pulsive behaviors when distressed; and engaging in goal-directed behaviors when distressed.

Not only are scores on the DERS significantly associated with numerous clinically relevant behaviors (e.g., self-injury, binge eating, substance use) and psychiatric disorders (e.g., borderline personality disorder, anxiety disorders, post-traumatic stress disorder, eating disorders), but extensive research also demonstrates that the DERS is sensitive to change following psychological treatments and can be used to track progress in emotion regulation over the course of treatment[9]. Moreover, although its self-report format increases its feasibility and ease of administration, the DERS is significantly associated with behavioral, neurological and physiological measures of emotion regulation[9].

Beyond established self-report measures such as the DERS, clinicians can use behavioral techniques such as functional analysis to assess individuals' responses to their emotions, including their acceptance and understanding of these emotions, how these emotions inform their behaviors (effectively or ineffectively), and the immediate and long-term emotional, cognitive, behavioral and interpersonal consequences of these responses. Repeated functional analyses with a patient may also increase insight into the functions of and motives for the selection and use of particular modulation strategies across different contexts, as well as highlight instances of emotion regulation inflexibility that can be targeted in treatment.

Although the term "emotion regulation" can imply that emotions require or need modification or modulation, we propose that the modulation of emotions is only one aspect of adaptive emotion regulation, and that effective emotion modulation requires emotional acceptance and understanding. In contrast, a singular emphasis on the modification or modulation of emotions obscures the fact that emotions serve important and necessary functions.

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Detecting and managing non-suicidal self-damaging behaviors

Non-suicidal self-damaging behaviors are actions that carry a high potential for physical harm to result, either as a direct and immediate consequence (e.g., self-cutting), or as a stochastic or accumulated consequence of the behavior (e.g., risky substance use; repetitive fasting or self-induced vomiting), but without associated suicidal intent. These behaviors affect around 10% to 30% of people[1], with substantial associated harms including negative impacts on mental and physical health, poorer educational and occupational outcomes, and excess risk of injury and premature death, including by suicide[2].

Non-suicidal self-damaging behaviors typically begin in adolescence or early adulthood[3], but may not be a focus of clinical attention until they become chronic, entrenched ways of coping. Improving detection and management of these behaviors has the potential to substantially reduce the global morbidity and mortality associated with psychiatric disease. Here, I discuss two problems that limit our ability to realize this goal, as well as suggested actions that could move us closer.

The first problem is that patients' histories of non-suicidal self-damaging behaviors are not routinely assessed in many primary care and behavioral health services. Behavioral health screening tools that are commonly used in primary care settings, for instance, focus on depression, anxiety and risky alcohol and substance use, but do not provide direct information about other forms of non-suicidal self-damaging behaviors.

Indeed, even comprehensive diagnostic interviews and self-reports often lack direct and comprehensive questions about a patient's self-damaging behaviors. This leaves it to the clinician to determine when to probe further, or to the patient to volunteer his/her engagement or history. Impeding the former, high rates of co-occurrence among non-suicidal self-damaging behaviors – estimated between 35% and 50% – may not be obvious. Thus, even when a clinician recognizes that a patient is struggling with one type of non-suicidal self-damaging behavior, he/she may not be cued to assess for other types of non-suicidal self-harm because of a tendency to view these as unrelated clinical problems.

Incorporation of these behaviors into screening measures used in primary care and behavioral health settings could improve their detection, as would development and use of decision-making tools that prompt further assessment of these behaviors whenever patients report substance-, eating- or self-injury related problems.

Impeding the patient to volunteer his/her engagement or history, non-suicidal self-damaging behaviors remain highly stigmatized. Patients who seek help for problems with mood, anxiety or non-behavioral concerns may not disclose non-suicidal self-damaging behavior for fear that it will be misunderstood as being motivated by suicidal intent, or that it will negatively impact the care they receive. Increased screening for non-suicidal self-

damaging behaviors may help reduce both patients' and clinicians' perceptions that these behaviors are something to avoid discussing.

