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EDITORIAL

Preventing somatization[1]

Countless cross-sectional surveys of primary and secondary care have demonstrated the ubiquitous nature of medically unexplained symptoms. If grouping diverse symptoms under one heading is appropriate, they account for over half of all new presentations in secondary medical care (Nimnuan *et al*. 2001*a*) and a sizeable proportion of 'frequent attenders' in secondary care have predominantly medically unexplained symptoms (Fink, 1992*a*; Reid *et al*. 2002). Such symptoms are costly, persistent, and associated with significant disability and psychiatric disorder (Reid *et al*. 2001, 2003), but are generally ignored by mental health services (Bass *et al*. 2001).

Current definitions of medically unexplained symptoms are best seen in the context of systems of medical care. In primary care, the concept of somatization as a process is widespread and defined by Lipowski (1988) as the tendency to experience and communicate somatic symptoms that are unaccounted for by pathological findings, to attribute these to physical illness and to seek medical help. Others have emphasized how medically unexplained symptoms are an expression of underlying mood disorder (Bridges *et al*. 1991). In secondary medical care specialities, a number of functional somatic syndromes have been described and have proliferated in step with the fracturing of general medicine into ever smaller components. Wessely *et al*. (1999) have argued that conditions such as irritable bowel syndrome in gastroenterology, atypical chest pain in cardiology and fibromyalgia in rheumatology each serve the corresponding speciality's needs for a diagnostic label for patients with unexplained symptoms, but the overlap between such syndromes is so great (Nimnuan *et al*. 2001*b*) that they are better seen as a single underlying disorder. In psychiatry the somatoform disorders have been recognized in DSM and ICD, but are arbitrary and unreliable diagnoses (Escobar *et al*. 1998). Finally, from the patient's perspective, the current vogue for referring to medically unexplained symptoms may itself have a limited life-span – patients find the term offensive and prefer the label of 'functional' symptoms (Stone *et al*. 2002).

It is tempting to view the experience and presentation of unexplained symptoms as learned behaviours. Many aspects of normal illness behaviour are learned (Pennebaker, 1982) and there is often a history of medically unexplained symptoms extending back to childhood. DSM definitions of somatization disorder described it as a life-long condition. If the behaviour is learned, this implies that certain early risk factors may be especially salient. For example, Craig *et al*. (1994) found that patients presenting to their GP with medically unexplained symptoms were more likely than either physically ill or depressed controls to report having suffered from a physical illness during their childhoods. Furthermore, parental illness during childhood was more frequently reported than in controls. Using data from the Medical Research Council National Survey of Health and Development (a birth cohort that followed individuals born in 1946), we demonstrated that the children of parents who rate their health as poor have more medically unexplained symptoms and hospitalizations in adult life (Hotopf *et al*. 1999, 2000). This study also indicated that medically unexplained symptoms, such as recurrent abdominal pain during childhood, were risk factors for subsequent difficulties. However, well-defined physical disease during childhood was not associated with adult unexplained symptoms.

These epidemiological studies leave several questions unanswered. First, it is not clear what aspect of parental illness matters. Is the relationship a general one, in which all chronic illness in parents is associated with unexplained symptoms in the offspring? Or is it more specific – it could

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be, for example, that the 'active ingredient' is having a parent who also suffers from medically unexplained symptoms and has distorted illness beliefs and behaviours. Secondly, using historical data has great advantages in terms of economy, but childhood diseases have changed dramatically since the middle of the last century. Diseases that were common then (especially infectious diseases) have to a large extent been controlled, and some childhood diseases (e.g. cystic fibrosis, cancers), which would have been almost universally fatal in childhood or adolescence in the 1950s, now have a markedly better prognosis.

New work provides possible answers to these questions. For example, a major follow-up study of 9535 adult survivors of childhood cancer has reported that compared with siblings, such individuals continue to experience major disadvantages into their adult lives (Hudson *et al*. 2003). Children who have had cancer not only had poorer mental health, greater limitations of activities and more functional impairments but also higher levels of somatization symptoms. Clearly, not all childhood illnesses are the same, and psychological outcome for survivors of some may be less favourable than previously thought (Pless *et al*. 1989).

