Annals of Physical and Rehabilitation Medicine 58 (2015) 326–331

Available online at ScienceDirect www.sciencedirect.com

Elsevier Masson France EM|consulte www.em-consulte.com

Original article

Volition and low back pain: When patients talk

C. Mathy [a,b,c,*], C. Cedraschi [c,d], J.-P. Broonen [e], A. Azzi [a], Y. Henrotin [b,c]

[a] Unité de psychologie sociale, faculté de psychologie et des sciences de l'éducation, université libre de Bruxelles, CP 122, 50, avenue F.D.-Roosevelt, 1050 Bruxelles, Belgium
[b] Service de kinésithérapie et de réadaptation fonctionnelle, hôpital Princesse-Paola, rue du Vivier, 21, 6900 Marche-en-Famenne, Belgium
[c] Section rachis de la Société française de rhumatologie, Paris, France
[d] Centre multidisciplinaire de la douleur, service de pharmacologie et toxicologie cliniques, service de médecine interne de réhabilitation, hôpitaux universitaires de Genève, faculté de médecine, université de Genève, Genève, Switzerland
[e] Centre de recherche en psychologie du travail et de la consommation, faculté des sciences psychologiques et de l'éducation, université libre de Bruxelles, Bruxelles, Belgium

ARTICLE INFO

Article history:
Received 19 June 2015
Accepted 23 October 2015

Keywords:
Volition
Chronic low back pain
Physical exercises
Content analysis
Pain

ABSTRACT

Objective: Our objective was to explore, describe and understand volition of chronic low back pain (LBP) patients, highlighting barriers and facilitators to practicing regular physical activity in order to develop a questionnaire assessing those volitional competencies.
Methods: A content analysis of semi-structured interviews with 30 chronic LBP patients was performed. Participants were asked about their pain, motivation, physical abilities, barriers and facilitators to regular exercises and finally strategies implemented to achieve the exercise program.
Results: Patients often reported that they were motivated and that exercises had no negative effects on LBP. Many patients recognized having difficulties performing all their exercises regularly. The main barriers were: lack of time, fatigue, lack of visible results, pain and other daily priorities. The main facilitators were: group exercise, help from the therapist, strategic planning, favorable environment, pleasure associated with exercises, fear of pain recurrence and pain itself.
Conclusion: Content analysis showed that sharing stories allowed patients to express their experience of LBP in their own words. It provides a solid ground to develop a questionnaire assessing volitional competencies in chronic LBP patients in order to identify patients who will not realize their exercises and help them be (more) active and avoid chronicity.

1. Introduction

Physical exercises are recommended to treat chronic low back pain. They are effective to prevent work absenteeism and recurrent pain episodes [1–3]. However, between 60 and 80% of patients do not fully (or not at all) perform the exercises prescribed by their therapist (primary care physician, specialist physician or physiotherapist) when they are alone at home, even when they reported being motivated [4]. Thus, motivation is not sufficient to trigger an action. As a matter of fact, one is often confronted to barriers (e.g. forgetting about exercises, feeling that the activity on the long term is too expensive, distractors, bad habits, depressive moods) preventing the action of exercising [5,6].

According to the Health Action Process Approach (HAPA) model [7], developed to explore change pathways for unhealthy behaviors, it is essential to differentiate pre-intentional processes of a motivational nature and post-intentional processes of a volitional nature (Fig. 1). Patients progress (ideally) from one stage to the next in a sequential manner and have common characteristics according to the stage they are in. The motivational stage includes three positive socio-cognitive predictors of an intention to act (e.g. "I intend to exercise"): risk perception related to a given pathology/disease, outcome expectancies of a specific action and perceived self-efficacy of this action. The concept of the volitional stage is driven by the need to appreciate that once patients have forged a global intention to develop a behavior, they must plan to implement this behavior into their routine (action planning), sustaining it over time against potential obstacles (coping planning) and make it effective (action). In related fundamental research, HAPA underlined facilitators for specific plans, called implementation intentions, for planning an action and coping [8]. These specific intentions, wilful cognitive tools determined to consciously promote the initiation of an action, are conditional plans with the following structure "if. . ., then. . .": "If faced with the

* Corresponding author. Rue de Fraigneux, 22B, 4100 Boncelles, Belgium.
E-mail address: celine.mathy@ulg.ac.be (C. Mathy).

