Published in final edited form as:

Gen Hosp Psychiatry. 2010 January ; 32(1): 114–115. doi:10.1016/j.genhosppsy.2009.09.007.

Musculoskeletal Pain and Measures of Depression: Response to Comment on the article by Poleshuck et al

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We appreciate the interest in our work and commend the letter's author for raising the important and complex issue of depression assessment in patients with pain. It is critical to consider the appropriateness of our assessment measures to address the validity of our study findings.

The overlap between chronic pain symptoms and depression symptoms, as highlighted by the author, is significant. There is an integral relationship between depression and pain that is clinically meaningful and therapeutically essential to recognize. For many patients, depression involves a physical experience, and chronic pain involves an emotional experience. Disentangling these symptoms becomes extremely challenging and perhaps impractical for clinicians.

The existing evidence generally supports using standardized depression measures without modification for patients with chronic pain. There are several studies supporting the suitability of the Beck Depression Inventory (BDI) for patients with chronic pain,^{1,2} one of the most commonly used measures of depression. Most recently, Harris and D'Eon³ conducted a careful examination of the factorial validity, internal consistency, and gender invariance of the BDI among 481 patients with chronic pain. The factor structure showed that somatic items covaried with the cognitive and affective items, and correlated as highly as other items with the total score (with the exception of sleep). The investigators concluded there is evidence to support the construct validity and internal consistency of the intact BDI for identifying depressive symptoms in patients with pain.

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In contrast to the findings of Blalock et al.⁴ referenced by the letter's author, there is also support for the use of the Centers for Epidemiological Studies Depression Scale (CES-D) for patients with chronic pain. In 132 patients with chronic pain, Geisser, Roth and Robinson¹ found the CES-D was able to discriminate significantly between individuals with and without depression. Additionally, they determined that removing somatic items did not improve accuracy.

In 2005, the Initiative on Methods, Measurements, and Pain Assessment in Clinical Trials (IMMPACT), composed of 35 leaders in the pain field, developed consensus guidelines for specific measures of core pain treatment outcomes including emotional functioning.⁵ The IMMPACT recommendations state, "the evidence indicates that measures of emotional functioning are adequately reliable, valid, and responsive when used with the medically ill." They recommend the use of the Profile for Mood States (POMS) and the BDI, however, and do not specifically consider the Patient Health Questionnaire – 9 (PHQ-9), 6 one of the depression measures used in our study.

The CES-D, POMS, and BDI are all well-validated, robust self-report measures of depressive symptoms. Unfortunately, in busy primary care settings each is relatively long, time-consuming to score, and impractical. The PHQ-9 was developed as a research and clinical screening tool for busy primary care practices, and is valuable for its demonstrated accuracy, clinical utility and brevity. Nease and Malouin⁷ concluded the PHQ-9 is the best available screening tool for depression for use by primary care clinicians.

Several other research teams have used the PHQ-9 for measurement of depression in patients with chronic pain. Three recent examples include a cluster randomized trial for veterans with musculoskeletal pain in primary care,⁸ a case control study of depression in urology patients with interstitial cystitis, chronic prostatitis, and chronic pelvic pain,⁹ and predictors of depression in primary care patients with osteoarthritis.¹⁰ These studies suggest an acceptance by the pain community of the PHQ-9 as a measure of depression among patients with chronic pain.

For our study, the PHQ-9 was used to determine eligibility at study entry. Another measure, the 20-item Symptom Check List (SCL-20), was used to assess depression severity. The SCL-20 is a modified subscale of the Hopkins Symptom Checklist and has been used extensively to assess depression outcomes in primary care trials. SCL-20 scores were significantly higher in patients identified with clinically significant depressive symptoms by the PHQ-9. These findings confirm the significant convergent validity of the PHQ-9 and SCL-20 and argue against the over-estimation of depression prevalence in our study. Unfortunately, we do not know of any studies to date that examined the psychometric properties of the PHQ-9 for patients with pain. In a future study, we plan to assess its reliability and validity, evaluate the appropriateness of retaining the somatic symptoms, and calculate optimal threshold scores for clinically significant depression specifically for primary care patients with musculoskeletal pain.

Finally, we contend there is another, potentially more harmful risk than overestimation of depression among patients with pain: underestimation. Physical symptoms, especially pain, negatively affect the recognition of depression. As a result, depression is often missed in patients with pain. By misattributing patients' symptoms to their pain, we may fail to recognize and treat a significant depression. Standardized measures like the PHQ-9 are particularly valuable because they can facilitate our ability to detect and subsequently treat depression.

In sum, the assessment of depression among patients with chronic pain is an important task for clinicians and researchers alike. We believe the PHQ-9 provides an acceptable choice for

screening depressive symptoms, and its use is unlikely to lead to an overestimation of depression prevalence among patients with chronic pain in primary care. Yet we acknowledge further research and discussion is needed to evaluate its use further.

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