosed mental disorders.
2. Incorporate interviewing/communication skills and action-oriented, patient education to optimally structure therapist-patient relationships that promotes the patient’s self responsibility and efficacy
3. Apply patient education strategies intended to prevent the progression of acute pain to chronic, disabling conditions.

In addition to the resources listed in the references/bibliography list, a significant amount of the content from this presentation can be found in the monographs in the 2003 Independent Study Course “Including the Patient in Therapy: Psychological Considerations in Physical Therapy Practice,” published by the Orthopaedic Section, APTA, Inc. Dr. Godges was the subject matter expert review for the monographs in this independent study course, which is available from the Orthopaedic Section, APTA, Inc., at www.orthopt.org.
Bibliography/References:


Maeda R, Jaffe ME. Diagnosis of Patients with Mental Disorders. *Orthopaedic Section HSC 13.1.3*, 2003.


### DIAGNOSIS OF MENTAL DISORDERS

**DSM - IV - TR** Diagnostic and Statistical Manual of Mental Disorders, 4th edition, American Psychiatric Association

**Axis I** 
**Clinical Syndromes**

Classifies: “What are the problems that the person has?” e.g., Delirium, Dementia; Substance-Abuse; Schizophrenia; Mood Disorders; Anxiety Disorders; Somatoform Disorders; Factitious Disorders; Eating Disorders; Sleep Disorders; Adjustment Disorders

**Axis II** 
**Personality Disorders**

Classifies: “Who is the person with the disorder?” e.g., Paranoid, Schizoid, Schizotypal Antisocial, Borderline, Histrionic, Narcissistic Avoidant, Dependent, Obsessive-Compulsive

**Axis III** 
**Medical Illnesses**

Describes: Any medical condition related to the mental problem

**Axis IV** 
**Severity of Psychosocial Stressors**

Describes: Level of “stress” in the individual’s life

**Axis V** 
**Global Assessment of Functioning**

Describes: Highest level of functioning that the individual has had in his/her lifetime

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**THE MIND OR THE SPINE – WHICH GOES FIRST?**


200 patients with chronic low back pain in a “Functional Restoration Program” in Dallas went a SCID for DSM-III (SCID = Structured Clinical Interview for Diagnosis)

<table>
<thead>
<tr>
<th>Current (co-existing) rates – Axis I Disorders</th>
<th>Major</th>
<th>Premorbid Axis I Disorders (existed before LBP)</th>
<th>Major</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depression</td>
<td>45%</td>
<td>Depression</td>
<td>39%</td>
</tr>
<tr>
<td>Substance Abuse</td>
<td>19%</td>
<td>Substance Abuse</td>
<td>34%</td>
</tr>
<tr>
<td>Anxiety Disorders</td>
<td></td>
<td>Anxiety Disorders</td>
<td>14%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Current (co-existing) rates – Axis II Disorders</th>
<th>Paranoid</th>
<th>Antecedent Axis I Disorders (developed after onset of LBP)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personality Disorder</td>
<td>33%</td>
<td>Major Depression</td>
</tr>
<tr>
<td>Borderline Personality Disorder</td>
<td>15%</td>
<td>Substance Abuse</td>
</tr>
<tr>
<td>Avoidant Personality Disorder</td>
<td>14%</td>
<td>Anxiety Disorders</td>
</tr>
</tbody>
</table>
COMMON PERSONALITY DISORDERS (DSM Axis II) IN PHYSICAL THERAPY CLINICAL PRACTICE

Personality Disorders - common clinical findings:
- Symptoms appear in teens/20’s/30’s
- Pervasive patterns of behavior
- Behavior deviates markedly from norms of society
- Impairments cause distress/limitations
- Not as disabling as Axis I disorders

Paranoid Personality Disorder
- Discriminating characteristic: Suspiciousness (mistrust)
- Key beliefs: “I am vulnerable to other people”
  “If I am not careful, people will manipulate, abuse, or take advantage of me”
- View of others: Malicious, devious, covertly manipulative
- View of self: Righteous, innocent / noble, mistreated by others
- Coping strategy: Be hypervigilant and always on guard, Be wary of “hidden motives” of adversaries
- Talk show tips for the PT when dealing with patients suspected to have a paranoid PD:
  Be a total straight shooter – no surprises with goals, measures, treatment plan, and discharge criteria
  Be totally neutral and non-adversarial – have no interest in taking “sides” for/against other providers

