

Rachel Diamant, PhD, OTR/L, BCP, Brandi Buchanan, OTD, OTR/L, Melissa Clark OTR/L, CHT, Christina Griffin, PhD, OTR/L, FAOTA, Stephanie Black, OTS, Jesse Dialessi, OTS, Maureen Bush, OTS, Foli James, OTS, Amanda Leach, OTS, Jen Dachtyl, OTS, Andrew Martina, OTS, Kenlynn Ralph, OTS, Rose Tin, OTS

BACKGROUND

Neck pain is a common complaint that affects the cervical spine region. It is a result of muscle strain and/or soft tissue sprain, arthritis, nerve compression, injuries, and diseases. This pain can be caused by a variety of activities that include poor posture, such as leaning over while driving or working at a computer, carrying heavy objects, overuse and sport injuries, whiplash, stress, or an improper sleeping position (Gonzalez-Iglesias et al., 2009). Other symptoms associated with neck pain include stiffness and headaches (Gonzalez-Iglesias et al., 2009). Functional issues impacted by pain include flexibility reduction of strength, endurance, and range of motion. Kinesiology taping is a technique often used in treatment to manage pain. Kinesio® Tex Tape is an elastic therapeutic and rehabilitative tape that is made of gentle cotton fiber, features a 100% medical-grade acrylic adhesive, and is latex free. Kinesio® Tex Tape creates a lifting effect on the skin's surface, which improves circulation and relieves pain (Kinesiotaping Association International, 2010). A number of studies have reported that Kinesio® Tex Tape is effective in short-term management of pain (Gonzales-Iglesias, Fernandez-De-Las-Penas, Cleland, Huijbrechts, & Del Rosario Gutierrez-Vegas, 2009; Thelen, Dauber, & Stoneman, 2008; Yoshida & Kahanov, 2007; Pendleton & Schultz-Krohn, 2006). In the last few years, pre-fabricated, pre-cut kinesiology tape kits for specific joints and body parts have been introduced to the market. To date, no studies comparing the effectiveness of pre-fabricated kits and standard application methods have been found.

PURPOSE

- The purpose of this study was to compare the use of SpiderTech™ pre-fabricated kits and traditional kinesiology taping methods in the management of neck pain
- Hypothesis:**
 - H₀. There will be no significant differences in relief of neck pain when taping with SpiderTech™ pre-fabricated kits as compared to traditional taping methods using standard rolls of kinesiology tape.
 - H₁. There will be a significant difference in relief of neck pain when taping with SpiderTech™ pre-fabricated kits as compared to traditional taping methods using standard rolls of kinesiology tape

STUDY DESIGN

- Experimental research design that involved the comparison of neck pain management using two different methods of kinesiology taping across two groups. Participants were randomly assigned. Wearing time of tape was 3 days. Data was collected through assessments before, during and after taping.

PARTICIPANTS

- Adults ages 18 and over who were currently experiencing daily neck pain, strain, or stiffness. Individuals who were currently experiencing skin rashes or irritations in the neck area, taking any prescription pain medication, or were currently being treated by a physician, therapist, or other professional for neck pain were excluded from the study.

RECRUITMENT METHODS

- Recruitment obtained using a convenience sample method through use of email and fliers at a small graduate university for health sciences, as well as through personal contact.

PARTICIPANT DEMOGRAPHICS

- 48 adults all 18 years or over
- 94% female

GROUPS

- Kinesio®Tex tape group:
- Total taped (n= 24)
 - Total returned packets (n=20)
- SpiderTech™ group:
- Total taped (n= 24)
 - Total returned packets (n=22)

ASSESSMENT TOOLS

- Visual Analogue Scale (VAS) for pain: Three surveys for pain levels were used: prior to tape application (present pain and 24- hours before application), pain levels while wearing the tape (pain levels morning, mid-day, and evening), and post-application pain levels (directly after tape removal and 24- hours post tape removal)
- Neck Disability Index (NDI) was completed directly before and after tape applications as a measure of overall neck pain (Vernon, 2008)

