Our recent systematic review found that exercise training programmes that included a combination of two different subgroups of exercises were effective in reducing short term pain and disability. The subgroups identified were:

1. **Motor Control Exercises** - submaximal effort exercises for the deep cervical muscles to improve co-ordination and sequential spinal control
2. **Segmental Exercises** - exercises for the superficial cervical muscles to improve the ability of the neck to produce, transfer and absorb force

Exercise and dosage variables for both motor control and segmental exercises were different between trials providing little guidance for clinical practice or future clinical trials. The aim of this e-Delphi is to gain consensus over important exercise and dosage variables of a motor control and segmental exercise programme for chronic non-specific neck pain. This round consists of 3 sections:

1. **Participant Details**
2. **Exercise Variables**
   a. Motor Control exercise
   b. Segmental exercise
3. **General Comments**

This survey will take between 20-30 mins to complete depending on the length of explanations you provide. You can save your progress and return at any time.

Thank you for your time and commitment in helping us develop an intervention that can inform clinical practice and future clinical trials.
PART 1: PARTICIPANT DETAILS

1. What is your **professional background**? Please select **at least one** of the following:
   - Physiotherapist
   - Strength and Conditioning Coach
   - Chiropractor
   - Osteopath
   - Other (please provide details) .........................

2. What is your **highest qualification**? Please choose **one** of the following:
   - Doctor of Philosophy or equivalent
   - Master Degree
   - Bachelor Degree
   - Other (please provide details) .........................

3. Please provide your **primary country of work**?

4. What **setting** do you work in? You can select more than one option from the following:
   - National Health Service
   - Charity
   - Private
   - Occupational Health
   - Sports
   - Research
   - Education
   - Other (please provide details) .........................

5. Please identify your expertise in neck pain management
   - Academic/Education Expertise
   - Clinical Expertise
   - Both
   - Other (please provide details) .........................
If Academic Expertise

5.1.1. What is your H index? Please choose one of the following:

- < 10
- 11 – 20
- 21 – 30
- 31 – 40
- 40 +
- Rather not say

5.1.2. How many peer-reviewed publications do you have in any topic/subject? Please choose one of the following:

- < 50
- 51 – 100
- 101 – 200
- 200+
- Rather not say

If Clinical Expertise

5.2.1. How many years is it since you qualified? Please choose one of the following:

- ≤5
- 6 – 10
- 11 – 15
- 16 – 20
- 21 +
- Rather not say

5.2.2. What is your current work grade? Please choose one of the following:

- Band 5/ Junior
- Band 6/ Senior
- Band 7/ Advanced
- Band 8/ Clinical Specialist/Extended Scope Practitioner/ Advanced Clinical Practice
- Rather not say
- Other (please provide details) .................................
PART 2 EXERCISE VARIABLES

We are now going to ask about the exercise and dosage variables you consider important when prescribing chronic non-specific neck pain exercise. We will then ask for any patient and other factors that may change how you prescribe the variables you identified.

We will ask you to do this for Motor Control exercises and Segmental exercises separately to allow identification of differences in approaches for each subgroup of exercise.
PART 2A: MOTOR CONTROL EXERCISE VARIABLES

The following questions are about motor control exercises defined as:

“Exercises intended to retrain co-ordination of cervical musculature or sequential segmental control of spinal movement using submaximal effort” (Spencer, Wolf et al. 2016)

(e.g. cranio-cervical flexion in supine and cranio-cervical extension in 4-point kneeling).

1. Exercise Variables
   a) Please list and provide examples of all the dosage variables (e.g. sets, repetitions) you consider important when prescribing motor control exercise for chronic non-specific neck pain.

   Example: Sets: 2-3; Repetitions: 10-15

   b) Please list and provide examples of exercise variables other than dosage you consider important when prescribing motor control exercise.

   Example: Tempo – exercises performed slowly; Execution – must be completed with perfect technique

2. Patient Factors

   Please list and explain patient factors you consider important that may change the exercise variables you identified in Question 1 A) and B).

   Example: High pain severity – reduce sets and repetitions

3. Other Factors
   a) Please list and explain any other factors you consider important that may change the exercise variables you identified in Question 1 A) and B).

   Example: Quality of exercise less important for home exercise if no equipment available
PART 2B: SEGMENTAL EXERCISE PARAMETERS

The following questions are about segmental exercises defined as:

"Exercises intended to develop the ability of the spine to endure the production, transference, or absorption of forces through the performance of sequential segmental movements" (Spencer, Wolf et al. 2016)

(e.g. cervical flexion using theraband resistance and cervical extension in 4- point kneeling using head weights).

1. Exercise Variables
   a) Please list and provide examples of all the dosage variables (e.g. sets, repetitions) you consider important when prescribing segmental exercise for chronic non-specific neck pain.

   Example: Sets: 2-3; Repetitions: 10-15

   

   b) Please list and provide examples of exercise variables other than dosage you consider important when prescribing segmental exercise.

   Example: Tempo – exercises performed slowly; Execution – must be completed with perfect technique

2. Patient Factors

   Please list and explain patient factors you consider important that may change the exercise variables you identified in Question 1 A) and B).

   Example: High pain severity – reduce sets and repetitions

3. Other Factors
b) Please list and explain any **other factors you consider important** that may change the exercise variables you identified in Question 1 A) and B).

Example: Quality of exercise less important for home exercise if no equipment available
PART 4: GENERAL COMMENTS
Please provide any general comments

You have now come to the end of the Round 1 questionnaire. We will now analyse the results and develop a Round 2 questionnaire using the statements you have provided. We will provide you with a link to the Round 2 questionnaire once it is ready to be completed.

Thank you for your time and commitment in aiding us develop an intervention that can inform clinical practice and future trials.

Your sincerely,
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References