

Patients' etiological beliefs about causation of multiple sclerosis

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Introduction

Health beliefs are known to predict health-related behaviors therefore understanding patients' health beliefs is an important prerequisite to effective health communication^{1,2}. The results of numerous relevant studies have shown that patients often hold beliefs that are greatly at variance with medical knowledge^{3,4,5} and it has been reported that they often blame psychological factors or special events for triggering their disease³. A recent study which was conducted with 750 neurological inpatients confirms this fact, since more than a third of the sample believed that psychological factors had played a role in triggering their disease.³

Similar studies in MS research have showed that a considerable amount of patients suffering from MS, believe that stress can worsen their symptoms and a growing literature tried to address this question.⁶ It has also been reported that stressful life events such as family conflicts and stress in the work place are associated with exacerbation and subsequent development of brain lesions^{7,8,9}, however up to now it has not been provided a consensus opinion of the relationship between stress and relapses in relapsing –remitting multiple sclerosis (RRMS)¹⁰ and there is almost no literature on stress in primary progressive MS.⁶

If patients' beliefs about the etiology of their disease are in divergence with medical opinion this could compromise help seeking behavior, therapeutic relationship and at last compliance with treatment^{11,12}. In a British study of patients in general practice showed that only half the patients thought they would benefit from medical treatment or hospitalization for investigations.⁵ Additionally, the failure of conventional medicine to take into account the psychological aspects of the illness may be one reason for the recent enthusiasm for alternative and complementary therapies^{13,14}

The foregoing points motivated us to conduct a study with the aim to identify the causes to which patients with MS attribute their illness and furthermore to associate socio-demographic and clinical variables with the causal attributions made.

Patients and methods

A total of 88 patients (22 male, and 66 female) with clinically definite multiple sclerosis according to McDonald et al¹⁵.criteria for multiple sclerosis participated in the study. They were diagnosed and followed up in the neurology clinic of the Athens University Medical School and had no history of alcohol/drug abuse, or psychiatric illness.42 of them had a relapsing remitting form and the rest had a progressive form of MS. The study did not comprise newly diagnosed patients since it was hypothesized that these patients were not yet readily informed about their disease and the psychological impact of diagnosis would be heavier on them.

Patients were prompted to answer a short questionnaire, shown in table 1, concerning the cause of their illness and their awareness of psychological or other factors that might have triggered their disease. The questionnaire was drawn from an earlier study that comprised neurological inpatients, namely by Croquelois et al.(2005).³Two items were added among the list of causes a participant could choose. Additional data on each patient included duration of the disease and educational level.

What do you think triggered your disease?
Do you think psychological factors triggered your disease?
Do you think any of the following causes triggered your disease? Stress,fatigue,excessive work or other activities,poor lifestyle,conflict with a person,pregnancy,infections,tragic event,chance,destiny.

Table 1.

Results

The patient population consisted of 22 men (25%) and 66(75%) women. The mean age of the patients was 37.63 years and they had been ill for a mean duration of 12.95 years. 42 of the patients had a relapsing remitting form (n=47,72%) and the rest had a progressive form of MS (n=52.28%).The mean educational level, was counted in years of education and was 14.7.

