

The Effects of Dry Needling Combined with Conservative Treatment on College-Aged Athletes With Rotator Cuff Disease

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Introduction

In this study, thirty college-aged athletic patients were used to determine if dry needling combined with physical therapy is an effective method of treatment of the rotator cuff. Specifically, this study wanted to address the best way to treat a rotator cuff issue, as there is no current consensus among professionals. Each individual was a volunteer that met specific rotator cuff disease criteria. Every participant had to complete an informed consent form before beginning the study. Three various groups were used in this study for a total of six weeks. The group to receive physical therapy only was the control group. The other two groups consisted of, (1) dry needling only, and (2) dry needling with physical therapy combined. The VAS and DASH were methods used to determine the outcome of pain and disability within the rotator cuff of each patient. After the six weeks of treatment, multiple follow ups, up to a year, were required for each participant.

Purpose

The purpose of this investigation was to look at how dry needling integrated with conservative treatment can help rotator cuff disease in college-aged athletes.

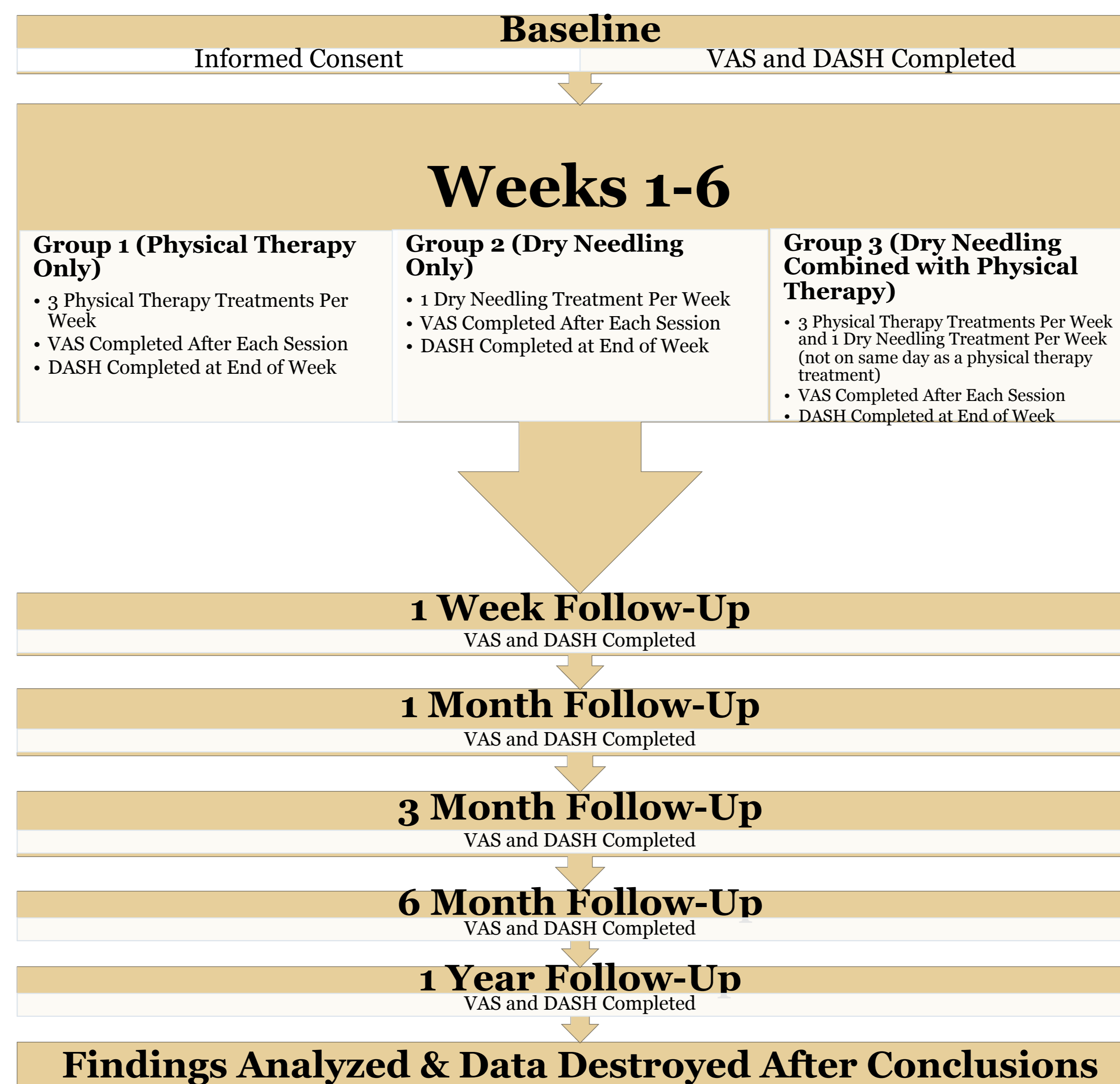
Hypothesis

It was hypothesized that conservative treatment combined with the dry needling technique will yield the most increase in ROM and most decrease in pain of the rotator cuff.

