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Primary attributions in women suffering fibromyalgia emphasize the perception of a disruptive onset for a long-lasting pain problem

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Abstract

Objective: Fibromyalgia (FM) is a chronic musculoskeletal pain disorder characterized by widespread pain. This study focuses on patients' attributions of illness and of symptom onset.

Methods: Semi-structured interviews were conducted with 56 women to elicit patients' views on what triggered their FM. The transcripts of the interviews were analyzed using a classical indexing technique to identify key themes. Content analysis was performed by two independent coders.

Results: Primary causal attributions fell into five categories: psychological problems (28 respondents); somatic concerns (N = 12); violence/abuse during childhood (N = 7); gynaecological/obstetrical problems (N = 6), and fatigue (N = 3). Patients' attributions were internal and external in the same proportions, more frequently unstable than stable, and more often described uncontrollable than controllable. Participants expressed decrements in self-esteem and feelings such as self-blame or despair; global perceptions of persistent pain and long-lasting problems, evoking chronicity and hopelessness; and low perceived control over their lives as well as beliefs that nothing can be done, thus increasing a feeling of guilt and vulnerability. Patients' narratives emphasized disruptive circumstances surrounding symptom onset.

Conclusion: Attributions often referred to the psychological dimension of the events surrounding FM onset, even though some of them also had a clear somatic dimension. Many narratives mentioned successive disruptive events and suggested an increasing loss of control. Addressing these illness representations may contribute to tailor the treatment and to help patients gain self-coherence by providing means to understand pain onset but also to guide future behaviours, particularly in terms of adjustment and help-seeking.

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Introduction

Fibromyalgia (FM) is a chronic musculoskeletal pain disorder characterized by widespread pain and pain upon palpation at tender points [1,2]. A majority of patients also complain of fatigue and nonrestorative sleep, memory or concentration problems, stiffness, and mood disturbances. A number of studies also point to central nonrestorative sleep, memory or concentration problems, pain upon palpation at tender points [1,2]. Attempts have been made to elucidate etiological mechanisms underlying FM. This is important as assumptions about the nature and origin of symptoms play an important role in clinical management.

Research on psychological factors, such as the perceptions and cognitions that patients hold about their pain problem, has shown the importance of patients' illness perceptions. These perceptions provide a coherent and empirically-based framework within a 'common-sense' model [5,6]. Such a model suggests that patients suffering FM develop personal representations about their illness and that these representations may influence what this illness means to them [6].

Causal attribution theory brings understanding into the ways patients reconstruct their illness experience. Causal attributions are the common-sense explanations people give to account for an event and their own interpretations which will guide future behaviours [7–10]. Various studies [11–13] have highlighted how much causal attributions influence cognitions and symptom experience but also contribute to determine the illness response, help-seeking behaviour, illness-associated disability as well as coping behaviour and adaptive resources in various illnesses, including heart infarction [14], somatoform disorders [15,16], somatoform disorders in patients with suspected allergies [17], orthopaedic surgery [18], chronic pain [19], fatigue [20,21] and fibromyalgia [22,23].

Attributional theories were first elaborated with reference to the locus of causality. Further studies showed the importance of two additional dimensions which may influence affective and behavioural
responses to stressful events: stability over time and controllability of the event [9,10,24–26]. Causal attributions can be thus classified into three dimensions: 1) locus of causality, 2) stability, and 3) controllability [26]. The locus refers to the perceived location of a cause as either internal or external to the person and will influence his/her affective experience of the event (e.g. in terms of self-blame and self-esteem); stability refers to the perceived degree of permanence/changeability of the cause over time (stable vs unstable) and is modulating expectancies for recurrence of the event; and finally, controllability refers to the differentiation between causes that are under, versus not subject to, volitional control (controllable vs uncontrollable), and may predict subsequent outcomes. A combination such as internal, unstable and controllable attributes has been described as facilitating positive coping strategies which improve the management of distressing emotions and cognitions. On the contrary, stable and uncontrollable attributions have been associated with avoidant coping strategies and negative psychological adjustment [26,27]. This basic taxonomy is an aid in reconstructing assumptions that individuals have about their illness and is thus of interest in understanding illness in FM patients.

Guidelines for the management of FM stress the importance of a comprehensive assessment of the patient [28,29]. In this context, the investigation of how patients suffering FM describe symptom onset may help tailoring the treatment to the individual’s needs. In this study we explored what kind of attributions women suffering FM make regarding their illness. Our purpose was to investigate FM onset using the dimensions of the attribution theory as a framework to analyze the patients’ accounts of symptom onset. Drawing on a qualitative interview study, we focused particularly on the women’s primary causal attributions, i.e. the cause they presented as the main or primary reason for pain onset.

