The science of psychiatry in uncertain times: what does the future hold?

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Abstract

An unknown fact to most medical students is that psychiatry has been living in uncertain times for many years. High-profile psychiatric journals are publishing articles on the multiple problems faced by psychiatry, featuring worrying predictions for the future. Many groups of distinguished psychiatrists are involved in a global debate. These problems are numerous and disturbing, leading some psychiatrists to warn that psychiatry as we know it may soon be a thing of the past, its work progressively taken over by other specialties and professions, or simply left undone. The position of psychiatry at the core of mental health services is losing its stability, coming under threat by other groups looking to increase their field of expertise, such as psychologists and neurologists. In addition to this, psychiatry faces a worsening recruitment crisis, a negative image with both the public and other specialties, and a lack of confidence in the evidence base behind some of its most widely used therapies. As worrying as these issues are, further investigation shows that psychiatry has a much deeper problem within its core - its current relationship and troubled past with basic science. Opinions on the future direction for research and patient care in psychiatry are numerous and conflicting. This essay examines these issues in the hope that they can reveal what the future has in store for psychiatry.

(223 words)

The displacement of psychiatry

It is widely considered that there has been a devaluation of the role of psychiatry within mental health services in the UK. This is both in direct patient care and in the broader provision of psychiatric care as part of the NHS [1, 12]. In the past it was once the case that patients were referred to psychiatrists directly for assessment, before being managed collectively by a mental health team under the direction of a consultant psychiatrist. Under new guidelines, team members share responsibility for patients and leadership to a greater degree, and patients are now referred to and managed by the team as a whole. This approach to care can lead to patients bypassing a psychiatric assessment and receiving ineffective or insufficient treatment, or an inappropriate diagnosis. Continuity of care is also affected [15]. A group of prominent psychiatrists recently condemned this approach as an unnecessary and dangerous change in care, moving away from medically-based care towards a non-specific psychosocial intervention [1].

In addition to playing a reduced role in patient care, psychiatrists are also less involved with the management of psychiatric services. This situation has changed considerably in the last 20 years, with the government now having a major influence. Patient organisations such as Mind are also increasing in power and are frequently consulted for their opinion on policy and decision making,
possibly more so now than psychiatrists [17, 13]. This is at least partly due to a loss of confidence in the profession for past failings [12, 23]. While it is obviously appropriate for the government and patients to be involved in the provision of psychiatric services, the ability of psychiatrists to regulate themselves – their professional autonomy – is increasingly under threat.

As psychiatrists are losing professional ground, others are moving in to take over. As already mentioned, the other professions working in mental health are becoming more autonomous and taking over areas which used to be the exclusive domain of psychiatry [17]. Psychotherapeutic interventions – originally developed in psychiatry – are now mostly carried out by non-medical psychotherapists. Other medical specialties are increasingly taking on patients that previously would be treated in psychiatry, particularly general practitioners, neurologists and elderly care physicians. A major challenge for psychiatry is to define its boundaries and the treatments and responsibilities it wants to keep for itself. It must also decide on the conditions that are psychiatric rather than neurological, and situations that require a specialist rather than a generalist.

Psychiatry faces further problems with a negative image both with the public and within medicine. Psychiatry may share some of the stigma that affects its patients [17]. Perhaps partly because of this it also has a poor record in recruiting medical students and keeping hold of the psychiatrists it already has. Numbers have been in decline for some time, and are now considered to be at a crisis point. Students generally consider psychiatry to be unscientific, boring, or worse, and one of the worst options for a future career [6]. Doctors in other specialties are also likely to think of psychiatry as unscientific as well as lacking in prestige, effective treatments and an evidence base for diagnosis of psychiatric disorders. These are serious problems.