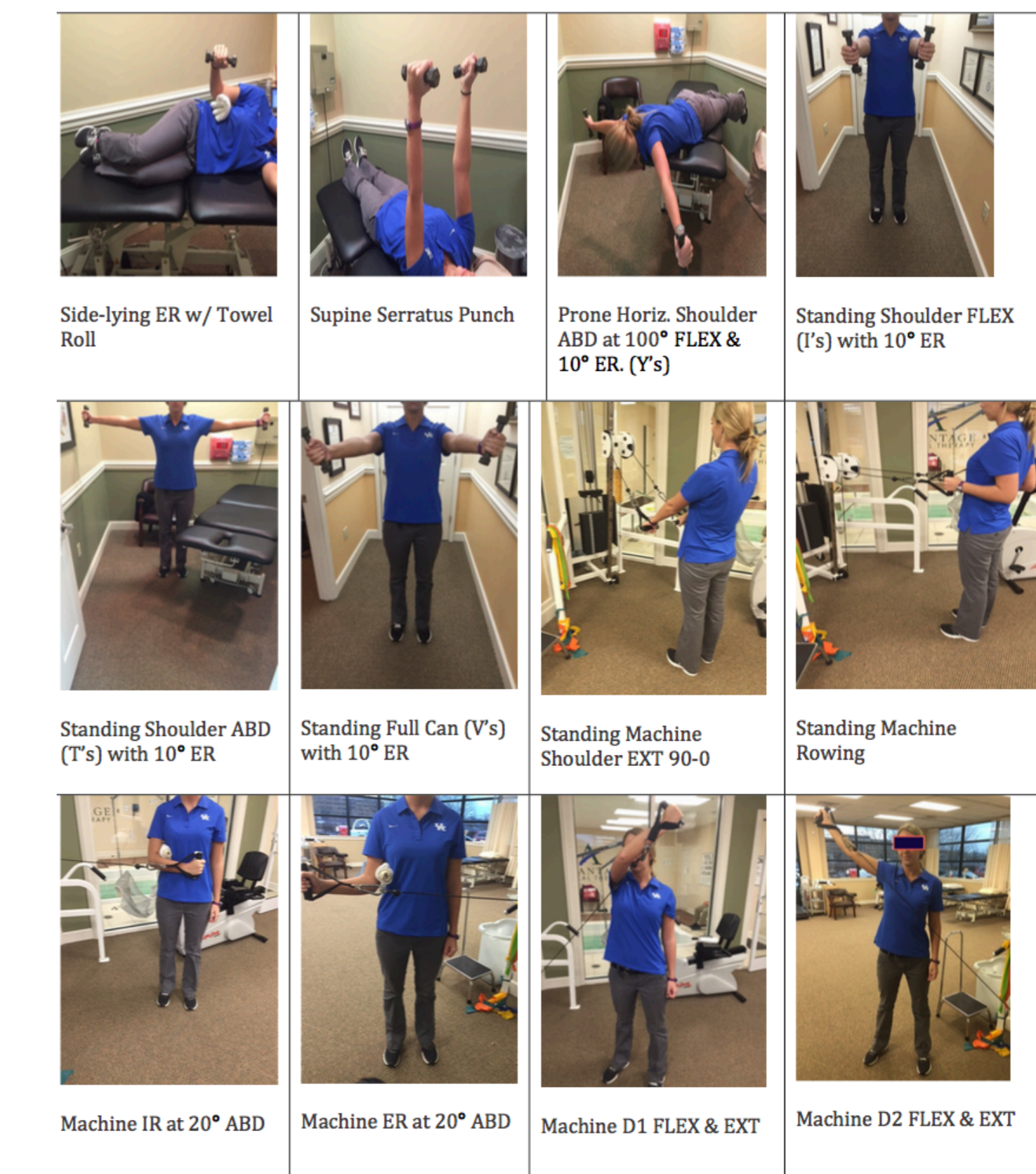
Research Question

How Might Dry Needling, Alone or Combined with Conservative Treatment, Help the Rehabilitation of Rotator Cuff Disease in College-Age Athletes?

Methodology Timeline



Physical Therapy Strength Exercises



Disabilities of the Arm, Shoulder, & Hand (DASH)

DISABILITIES OF THE ARM, SHOULDER AND HAND

Please rate your ability to do the following activities in the last week by circling the number below the appropriate response.

	NO DIFFICULTY	SLIGHT DIFFICULTY	MODERATE DIFFICULTY	SEVERE DIFFICULTY	UNABLE TO DO
1. Open a light jar or jar lid	1	2	3	4	5
2. Walk	1	2	3	4	5
3. Turn a key	1	2	3	4	5
4. Prepare a meal	1	2	3	4	5
5. Push open heavy door	1	2	3	4	5
6. Place an object on a shelf above your head	1	2	3	4	5
7. Do heavy household chores (e.g., wash walls, wash floors)	1	2	3	4	5
8. Climb or sit on stairs	1	2	3	4	5
9. Make a bed	1	2	3	4	5
10. Carry a shopping bag or suitcase	1	2	3	4	5
11. Carry a heavy object (over 10 lbs)	1	2	3	4	5
12. Change a light bulb overhead	1	2	3	4	5
13. Wash or clean your car	1	2	3	4	5
14. Wash your back	1	2	3	4	5
15. Put on a shoulder holster	1	2	3	4	5
16. Use both hands to hold	1	2	3	4	5
17. Recreational activities which require the effort of swinging, striking, etc.	1	2	3	4	5
18. Recreational activities in which you take some force or impact through your arm, shoulder or hand (e.g., golf, swimming, tennis, etc.)	1	2	3	4	5
19. Recreational activities in which you move your arm freely (e.g., playing tennis, basketball, etc.)	1	2	3	4	5
