**Script for education of people with fibromyalgia or osteoarthritis, excluding 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 or 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 the 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. 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:

*“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:

*“Another useful aspect of these types of scales is that they can be used to assess different aspects of pain such as pain intensity and pain unpleasantness. Pain intensity describes how strong the pain is whereas pain unpleasantness describes how bothersome it is. Now, just because something is intense, that doesn’t necessarily mean that it is bothersome and vice versa. For example, you might find the pain from a hard massage to be quite intense but not necessarily unpleasant. There is some interesting research in athletes using these different types of pain scales showing that sportsmen and women typically have lower ratings of pain unpleasantness and higher pain tolerances compared to non-athletes. Basically, athletes find things to be just as painful but are willing to tolerate them for longer. This is probably a big part of why endurance athletes like marathon runners and cyclists are able to exercise at high intensities for so long. Now I don’t wish to create an impression that with exercise we can all become stoical like elite athletes and learn to ignore pain. The point is simply that we recognise the different aspects of the pain experience and how these interact with exercise. Do you have any questions about this?”*

Participant responds:

**Experimenter**: summarises key points raised by the participant 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 because you are going to be asked to rate these sensations during exercise 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 but tolerable increase in pain/discomfort during exercise that levels off and then reduces shortly after exercise is a common and normal response when people with chronic pain such as osteoarthritis or fibromyalgia exercise
* During exercise at an intensity that causes some discomfort, tolerable increases in pain are normal and safe. We can monitor these increases in pain and discomfort during exercising using self-report scales.

*“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:

*“Do you often exercise at an intensity that you consider to be uncomfortable or painful?*

Participant responds:

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

Participant responds:

*“How can levels of pain and exertion be measured during exercise?”*

Participant responds:

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

Participant responds:

**Experimenter:** *“Alright, well I hope that 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.”*