In multivariate analysis, years as braider, rather than age, was more strongly associated with reported pain. Number of years as a braider was a significant risk factor for African hair braiders.

Wrist/hand, neck, shoulder, and upper arm pain were most strongly correlated with years as braider.

Concerns related to chemicals in the hair products were commonly reported by African hair braiders.

Ages ranged from 20 to 61 years with a median age of 35.

More than 75% of braiders reported discomfort in the fingers, wrist/hand, and back.

Braid-related WMSDs are prevalent among African hair braiders.

Relationship between Years as a Braider and Body Pain

- In multivariate analysis, years as braider, rather than age, was more strongly associated with reported pain.
- Wrist/hand, neck, shoulder, and upper arm pain were most strongly correlated with years as braider.

Objective: African braiders are potentially subject to work-related musculoskeletal disorders (WMSDs) because they perform constant repetitive hand motions and maintain awkward postures for many hours. The general objective of this study was to characterize potential ergonomic hazards faced by African hair braiders in two states with different licensing requirements: Oklahoma, which requires 600 hours of training plus an examination, and Texas, which requires only 35 hours of training and no examination. The study addressed two hypotheses: Hypothesis 1: Risk factors and signs of work-related musculoskeletal disorders (WMSDs) are prevalent among African hair braiders. Hypothesis 2: Different state licensing requirements in Oklahoma and Texas have an effect on the prevalence of risk factors for African hair braiders.

Methods:
- A complete enumeration of African hair braiders was attempted in Oklahoma City (OKC) and Dallas/Fort Worth (DFW). Braiders were identified through the channels they typically use to offer services to clients.
- Risk factors and symptoms of WMSDs were assessed using an interview questionnaire administered over the phone or face-to-face in the subject's preferred language (Wolof, French, or English). Oral consent and questionnaire forms were approved by the university’s Institutional Review Board.
- Relationships among city, risk factors and symptoms of potential WMSDs were analyzed using Pearson correlation coefficients, Fisher’s exact test, and multiple logistic regression.

Results: Statistical Analysis
- Response rates were 95% (18/19) in OKC and 83% (83/101) in DFW.
- The number of braiders per 10,000 African-American residents was 2.1 in OKC and 2.2 in DFW.
- Ages ranged from 20 to 61 years old, with a median age of 35.
- More than 75% of braiders reported discomfort in the fingers, wrist/hand, and back.
- Braiders in OKC were significantly more likely than braiders in DFW to work at home (67% vs. 2%, P=1 x 10^-9) and to experience pain in the lower leg (73% vs. 30%, P=0.0011).
- Fisher’s exact test did not show significant differences between the cities for discomfort in hand/wrist, finger, lower and upper back, and ankle.
- Number of years as a braider was a significant risk factor (p=0.0047) for reported pain in the wrist/hand.
- Length of workday in hours (median: 9 in OKC and 12 in DFW; range: 7-13 in OKC and 6-18 in DFW) was not significantly related to reported discomfort.
- Only 5% and 16% of the braiders respectively in OKC and DFW reported taking breaks during working hours.

Additional Comments by Braiders
- Common comments:
  - No breaks: finish as fast as possible to start on the next client
  - Pain caused mainly when doing Senegalese and kinky twist
  - Desire to stop braiding
  - Concerns related to chemicals in the hair products used during and after braiding.

Younger braiders:
- “I hate this job, I cannot wait to graduate and get a real job.”

Older braiders:
- “I feel pain all over my body.”
- Self-medicate by taking over-the-counter pain killers such as Advil or Tylenol.

Prevalence of Body Segment Pain by City

Conclusions and Recommendations:
- Symptoms of WMSDs were commonly reported by African hair braiders regardless of their work settings.
- The different state licensing requirements in Oklahoma and Texas affected whether braiders worked in salons or at home but had limited impact on risk factors for WMSDs.
- Community-based participatory research (CBPR) practitioners can use these findings and collaborate with the braider communities and public health officials in an attempt to reduce and eliminate WMSDs among African hair braiders.

Desire to stop braiding

Risk factors and symptoms of WMSDs were commonly reported by African hair braiders.

The different state licensing requirements in Oklahoma and Texas have an effect on the prevalence of risk factors for African hair braiders.

Objective: African braiders are potentially subject to work-related musculoskeletal disorders (WMSDs) because they perform constant repetitive hand motions and maintain awkward postures for many hours. The general objective of this study was to characterize potential ergonomic hazards faced by African hair braiders in two states with different licensing requirements: Oklahoma, which requires 600 hours of training plus an examination, and Texas, which requires only 35 hours of training and no examination. The study addressed two hypotheses: Hypothesis 1: Risk factors and signs of work-related musculoskeletal disorders (WMSDs) are prevalent among African hair braiders. Hypothesis 2: Different state licensing requirements in Oklahoma and Texas have an effect on the prevalence of risk factors for African hair braiders.