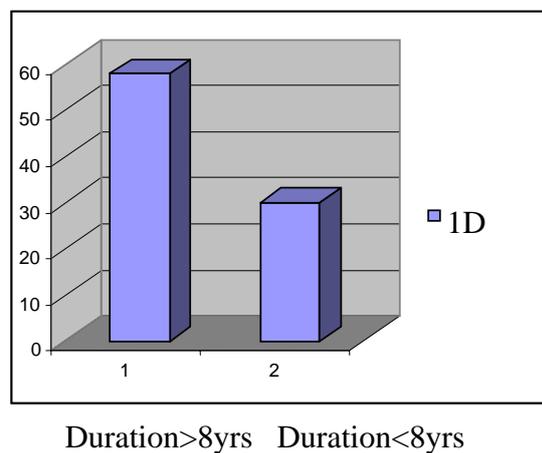
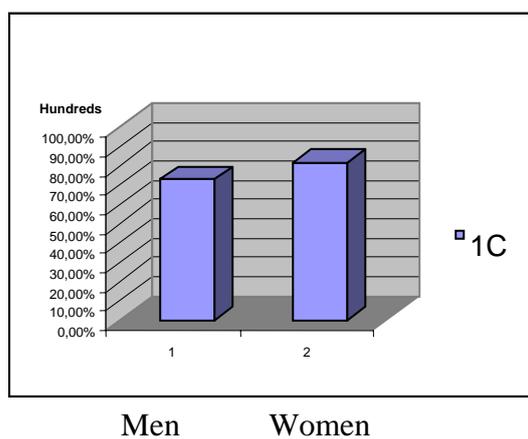
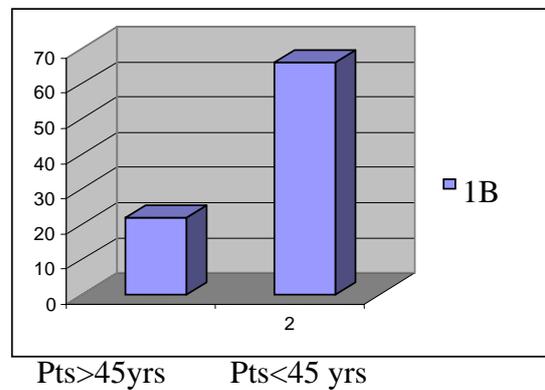
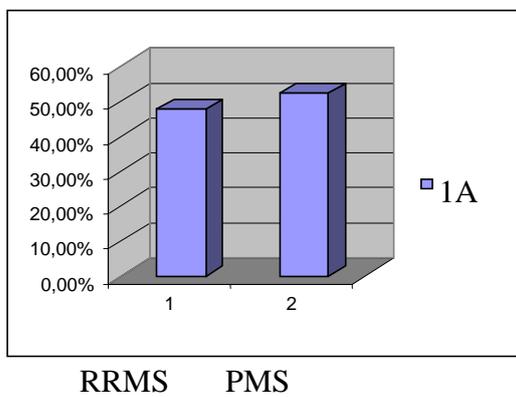
When answering the first question 18,2% responded they did not know the cause of their illness . 22,7% blamed organic causes that have been linked with the etiology of MS or have been reported to worsen the symptoms of MS such as genetic causes ,autoimmune disease, exposure to high temperature ,pregnancy ,viral infection .36.4% answered that stress and fatigue caused their illness and 25,0% gave a non medical congruent explanation ,among which common answers were that chance, destiny or supernatural causes had been responsible for their disease.Cause “not known” was answered significantly more often from male patients($x^2=21.52,p<0.001$) and “ non medical congruent explanation” also showed statistically significant difference between sexes as a causative factor ($x^2=17.45, p<0.001$).

When asked if psychological factors triggered their disease 79,5% gave an affirmative answer. (Figure 1)

No statistically significant differences were found among different types of the disease (χ^2 test, $p=0,31$), between the two age groups (χ^2 test, $p=0,41$) and among sexes (χ^2 test, $p=0,17$). Additionally, the educational level of the participants did not affect the answers (χ^2 test, $p=0,43$).

On the contrary the duration of the illness proved to be the only factor that affected the affirmative answers given, since patients with longer duration of MS (>8yrs) considered less frequently that psychological factors had an impact in the course of their disease (χ^2 test, $p<0,05$).

The frequency of each causal attribution when patients were given specific answers to choose is shown in Figure 2. The most common cause cited was stress followed by chance and destiny. Tragic event, infections, fatigue, excessive work, conflict with a person and pregnancy were next in order and poor lifestyle was the least frequent of all.