Methods

Participation in the study was proposed to FM patients involved in a neurophysiological assessment [30]. Patients were recruited from the community and were referred by their physicians to the Multidisciplinary Pain Center of the Geneva University Hospitals, a public hospital which is the major primary care facility for the area. Diagnosis of FM was established by the patients’ treating physicians. The inclusion criteria were fulfilling the American College of Rheumatology 1990 criteria for FM [1]. As FM mainly affects women [31], participation was proposed only to female patients. In qualitative studies, the number of participants is usually determined by inductive sampling, i.e. by the need to encompass the range of possible responses and to achieve theoretical saturation of the established analytical categories. These categories and themes served as the basis for a final grid, which was then used independently by the two researchers to analyze the transcripts in order to maximize theoretical sensitivity and rigor [42]. Using patient-generated data via the interviews and verification of interpretation using two researchers allowed for an assessment of trustworthiness [37]. In short, as for credibility, confirmability and transferability, research methods were derived from previous comparable projects; familiarity with the culture and adequate understanding of participating groups of patients has been developed before the first data collection; and triangulation was used insofar as two investigators collected and analyzed the raw data so that findings emerged from consensus between investigators. Emergent findings were corroborated with existing theories and examined in comparison with previous research findings to assess the degree to which they were congruent with those of past studies.

Overall agreement between the two raters was assessed by means of the Kappa value. Disagreements were solved by consensus. The results of the separate analyses showed excellent between-raters agreement (K > .85). The final grid provided a basis for the identification of the attributions patients made regarding the onset of their pain problem. In this process, primary causal attributions were specifically identified, i.e. the cause presented as the main or primary reason for pain onset. The three dimensions of primary attributions, namely locus of causality, stability, and controllability, were characterized in terms of their internality/externality, stability/unstability, and controllability/uncontrollability.

Patients were interviewed at the site of the neurophysiological assessment and were informed that their responses would not impact on their care. Complete confidentiality was guaranteed and responses were anonymized. The protocol was approved by the local Ethics Committee and written informed consent was obtained from all participants.

Results

The 56 respondents were mainly middle-aged (51.3 years), married (64.2%), and professionally qualified (57.1%) women. The majority were either on sick-leave (23.2%) or on disability (41%). Duration of pain was > 5 years in the majority of them (66.18%), Mean present pain intensity was scored high (57.3) on a 100 mm Visual Analogue Scale (Table 1).

Primary causal attributions of illness

All fifty-six respondents expressed causal attributions for FM. Content analysis of patients’ responses showed a great diversity; primary causal attributions fell into five mutually exclusive categories: 28 (50%) of the respondents mentioned “psychological problems” including ‘relational problems’ (e.g. divorce) in 10 patients, ‘depression’, i.e. feelings of sadness, hopelessness and helplessness (9 respondents), and ‘death of a relative’ (in 9 respondents); 12 (21%) mentioned “somatic concerns” including an
well…

ability, regarding both pain and its affective consequences: 

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within or outside the respondent. Vulnerability and psychological repercussions were in 

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stance or as a cascade of intertwined events surrounding pain onset. 

The analysis of the responses in terms of the three dimensions of attributions 

showed that the patients’ attributions were internal (52%) and external (48%) in the 

same proportions, and about two times more frequently unstable than stable (68% vs 32%); a 

majority of the attributions were uncontrollable (74% vs only 26% of 

controllable ones).

Locus of causality

The locus of causality refers to the perceived point of origin and is articulated either 

within or outside the respondent. Vulnerability and psychological repercussions were in 

the foreground in both internal and external attributions of causality. As expected, percep-

tion of an internal causality was susceptibility to increase self-blame and a feeling of vulner-

ability, regarding both pain and its affective consequences: “It started because I worked 

very hard, maybe too hard, I had just created a new department within the company. At 

that time, I noticed that I had blackouts while until then I had a phenomenal memory, and I 

also started to have terrible pain, […] Now, even if I listen carefully to something that interests 

me, I cannot make a summary, find the right words, whereas before I expressed myself very 

well … and I cannot take pleasure in mediocrity. I cannot even choose the clothes that suit 

me in the store” (Respondent 38, 56 years).

Nonetheless, perception of an external causality also revealed vulnerability or psy-

chological distress in the patients’ narratives: “In 1990, I was the happiest woman in the 

world just after the birth of my second child. Everything was going very well until the 

moment I received a phone call from Spain telling me that my brother had just been killed 

in a car accident. Then, […] the pain started” (Respondent 12, 50 years).

It could be presumed that the dimension of externality may provide a self-protective 

compromise in maintaining self-esteem; but content analysis of the narratives of this 

group of patients rather showed that even external attributions were inducing psycholog-

ical distress in terms of feelings of decreased self-esteem and self-blaming.

