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2 TIDieR (Template for Intervention Description and Replication) Checklist
3 (BMJ 2014;348:g1687): Pain Neuroscience Education lecture

4 1. Brief Name:

5 Mastery of the Pain Puzzle. A structured pain education lecture for chronic spinal pain patients
6 participating in an interdisciplinary, multimodal pain therapy program.

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8 2. Why:

9 The lecture aims at reconceptualization of patients' pain knowledge, thus adapting it to a
10 contemporary, modern and evidence-based one. Through understanding of pain and its
11 biological processes the perceived threat level of an ongoing pain experience will be calmed
12 down.

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14 3. What: Procedures

15 The lecture is divided into 4 parts, with the following content is based on the published learning
16 objectives (see article Figure 2).

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18 Week 1: pain definition and importance of evidence based management, self-empowerment,
19 epidemiology of chronic pain, changes in asymptomatic people, damage does not need to be
20 painful, differentiate pain and nociception, illusions: role of brain and eyes, acute vs. chronic
21 pain, pain is normal and protective, fear avoidance model of chronicity, the knight George as
22 metaphor, teaser: pain matrix, group work: individualization and discussion of fear avoidance
23 and/or endurance behavior

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25 Week 2: pain matrix, pizza metaphor, long term potentiation, learning and pain, pain and stress
26 response, pain as part of whole-body stress response, bioplasticity of the nervous system,
27 sensitization: peripher/central, nociceptive system, effective vs. ineffective strategies to resolve
28 and treat chronic pain

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30 Week 3: pain as protection revision, brain development and survival, chronic pain and body
31 response, Protectometer¹ categories and playful testing of Protectometer, group work:
32 Yesterdays Protectometer and design of a day full of safety

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34 Week 4: reflection of 3,5 weeks of interdisciplinary rehabilitation, learning experience and
35 readiness for self-management discussion, graded exposure and activity after the program, role
36 of resilience and activity, handling flair ups, test: neurophysiology of pain questionnaire

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38 4. What: Material

39 Patients are provided with the used PowerPoint™ presentation as a script to make notes during
40 the lecture and to be able to rework the content.

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42 5. Who provided:

43 The team of physiotherapist and sport scientists was educated by two of the authors (MR, CR)
44 and repetitively supervised during the study time either by MR or CR. All therapists working in
45 the study center are well experienced with their work. MR and CR qualifications are found in the
46 chapter “Preparing the Team” in the main manuscript.

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48 6. How:

49 The lecture was delivered to the patients in groups of eight. PowerPoint™ presentation was used
50 for the content delivery. If necessary additional flip chart notes could be used.

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52 7. Where:

53 The same room was used for each session. The room was equipped with at least 10 chairs and
54 classic presentation equipment e.g. computer, laser-pointer, flip chart and within the facility of
55 the study center.

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1. ¹ Moseley GI, Butler DS. The Explain Pain Handbook. Protectometer. Adelaide, Australia: *Noigroup Publications*; 2015.

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8. When and how much:

The lecture was presented weekly (Thursdays or Fridays) over four weeks. Each session lasted around 45min and was organized within a one-hour time slot. Spare time was used for discussion or individual questions.

9. Tailoring

The lecture used stories and metaphors to emotionally reach the patients. For a deep learning experience individual patient statements were used. Two group works were used to make the individual transfer of the content easier for the patients (Individual fear avoidance cycle and “a day without the need for protection”). During the study time no adaptations were made to the content of the lectures.

10. Modifications

No modification of this intervention took place.

11. How well: planned

If a lecture was missed by a patient, it was planned to have it later through a face to face session.

12. How well: actual

None of any session were missed by patients.