

# DO PEOPLE WITH CHRONIC PAIN JUDGE THEIR SLEEP DIFFERENTLY?

## A QUALITATIVE STUDY

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### 1. BACKGROUND

- ✧ Poor sleep quality is a common complaint in people suffering from chronic pain. It has been reported by as many as 99% of patients with fibromyalgia, whilst clinical level of insomnia is found in between 53 and 79% of mixed group patients with localised and diffuse pain.
- ✧ Poor sleep quality in people with chronic pain has been associated with a wide range of negative health outcomes such as lower quality of life, mood disturbance, decreased pain threshold, greater disability and reduced physical activity.
- ✧ Sleep quality is a subjective experience as there is no authoritative definition of what sleep quality is and how the sleepers interpret their sleep. Yet, little is known about the parameters people with chronic pain use to define their sleep quality.
- ✧ **Aim:** To explore the definitions of sleep quality in people with fibromyalgia, those with back pain and healthy individuals without pain.

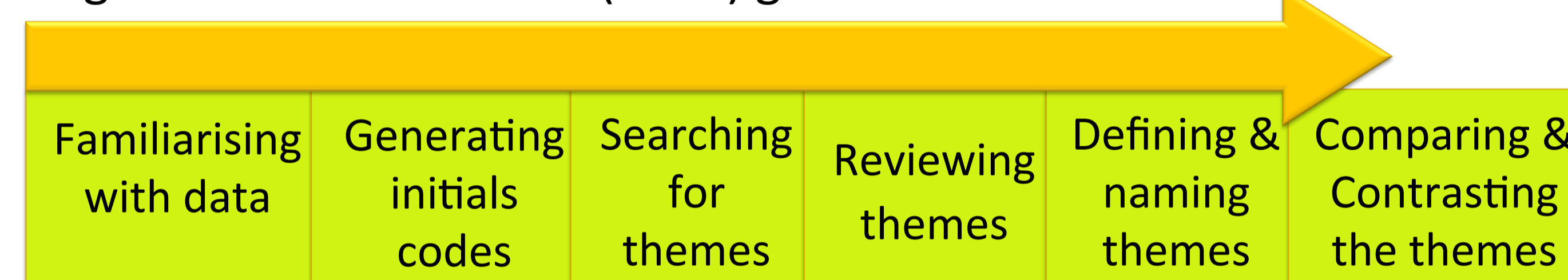
### 2. METHOD

- ✧ Participants (N= 17): Purposive sampling to respectively represent chronic widespread pain, localised pain and absence of chronic pain.
- ✧ In depth interviews, using 5 open-ended questions (30-40 minutes each long).
- ✧ Audio-recorded → Transcribed verbatim (professional transcriber) → Reviewed for accuracy (FR & EA) → Nvivo10 (to organise transcripts and to manage the extraction of codes and emerging themes).

- ① How is your sleep? Can you tell me your typical sleep pattern.
- ② How can you tell that you have had a good night's sleep?
- ③ How can you tell that you have had a poor night's sleep?
- ④ To you, what are the major differences between a good night's sleep and a poor night's sleep?
- ⑤ Is there anything else you would like to add about your sleep?