20. Heavy transportation needs (getting from one place to another)	1	2	3	4	5
21. Sexual activities	1	2	3	4	5

DISABILITIES OF THE ARM, SHOULDER AND HAND

22. During the past week, to what extent has your arm, shoulder or hand problem interfered with your normal social activities with family, friends, neighbors or groups? (circle number)

	NOT AT ALL	SLIGHTLY	MODERATELY	VERY	UNABLE
1	1	2	3	4	5

23. During the past week, were you limited in your work or other regular daily activities as a result of your arm, shoulder or hand problem? (circle number)

	NO LIMITATION AT ALL	SLIGHTLY LIMITED	MODERATELY LIMITED	VERY LIMITED	UNABLE
1	1	2	3	4	5

Please rate the severity of the following symptoms in the last week. (circle number)

	NONE	SLIGHT	MODERATE	SEVERE	EXTREME
24. Arm, shoulder or hand pain	1	2	3	4	5
25. Any, shoulder or hand pain when you perform any work, activity	1	2	3	4	5
26. Tingling, pins and needles in your arm, shoulder or hand	1	2	3	4	5
27. Weakness in your arm, shoulder or hand	1	2	3	4	5
28. Stiffness in your arm, shoulder or hand	1	2	3	4	5

29. During the past week, how much difficulty have you had lifting or holding the pain in your arm, shoulder or hand? (circle number)

	NO DIFFICULTY	SLIGHT DIFFICULTY	MODERATE DIFFICULTY	SEVERE DIFFICULTY	SO MUCH DIFFICULTY YOU STOP
1	1	2	3	4	5

DISABILITY/SYMPTOM SCORE = _____ (Sum of responses 1-28) x 25, where 0 is the number of completed responses.)
A DASH score may only be calculated if there are greater than 7 missing items.