Problems with psychiatry and science

Being considered ‘unscientific’ is a major problem for psychiatry. Whilst the issues mentioned already are sociological and political, it can be argued that at the root of the problem is the science of psychiatry. Some major aspects of current practice have serious problems with their evidence base – the reliability of the current criteria used for diagnosis has been called into question, and some widely used medications may be lacking in evidence – and when the foundations of a whole branch of medicine are attacked there are strong implications for its credibility.

Where other medical specialties can rely on pathology to make accurate diagnoses, psychiatry relies on clinical classifications based on psychopathology – abnormal signs in the behaviour and mental state of the patient. There are two major classification systems which offer criteria and diagnostic labels for psychiatric diseases, and are heavily used to guide treatment. While these classifications are necessary and useful, there are issues with their validity – they are sometimes arbitrary, constantly subject to changing opinion and are assumed to correlate with an often largely unexplained disorder in the brain [17]. This situation has long been criticised, and maintained because of necessity, but now is becoming critical for psychiatry in a time where all medicine should aim to be evidence-based. The lack of a deeper understanding of psychiatric disease likely contributes to psychiatry being considered unscientific.
In addition to this, the evidence base for some very widely used drugs are under scrutiny [17]. The use of antidepressants for mild and moderate depression was considered no better than placebo in a recent meta-analysis. A ‘real-world’ trial of 2nd generation antipsychotics found that they may not be superior to the 1st generation of antipsychotics as previously thought. More broadly, much of the evidence for psychiatric drugs is based on them being used as monotherapies, which is often not the norm in the real world.

Scientific weaknesses like these are disturbing and damaging to psychiatry as a profession. They definitely play some role in the diminishing position of the psychiatrist in the field of mental illness. But behind these recent scientific troubles, psychiatry has a deeper problem. The relationship between psychiatry and the basic sciences is seriously complex and fractured. Psychiatry lacks the solid grounding in science that other specialities take for granted. It has no consistent ideology, and deep rifts exist between various groups of psychiatrists that tend to advocate either biomedical or psychosocial models of the mind and mental illness [17]. The nature of mental illness itself is open to debate, not just its aetiology and management. This is still true with other diseases, like arthritis of the knee for example – at what point does it become a disease and not a normal part of the human condition – but this is a much greater problem in psychiatry. The use of pharmacology and neuroscience is not accepted by some, whilst other groups play down the importance of psychology, sociology and psychotherapy. Both approaches have been considered to be reductionistic [10]. At a time when the DSM considers the idea of non-organic, ‘mental’ disorders to be a ‘reductionistic anachronism’ [4], some psychiatrists have accused psychiatry of being neurophobic - afraid of the neuroscience at its foundation [5], and others are calling for a ‘post-psychiatry’ movement away from a biomedical aspects of mental illness [22]. This debate and mix of opinion has negative, damaging effects on both patients and psychiatrists in terms of patient care and public opinion. The biomedical view is particularly unpopular, viewed as inhumane and untrustworthy by some, contributing at least in part to the current predicament of psychiatry [8]. Katschnig (2010) [17] describes a situation of two cultures, each claiming to have superior results, advocating integration but never making attempts to achieve it. It is an extraordinary situation in modern medicine and integral to the future of psychiatry.

Mind vs brain

The debate on whether certain illnesses are rooted in the mind or the brain is not new. Historically, the Descartian divide – the idea that the mind and brain are separate entities – has played a major role, and different ideologies have varied in popularity over the years [10]. The concept of the mind being independent from the brain is considered backwards now by many, but elements of it remain, even in prominent psychiatrists [4, 18]. While ideas about mental disease being separate from the brain are genuinely flawed, the debate is hugely complicated by the fact that while the mind is anchored in the brain, just what the mind actually is, where it begins and ends, and how it arises from the function of the brain, is still largely up for debate and speculation. Psychiatry suffers by being the only speciality to treat a highly conceptual part of the human body that borders on the metaphysical. A major challenge for psychiatry now and in the future is to decide what it is it actually treats. Is it the brain? The mind? Is it society? Or is it all of these things? And to what extent? This identity crisis has lead to the current situation in psychiatry where different ideologies are rife and makes it very difficult for psychiatrists as a whole to defend their place in medicine. However, this
situation may be beginning to change. Recent developments within both of the major approaches suggest that they both have something concrete and scientific in common.