A second problem limiting our progress in detecting and managing non-suicidal self-damaging behaviors arises from unintended consequences of fidelity to superficial features of current diagnostic nosologies. Researchers (and, sometimes, research granting agencies) have often focused inquiries on a particular psychiatric diagnosis or diagnostic category. As a result, many studies do not assess, or exclude, co-occurring behaviors that span multiple principal categories. This has slowed understanding of shared etiologies of non-suicidal self-damaging behaviors and, thus, development and evaluation of potentially efficient treatments.

Likewise, specialist psychiatric services often reflect current diagnostic categorizations, with separation of addiction treatment, eating disorder services, and self-injury treatment (which is commonly referred to personality disorder services). Professional specialties that are commonly integrated in one setting (e.g., dieticians in eating disorder services; physicians who are licensed to provide substance substitution medications in addiction treatment settings) may not be easily accessed in another, leaving potential gaps in care. Available treatment modalities (group vs. individual psychotherapy; psychopharmacology) may also substantively differ, as might the training of affiliated professionals. Thus, there may be non-negligible differences in the treatment that a patient receives depending on conceptualization of the primary diagnosis or problem.

Fortunately, there has been resurgent interest in dimensional, transdiagnostic models of psychopathology in the past decade. The Extended Evolutionary Meta-Model[4], for instance, argues for an idiographic, functional-analytic approach that could more readily identify common behavioral functions, and corresponding treatment strategies, among a diverse set of clinical problems. Development and evaluation of transdiagnostic and modular treatment protocols, as well as attention to so-called "non-specific factors" of therapeutic change, hold promise for identifying essential elements and strategies for managing non-suicidal self-damaging behaviors.

In thinking about ways to improve management of these behaviors, it is worth briefly reflecting on what constitutes "successful" management. It is logical to aim for reductions in the behavior; however, whether abstinence is a desired and appropriate goal for all patients has been questioned. Given that clinical concern often stems from the potential for these behaviors to result in physical harm, incorporation of harm reduction principles may be appropriate. Additionally, evidence-based treatments for substance use and eating disorders suggest the wisdom of incorporating motivational principles, including explicit attention to the patient's readiness for change, when initiating intervention.

While promising treatments for non-suicidal self-damaging behaviors have been developed, the quality of evidence is often limited to preliminary pilot evaluations and uncontrolled trials. Additionally, evidence is often tied to DSM diagnoses (e.g., bulimia nervosa, borderline personality disorder); as a result, the most effective strategies for treating these behaviors in patients who do not meet diagnostic thresholds is unclear, and cross-over effects (e.g., the effectiveness of treatment for bulimia nervosa in reducing non-eating-related self-damaging behaviors) are rarely evaluated.

Overall, cognitive-behavioral, mentalization-based, and emotion regulation-focused group psychotherapies have some level of support for reducing non-suicidal self-damaging behaviors[5]. Cognitive behavioral therapy (CBT) and dialectical behavior therapy (DBT) have been shown to reduce self-damaging eating behaviors, substance use, and non-suicidal self-injury in patients with borderline personality disorder, with stronger effects relative to treatment-as-usual (TAU). Mentalization-based therapy also results in greater reduction in non-suicidal self-injury than TAU[6].

Recent efforts have focused on evaluating interventions that might improve treatment access and reach (e.g., stand-alone group skills training interventions, online or self-guided interventions), but resulting evidence is preliminary. Recommendations regarding patient characteristics that could inform the optimal setting and duration of treatment are not yet clear. Evidence regarding the efficacy of pharmacotherapy in reducing non-suicidal self-damaging behaviors is even more limited, and medication is not currently recommended as a first-line treatment for addressing these behaviors outside of primary diagnoses of eating or substance use disorders[7].

Non-suicidal self-damaging behaviors represent an important clinical concern. Prioritizing these behaviors in screening and assessment may improve their detection. Transdiagnostic models could transform the way we think about and manage these behaviors, helping us appreciate commonalities that may not have previously been apparent. Still, there is room to grow. We should not lose sight of practical benchmarks – changes in practice that are likeliest to stand the test of time are those that ultimately deliver better outcomes for patients, their loved ones, and society.

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