

Irritable Bowel Syndrome: A Cross-Cultural Perspective

By Drs. Charles and Mary-Joan Gerson

Drs. Charles and Mary-Joan Gerson were asked to write the following guest article for the Spring 2005 *Functional Brain-Gut Research Group* (FBG) newsletter. FBG is the pre-eminent international organization of functional bowel disease researchers.

Charles D. Gerson, M.D., Mary-Joan Gerson, Ph.D.

Division of Gastroenterology, Mount Sinai School of Medicine and Post-Doctoral Program in Psychotherapy and Psychoanalysis, New York University

Since IBS has been codified by the first Rome Committee in the early 1990's, symptom patterns, psycho-social findings and epidemiologic studies have originated predominantly from the United States, Canada and Western Europe. More recently, there have been a number of publications documenting IBS around the globe (1, 2). Most of these articles have described population incidence, sex ratio and age range. While some studies suggested that incidence is lower in Asia than Europe or the United States (3), others have shown comparable rates (4). The interest in IBS around the world is exemplified by the membership of the FBG which has 48 members from Latin America, the Middle East and Asia in the latest directory.

IBS has been described as a biopsychosocial illness, associated with life stress, psychological distress and somatization (5). Comparing its incidence in different countries does not address the myriad of possible cultural influences on symptom presentation, health care utilization and treatment implications. As Kleinman, et al, note, "Illness behavior is a normative experience governed by cultural rules: we learn "approved" ways of being ill. It is not surprising then, that there can be marked cross-cultural and historical variation in how disorders are defined." (6). Beliefs about illnesses, such as functional gastro-intestinal disorders, are embedded in cultural world views.

The cultural context of illness, which most essentially includes the family and work environment, may have a significant effect on IBS symptoms and, of course, differs from country to country. The relationship between the individual and the community varies by culture; communal coping is quite different from individual coping. A stressful event that is normally processed in the context of close relationships may increase manifestations of IBS if those relationships are dysfunctional. Research in the United States has found that conditions as disparate as rheumatoid arthritis and congestive heart failure are affected by spousal conflict (8, 9).

What about the effects of modernization on functional bowel disorders? While IBS was originally thought to be less prevalent in "non-Westernized" societies, it now appears that rapid societal influences may be changing this. Several studies have shown significantly greater IBS incidence in urbanized population compared to rural subjects (10, 11). Urban change includes stressful living conditions and possible disruption of traditional family relationships.

What is the empirical evidence documenting cultural influence on illness behavior? China provides some

examples. In one study, Chinese survivors of the Cultural Revolution expressed disturbed thoughts via the experience of bodily pain (7). Health research has recently begun to focus on the beliefs and expectations which accompany illness. It has been reported that traditional Chinese belief in the relationship of astrological signs and illness can hasten death by up to five years (12).

Health care utilization may be affected by cultural factors. The oft-quoted reversal of female: male ratio among IBS patients in India may represent a cultural effect, the difficulty females have in accessing medical care for IBS symptoms (13). A colleague in Sri Lanka offered a different explanation for the noted male dominance in IBS presentation. He hypothesized that males have been entering the work force in high pressure commercial situations and the associated stress may be manifesting itself in IBS symptoms (14,15). In China, patients with chronic illness such as IBS are often seen by traditional doctors, possibly biasing IBS epidemiological studies performed in "Western" medical facilities. Traditional healers are more likely to use complementary methods. Difference in local culture may affect the choice of complementary therapies by IBS patients, as documented in a study of Hispanics living in Texas (16).

Our interest in these questions led to a global survey of 239 IBS patients in eight different countries, United States (New York City), Mexico (Mexico City), Canada (Montreal), England (London), Italy (Bari), Israel (Beer-Sheva), India (Calcutta) and China (Beijing) (17). Our study was designed mainly (1) to evaluate their family relationship patterns, as measured by three sub-scales, support, depth and conflict and (2) to investigate attitudes of IBS patients towards psychological vs. somatic factors as explanation of their colonic symptoms (mind-body questionnaire). The mind-body questionnaire asked patients to agree or disagree with statements attributing their symptoms to emotional or physical causes. Results from both questionnaires were correlated with level of IBS symptoms. Finally, we assessed whether there were significant universal findings or significant intra-country differences.

As the study progressed, it became clear that it is possible to perform this kind of research via the internet, a research team without walls. Our colleagues were primarily at tertiary centers so the results mainly apply to IBS patients referred to specialists. Most patients were urban based and lower or middle class. The one exception was Italy where the study population was 50% rural and had the lowest level of education. This may explain why the results from Italy were the most strikingly different from all the other countries with high relationship conflict, low depth and support and reversed ratio of physical and emotional attributions. The sex ratio of the entire study population was fairly typical of other surveys, with 68% female. However, the usual variance was present in the Indian group where 93% were male.

There was surprising universality of results among the eight countries with some interesting variation between countries. The relationship scale that we used had highly significant results. Aggregate analysis of the data showed that patients whose family relationships were high in support and depth had low IBS activity while patients who scored high in family conflict had high IBS activity. There is empirical evidence that spousal support is related to lower levels of reported pain and to pain reduction (12). A positive link has been described between health and social support. However, it is possible that illness may have a negative effect on relationships, leading to increased conflict. Additionally, IBS patients suffer from chronic pain, and because of their physical distress, may be more sensitive to conflict and perceive significant others as less supportive.

The mind-body questionnaire also yielded highly significant correlations. Patients with greater psychological attributions had lower IBS activity. Patients with greater physical attributions had higher IBS activity. It is possible that patients who are more psychologically minded minimize physical symptoms. However, it has been reported in the literature that psychotherapy is more successful in IBS patients who believe that stress is related to their symptoms (18). In either case, patients may benefit from accepting and not resisting the concept that IBS is a mind-body illness.

The universal findings in so many different geographic settings may represent an urban effect on a global scale, consistent with recent IBS epidemiologic reports of comparable IBS prevalence in different countries (4). Most of our subjects lived in cities, experiencing the effects of globalization. However, some of the intra-national differences we observed, particularly in India and China, suggest that there is a cultural influence on IBS. India had the highest conflict sub-scale score in the relationship scale while China was low in depth and support. These findings may be a result of the disruption of traditional family relationships associated with modern urbanization in those countries. China and India had the highest scores for agreement with both mind and body attributions of IBS. This is consistent with the holistic view of health prevalent in both countries.

Our results indicate that physicians should address the importance of healthy relationships in their IBS patients, including the attitudes of significant others. The mind-body questionnaire results suggest that psychological awareness should be fostered as well. It appears crucial that physicians be aware of possible differences between their belief systems and that of their patients.

There are clearly numerous cross-cultural aspects of IBS still to be explored. A new sub-committee of the FBG has been established to look at issues represented in our study, including the influence of culture on symptoms, manifestation of psychological problems, and how family dynamics affect IBS symptom patterns. Hopefully, more research will emerge regarding these and other questions. Finally, the terminology used to describe functional bowel disorders may not be easily translatable from one culture to another. One of the supportive symptoms for the Rome criteria for the diagnosis of IBS, bloating, is not directly translatable into Spanish usage (19). Patients in different countries with different languages may require an alteration of terms in order to be compared. In research studies, the translatability of questionnaires should be a rigorously addressed (20).

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