The medical model

The medical model is a traditional, but unfashionable, often maligned way of looking at mental illness [8]. There is some confusion about what actually constitutes the medical model and a range of interpretations exist. Some see the model as a broad minded scientific process, developing new information about illness, which is common to all branches of medicine, regardless of a particular focus [10]. Others see it as a cold, reductionist obsession with biology and pharmacology [22]. The major criticisms of the medical model (and the general position of biology in psychiatry) are that it is reductionist, rarely produces useful knowledge, and is incapable of fully explaining mental disorders, providing only one side of the story [10]. There is certainly evidence for this: many of the drugs used commonly in psychiatry were discovered by accident, not by design [11], and current explanations of psychiatric illness often come down to vague ideas about neurotransmitters, which have a poor foundation of evidence [3]. In addition, the traditional medical model generally considers topics like sociology and psychology to be secondary and distant to the core biological sciences of psychiatry. This again is without good evidence [3].

Recently, these criticisms have been are refuted in an editorial by Bullmore et al, which proposes a new biomedical approach in the light of new research [5]. They argue that while neuroscience is still in its infancy when it comes to explaining the complexity of mental illness, it has already made great progress, and now drives research into psychiatric disorders. Where the brain was once inaccessible, it is possible to now investigate the brain at all levels, from genes to behaviour, through a combination of genome scanning, proteomics, electrophysiology, neuroimaging and cognitive function tests. These techniques, far from being useless, are starting to elucidate psychiatric disorders that have never been adequately explained. Schizophrenia, a condition long thought to be functional or non-organic, is starting to be described in terms of neuropathology, rather than psychopathology. Many other psychiatric diseases are also beginning to be understood this way. Bullmore et al and others make a case for a new medical model, not reductionistic, where neuroscience research is combined with psychology, sociology, epidemiology and other fields to form a powerful complex, able fully explain psychiatric disorders. While these developments are in their infancy and have only slightly affected current practice, the authors argue that future holds a great deal of promise. This is likely to be true. The increasing understanding of the neuroscience behind psychiatric disorders could go a great way in ameliorating the problems that psychiatry has with its unscientific image. It seems clear that the medical method, if open-minded and integrated with other areas of psychiatry, is not redundant but essential for the future understanding of the mind.

The psychosocial model

On the opposite end of the spectrum to the medical model is the psychosocial model. In many ways it is traditionally the opposite of the medical model – fixated on human behaviour and psychology as the core of psychiatry, championing psychosocial interventions over pharmacology and the importance of philosophy and the interface between psychiatry and the public [14, 22]. It is
generally well regarded by patients and the public [8]. In other ways it can be the same as the medical model, being potentially reductionist, conflicted with the opposite ideology and adamant that its interventions are superior. The psychosocial model comes under attack for being unscientific, neurophobic, and again, reductionist [5, 8].

Some of this is true. Some forms of psychotherapy have a weak evidence base [10, 14], and the reluctance of some psychiatrists to accept neuroscience as a key player in psychiatry is increasingly difficult to justify [18]. It is a fact however that psychotherapy is effective and plays a role in the treatment of many disorders – in many cases more effectively than medications – and is widely recommended by NICE as being cost-effective [18, 19].