Stability

The dimension of stability of the causal attribution refers to the perceived degree of 

changeability or permanence over time. The data showed more frequent unstable 

than stable causes. Events such as ‘surgery’ or ‘accidents’ are unstable; similarly, attri-

butions such as ‘relational problems’ or ‘fatigue’ were considered as unstable, since 

there is a chance that it may evolve over time.

“It started two years ago… now I feel sick all the time. I’ve pain in the back, everywhere. I 

feel so tired and stuff… Before I’d never had such pain; I was active, dynamic, smiling and all 

of a sudden, it’s over. Now I’m exhausted and if I rest, I get very very sick, […] Last year, the 

docto gave me a rest of one week: I spent all the time in bed, sleeping… and it took me two months 

to recover!” (Respondent 10, 38 years). Analysis of the patients’ attributions showed 

that nearly all unstable causal attributions, including ‘fatigue’ or ‘relational problems’, 

were described as having endless consequences, and thus induced negative emotional 

consequences.

The most prevalent stable primary causal attributions were found in the categories of 

“somatic concerns” expressed as ‘constitutional weakness’ and of “violence/abuse 
during childhood”.

“…I thought I could forgive him but the evil was done. The rest of my life was a failure” 

(Respondent 15, 66 years). Attributions to such stable causes allow understanding how long-lasting difficulties can be perceived as influencing psychological adjustment to illness — and beliefs that nothing will ever change. The analysis suggested that per-

ceived degrees of changeability or permanence over time both had negative psychological 

repercussions, possibly leading to feelings of helplessness and hopelessness.

Controllability

Data showed a significant majority of uncontrollable causes. ‘Constitutional weakness’, 

a clearly uncontrollable cause, was considered as the triggering factor in a number of 

respondents.

“As a child already I felt fragile, lacking resistance. I had a twin sister who died at birth… I 

weighed only 1 kg 500 and she had normal weight… I’ve always had problems with my 

digestion, diarrheas… I was born first, feet first, so that it took me a long time to get out. 

my twin was in the right position but she had to wait too long and she died in the 

waiting… […] I think they took too much care of me…” (Respondent 23, 51 years).

The analysis of the responses in terms of the controllability/uncontrollability often 

underlined a successive cascade of disruptive events. Even though the various events de-

scribed in the patient’s responses may have been controllable, their cascade seemed in 

turn completely out of control. In the following example related to “gynaecological/obstetrical 

problems”, the question of controllability/uncontrollability is in the foreground:

“It started after the labour of my last child fifteen years ago. I felt as if my genital 

organs had shrunk… […] I refused to have sexual intercourse […] Two years after, I was not on the pill because I refused to have sex… but I got pregnant… and I had a 

miscarriage. In fact it was an abortion; I didn’t feel ready to carry it to the term… 

Then after two years, I got pregnant again and I had another abortion… then I had 

sterilization […]” (Respondent 8, 46 years).

Pain onset was described as related to a disruptive event, or a series of events, 

in many of the respondents. Participants’ narratives pointed to various types of psy-

chological or somatic consequences in relation with these events. The description of 

these events often evoked emotionally painful, distressful, or shocking, experiences.

Various aspects of life referring to both the psychological and the somatic dimensions 

such as pregnancy or labour as in the above-mentioned examples, or work-related fa-

tigue associated to mobbing, psychological shock due to the death of a relative, were 

particularly salient in the narratives.

Discussion

This study investigated the principal attributions related to per-

ceived pain onset using a qualitative analysis of the discourse of 

women suffering fibromyalgia. The results indicated that attributions 

were often referring to the psychological dimension of the events 

mentioned by the participants (such as relational problems or death 

of a relative), even when the events also had a clear somatic dimen-

sion, such as violence during childhood, accident, or gynaecological/ 

obstetrical problems. These results corroborate estimates of patients’ 

psychological distress observed in other studies [43,44] with approx-

imately 60% of patients expressing psychological attributions for 

various symptoms. Other studies on causal attributions also emphasized 

the importance of psychological attributions although multiple causal 

attributions may coexist [16,19].

Three-dimensional analysis was the framework to define causal 

attributions in a comprehensive perspective, i.e. as permitting to 

understand patients’ adjustment to illness. Participants expressed dec-

rements in self-esteem and feelings such as self-blame or despair. 

