

Illness behavior: pain clinic patients vs. psychiatry clinic patients

ABSTRACT

Aims: To investigate the difference of illness behavior with pain between psychiatric and pain clinic outpatient.

Study design: Cross-sectional study

Place and Duration of Study: A survey on psychiatric and pain outpatients, Saga Medical School, Saga 849-8501, Japan. Duration of this study was three months between April 1, 2011, and June 30, 2011.

Methodology: The subjects of this research included 40 patients (62.9 ± 16.5 yr., M/F:15/25) in pain clinic outpatients and 43 patients (49.7 ± 15.9 yr., M/F:13/30) in psychiatric clinic outpatient. Psychiatric patients were diagnosed as the somatoform disorders according to the DSM-IV. To clarify the difference of psychological status and illness behavior, we examined them using two psychological instruments: Illness Behavior Questionnaire (IBQ) and General Health Questionnaire-12 (GHQ-12).

Results: Pain clinic patients' group was significantly older than psychiatric patient's group. In terms of IBQ, the scores of psychological vs. somatic perception and affective disturbance among psychiatric outpatient group were significantly higher than those of pain clinic group. On the other hand, the score of denial among pain clinic group was significantly higher than those of psychiatric outpatient group.

Conclusion: According to the IBQ, the subscale of denial has significant difference between the pain clinic patients and the psychiatric patients with pain. Pain clinic patients tend to deny their psychological problem.

Keywords: Pain, Psychiatric clinic, Pain clinic, Illness Behavior Questionnaire, Denial

10 1. INTRODUCTION

11

12 “Illness behavior, the belief that one is threatened by illness and in need of protective action,
13 including medical care, is typically initiated by changes in somatic experience and physical
14 function that are interpreted as symptoms of an underlying threat to health. A number of
15 studies on the illness behavior as measured by the Illness Behavior Questionnaire (IBQ)
16 have been reported from several countries” [1]. It is reported that the illness behavior is
17 universal [2] and the socio-cultural background can influence the illness behavior pattern.

18 “On the other hand, abnormal illness behavior has been introduced to describe the
19 excessive concern with somatic symptoms and inappropriate treatment-seeking observed in
20 patients who are apparently motivated by fear of severe disease or by the potential rewards
21 of the sick role” [1,3,4]

22 Our current study is to identify the difference of the illness behavior between the pain clinic
23 and the psychiatric clinic outpatients who complaint of chronic pain without organic basis.
24 Using the IBQ and the 12-item General Health Questionnaire (GHQ-12) [5], we analyzed the
25 reasons why they choose the department and continue going to the treatment.

26 2. METHODOLOGY

27 The subjects of this research included 40 patients (62.9±16.5 yr., M/F:15/25) in pain clinic outpatients
28 and 43 patients (49.7±15.9 yr., M/F:13/30) in psychiatric clinic outpatient at Saga University
29 Hospital, Saga 845-8502, in Japan. Psychiatric patients were diagnosed as the somatoform disorders
30 according to the DSM-IV. As the socio-demographic variables, the following information were
31 collected from medical charts: gender, age, marital state and education.

32 To clarify the difference of psychological status and illness behavior, we examined them using two
33 psychological instruments: IBQ and GHQ-12

34 IBQ: It is a 62-item self-report instrument that provides information relevant to the delineation of a
35 patient’s attitude which developed by Pilowsky and Spence. Seven subscales and their definition: (i)
36 General hypochondriasis (GH) - a fear of illness with some insight as to its excessiveness; (ii) Disease
37 conviction (DC) - a firm belief that a somatic disorder is present and a reluctance to accept a doctor’s
38 reassurance; (iii) Psychological versus somatic focusing (P/S) - high scores indicate that the patient
39 feels somehow responsible for the illness and is in need of psychiatric help, whereas low scores
40 indicate a rejection of such ideas and a tendency toward somatization. (iv) Affect inhibition (AI)–
41 difficulty in expressing personal feelings, especially negative ones; (v) Affect disturbance (AD)–
42 feelings of anxiety, depression and tension; (vi) Denial (D) - a tendency to deny life
43 stresses and also to attribute all current difficulties to somatic disorders; (vii) Irritability (I)–a measure
44 of interpersonal frictions.