In a similar vein to the editorial written by Bullmore et al, Brenner and others [19] show the progress that psychotherapy research is making and how the findings can be integrated into a deeper understanding of psychiatric disorders. Study into the effects of the environment on microstructures within the brain have shown that early family life, and other social experiences, have an effect on gene expression and complex neural networks. These can lead to susceptibility to mental illness, or conversely, in the case of the psychotherapeutic experience, protection and recovery from illness. These findings add a very important scientific weight to psychotherapy and the broader psychosocial approach, and are difficult to ignore. In addition Brenner et al stress the links between psychotherapy and neuroscience and advocate the integration of the two. They comment on an important finding that both psychotherapy interventions and psychiatric medications appear to have a common pathway, affecting the brain in similar ways, but from different approaches.

The biopsychosocial model?

There is good evidence for an integration of ideologies within psychiatry. Neither a purely biomedical or psychosocial view seems sufficient to explain mental illness in detail, and new research shows that the old frontiers are starting to overlap. As mentioned previously, an integration is often advocated, but yet to be achieved [17]. However, the idea of a biopsychosocial model encompassing the biology, psychology and sociology of mental health is not new and is used widely in psychiatry as a clinical tool for thinking about assessment and management [16, 21]. It has suffered from a lack of a solid evidence base, and while useful in some ways, does not seem to have become the all-encompassing ideology it might have been [21]. New developments like those briefly outlined above may be changing this though, and with the promise of much more to come, are starting to show that the two prominent approaches could combine into a cohesive approach backed up with solid evidence [20].

What does the future hold for psychiatry?

Psychiatry seems to be facing extinction at the same time it is about to enter a golden age [2, 5, 9, 17]. Perhaps this reflects a huge amount of uncertainty about the future and the prevalence of some worried, unfounded predictions. Perhaps a golden age is about to happen whether psychiatry is around to see it or not. Developments are in their early stages yet, but even the small amount of hard science discussed in this essay is exciting and hugely important for not just psychiatrists, but almost everybody. It might be said that everybody with a brain is set to gain from the increasing
knowledge gained from the study of neuroscience. This new golden age has the potential to fix many problems in psychiatry by invigorating one of the most important components of a profession – it’s body of knowledge. Greater understanding of mental illness and therapeutics would undoubtedly improve the standing of psychiatrists, and in turn help to renew their involvement in treating psychiatric illness. Scientific foundations would be strengthened. Psychiatry would again become attractive to potential new psychiatrists. New understanding will help to lessen the stigma of mental illness, just as the stigma of epilepsy as a mysterious, divine ailment disappeared in the past. A more cohesive understanding may be what is needed for psychiatrists to mark out their territory – it will be much easier when the territory of the mind and the brain is better mapped out and understood. Psychiatrists may find a niche in the interface between brain, mind and environment, and excel in the skills required to practice in each of these areas. The idea of a psychiatrist as something of a polymath is not implausible [1].

Whether psychiatry can go along for the ride with this golden age depends, at least partly, on its ability to work across a broad range of basic sciences and apply them all equally to clinical practice. It seems that understanding the mind requires a commitment to all aspects of psychiatry, both the biomedical and psychosocial. If not, the future may be not quite so golden. Psychiatry may be entering a dark age. The traditional territory of psychiatry could continue to be overrun by other disciplines and psychiatry may lack the confidence, knowledge and skills to fight a battle on so many fronts. Psychiatry may lose its place at the centre of mental health or worse, its status as a profession. Alternately, the divide between biomedical and psychosocial psychiatry may be too wide for reconciliation, and force psychiatry into two major subspecialties, a radical option once suggested in The Lancet [18]. Whether this would be an acceptable solution or not is difficult to know.

Psychiatry has a special place amongst medical specialties in that it overlaps very closely with the fields of neuroscience, psychology, sociology, philosophy and others. In the future, and because of this, psychiatry has a unique opportunity to be at the centre of major scientific developments not just relevant to disease, but to how we see the world and our place within it. The downside of this is that it is also uniquely challenged with one of the most complex scientific challenges of our time - the mind. While the future for psychiatry is still unclear, hopefully it will bring the scientific knowledge and approaches needed to stay in such a privileged position.

(2971 words)

References

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