The Corrupted Epidemiological Evidence Base of Psychiatry

A Key Driver of Overdiagnosis

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Background

Like medicine more broadly, psychiatry claims to be evidence-based. This includes reliance on rigorous citation of evidence in the academic literature.

It is assumed that formal peer review ensures that most inaccuracies in journal articles are systematically detected and corrected before publication, and that post-publication peer scrutiny addresses any errors that slip through.

However, peer review focuses primarily on methodology and interpretation of findings, and sometimes overlooks inaccuracies in sections of articles, particularly introductions.

Citation content misrepresentation

Citation content misrepresentation (referred to by Greenberg (2009) as 'citation diversion') – inappropriate and misleading reporting of the content of cited sources – is common in introductions, even in peer-reviewed journals, and is very common in the grey literature. (reports etc.)

However, very little attention has been paid to citation content misrepresentation.

Method

Analysis of psychiatric/mental health literature, including peer-reviewed journal articles and grey literature, assessing the validity of citations.

Results

The prevalence, severity, chronicity, and progressiveness of psychiatric disorders are routinely exaggerated, as is the risk of premature mortality, particularly suicide, and the effectiveness of treatment.

Reporting of evidence about depression in particular is highly misleading, primarily as a result of decades of antidepressant promotion, including depression awareness campaigns and industry-funded guidelines (Raven 2012).

Key types of citation content misrepresentation include:

- inappropriate generalisation from clinical to population samples
- inappropriate generalisation from tertiary treatment samples to primary care patients
- conflation of treated and untreated samples
- conflation of primary prevention and relapse prevention
- conflation of point prevalence and period prevalence
- disregard of limitations identified by source authors

Once published, misrepresentations tend to go unchallenged, and are often amplified in textbooks, grey literature, policy documents, parliamentary deliberations, pharmaceutical industry advertisements/websites, consumer organisation websites/publications, and the mass media.

This is often compounded by secondary citation and unreferenced statements, which make it hard to check validity.

Furthermore, grey literature is often cited uncritically in supposedly rigorous sources.

Examples

15% suicide rate in depression

- Scott (2006) [*BMJ* editorial]: '15% of all patients with depression will eventually commit suicide' (no reference cited)
- Agency for Healthcare Research and Quality (AHRQ) (2003): 'Suicide, a risk of untreated depression…. Fifteen percent of depressed people take their own lives' (National Mental Health Association (NMHA) (2003) cited)
- National Institute of Mental Health (NIMH) (2003): 'nearly one in six persons with severe, untreated depression will die by suicide' (no reference cited)
- Schotte et al. (2006): 'high prevalence of suicide, which is estimated at 15%' [American Psychiatric Association, 1994'

Main source:

- Guze & Robins (1970): 'the ultimate risk of suicide in [primary affective disorders] disorders is about 15 per cent'

Key secondary source:

- American Psychiatric Association (APA) (1994) [*DSM-IV*]: 'Major Depressive Disorder is associated with high mortality. Up to 15% of individuals with severe Major Depressive Disorder die by suicide' (no reference cited)

Guze & Robins reported *case-fatality rates* rather than *proportionate mortality*, and misrepresented the studies they reviewed by not acknowledging the limitations of their generalisability:

- many people had been *hospitalised for severe depression*, for which *suicidality is a key indication*
- many of the studies were already decades old (as early as 1937), when depression criteria were much stricter

Guze & Robins' misrepresentation is itself routinely misrepresented. AHRQ and NIMH both seriously misrepresented it by specifying *untreated depression*.

APA appropriately specified *severe* depression but did not explain that the 15% suicide rate was based on treatment samples. This was compounded by Schotte et al.'s misleading omission of the word severe.

AHRQ uncritically cited NMHA's (2003) misrepresentation.

Economic costs of depression

- Mental Health America (MHA) (2006): 'Left *untreated*, depression is as costly as heart disease or AIDS to the US economy, costing over $43.7 billion in absenteeism from work (over 200 million days lost from work each year), lost productivity and direct *treatment* costs' (Greenberg et al. (1993) cited)
- WorkplaceBlues.com (2007): '*Untreated* depression is costly. A RAND Corporation study found that patients with depressive symptoms spend more days in bed than those with diabetes, arthritis, back problems, lung problems or gastrointestinal disorders. Estimates of the total cost of depression to the Nation in 1990 range from $30-$44 billion.... costs escalate still further if a worker's *untreated* depression contributes to alcoholism or drug abuse'

Main source:

- Greenberg et al. (1993) 'We estimate that the annual costs of depression in the United States total approximately $43.7 billion. Of this total, $12.4 billion – 28% – is attributable to direct [treatment] costs'

MHA's obliviousness to the contradiction between the words 'untreated' and 'treatment' in its own statement is symptomatic of the fact that the blurring of treated and untreated depression is pervasive and is rarely challenged.

The RAND study (Wells et al. 1992) referred to by WorkplaceBlues.com focused on depressed patients *receiving treatment from mental health specialists and general practitioners*, not people with untreated depression.

Early intervention improves depression outcomes

Wright et al. (2006): 'early detection and treatment [of depression in young people] at the time of first onset has been found to improve long-term outcome and reduce the risk of future episodes of illness'

Two references cited, neither of which supports the claim:

- Kupfer et al. (1989): people with *at least 3 episodes of recurrent depression* (median 4), mean age 42.7, in a *specialist psychiatric setting*. Kupfer et al. commented that it might not be valid to generalise the findings to depression more broadly.
- Kroll et al. (1996): depressed adolescent patients in a *specialist psychiatric setting* who received *continuation* CBT after remission.

Conclusions

The epidemiological knowledge base of psychiatry is profoundly flawed by misrepresentation and uncritical citation. Even conscientious and well-meaning practitioners and academics are seriously misled by misrepresented evidence in the literature.

Exaggeration of the burden of mental disorders and the effectiveness of treatment encourages inappropriate screening, premature diagnosis, and unnecessary pharmacological treatment, particularly in primary health care, where most mental health care is provided.

There is a need for more rigorous pre-publication peer review, more critical peer scrutiny of published literature (particularly introductions of journal articles), and stringent restrictions on secondary citation.

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