Results: The subjects in the study were divided into 3 diagnostic groups: 1. OA (subjects with knee OA and chronic knee pain, n = 502), 2. Pain (subjects with chronic knee pain, but no knee OA, n=496), 3. Controls (subjects with neither chronic knee pain nor knee OA, n=421). The overall F-test and all pairwise differences between the 3 diagnostic groups were statistically significant (p<0.001) with all HRQL instruments. Based on the overall F-score, the different HRQL instruments and subscales were ranked regarding their ability to discriminate the diagnostic groups (see Table 1).

For a hypothetical repeat study with the 3 diagnostic groups, the approximate number of subjects per group needed with the HRQL instruments are given in Table 2.

Conclusion: As judged from the present study, QoL(KOOS), Pain(KOOS), and Symptoms(KOOS) are the most powerful discriminators between the different diagnostic groups, and EQ-5D single index is the least powerful one. The results indicate that only 50-70 subjects are needed in a hypothetical repeat study when using KOOS and WOMAC discriminators as compared to one, 1,000 subjects for EQ-5D single index.

Purpose: To conduct a systematic review to identify and describe the scope and nature of the research evidence on the effectiveness of interventions to improve health care quality or reduce disparities in care of disadvantaged populations with osteoarthritis (OA).

Methods: We searched electronic databases from 1950 through February 2010 and the grey literature for relevant articles in any language using any study design. Studies with interventions designed explicitly to improve health care quality or reduce disparities in care for disadvantaged adult populations with OA were eligible. Those that evaluated the effectiveness of the intervention were included. Disadvantaged populations were identified using the PROGRESS-Plus framework. Reviewers abstracted data from studies to determine study and participant characteristics, details on the intervention, results and quality.

Results: Of 4,701 citations identified through the search process, 10 studies met the inclusion criteria. Most studies were community-based (n=8) and targeted race/ethnicity/culture (n=6). All 10 studies evaluated interventions aimed at people with OA; 2 hospital-based studies also targeted the health care system by providing individualized assessment or reinforcement using follow-up telephone calls not previously provided by health care providers. No studies targeted health care providers. Nine of 10 studies evaluated arthritis self-management interventions and 6 described cultural tailoring of the intervention. Arthritis self-management interventions improved the health care quality of disadvantaged populations by improvingparticipant arthritis self-efficacy, health behavior, and health status. Only one study measured the impact of an intervention in reducing disparities in care by comparing the difference in effect between the disadvantaged populations and the relevant PROGRESS-Plus comparator group.

Conclusions: There are few studies evaluating the effectiveness of interventions to improve health care quality in disadvantaged populations with OA, and a lack of studies evaluating interventions targeting health care providers. Further research is needed to evaluate interventions aimed at health care providers and the health care system, as well as other patient-level interventions. Promising interventions at the provider-level, such as cultural competence training and shared decision-making skills, are worthy of future evaluation. Gap intervention research is important to evaluate whether an intervention is effective in reducing documented health care inequities.