



# CORR Insights

## **CORR Insights®: Higher Preoperative Patient Activation Associated With Better Patient-reported Outcomes After Total Joint Arthroplasty**

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### Where Are We Now?

Some orthopaedic surgeries (think spinal fusion or tennis elbow) have mixed outcomes. Some people feel better, some do not.

*This CORR Insights® is a commentary on the article “Higher Preoperative Patient Activation Associated With Better Patient-reported Outcomes After Total Joint Arthroplasty” by Andrawis and colleagues available at: DOI: 10.1007/s11999-015-4247-4.*

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But total hip and knee replacement? Always a winner, right? Not so fast.

Andrawis and colleagues note that satisfaction rates are around 85% for hip and knee arthroplasty [1]. Emotional health and resources explain much of the variation in symptom relief and magnitude of disability after arthroplasty [2–4]. In other words, patient factors may be as important as technical factors, even for total hip and knee arthroplasty.

### Where Do We Need To Go?

Those of us sensitive to the cognitive and emotional aspects of good health in the face of advanced arthritis recognize the importance of an active, optimistic approach to the problem. The doctor should project—and the patient should cultivate—a sense that this is a problem

that can be managed, whether this means cured (unlikely) or palliated with surgery or nonsurgical approaches. Psychologists call this self-efficacy. Self-efficacy might be expected to take the form of active engagement and participation in care. Measuring the effect of so-called “patient activation” on satisfaction, symptom intensity, and magnitude of disability after total hip and knee arthroplasty makes sense. Andrawis and colleagues found that patient activation was associated with pain, symptoms, mental health, and satisfaction, but not with activity/function/disability [1].

I was a part of a group of researchers that found similar results when we studied the effect of patient activation on upper extremity illness [5]. A direct measure of self-efficacy accounted for variations in pain intensity, magnitude of disability, and satisfaction with care better than a measure of patient activation.

I believe there is a single factor common to all subjective measures of illness: The effective coping strategy

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of self-efficacy. Greater self-efficacy creates greater patient activation, lower pain intensity, and less disability. The accumulating evidence is compelling: Cultivating optimal self-efficacy prior to discretionary surgery and during recovery from nondiscretionary and discretionary surgery may be one of the best things we can do for our patients [7].

## How Do We Get There?

It is time to get beyond a narrow focus on the technical and procedural aspects of musculoskeletal care and take care of the entire patient. A focus on empathy and communication skills, accurate and hopeful disease conceptions, accounting for various levels of health literacy, and optimizing adaptation and resilience will bear as much or more fruit than a focus on technology alone. Randomized trials of the effect of preoperative and postoperative cognitive behavioral therapy

(a method for training and optimizing self-efficacy) will likely provide high-level evidence that this approach is helpful [6]. In the meantime, I encourage orthopaedic surgeons to study the effect of practiced communication skills and attention to the cognitive and emotional aspects of illness in their daily practice. I think most will find it rewarding.

## References

1. Andrawis J, Akhavan S, Chan V, Lehil M, Pong D, Bozic KJ. Higher preoperative patient activation associated with better patient-reported outcomes after total joint arthroplasty. [Published online ahead of print March 11, 2015]. *Clin Orthop Relat Res*. DOI: [10.1007/s11999-015-4247-4](https://doi.org/10.1007/s11999-015-4247-4).
2. Ayers DC, Franklin PD, Ploutz-Snyder R, Boisvert CB. Total knee replacement outcome and coexisting physical and emotional illness. *Clin Orthop Relat Res*. 2005;440:157–161.
3. Ayers DC, Franklin PD, Trief PM, Ploutz-Snyder R, Freund D. Psychological attributes of preoperative total joint replacement patients: Implications for optimal physical outcome. *J Arthroplasty*. 2004;19(7 Suppl 2):125–130.
4. Badura-Brzoza K, Zajac P, Brzoza Z, Kasperska-Zajac A, Matysiakiewicz J, Piegza M, Hese RT, Rogala B, Semenowicz J, Koczy B. Psychological and psychiatric factors related to health-related quality of life after total hip replacement - preliminary report. *Eur Psychiatry*. 2009;24:119–124.
5. Gruber JS, Hageman M, Neuhaus V, Mudgal CS, Jupiter JB, Ring D. Patient activation and disability in upper extremity illness. *J Hand Surg Am*. 2014;39:1378–1383.e3.
6. Rosal MC, Ayers D, Li W, Oatis C, Borg A, Zheng H, Franklin P. A randomized clinical trial of a perioperative behavioral intervention to improve physical activity adherence and functional outcomes following total knee replacement. *BMC Musculoskelet Disord*. 2011;12:226.
7. Vranceanu AM, Barsky A, Ring D. Psychosocial aspects of disabling musculoskeletal pain. *J Bone Joint Surg Am*. 2009;91:2014–2018.