### 3. THEMATIC ANALYSIS

Figure 1. Braun & Clarke (2006) guidelines

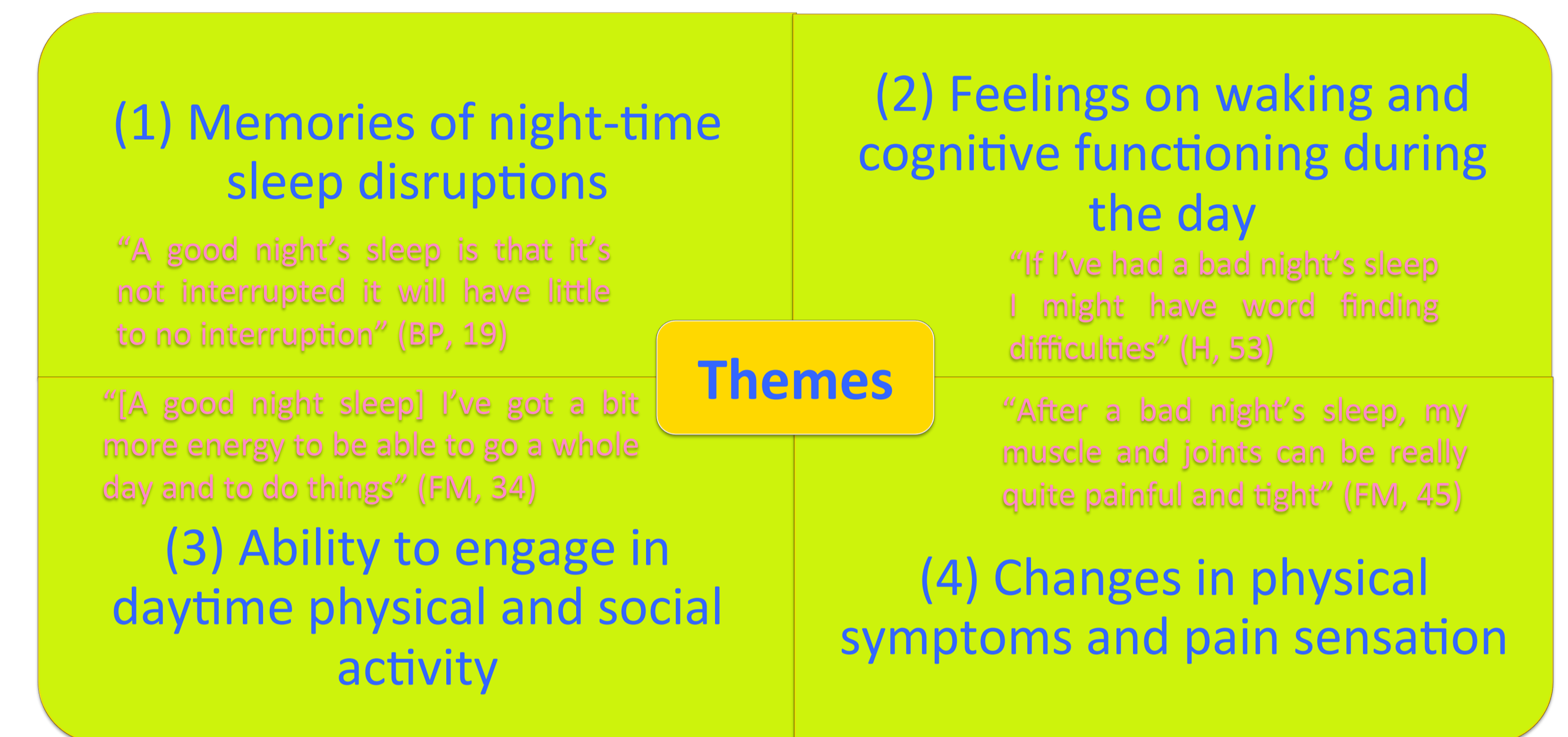


### 4. RESULTS

Table 1. Participant characteristics by group

	Fibromyalgia (n= 6)	Back Pain (n= 5)	Healthy (n= 6)
<b>Demographics</b>			
Sex			
Male	3	3	3
Female	3	2	3
Age [in years]	49 (11.6)	35.2 (19.2)	41 (15.3)
Body mass index	27.8 (5.4)	32.4 (6.2)	24.2 (3.6)
Employment status			
Full-time employment	1	3	3
Unemployed	5	2	3
<b>Clinical characteristics</b>			
Body manikins [number of area shaded]	24.5 (9.9)	4.2 (3.1)	N/A
BPI- Present Pain Severity	6.1 (0.5)	3.8 (0.9)	0.5 (1.0)
BPI- Pain Interference	8.3 (0.9)	3.8 (1.6)	0.5 (0.8)
Insomnia Severity Index	23.1 (3.7)	14.4 (4.2)	8.3 (3.3)
Epworth Sleepiness Scale	10.3 (7.4)	6 (4.8)	6 (3.5)
Dysfunctional Beliefs and Attitudes about Sleep	7.23 (1.4)	4.3 (1.8)	3.2 (1.3)
Multidimensional Fatigue Inventory	88.8 (11.8)	56 (10.4)	47.5 (18.9)
Hospital Anxiety and Depression Scale (Anxiety)	12.5 (2.7)	7.6 (1.8)	5 (2.7)
Hospital Anxiety and Depression Scale (Depression).	12.3 (2.3)	5.6 (2.8)	4 (2.5)

Figure 2. Themes emerged as criteria for judging sleep quality



### 5. CONCLUSIONS

- ✧ Sleep quality is not solely determined by night-time sleep parameters, but also by daytime processes.
- ✧ Sleep quality was often retrospectively inferred based on:
  - absence/ presence of memory of awakenings
  - participants' feelings on waking
  - evaluation of their cognitive state and task performance during the day
  - ability to engage in physical and social activities as planned.
- ✧ Overall the criteria for judging sleep quality appeared to be similar across the participants although pain was specifically mentioned by participants with fibromyalgia and back pain as an indicator of poor quality sleep. This suggests that pain potentially contributes to subjective perception of sleep disturbance and engagement in daytime functioning in chronic pain population.
- ✧ **Implications:**
  - People with chronic pain are aware of the close link between their pain and sleep (described as vicious cycle)
  - People could potentially revise their sleep quality judgment by altering the ways they interpret their feelings and evaluate their performance tasks during the day.
  - Helping people to engage and regulate daytime physical activity could potentially improve their sleep quality.
  - Thus, hybrid sleep and pain intervention would be particularly useful for people with chronic pain.