http://dx.doi.org/10.1016/j.rehab.2015.10.005
1877-0657/

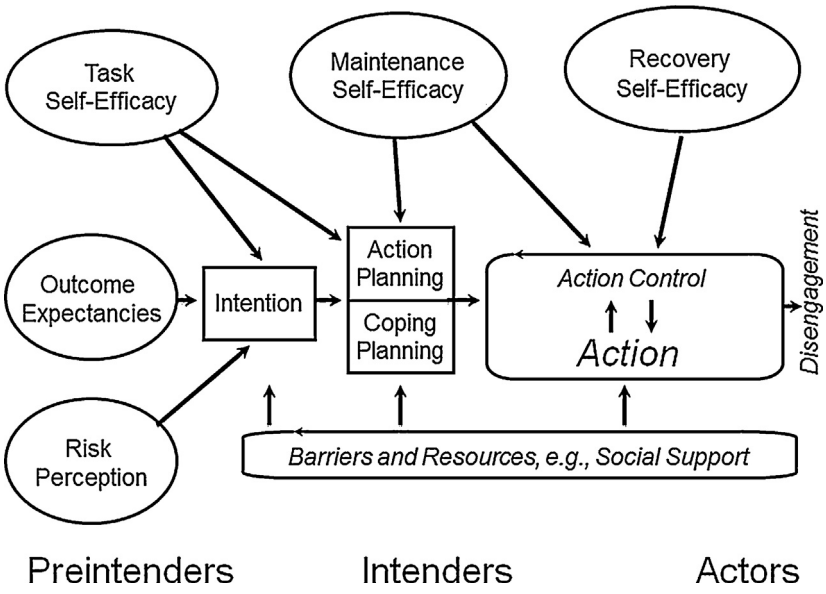

Fig. 1. Health Action Process Approach (Schwarzer, 2008).

situation *Y*, I will then adopt the behavior *Z*, geared towards the goal *X*". These plans specify under which circumstance (when and where) a certain goal-directed action will be required (how) [9]. Action planning and coping planning are positively predicted by the self-perceived efficacy to elaborate quantitatively and qualitatively-suited action plans. Once the action is initiated, its proper execution must be controlled. On the one hand, barriers can arise and the problem in that case is sustaining the action; on the other hand the problem might lie in resuming the action after having stopped or given up. Action maintenance is positively predicted by the volitional maintenance self-efficacy, designating the optimistic beliefs related to the perceived ability to face barriers that might arise along the course of the action (e.g. "I feel able to continue my physical exercises in spite of fatigue"). The ability to resume an action is positively predicted by the volitional recovery self-efficacy, designating the confidence in the ability to resume the activity after interruption or failure (e.g. "I am confident that I can resume a physical activity even after having been sick").

The results of several studies suggest that volition, especially implementation intentions, could play a positive role in the effective implementation of healthy behaviors in patients with non-specific low back pain (NSLBP) [10–12]. To date and to our knowledge, no tool exists to evaluate the volitional abilities of a NSLBP patient towards physical exercises. We believe it might be a missing link in the care management of this type of patients [13]. In this context, it seems important to explore the specific self-regulation problems encountered by NSLBP patients in terms of barriers faced when performing their physical exercises, strategies implemented, resources they have as well as assessing their feeling of self-efficacy to execute their exercises. Our objective was to better understand volitional abilities in the framework of NSLBP, in order to develop a specific questionnaire to assess these competencies and identify patients who would tend to not perform the exercises in order to help them exercise more.

2. Methods

2.1. Participants and recruitment

We interviewed 30 patients recruited in Belgium, at the University Hospital of Liege and at the Physiotherapy and Functional Rehabilitation Department of the Princess Paola Hospital of Marche-en-Famenne. They were informed about the objectives of research by the physiotherapist in charge. Inclusion criteria were: being at least 18 years of age, suffering from NSLBP, speaking good enough French, not having contraindication to practicing a physical activity and being enrolled in a multidisciplinary program, such as the multidisciplinary back school program. Regarding the HAPA that establishes a distinction between individuals who do not yet intent to act ("preintenders") from those who intend to act but have not yet transformed their intention into action ("intenders") and those who already act ("actors"), our sample clearly belongs to the last group.

2.2. Data collection

Semi-structured interviews (Table 1) were conducted by a psychologist (CM) in order to explore the participants' point of view, she questioned them on their experience as LBP patients in terms of pain, motivation to exercise, factors perceived as barriers and facilitators of their involvement and regular participation to physical exercise programs, as well as strategies implemented to execute them. Participants were encouraged to give their opinion on the subjects discussed. The interviews were recorded and transcribed ad verbatim in Word. Transcriptions include patients' answers, but also interactions with the psychologist. They were completed by notes and observations taken during each interview.

2.3. Data analysis

A thematic qualitative analysis was conducted based on transcriptions. Two researchers (CM, CC) read the interviews in order to develop a data coding grid, based on the constant comparative method, which consists in comparing each new answer to the answers previously observed in the analysis [14]. More precisely, after initial reading of all collected elements, the random selection of a sample of 10 interviews led to unveiling recurrent themes after multiple readings. Thus, CM identified significant semantic units regardless of text length (word, part of a sentence, sentence) and coded them. Afterwards, CC checked the adequacy of the codes for each of the texts in terms of precision and code coherence. No discordant code was identified. Related codes