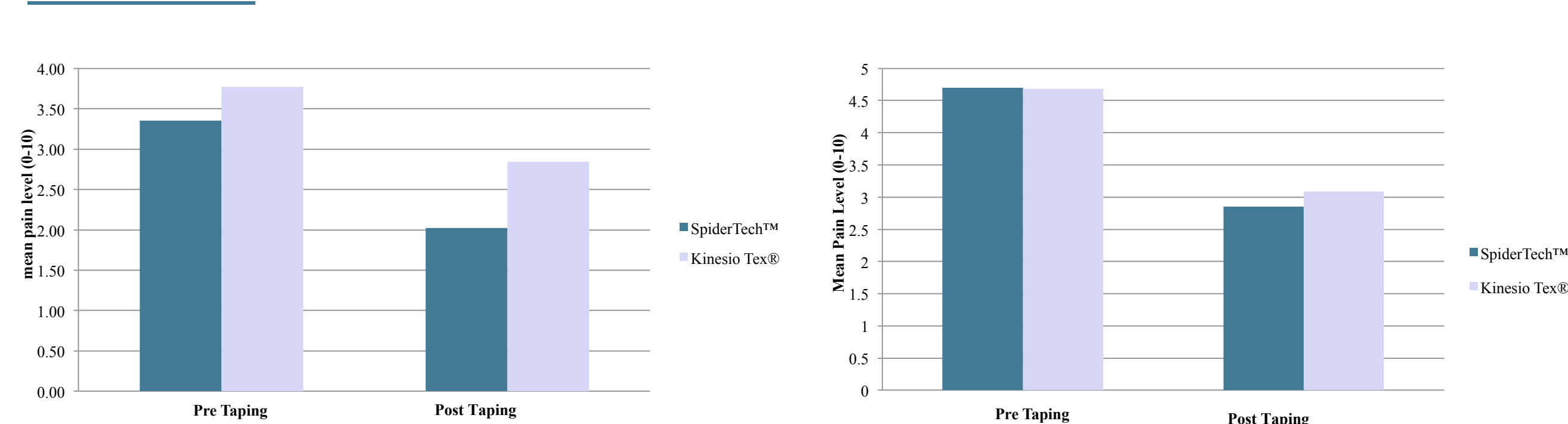
DATA COLLECTION METHODS



DATA ANALYSIS METHOD

- SPSS 17.0 statistics software system
- Repeated-measures ANOVA used to analyze changes in pain from before and after taping between groups

RESULTS



Pre- and post-pain measurements using the VAS, time by group

Pre- 24-hour and post- 24-hour pain measurements using the VAS, time by group

RESULTS CONTINUED

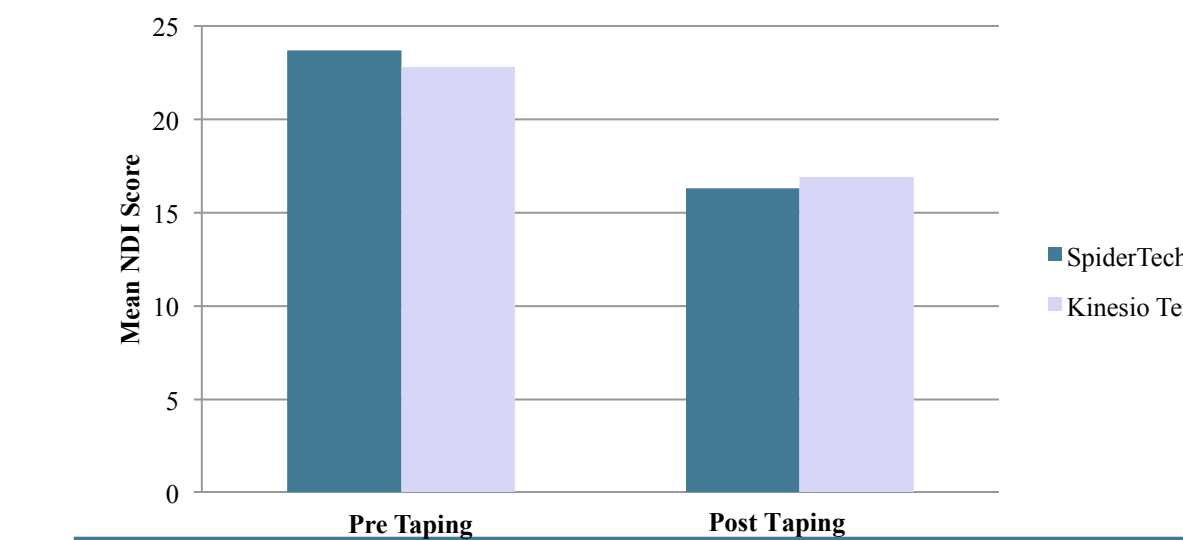


Figure 5. Pre- and post- pain scores using the Neck Disability Index, time by group

CONCLUSIONS AND APPLICATIONS

- Traditional kinesiology taping and SpiderTech™ prefabricated kits are comparably effective in the management of neck pain
- SpiderTech™ prefabricated kits can be applied in less time
- SpiderTech™ prefabricated kits to be easier for application

Cost	Spider Tech™	Kinesio® Tex Tape
Professional Training	\$395.00	\$675.00-\$750.00
Student Training	\$295.00	\$420.00
Certification Fee	n/a	\$99.00
Applications	\$4.68-\$7.65	\$14.94 per roll

LIMITATIONS/DELIMITATIONS

- Study may not be representative of the entire population with cervical pain
- Long term effects were not assessed
- Specific demographics of population not recorded
- Participants limited to the Phoenix metro area
- Data limited to only individuals who completed the 3-day application

RECOMMENDATIONS FOR FUTURE RESEARCH

- Observation of long term effects between Spider Tech™ prefabricated kits and traditional taping methods using Kinesio® Tex Tape in the management of neck pain
- Obtain larger sample size with detailed demographics recorded
- Comparison of Kinesio® Tex Tape and Spider Tech™ kits for use on different joints, management of edema, and participation in daily functional activities

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