**Script for education of people with fibromyalgia or osteoarthritis, including explicit description of exercise analgesia**

Participant has been deemed eligible to participate in the study and arrives at the clinic and informed consent and introduction formalities are completed.

***Pain education (10-15 min) Script***

**Experimenter**: *“Can you give me some understanding of how much pain impacts on your daily life; work, social activities, recreation, exercise”*

Participant responds:

**Experimenter**: Summarise key points raised by the participant then:

*“Yes, pain can have a big impact on people’s lives and make it hard to do the things that you need to do, let alone participating in regular exercise like walking or swimming. Is there any type of exercise that you regularly participate in”?*

Participant responds:

**Experimenter**: Summarise the participant’s relevant points and then:

*“You know the funny thing is that while most people know about how good regular exercise is for things like managing weight, improving lung and heart function, and even our mood, we are starting to learn more about the benefits of exercise for chronic pain like osteoarthritis and fibromyalgia. Have you come across much information about the benefits of exercise for chronic pain?”*

Participant responds:

**Experimenter**: summarises key points raised by the participant and then:

*“One of the most important benefits of exercise for people with osteoarthritis and fibromyalgia is that it can reduce pain. Have you heard anything about this?”*

Participant responds:

**Experimenter**: reflects on relevant points the participant has raised and then:

*“To describe the research about how exercise influences pain requires me to explain a bit more to you about pain and exercise. The first thing I would like to discuss is pain during exercise. When you exercise and your pain increases, can you tell me how you determine if it is safe for you to continue or if the pain is an indication that you should stop?”*

Participant responds:

**Experimenter**: summarise any relevant points then:

*“It’s normal to feel an increase in discomfort/pain during exercise. This is not an indication that you are causing further damage to the muscle or that you are hurting yourself. It is safe to continue to exercise when the increases in pain you experience are tolerable and feel manageable. This discomfort should level out during exercise and reduce shortly after you finish. If you feel your muscles are getting tired or hurting too much during the exercise, then you should just drop the intensity slightly back to an easier level. Does any of this sound like how you deal with pain during exercise?*

Participant responds:

**Experimenter:** reflects on relevant points the participant has raised and then:

*“Taking this approach to pain during exercise seems to be the most beneficial for people with chronic pain and I would encourage you to apply this approach to the exercise bout you are about to complete for this study. By exercising with some degree of pain or discomfort at a safe and low level you can manage to maintain or get back to normal levels of activity and to improve your general quality of life. Before we continue, do you have any questions about pain and discomfort during exercise?”*

Participant responds:

**Experimenter:** answers any of the questions raised by participant and then:

*“So I mentioned before that exercise can reduce pain from osteoarthritis and fibromyalgia. This benefit of exercised comes after weeks and months of regular exercise. It can be as effective as taking a pain medication, which also has to be done consistently to reduce pain. Here, I’ll show you some data pulled together from many scientific studies to demonstrate the benefit of exercise. For osteoarthritis, the evidence of the benefits of exercise has been known since 2002!”*

[Experimenter presents a simplified figure with a forest plot of studies showing the positive treatment effects of exercise on osteoarthritis and/or fibromyalgia]

*“Do you have any questions about this graph?”*

Participant responds:

**Experimenter**: Answers any of the questions raised by the participant and then:

*“The next point I would like to discuss is something called exercise analgesia. Do you know anything about this?*

Participant responds:

**Experimenter**: Acknowledges any key points and then:

*“Exercise analgesia refers to a decrease in pain following exercise. So, when we ask a person to rate their level of pain before exercise, and then again after exercise, it is typical that their rating of pain after exercise has dropped. This reduction in pain has been shown for people with osteoarthritis and people with fibromyalgia and lasts for a bit after we stop exercising; it’s kind of like taking a painkiller. It’s also a clue as to why exercise is one of the most effective ways to manage pain from osteoarthritis or fibromyalgia. Now that I have explained a little more about it, do you think that exercise analgesia is something you have ever experienced?*

Participant responds:

**Experimenter**: Answers any of the questions raised by the participant and then:

*“I would now like to talk about how levels of pain and exertion are typically measured during exercise. Do you know anything about this?”*

Participant responds:

**Experimenter**: reflects on any relevant points the participant has raised and then:

*“Because pain and exertion are both subjective sensations, they are normally assessed using self-report scales. For example, I might ask you to rate your pain during exercise on a 0 to 10 scale whereby 0 is no pain and 10 is the worst possible pain. I could use a similar scale to ask you about your level of exertion during exercise, and this information would be useful for me to gauge how hard you are finding the exercise. Have you used these types of scales before?”*

Participant responds:

**Experimenter**:

Reflects on relevant points and then:

*“Okay well it’s good that you are now a little more familiar with what is considered safe and tolerable levels of pain and discomfort during exercise as well as how these are measured so you can apply this to the exercise bout later on. Now I will just summarise the key points we have talked about before we go on with the rest of the experiment, if that is okay?”*

[Key points on a card:

* Exercise is strongly recommended for people with osteoarthritis and people with fibromyalgia because of its physical and psychological benefits, including pain management
* Pain during exercise doesn’t mean you that are causing further damage to your muscles or joints. A small increase in pain/discomfort during exercise that levels off and then reduces shortly after exercise is a common and normal response when people with osteoarthritis or fibromyalgia exercise
* Exercise analgesia is a reduction in pain that occurs after exercise and this can last for up to 30 min following exercise. It is common to experience exercise analgesia following aerobic exercise like walking and cycling, particularly when exercise is performed at slightly higher intensities. This is the same for people with osteoarthritis fibromyalgia and as well.

*“I just have a few final questions to gauge your understanding of what I have just said before we go on with the rest of the experiment.”*

*“What do you think are some of the benefits of taking regular exercise?”*

Participant responds:

*“How do you know if you should stop exercise if you experience increases in pain and discomfort?”*

Participant responds:

*“What is exercise analgesia and what sort of exercise is most likely to result in it?”*

Participant responds:

**Experimenter:** *“Thank you. Do you have any questions before we commence?”*

Participant responds:

**Experimenter:** *“Alright, well I hope that information was useful for you and that you have learned something about pain during exercise. Now I would just like to quickly explain what is going to happen for the rest of the experiment, after which I will hand over to one of my colleagues who will take you through the exercise bout and some pain assessments.”*

Following explanation of experimental procedures:

**Experimenter**: *“Thank you again for your time and for agreeing to participate in this study. I will leave you with my colleague and see you again when you’re done.”*