

The aim of TBI Research Review is to summarize current research on traumatic brain injury (TBI), offer suggestions for future research planning and suggest application of research findings to clinical practice and policy. The focus in this first issue is on POST-TBI DEPRESSION.

Depression is the most common Axis I psychiatric disorder following TBI¹⁻⁷.

Prevalence rates vary widely in the literature. This variation is a product both of the differing cohorts studied (inpatients, outpatients, community-based samples; groups varying in severity of injury and in time since injury), and of different diagnostic methods adopted (diagnostic interviews such as the Structured Clinical Interview for the DSM-IV, family interview, clinical impressions, self report).

Depression is significantly more prevalent in individuals with TBI than in individuals without a disability¹ and in individuals with other disabilities⁷⁻¹¹.

Depression post TBI is often co-morbid with other Axis I disorders^{1, 3-5, 12-13}, with anxiety disorders being the most common co-morbidity.

The course of depression follows many patterns. It may be chronic, as evidenced by elevated rates of post TBI depression documented many years after injury^{1, 9}, or it may resolve. Depression may emerge immediately or only several years after injury¹³. A small subgroup of individuals do not become depressed post TBI^{5, 13}.

Depression appears to be unrelated to demographic factors (e.g., gender, age, ethnic background, level of education) or to characteristics of injury (e.g., severity of TBI, time since injury).

Pre-TBI history of depression is a risk factor for development of post-TBI depression^{5, 13}.

Considerable research has shown that post-TBI depression is associated with a variety of negative correlates—both for individuals with TBI and their caretakers. Compared to those who are not depressed, individuals with post-TBI depression experience:

- Poorer rehabilitation outcomes^{14, 15}
- Greater functional disability^{13, 16, 17}
- Reduced activities of daily living¹⁸
- Less social and recreational activity¹⁹
- Less employment potential²⁰
- Elevated divorce rates⁵
- Greater caregiver burden^{21, 22}
- Greater sexual dysfunction²³
- Lower ratings of health²⁴
- Poorer subjective well-being^{8, 25}
- Poorer quality of life^{8, 26, 28}
- Increased rates of suicidal ideation²⁹.

It is not clear from these studies whether a causal relationship exists between depression and any of these other life elements and, if so, the directionality of the causality. It is clear, however, that depression implies a variety of other negative life circumstances.

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...about the treatment of post-TBI depression?

Research on approaches to treating depression in individuals with TBI remains limited:

Published studies of psychopharmacological treatments of depression are few, lack double-blind clinical trials and often produce mixed or unexpected results^{7, 30}.

Although psychotherapy remains the preferred means of treatment of mood disorders in individuals with TBI^{1-2, 31-33}, studies evaluating specific approaches to psychotherapy in the treatment of post-TBI depression are inadequate, consisting primarily of uncontrolled case reports, case series and single-case design studies⁷.

In treating depressive symptoms after TBI, the choice of psychotherapeutic method is important, as cognitive deficits often limit the individual's ability to profit from psychodynamic approaches³⁴. Individuals with TBI may benefit from treatments that specifically take into account cognitive distortions.

Caution should be taken when utilizing psychopharmacologic treatments, as individuals with TBI are more likely to experience side effects from these medications². [appri9ken u4l.ches](#)

Future research focused on treatments should include:

- Randomized trials of antidepressant medications,
- Randomized trials of a variety of types of psychotherapy,
- Randomized trials of antidepressant medications and psychotherapy, in combination,
- Investigation of factors mediating treatment efficacy, and
- Evaluation of pre-TBI Axis I disorders as moderators of post-TBI treatment outcome.

Further, within health care professions, inadequate awareness exists of the extent and characteristics of depression that follows injury. Educational materials need to be developed and disseminated to current professionals and to educators responsible for curriculum development, to affect input into professionals-in-training.

...for Clinical Practice

Changes are needed in standards of practice with respect to post-TBI depression. Efforts need to be made to develop standards of practice addressing the following points:

Physicians and other health care providers need to be better informed of the prevalence of depression that emerges post TBI and methods to assess this co-morbid condition.

Clinicians need to assess—systematically, proactively and routinely—an individual's mood post TBI, to enhance identification and promote referral for services and/or the timely use of psychotropic medications.

Clinicians should monitor patients for suicidal ideation.

Clinicians need to broaden assessment to systematically and regularly assess other Axis I disorders (co-morbid with depression) that can serve to maintain an individual's depression post TBI.

Clinicians need to inquire about pre-TBI Axis I disorders, as this history places the individual at increased risk of development of post-TBI Axis I disorders.

Clinicians should assess marital and family stresses, and intervene within the context of therapy with the patient and/or refer the family for treatment.

...for Consumers

Consumers and members of their support network need to become proactive in their interactions with health service providers with respect to their being monitored for depression post injury. Specifically, they should be asking their primary health care provider to be monitoring them regularly for symptoms of post-TBI depression. If depression emerges, they should be asking for referral for psychotherapy or for anti-depressive medications.

Consumers need to become advocates for expanded research focused on treatment of depression and for public policy that reflects the long-term (typically life-long) consequences of TBI.

...for Public Policy

TBI should be viewed as a life-long disability requiring ongoing treatment rather than viewed as an acute illness with resolution over time. Insurance and service providers need to plan for lifelong support of individuals post TBI.

An increase in funding for needed psychological/psychiatric clinical trials is warranted in the area of TBI and Axis I pathology.

The research agendas of Federal funding agencies such as CDC, NIDRR, NIH and SAMHSA should be directed to the issue of post-TBI depression, especially in terms that are summarized herein.

¹ Hibbard, M.R., Uysal, S., Kepler, K., Bogdany, J., & Silver, J. (1998).