Craig and colleagues have answered some of the questions regarding the likely 'active ingredient' of parental illness in relation to subsequent symptoms in offspring. They have now published two papers comparing children of somatizing mothers, mothers with physical illness and healthy mothers (Craig *et al*. 2002, 2004). For practically every outcome, children of mothers with physical illness and healthy mothers have similar outcomes. Children of somatizing mothers have more GP consultations, and more reported ailments. Maternal reports of headaches and stomach-ache were both about three times more common in the children of somatizing mothers than other children. Similar findings were described for emotional symptoms, but the effect sizes were still greater. Craig's second paper (Craig *et al*. 2004), reported in this issue, used in-depth observations of the same mother and child dyads. Children and their mothers were observed during play and while eating a snack. One of the play situations was neutral, the other involved a medical theme. The investigators hypothesized that the responsiveness of the somatizing mother would be reduced in general, but that the mother would respond to the child in a selective way, which would reinforce illness behaviour. They suggested that there would be more maternal bids for attention when the medical set was used. There was more evidence for the first hypothesis than for the second. Somatizing mothers were indeed emotionally flatter, less involved and generally made fewer critical or reinforcing comments. However, this effect was general, and somatizing mothers did not try to engage their children in the medical set more than other mothers. There was, however, a subtle difference in the way in which mothers and children interacted over play tasks. The children of somatizing mothers tended to ignore maternal bids for attention to use medical toys, but the mothers of somatizing children tended to be more responsive to their children's bids for attention when using medical toys. Hence, somatizing mothers and their children respond differently from each other when the centre of attention is a medical theme. The nature of the interaction between maternal and child bids for attention when playing with medical toys suggests that somatizing mothers may be more attuned to medical subject matter, and it does not seem too great a stretch of imagination that they may respond to their child's ailments in a way which reinforces symptom focusing, fear, avoidance and other unhelpful responses.

How can these fascinating findings be applied in practice? It is possible that one is observing genes as much as learning, and epidemiological and clinical studies are simply describing the heritability of unexplained symptoms across generations. Twin studies indicate that some unexplained symptoms are heritable (Kendler *et al*. 1995; Farmer *et al*. 1999; Hickie *et al*. 1999). This should not be taken as an indication that learning is unimportant – genes require the right environment in order to be expressed – but if we are observing a pattern of learning, this begs the question whether the pattern can be reversed. Even if interventions could be devised that would minimize the effect of somatizing mothers on their offspring's illness behaviours, a strategy limited to high risk groups would be unlikely to make a sizeable impact on the problem in population terms. In terms of treatment of children with unexplained symptoms, these studies suggest that the involvement and education of their parents may be a crucial ingredient, and trials are underway using this approach.

Ultimately, the area where prevention (or at least secondary prevention) may prove most attainable is in changing the behaviour of doctors and health care systems. In primary care, recent qualitative work indicates that many opportunities to 'change the agenda' regarding medically unexplained symptoms are missed (Dowrick *et al*. 2003; Salmon *et al*. 2003). For example, in many encounters, doctors attempt to 'normalize' physical symptoms without giving sufficient explanation (e.g. 'it doesn't sound like the pain comes from your heart') and this leads to the patient seeking further reassurance, or introducing new physical symptoms. Such encounters often ended with the doctor ordering a further investigation or prescribing medication. An alternative approach, where the doctor provided effective explanations for the symptoms (which could be psychological or physical) linked to the patient's specific concerns, was hypothesized to allow a change in the agenda and an improved outcome of the consultation. Secondary care practitioners probably experience similar difficulties, and a common outcome of such consultations is referral to another specialist (Reid *et al*. 2002). Failure to recognize the overlap between functional somatic syndromes may mean that patients are bounced from one hospital department to another, over-investigated and given unnecessary and misleading diagnostic labels and treatments; all of these reinforce symptoms and disability, and make return to health more difficult.

More overt iatrogenesis has a central role in the perpetuation of medically unexplained symptoms (Page & Wessely, 2003). Patients with medically unexplained chronic pain feel disbelieved, are overtreated and report having received misleading explanations from doctors (Kouyanou *et al*. 1997, 1998). Many patients with somatization disorder will have been through unnecessary surgery often leading to the removal of healthy organs (Fink, 1992*a*). Following such surgery previously unexplained pain may be converted to explained pain due to adhesions and other pathological changes caused by the surgery. Less extreme examples of well-intentioned but possibly misguided practice are more common. Patients with low back pain attending practitioners who advise rest and prescribe medication have a poorer outcome than those who avoid such strategies (von Korff *et al*. 1994). We have recently completed a randomized controlled trial of a 'guided convalescence' to prevent fatigue following glandular fever (Candy *et al*. 2004). The intervention involved advice on resumption of normal activities, and appeared promising. But most patients recalled their general practitioners giving them conflicting advice – 70% recalled being given unconditional advice to rest. Rest in the context of an acute viral infection is not necessarily bad advice, but it needs to be balanced by advice to resume normal activities soon.

Parental and iatrogenic risk factors for the development of somatization may have more in common than is immediately apparent. Both can reinforce illness behaviour by over-prescribing rest, encouraging medication use, giving misleading interpretations of symptoms, and endorsing a sick role by excusing school or providing sickness certification. Whether it is possible to train either doctors or parents to respond to symptoms in a way that avoids such traps is another matter.

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