Borderline Personality Disorder
- Discriminating characteristic: Unstable relations, empty / bored
- Key beliefs: “I am powerless and vulnerable in a dangerous world”
- View of others: Flawless or completely unacceptable
- View of self: Helpless, inherently unacceptable
- Coping strategy: Lack of inner security (self-efficacy) forces vacillation between autonomy and dependence without being able to rely on either
- Talk show tips for the PT when dealing with patients suspected to have a borderline PD:
  Careful not to be “sucked” into a personal relationship that may turn against you
  Remain calm and unwavering in the midst of whining, tantrums, and manipulative demands

Avoidant Personality Disorder
- Discriminating characteristic: Sensitivity to negative experiences
- Key beliefs: “I cannot tolerate unpleasant feelings” (including musculoskeletal pain)
  “If I take risks it would be devastating”
- View of others: Potentially critical and demeaning
- View of self: Vulnerable to rejection, incompetent
- Coping strategy: Avoid situations that incurs a risk of failure or rejection
- Talk show tips for the PT when dealing with patients suspected to have an avoidant PD:
  Mutually determine treatment plans – involve the patient in creating plans that are attainable and involve the patient experiencing a "win" with the risk of “self-treatment” (solution focus therapy)
  Reinforce exercise goal attainment - one example where the patient can experience success/efficacy

Dependent personality disorder
- Discriminating characteristic: Dependency, (submissiveness)
- Key beliefs: “I need other people - specifically, a strong person - in order to survive.”
  “Don’t offend the caretaker”
- View of others: The ideal other is a strong, nurturing, supportive, and competent caretaker
- View of self: Needy, weak, helpless, incompetent
- Coping strategy: Be subservient in order to bind him or her
  Priority is placed on placating or pleasing the caretaker
- Talk show tips for the PT when dealing with patients suspected to have a dependent PD:
  Patiently wait for the patient to come to his/her own decisions about the best course of intervention (provide “guided” choices only)
  Do not provide passive therapy – such as modalities or manipulation – that diminishes the potential of enhancing the patient’s self direction and self efficacy
DEPRESSION

Overview: Feelings of intense sadness  Depressed mood for extended periods of time
Life prevalence approx. 0.5 – 1.0 %  Suicide linked depression is alarmingly common
Condition prevents normal functioning  Most often untreated – which is unfortunate since there good efficacy for treatment

Symptoms of Depression: Somatic complaints
  Sadness  Feelings of hopelessness or worthlessness
  Loss of energy  Loss of enjoyment in normally pleasurable things
  Sleep disturbances  Appetite and digestive disturbances
  Sexual problems  Difficulties with concentrating and making decisions

Types of Depression: Major Depression  Chronic Depression (dysthymia)
Bipolar Depression  Seasonal Depression (SAD)

Warning Signs of Suicide:
  Talk of killing one’s self  Talk or thinking about death
  Comments about being hopeless, helpless, worthless: “It would be better if I wasn’t here”
  Worsening depressive symptoms – or – A sudden switch to being very calm or happy
  Putting affairs in order  Visiting or calling people one cares about
  Be especially concerned of warning signs in one whose have made a previous attempt
  20 – 50% or those who commit suicide had a previous attempt

What to do: Take warning signs/threats seriously
  Listen, care, and attempt to understand
  Avoid “You have so much to live for” statements
  Non-judgmentally inquire about plans
  Then, encourage individual to seek help from mental health professionals
  Be persistent – the individual probably does not think anyone can help
  If your loved one appears in imminent danger, do not leave alone, remove drugs and weapons,
  accompany him or her to a nearby a medical care facility
  Support treatment – remind to take prescribed medication and continue therapy