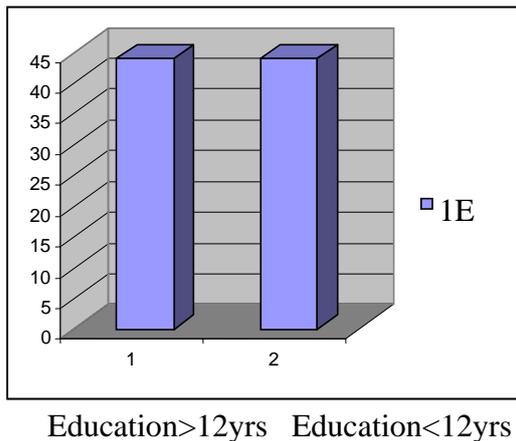
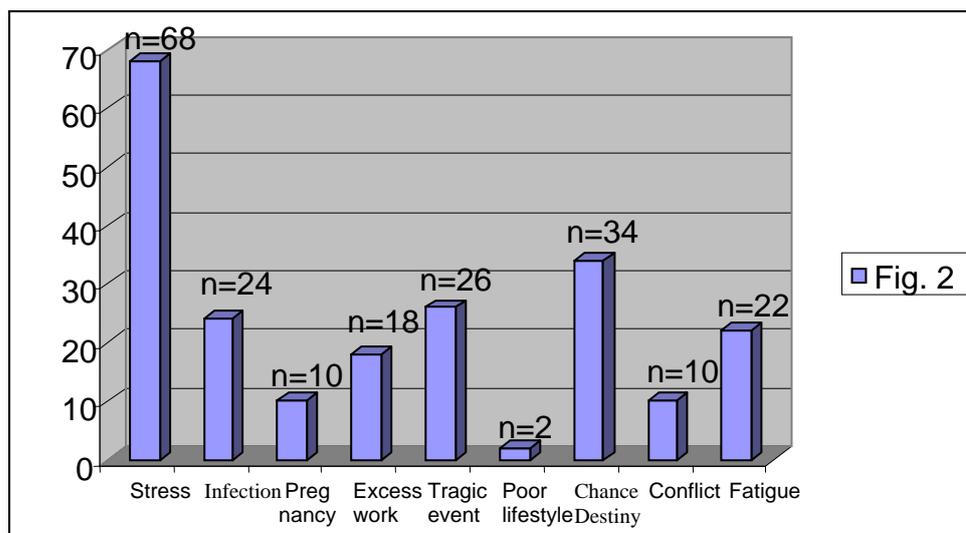


Figure 1. Percentage of affirmative answers for psychological factors. (A) Comparison between different types of MS, (B) Age, (C) Sex, (D) Duration of illness, (E) Years of education



Discussion

Although the pathogenesis of multiple sclerosis is believed to be multifactorial¹⁶ its precise etiology remains largely unknown⁶. Extensive research and numerous published reviews exist in this field, however comprehending the pathogenesis of MS becomes often difficult even to the treating physician.

The dearth of information for most chronic diseases is shocking to a present-day "Internet generation" of the newly diagnosed who find themselves often unable to find answers to simple questions¹⁷. It is understandable that if patients only partially

comprehend their disease, their beliefs about the etiology of their illness can only partially concur with medical opinion.

In the present study 25,0% of MS patients gave a non medical congruent explanation when they were asked about the cause of their illness and 79,5% answered that psychological factors may have triggered their disease .

Educational level did not seem to influence the way multiple sclerosis patients think about their disease and this was a surprise to us. Additionally, psychological factors were mentioned almost from the same proportion of patients suffering from RRMS or progressive forms of the disease.

In contrast the duration of the illness had a bearing on the causal attributions made since patients that had been ill for long, blamed less often psychological reasons. Thus, it would seem possible to hypothesize that causal attributions made are not static ones but may change with the progress of the illness.

A gender difference in the answers given was also evident in the present study. The cause not known was more frequently mentioned when the illness occurred in a male patient. Also chance and destiny were more frequently reported from males.

The reason for this gender difference was not apparent to us since males traditionally are thought to be better exposed to information. However, T.N.Srinivasan.R.Thara.in their study of “Beliefs about causation of schizophrenia reported similar findings”, cause not known” was named significantly more when the patient was male.

In summary, despite the increasing exposure to information available through electronic mass media in our days, a large proportion of MS patients give a non congruent medical explanation when they were asked about the cause of their illness and even a bigger proportion believe that psychological reasons triggered MS.

Time was proved the only factor that influences the etiological beliefs of MS patients ,and this can reflect the fact that with time patients are more readily informed about their disease or cope better with their illness.

Current literature identifies that education, support and teaching patients to cope are important for the management of the consequences of MS and should therefore complement medical intervention.

In this context, more information about multiple sclerosis patients beliefs of the disease could prove helpful to guide clinicians attempts to educate patients, assist them to address their concerns, clarify misconceptions and make informed choices. Whether MS patients help seeking behavior and compliance with treatment is affected from beliefs they hold about their illness should be further assessed in future studies^{18,19, 20} .

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