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INTEGRATING MODELS OF DISABILITY: a reply to Shakespeare and Watson

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The WHO model has been widely used as a model of disability and continues to be the implicit model adopted in the delivery of health care. The model has been criticised in a variety of ways with resulting suggestions that it can be modified or abandoned. However the model offers a useful staring point by clearly separating the concepts of ‘impairment’ (limitations in the performance of activities). The model proposes that disability is the result of impairment, but opens up the possibility that other factors may also influence disability. Clarification of these other factors is essential to the viability of this model.

Since disability is defined in behavioural terms, it seems obvious that disability should be influenced by the same variables as influence other behaviours, including physiological, environmental, social, cognitive and emotional factors. I have proposed (Johnston, 1996a) that it is possible to integrate the WHO model with some of the current most strongly validated theories of behaviour. Based on findings from observational, longitudinal and experimental studies, perceptions of control have been found to determine levels of disability, even allowing for level of impairment. For example, one experimental study showed that when individuals were asked to describe occasions when they found it difficult to exercise control, their perceptions of control were reduced and their levels of disability were increased; similarly, describing occasions of successful control resulted in greater perceived control and less disability (Fisher and Johnston, 1996). This study clearly demonstrates changes in disability without changes in impairment and thus challenges the WHO model. I have proposed that, rather than abandoning the WHO model, it should be developed to be more compatible with existing scientific findings and have proposed a fuller model of factors explaining limitations in functional activities. Other psychological models deal with the psychological and emotional *consequences* rather than determinants of impairment and disability.

Theoretic models serve a number of functions. My objective was to achieve a model that more satisfactorily explained the observed phenomena and that allowed the possibility of further testing of the model. For others, such a model can have an applied function, enabling new and potentially more effective insights and methods of clinical intervention; hopefully my paper may serve this end by being reprinted in a journal read by research practitioners (Johnston, 1996b). A third function is to influence social policy and public debate with the aim of persuasion and the possibility of social change. Thus models serve scientific, applied and social functions. It is not clear that the same model can serve all of these functions simultaneously and the rules for each type of model are different. The rules for the development of scientific models are relative clear: such models depend on the generation of hypotheses and testing them with scientific rigour. Scientific models are changed by evidence, whereas applied models are changed by acceptability and usefulness and social models are changed by argument and persuasion.

One can debate the level at which models should be pitched and explanations of human behaviour can be at physiological and social levels. Shakespeare and Watson (this publication) are critical of psychological explanations of limitation of activities, perhaps because they do not believe that what we think and feel influences our behaviour, in which case this is a very fundamental unhappiness with the existence of psychology as a discipline. Alternatively, they may be using a wider definition of `disability' to incorporate the WHO concept of `handicap' (limitations in social role) and are criticising the use of a simply psychological explanation of `handicap'. If so, then they are attacking a straw man as I doubt that anyone has proposed that handicap is exclusively a consequence of individual factors.

Apart from the fact that psychological explanations typically incorporate individual factors in explaining behaviour, there are other virtues in explanations at the level of the individual. As Shakespeare and Watson (this publication) observe, individuals may have widely varying methods of managing impairment. There are major psychological theories of coping and some of these are addressed with reference to impairment and disability in my paper (Johnston, 1996a). As well as individual levels of coping, it is the individual who engages the clinical situation as patient and the professions working with patients need individual level models. A physiotherapist who is aware that perceptions of control may serve to enhance or reduce the range of activities the patient can perform may be able to offer the patient more alternative methods of coping than one who simply believes that activities are determined by impairment.

Of course individual levels of explanation can be interpreted as victim blaming, a view that can be seen as the obverse of 'empowerment'. But all levels of explanation are subject to misinterpretations and the social level can be presented as the `nanny' or patronising society. Such presentations do not undermine the validity of the approach.

Different levels of explanation of the same phenomenon do not imply that there must be a 'fight' or `battle' as Shakespeare and Watson (this publication) suggest. A model of social influence does not rule out a psychological model.

Social factors undoubtedly influence psychological functioning and therefore, behaviour. Social influences may be mediated by psychological factors. For example, the results I report of patients having different levels of disability when rated by nurses and rehabilitation therapists may be due to the social and interpersonal factors operating; rehabilitation therapists may create a more enabling environment with greater expectations which raise the individual's perceptions of control and therefore the level of performance. Psychological theory clearly recognises the impact of social factors on important psychological variables; for example, perceptions of control are hypothesised to be influenced by persuasion and by the vicarious experience of the performance of others, in addition to the effects of one's own successful or unsuccessful performance.

Social factors may influence the impact of impairment not only on the limitations in activities, but also on the distress experienced by the individual. Stigmatising attitudes could obviously have this effect. Shakespeare and Watson (this publication) are also concerned about pathologising or normalising approaches. But surely any discussion of `disability', including having journals which address the topic and models which explain it, run this risk.

The model I proposed is not dependent on concepts of impairment and disability and can in fact be generalised to any limitation in activities arising due to any limitation in physical status. Thus the model can equally well explain why a short person cannot get a book from a high shelf and why a tall person cannot walk normally under a low arch. The basic psychological model was designed to explain limitations in behaviour due to lack of intention to perform the behaviour and can therefore account for differences in performance between two individuals of identical physical stature.

Shakespeare and Watson (this publication) argue for the need to take heed of writings of disabled people and contrast these reports with the model I adopt. However, the model I adopt is based on the reports of representative, unbiased samples of individuals with various clinical conditions. While I do not doubt the value of spokespersons, from my empirical standpoint, it is important to gain results which are representative. Thus I describe a cumulative measure of disability not because I `intended [it] to be a cumulative measure', but because the data from a community cohort resulted in a cumulative pattern.

So rather than defending or attacking any of the existing models, I would like to suggest that we identify the shared and cohesive strands. The WHO model leaves open the possibility that psychological, environmental and social factors may influence the process at the level of impairment, disability or handicap. The psychological models addressed in my paper (Johnston, 1996a) attempt to explain how psychological factors can explain limitations in the performance of activities. I have suggested that such models might be integrated with the WHO model to offer a better explanatory model and one which may have greater relevance in the clinical situation. Social factors can clearly also be integrated with this model.

But this assumes that the purpose of the models is to achieve scientific explanation, a core assumption of the discipline of psychology. If instead the -aim is to produce models that achieve social goals, then scientific models may not serve the purpose.

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