EXERCISE AND DEPRESSION

2009 Cochrane Systematic Review: Exercise for Depression


- “For the 23 trials (907 participants) comparing exercise with no treatment or a control intervention, the pooled standardized mean difference was -0.82 (95% CI -1.12, -0.51), indicating a large clinical effect.”
- “Including only the three trials with adequate allocation concealment and intention to treat analysis and blinded outcome assessment, the pooled standardized mean difference was -0.42 (95% CI -0.88, 0.03), i.e. moderate, non-significant effect.”
- The effect of exercise was not significantly different from that of cognitive therapy.
- Exercise seems to improve depressive symptoms in people with a diagnosis of depression, but when only methodologically robust trials are included, the effect sizes are only moderate and not statistically significant.
- More methodologically robust trials should be performed to obtain more accurate estimates of effect sizes, and to determine risks and costs.
**EXERCISE THERAPY FOR PATIENTS WITH DEPRESSION**

*How does exercise help depression?*
Research suggests that regular exercise may increase levels of serotonin in the brain. Serotonin is a neurotransmitter involved in mood, sleep, libido, appetite and other functions, and has been linked to depression.

Exercise may also increase endorphins, which are chemicals in the brain with ‘moodlifting’ properties. Regular exercise may also help depression by:

- Increasing energy levels
- Helping to get a good night’s sleep
- Providing distraction from worries and rumination
- Providing social support and reducing loneliness if exercise is done with other people
- Increasing a sense of control and self-esteem, by taking an active role in the individual’s own recovery.

*Exercise recommendations*
The National Physical Activity Guidelines for Australians recommend:

- a minimum of 30 minutes of moderate intensity exercise on most, preferably all, days of the week (an example of ‘moderate intensity’ exercise is brisk walking where you notice a slight increase in breathing and heart rate).
- exercising for at least 10 minutes at a time - the 30-minutes total does not need to be continuous – you can combine short sessions of different activities to a total of 30 minutes or more each day.
- being active in as many ways you can each day (e.g. use the stairs).

At least one study has shown that exercising at around the above level for 12 weeks can significantly reduce symptoms of depression amongst people who are inactive and experiencing mild to moderate depression. For people who are very inactive, health benefits can be gained by becoming even slightly more active. A little activity is better than none, and more is better than a little.

For extra health and fitness, it is recommended that adults (who are able) should also do vigorous activity that makes them ‘huff and puff’ (e.g. jogging, squash, rowing). For best results, vigorous exercise should be done for 30 minutes or more on 3-4 days per week (on top of moderate exercise).

*Hints for developing exercise plans with depressed patients*

**Start small and make realistic goals**
If the patient has been inactive, it is better to start with small goals to build a sense of confidence and mastery (e.g. a 10 min walk in the morning). Depressed patients who do not meet their exercise goals may interpret this as a ‘failure’ and further ‘evidence’ of a sense of worthlessness. Exercise goals can later be gradually increased.

**Consider depression type and severity**
If a patient has severe melancholic depression and is having trouble getting out of bed, very small goals (e.g. one stretch or a walk for 2 minutes) should be set. For patients who are better able to function, a range of exercise options of greater intensity can be considered (e.g. swimming, yoga, weight-lifting, jogging, brisk walking for 30 minutes).

**Encourage social interaction**
Depressed patients who are isolated and withdrawn are likely to benefit from increased social involvement. Walking with a friend or walking group, exercise classes or team sports (where appropriate) should be encouraged. Ask the patient to nominate people they could exercise with.

**Consider the patient’s preferences and enjoyment**
Patients will be much more likely to keep up activity if they enjoy it. Consider a wide range of activities, and ask patients to choose activities that would prefer to try or that they previously enjoyed. Being outdoors, in sunlight or in a pleasant setting may enhance mood. Patients may choose to keep it simple and stick to brisk walking.

**Dealing with symptoms of depression**
In addition to symptoms of fatigue and lack of motivation, depressed patients often report anhedonia – or lack of pleasure. Remind patients that although activities may not be as enjoyable as usual at first, this will improve with time.

**Maintain motivation**
Patients should be encouraged to use the following strategies, which have been found to increase motivation to exercise: Keep a daily exercise diary. Set an achievable exercise goal each week. Reward oneself for meeting exercise goals each week. Write down specific short term and long term benefits of exercise important to the patient (e.g. improved mood, reduced stress / anxiety, increased energy, weight loss, improved concentration, improved sleep, improved fitness or flexibility, reduced risk of diseases).