Even though it could have been presumed that externality may pro-
	ect from a decreased self-esteem, narratives globally tended towards the 

expression of a negative and depressive undertone, uncovering psy-

chological suffering. Similarly, concerning the perception of changeabil-

ity or permanence over time, unstable attributions could be expected to 

increase the use of successful cognitive coping strategies [12]. Results 

rather showed that narratives stressed global perceptions of persistent 

pain and long-lasting problems, thus evoking chronicity, helplessness 

and hopelessness. Regarding the dimension of controllability, unco-

trollable attributions were clearly prevalent. The participants expressed 

low perceived control over their lives as well as beliefs that nothing can 

be done, thus increasing a feeling of guilt and vulnerability.
Multiple events and attributions were frequently mentioned in the context of pain onset; these attributions often called upon distressful experiences and/or were expressed in terms of successive disruptive events. Such contents were prominent in all five categories of primary causal attributions, referring to various emotional and somatic distressful events. Sexual abuse, violence, the threat or the witnessing of either, which have been mentioned in some of our respondents have also been described as causes of psychological trauma. Other authors found a high prevalence (>30%) of sexual and physical abuse in women with FM and reported higher rates of abuse in these patients as compared with a group of women without FM [45–47]. However, still other authors questioned the association between sexual abuse and FM onset [48–50].

Our findings demonstrate the pervasiveness of distressful illness perceptions in patients with FM. This salience in the patients’ narratives questions their ability to cope with distressing emotions but also confronts clinicians in their own ability to deal with pain problems inserted in such a context. The expression of psychological attributions raises the question of a possible contradiction between the emphasis on these issues and patients often described reluctance to address the psychological dimension of pain. Addressing this dimension may raise the fear of symptom psychologisation [51,52]. Psychological accounts of somatic symptoms can be perceived as referring to personal weaknesses and thus create a tension in the patient-therapist relationship because the therapist may assimilate narratives of psychological events to emotional disturbances. Practitioners’ recognition of psychological symptoms and distress is not always self-evident [53]. Practitioners’ resonance with the patient’s expressed experience is an important component of the therapeutic alliance and is known to represent a key tool of the patient-practitioner relationship. By investigating causal attributions, practitioners promote a dialogue about pain complaints and about psychological distress, thus possibly allowing for a better detection of psychological suffering in primary care. Although time-consuming, this patient-centred type of investigation also allows disclosure of patient’s illness perceptions and representations, which may in turn contribute to tailor the treatment to the individual’s needs and help patients gaining self-coherency by providing means to better understand pain onset. Discussing patient’s illness perceptions involves the development of communication skills that is one of the essential components of good clinical practice, along with knowledge base, problem-solving ability and physical examination. These skills involve ‘what’ to communicate, but also ‘how’ and ‘to whom’ in order to improve the patient’s support. Clinical implications are summarized in Table 2. In this sense, it would have been of interest to check the associations between the patients’ responses to an interview about FM onset and their responses to a self-administered questionnaire. Indeed, in the clinical setting using questionnaires appraising illness perceptions, including the patients’ views about the causes of their symptoms, may help the clinician discussing these issues with the patients suffering FM and assess their possible importance in the treatment [54–56].

**Limitations**

A selection bias may have occurred as patients were selected from treatment programs and individuals who were not receptive to interviews may have expressed other beliefs about symptom onset. This raises the question of the transferability of the results to other patients and contexts. The data showed variations but content analysis allowed reaching theoretical saturation. Furthermore, the sample characteristics in terms of pain intensity and duration make it likely that the results can be transferred to other clinical settings addressing patients possibly eligible for self-management programs. Indeed, the sex, age, and symptom duration of the participants in these studies were comparable to those of the patients evaluated in other self-management programs [57,58]. A recall bias should be considered since symptom onset was >5 years in the majority of the patients. Furthermore, they had all experienced various types of treatments, including medication, physiotherapy, and psychotherapy which may have changed their illness perceptions. However, in clinical practice, the overall illness perception of the patient at the time of the treatment is probably more relevant for both the patient and the therapist than the ‘real’ event or the patient’s experience at the time of pain onset and/or since symptom onset.

**Conclusions**

Attributions often referred to the psychological dimension of the events surrounding FM onset, even though some of them also had a clear somatic dimension. Perceived distressful events were multiple. Many narratives mentioned a cascade of disruptive events, suggesting an increasing loss of control. Addressing patients’ illness attributions may contribute to promote patient-tailored treatment and to guide future behaviours, particularly in terms of adjustment and help-seeking.

By including attributions and their connotations in the clinical approach, the therapist shows the patient that he/she cares for him/her globally. Taking an active interest not only in the clinical history but also in the patient’s narrative, the therapist may then identify the patient’s strengths and weaknesses. This may in turn help constructing a shared workspace and preventing disappointment and powerlessness related to refractory chronic pain. The renewed interest of the therapist for the patient’s history allows opening discussion to try and avoid therapeutic misunderstandings and failures.

**Conflict of interest**

The authors have no competing interests to report.

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**References**


Heider F. The psychology of interpersonal relations. New York: Wiley; 1958.


