Materials and Methods

This was a cross sectional study design to delineate work tasks of hand cultivating sweet potatoes associated with self-reported musculoskeletal pain symptoms among hired farmworkers. Community outreach workers from Greenville County Health Care, Inc. were used to conduct the study. A list of migrant labor camps in the region were provided that housed farmworkers that hand harvested sweet potatoes. Three camps were visited in random order in 3 eastern NC counties: Nash, Edgecombe, and Greene. A total of 129 farmworkers were recruited into the study; however, complete data were not available for 5 farmworkers, resulting in 124 total participants. Farmworkers were interviewed to identify symptoms related to WMSDs and work activities that contribute to pain and/or discomfort.

Measurements

Outcome measures for this analysis were WMSDs in muscle groups and joints typically affected by manual labor including the neck, shoulders, elbows, wrists, hands, lower back, hips, knees, and ankles. Other muscle groups found in feet, legs, chest and arms were also included. The level of pain or discomfort associated with self-reported MSD was measured as a result of hand harvesting sweet potatoes over the past 30 days. Any participant reporting body pain or discomfort symptoms was asked to point to the specific areas of pain or discomfort using a laminated, human body diagram adapted from Nordic Musculoskeletal Disorder Questionnaire. To rate the severity level of pain or discomfort, we used the six level Wong-Baker FACES® pain rating scale. The body diagram and pain scale are shown in Figure 2. This pain scale, which has been adapted in Spanish, along with other similar pain scales, has been shown to be an effective measure of pain in a variety of population subgroups including minority adults. The pain rating scale included severity levels of “No Hurt,” “Hurts Little Bit,” “Hurts Little More,” “Hurts Even More,” “Hurts Whole Lot,” and “Hurts Worst.”

Results

Significant associations were identified between younger age and neck pain (p = 0.02). Older age and pain in lower back and knees (p = 0.05).

Conclusions

These results support previous occupational research studies that have shown WMSDs among the agricultural work population represent a major public health concern and are a contributing factor to farmworkers debilitation. Farmworkers continue to be the primary work mechanism for handling heavy objects and lifting and carrying money on farm and ranch work. Manual labor is_a common characteristic of farm and health care workers. Solutions to the problem are warranted.

References