**Anticipate barriers**
Discuss with the patient the “things that are likely to make it more difficult to exercise.” Assist the patient to think of and write down possible solutions for each of these.
THERAPY FOR PATIENTS WITH LBP AND HIGH FEAR-AVOIDANCE BELIEFS

Patient Education – Biomedical Model
• Identifies the pathology and instructs the patient in posture and activities to decrease stress on damaged tissues
• Studies show high patient satisfaction but no effectiveness in reducing cost or disability

Patient Education – Non-Biomedical/Biopsychosocial Model
• Encourages patients to take an active role in their recovery
• Educate by “unambiguously educating the patient in a way that the patient views his/her pain as a common condition rather than a serious disease that needs careful protection”


Subjects
• Off work due to work-related acute low back pain
• FABQ < 50 (total of Work and Activity FABQ Scales)

Comparison Group: Modalities for pain control
Therapeutic exercises focusing on trunk strengthening and flexibility
Ergonomic instruction on biomechanical principles to reduce strain on the lumbar spine

Educational Group: Modalities for pain control
Therapeutic exercises focusing on trunk strengthening and flexibility
Patient education and counseling intended to reduce fear-avoidance

Methods for Educational Group
Patient reads during first visit: Back Pain-How to Control a Nagging Backache (Krames)

Topics
Inactivity and stress can set the stage for back pain
Do not allow back pain to control your life
Understand the pain cycle
Get pain under control as soon as possible
You can control your pain with exercise and relaxation
Stay as active as possible

Follow with three structured inquiries to initiate discussion and reinforce the information in the booklet
(1) “Did you learn anything new from the booklet?”
(2) “Are there any points that you found unclear in the booklet?”
(3) “Do you think that this booklet has provided information that will help you manage your back pain more easily?”

During each physical therapy session, inquire whether the patient is trying to stay active and cope with his or her LBP. Based upon the individual patient’s responses, discussed the following topics with the patient.

Low back pain can be painful, but pain rarely means there has been serious to the back
Most low back pain quickly resolves
The pain cycle repeats itself with inactivity and stress
Worrying about back pain can cause stress-related muscle spasms
The mind can control stress and pain through relaxation techniques (e.g., visualization, positive self-talk, or muscle relaxation)
Inactivity causes weak or stiff muscles that are more likely to be re-injured
Activity benefits overall health and well-being.

Results

<table>
<thead>
<tr>
<th></th>
<th>Median # Days</th>
<th>Min/Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>Educational Group (n=16)</td>
<td>19</td>
<td>Educational Group (n=16) 7/45</td>
</tr>
<tr>
<td>Comparison Group (n=18)</td>
<td>35</td>
<td>Comparison Group (n=18) 10/90</td>
</tr>
<tr>
<td>*p-value .03 (Mann-Whitney U Test)</td>
<td></td>
<td>(three still off work at 90 days)</td>
</tr>
</tbody>
</table>

Discussion/Conclusion/Suggestions
• Use the an impairment-based classification to guide intervention for patients with low fear-avoidance beliefs and acute low back pain
• Use a Non-Biomedical/Biopsychosocial Model of Patient Education and Counseling to guide intervention for patients with high fear-avoidance and acute low back pain
STAGES OF CHANGE - CREATING LIFESTYLES CHANGES BUILT ON HEALTY EXERCISE HABITS


Stage 1: Not really ready to change  "Precontemplation"
Simply not aware of the need or denying the need
React defensively when somebody brings up the subject
Feel overwhelmed by what it would take to make a change; so change is not a realistic option.

What it takes to move from this stage:  It will probably take a rude awakening to jolt one out of the complacency or fear of change.  “Your couch can kill you”

Stage 2: Getting serious  "Contemplation"
No longer sidestepping the issue.  Conscious of the problem.  Aware that what is done (or not done) has consequences.
The intention to do something is there - just not right now.  This could be considered an incubation stage, a transition towards doing something.

What it takes to move from this stage:  Paying more attention to the consequences of not making the change could motivate one to start doing something about it.

Stage 3: Making a plan  "Preparation"
Getting ready to do something within the next month and paying more attention to the specifics.  For example, it's not just "exercising", it's what kind of exercise, where, how often, etc.
There is also greater awareness of the "cost" of making the change:  It entails some sacrifices, a loss of something, along with the internal negotiation about is willing to be without and what is not be willing go let go of.
A plan shapes up, taking into consideration the goals as well as the realities of your life.