WORK MODULE (OPTIONAL)

The following questions ask about the impact of your arm, shoulder or hand problem on your ability to work (including homework) if that is your main work role. Please indicate what your job tasks are: (I do not work, (circle any step in the sector))

Please circle the number that best describes your physical ability in the past week. Did you have any difficulty?

	NO DIFFICULTY	SLIGHT DIFFICULTY	MODERATE DIFFICULTY	SEVERE DIFFICULTY	UNABLE
1. Using your usual technique for your work?	1	2	3	4	5
2. Doing your usual work because of arm, shoulder or hand pain?	1	2	3	4	5
3. Doing your work as well as you usually do?	1	2	3	4	5
4. Spending your usual amount of time doing your work?	1	2	3	4	5

SPORTS/PERFORMING ARTS MODULE (OPTIONAL)

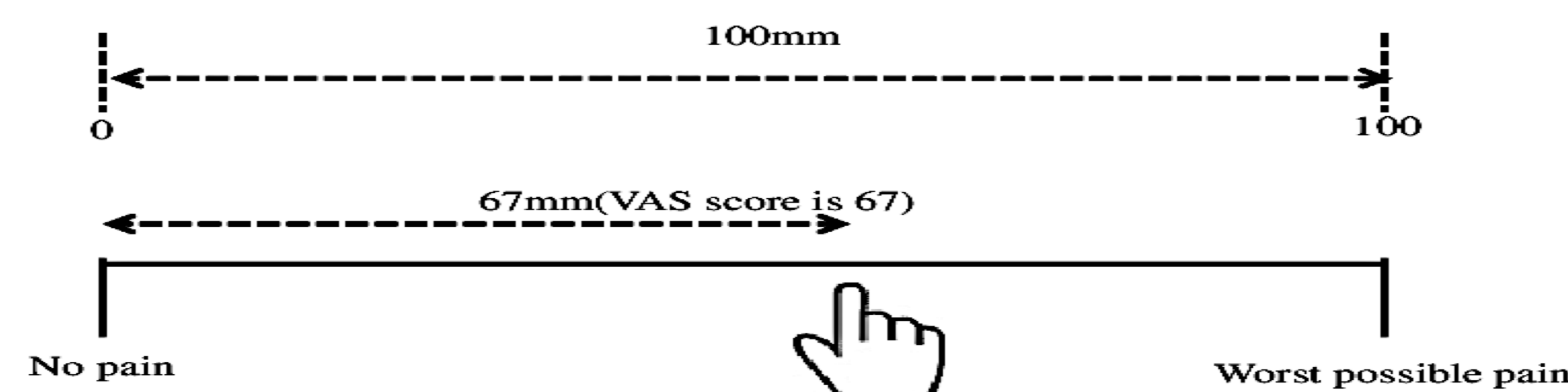
The following questions relate to the impact of your arm, shoulder or hand problem on playing your musical instrument or sport or hobby. If you play more than one sport or instrument (or play both), please answer with respect to that activity which is most important to you. Please indicate the sport or instrument which is most important to you: (I do not play a sport or an instrument, (circle any step in the sector))

Please circle the number that best describes your physical ability in the past week. Did you have any difficulty?

	NO DIFFICULTY	SLIGHT DIFFICULTY	MODERATE DIFFICULTY	SEVERE DIFFICULTY	UNABLE
1. Using your usual technique for playing your instrument or sport?	1	2	3	4	5
2. Playing your musical instrument or sport because of arm, shoulder or hand pain?	1	2	3	4	5
3. Playing your musical instrument or sport as well as you usually do?	1	2	3	4	5
4. Spending your usual amount of time practicing or playing your instrument or sport?	1	2	3	4	5

SCORING THE OPTIONAL MODULES: Add up assigned values for each response, divide by a number of items selected (usually 5). An optional module score may not be calculated if there are any missing items.

Visual Analogue Scale (VAS)



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