45 GHQ-12: “It is the most extensively used screening instrument for common mental disorders, in
46 addition to being a more general measure of psychiatric well-being. Its brevity makes it attractive for
47 use in busy clinical settings, as well in settings in which patients need help to complete the
48 questionnaire” [6]; its psychometric properties have been studied in various countries [7] and with

various types of population, for example, elderly people [8], and urological patients [9]. Seven subscales of GHQ-12 were also reported: anxiety set, depression set, anxiety & depression set, insomnia & anergia, social dysfunction, and anhedonia.

In addition, patients at pain clinic were asked for a brief explanation and medical history when handing over the questionnaire with the permission of the professor and director of pain clinic.

Statistical analysis: Comparison of the numerable data between the two groups was tested by the Student's t test, while categorical data by the Chi square test (SPSS version 16, 2008).

3. RESULTS

Table 1 presents demographic data for two groups of patients. Pain clinic patients' group was significantly older than psychiatric patient's group ($p=0.0006$). There was no significant difference between the two groups regarding sex, marital status, and education.

Table 1. Demographic characteristic of patients

		Psychiatric group (N=43)	Pain clinic group (N=40)	P value
		N (%)	N (%)	
Age, yr.	Mean age	49.8	62.9	0.0006
Sex	Male	13 (30.2)	15 (37.5)	$X^2=0.490$ df=1, ns.
	Female	30 (69.8)	25 (62.5)	
Marital status	Married	28 (61.5)	28 (68.4)	$X^2=0.898$ df=3 ns.
	Widowed	3 (7.7)	4 (5.2)	
	Divorced/separated	2 (5.1)	1 (13.2)	
	Never married	10 (25.7)	7 (13.2)	
Education	Elementary school	1 (2.5)	1 (0.0)	$X^2=2.776$ df= 4 n.s.
	Junior high school	7 (15.0)	11 (10.8)	
	High school	23 (52.5)	17 (27.0)	
	Junior college	8 (20.0)	5 (32.5)	
	College/ University	4 (10.0)	6 (29.7)	

Table 2 showed the total scores and sub scores in the GHQ-12. This result indicated that all GHQ-12 scores of psychiatric outpatient group were significantly higher than that of pain clinic group.

Table 2. Comparison of GHQ-12 between psychiatric outpatient group and pain clinic group

	Psychiatric outpatient group (N=43) mean (SD)	Pain clinic group (N=40) mean (SD)	p value
GHQ-30*			
Total scores	13.5 (8.8)	7.6 (5.8)	0.0007
Anxiety set	3.2 (1.8)	2.1 (1.7)	0.0072
Depression set	2.8 (2.4)	1.5 (1.9)	0.0098
Anxiety & depression	4.3 (3.3)	2.5 (2.5)	0.0051
Insomnia & anergia	2.5 (1.8)	1.5 (1.3)	0.0048
social dysfunction	1.6 (1.5)	0.8 (1.1)	0.0101
Anhedonia	1.3 (1.3)	0.5 (0.8)	0.007

Table 3 showed the comparison of the IBQ scores between psychiatric outpatient group and pain clinic group. This result indicated that the scores of psychological vs. somatic perception and affective disturbance among psychiatric outpatient group were significantly higher than those of pain clinic group. On the other hand, the score of denial among pain clinic group was significantly higher than those of psychiatric outpatient group.

	Psychiatric outpatient group (N=43) mean (SD)	Pain clinic group (N=40) mean (SD)	p value
IBQ			
General hypochondriasis	4.9 (2.4)	4.4 (2.3)	0.3747
Disease conviction	3.2 (1.8)	2.6 (1.8)	0.1302
Psychological v.s. somatic perception*	2.3 (1.0)	1.6 (1.2)	0.0063
Affective inhibition	3.1 (1.5)	2.9 (1.3)	0.4729
Affective disturbance*	3.0 (1.7)	1.9 (1.8)	0.0051
Denial*	2.6 (1.5)	4.0 (1.0)	<0.0001
Irritability	1.7 (1.3)	2.4 (4.6)	0.2790

*p<0.05

4. DISCUSSION

“The term *illness behavior* was introduced by Mechanic and Volkart to describe the individuals’ different way to respond to their own health status. Pilowsky’s concept of *abnormal illness behavior* encompasses several clinical conditions characterized by a maladaptive mode of experiencing, perceiving, and responding to one’s own health status. The concept of *somatization* was criticized because it implies the presence of psychological distress or an underlying psychiatric disturbance when an organic cause for somatic symptoms is not found. Thus, more atheoretical terms, such as *functional somatic symptoms* and *medically unexplained symptoms*, were introduced “[10].