What it takes to move you from this stage:  Understanding that the plan need not be perfect, and setting a date to start acting on it.

Stage 4: Taking action  "Take action"
Actually doing the plan, but probably assailed by all kinds of negative thoughts, fears, doubts, which are part the normal resistance to change.

“What do you expect?  If it was easy, you'd have done a long time ago.”  Awareness that the resistance is normal can, hopefully, facilitate pushing on despite the resistance.
The more specific the plan, the easier it is to follow.  For example, it is good to adjust the plan to be specific (e.g. "exercising on Monday, Wednesday and Friday at lunch", as opposed to "3 times a week").

What it takes to make this stage work:  Treat goals as a priority, so they don't get sidetracked by all the excuses that will inevitably come along.  It is OK to plan for some rewards to yourself as you go along, not celebrating the big success prematurely, just acknowledging success in each little step.

Stage 5: Working at it  "Maintenance"
Been doing it now for a while - several months to half a year or more, and feeling good about it.  The temptation at this phase is to believe these new habits are so ingrained that one no longer has to pay attention to them.  This is when a relapse happens.  For example, the weather changes or the days are shorter and keeping at the exercise is difficult.  An important part of making lasting changes is not taking these changes for granted.  “Keep working at it!”

What it takes to make this stage work:  Changes are more likely to last when the whole lifestyle supports them (e.g. spending time with people who are sedentary not going to make it easy to go out in the cold for a jog).  Awareness that the temptation to relapse is normal could help one better deal with relapses.  When a relapse occurs, remember that it's not an "all or nothing proposition: you have not failed, you have just had a relapse; keep working at it!”

Stage 6: Change happens  "Termination"
The new habits are now second nature.  There is minimal temptation to go back to the old habits, under any circumstances.  Congratulations are in order.

Is this a realistic goal?  Maybe, in some cases.  In many cases, however, the power of habits is such that you may always be fighting against temptation.  It's human nature.
Success does not necessarily mean having a personality transplant.  What counts is that the individual is able to maintain your good habits, and feels good about his/her ability to do so.

What it takes to make this stage work:  Don't obsess about getting ‘there.’  Just keep working at it.  Change is a creative process.”
## STRUCTURING INFORMATION FOR ACTION

### Physical Therapy Patient Care Model

<table>
<thead>
<tr>
<th>Phase</th>
<th>Relationship Tasks</th>
<th>Physical Therapist/Patient Action Tasks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 development</td>
<td>Initiate Rapport</td>
<td>Explore Patient Problems/Concerns (Focus, Following, Inquiry)</td>
</tr>
<tr>
<td>2 inventory</td>
<td>Identify Patient’s Style and Motivating Factors</td>
<td>Co-Define Problems (Reflect, Summarize)</td>
</tr>
<tr>
<td>3 priority</td>
<td>Facilitate Patient’s Kinesthetic Problem Solving, Clarify Roles</td>
<td>Identify Physical Impairments Related to the Patient’s Reported Functional Limitations and/or Disability (Physical Examination)</td>
</tr>
<tr>
<td>4 goal formation</td>
<td>Re-Clarify Role of Physical Therapy/Therapist and Patient</td>
<td>Co-Define Problems into Desired Goals/Expected Outcomes (Inquiry, Summarize, Information Giving, Confrontation)</td>
</tr>
<tr>
<td>5 action plan formation</td>
<td>Within Relationship: Delineate/Acknowledge Patient’s Responsibility</td>
<td>Mutually Generate Plans of Care Mutually Select Optimal Plan Mutually Prioritize Treatment as Appropriate (Structuring Information for Action)</td>
</tr>
<tr>
<td>6 action</td>
<td>Support, Acknowledge and Reward Optimal Patterns of Behavior</td>
<td>Involve Client with Implementation of Delineated Optimal Plans of Care. Facilitate Carryover of Plan in Absence of Physical Therapy/Therapist (Information Giving, Confrontation)</td>
</tr>
<tr>
<td>7 termination</td>
<td>Acknowledge and Promote Patient’s Self Efficacy</td>
<td>If Expected Outcomes Achieved – Identify Patient’s Role in Achieving the Success and Facilitate the Use of New Symptom Management Skills in Similar Scenarios If Expected Outcomes Not Achieved – Return to Phases 3, 4, and/or 5.</td>
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