What department should patients with pain choose and take medical examination? There are many possible factors, but all are due to the patient's judgement. The patient's hypothesis of the pain-causing illness will be the most important factor. Simply put, it is as follows. Psychiatric patients go to psychiatrists because they think their problems are psychological. Pain clinic patients go to pain clinicians because they think their problems are not psychological but more organic. Patients tend to select the appropriate department when they think what make their symptoms cause.

97 The most interesting finding of the results obtained in this study was that patients at pain clinics had
98 significantly higher denial scores. This means a tendency to deny life stresses and also to attribute all
99 current difficulties to somatic disorders. We assumed that pain clinic patients are more difficult to
100 treat because they do not recognize their symptoms psychological despite pain may be due to somatic
101 or psychological.

102 **Illness Denial and Illness Perception**

103 “According to Pilowsky’s abnormal illness behavior model, denial of illness may range from
104 conscious disguise of symptoms to lack of insight” [11].” In a same patient the value of illness denial
105 seems to vary according to its duration. Denial may be an adaptive response to illness when short-
106 lived, but it becomes maladaptive if it persists” [12]. “However, illness denial may deny (or
107 minimize) the diagnosis itself or other features, including implications of symptoms, need for
108 treatment, urgency, prognosis, vulnerability, and emotional consequences” [13].

109 On the other hand, a concept related to illness behavior which may be useful for the understanding of
110 subject’s ways to react to illness is that of *illness perception*. Illness perception is based on the self-
111 regulatory model developed by Leventhal et al. [14] “to describe the cognitive and affective processes
112 through which individuals respond a perceived health threat. Individuals’ illness reorientations may be
113 determined by several personal and social factors, such as previous experiences with illness and
114 information received by media or significant others” [15].

115 In the end, longitudinal studies are recommended to determine the causal links between health event
116 and illness behavior [16]

117 **5. CONCLUSION**

118 According to the IBQ, the subscale of denial has significant difference between the pain clinic
119 patients and the psychiatric patients with pain. Pain clinic patients tend to deny their psychological
120 problem. Pain clinicians may feel difficulty to treat their chronic pain patients because their patients
121 cannot recognize their pain as psychological.

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127 **AUTHORS’ CONTRIBUTION**

128 Authors may use the following wordings for this section: “Author TS designed the study,
129 performed the statistical analysis, wrote the protocol, and wrote the first draft of the
130 manuscript. Author NY managed the analyses of the study. All authors read and
131 approved the final manuscript.”

CONSENT AND ETHICAL APPROVAL

This research was conducted by getting approved by the Institutional Review Board of the Faculty of Medicine, Saga University, and an additional application was submitted to add some items, which was approved by the Institutional Review Board in 2011. In addition, the subjects were asked to cooperate after explaining the purpose and content of the research and gaining their understanding. Participation or non-participation in the research is the person's free will, non-participation in the survey, interruption of response, incompleteness, etc. will not be disadvantageous, and consent can be withdrawn at any time. We verbally explained in advance, and a questionnaire was distributed to those who obtained their consent. We explained that we would anonymize and strictly protect the data so that it would not identify individuals, and that we would not use the data for purposes other than research "Principles of laboratory animal care" (NIH publication No. 85-23, revised 1985) were followed, as well as specific national laws where applicable. All experiments have been examined and approved by the appropriate ethics committee. All psychological tests have been examined and approved by the appropriate ethics committee and have therefore been performed in accordance with the ethical standards laid down in the 1964 Declaration of Helsinki.

COMPETING INTERESTS

Authors have declared that they have no known competing financial interests OR non-financial interests OR personal relationships that could have appeared to influence the work reported in this paper.

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