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Recovery-based suicide prevention

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Seriousness of suicide crisis

Suicide has become an urgent public health crisis in the United States. The age-adjusted suicide rate increased by 36% between 2000 and 2022 (1). In 2023, suicide was among the top eight leading causes of death for people ages 10–64 and the second leading cause of death for people ages 10-34 (1).

Broadening treatment focus from the chronic illness model: restoring life meaning

The dominant treatment model in the U.S. for suicidality involves somatic treatments (primarily medication) and psychotherapy to manage psychiatric conditions and suicidality (2, 3). An underlying assumption of this model is that suicidality is generally chronic, reflecting long-standing psychiatric disorders with periodic life-threatening exacerbations. Indeed, suicidality is commonly associated with chronic mental disorders, particularly treatment-resistant depression (2, 4). Acute exacerbations of symptoms and suicidal risk are common, often requiring recurrent emergency services and/or hospitalization (5). Even after hospitalization, suicide risk remains elevated for at least 10 years (6). Since the common trajectory for suicidality involves chronicity, we call the dominant approach the "chronic illness" model.

Systematic reviews (7, 8) addressing psychotherapy for suicidality support the efficacy of psychotherapy, involving multiple approaches including cognitive-behavioral (CBT), dialectical behavioral (DBT) and psychodynamic therapies. In authoritative texts and systematic reviews, typical targets of psychotherapy involve suicidality and chronic psychiatric conditions, especially treatment-resistant depression, but do not necessarily include socio-occupational recovery (2, 3, 7–9).

Suicidality and socio-occupational dysfunction, manifested by social isolation (10) and unemployment/precarious employment (11, 12), are commonly linked, partly because both are associated with mental illness (13–18). Additionally, socio-occupational dysfunction is associated with demoralization (10, 11), a robust risk factor of suicidality (12), reflecting helplessness, hopelessness and meaninglessness (13).

Meaning, purpose and belonging are considered fundamental human needs (19, 20), integral to mental health and life satisfaction (21–24). The interpersonal theory of suicide

posits that two factors underlie suicidal ideation, an intractable belief of being burdensome and thwarted belonging (16). Empirical evidence for this theory (16, 25) is reinforced by studies linking a sense of meaning/purpose and social connectedness with lower suicide risk (26–28). The US "National Strategy for Suicide Prevention" emphasizes the protective importance of socio-occupational function, given its association with a sense of meaning/purpose and belonging (29–31).

A recovery-based model: psychotherapy targeting transdiagnostic suicide risk factors, including emotion processing deficits, to promote socio-occupational recovery

We believe resolution of chronic suicidality is possible by adding a focus on socio-occupational recovery to promote life satisfaction and social connectedness, which predict remission from suicidal ideation more robustly than psychiatric symptoms (32). Having socio-occupational recovery as the goal influences the necessary duration of psychotherapy. The recommended duration and intensity of psychotherapy for suicidality is not consensually defined. Systematic reviews reference a wide range of durations, from days to years (7–9). One systematic review reported a median duration of 12 weeks (9). However, when targeting recovery of interpersonal function, evidence suggests that a year or more is necessary (33).

Recovery of well-being and life satisfaction is facilitated by several conditions, including meeting basic needs (food, shelter and safety), developing a sense of autonomy, personal responsibility, self-acceptance and wellness skills and experiencing meaningful roles and relationships (34). The U.S. federal agency, SAMHSA (Substance Abuse and Mental Health Services Administration), emphasizes several key principles for recovery, such as hope, relationships, and person-driven holistic care, addressing biological and psychosocial vulnerabilities (35). We recommend a recovery framework to instill hope and re-engagement in life by targeting factors promoting vulnerability to socio-occupational dysfunction, treatment resistance and suicidality across diagnoses ("transdiagnostic"). These include emotion processing deficits, such as alexithymia, avoidance coping and impaired mentalization, and harsh self-criticism/lack of self- compassion (36–51).

Many of these transdiagnostic vulnerabilities can also be conceptualized as neurobiological deficits in emotion processing, the affective, cognitive and behavioral dimensions of emotion perception, interpretation and responses (52–54). Emotion processing networks include the dorsolateral prefrontal cortex, limbic cortex (medial prefrontal cortex, anterior cingulate, insula), striatum and amygdala (55). For example, alexithymia has been linked to limbic cortex dysfunction (56). Mentalization is associated medial prefrontal cortex activity (57). Notably, neurobiological changes associated with suicide appear to be independent of diagnosis, i.e., transdiagnostic (58).

Remediating emotion processing, self-compassion, and social connectedness through psychotherapy may not only reduce psychiatric symptoms, but also promote a meaningful, connected life, from functional socio-occupational recovery, to prevent suicide. Psychotherapy may reverse inflammation and many neurobiological deficits in the emotion processing system (59, 60). Additionally, psychotherapy can improve hopelessness, self-compassion, resilience, well-being and engagement in life in suicidal individuals (61–65). Preliminary evidence indicates that psychological interventions targeting alexithymia, experiential avoidance, and low self-compassion improve psychopathology, interpersonal functioning and suicide risk (66–70). Recovery of life satisfaction and sense of belonging increases well- being and predicts remission of suicidality (71).

This paper reviews evidence, including research from our institutional center, the Psychiatry High Risk Program (PHRP), supporting this treatment approach targeting transdiagnostic suicide risk factors, particularly dysfunctional emotion processing to promote recovery. Psychotherapy and adjunctive medication is given for a year, while monitoring improvement in suicidality, psychiatric symptoms and emotion processing with standardized scales (e.g., Toronto Alexithymia Scale (TAS-20) (72). This approach can lead to the resolution of suicidality, substantial recovery from psychiatric conditions and renewal of life satisfaction. The PHRP treatment model was recently designated by SAMHSA's Suicide Prevention Resource Center as "a best practice" in suicide prevention, and received the 2023 Psychiatric Services Silver Award by the American Psychiatric Association for innovative and effective care.

Front-loading investment in recovery to prevent suicide

We believe that the assumption of the intractability of chronic suicidality reflects insufficient outpatient treatment, particularly involving psychotherapy targeting functional recovery for at least a year.

Treatment duration and intensity can be limited by financial constraints. However, costly excessive emergency care and hospitalizations may result from inadequate outpatient treatment (73). Evidence indicates that individual psychotherapy and medication effectively reduce suicide risk and support functioning (8, 74). In adolescents, adjunctive family therapy for suicide prevention is recommended (75). This approach requires front-loading investment in recovery-focused psychiatric treatment, which we call a "recovery-based model."

Few outpatient clinics specialize in individuals with high suicide risk. Parallels can be made with the clinical specialty clinics (CSCs) for early psychosis, promoted by NIMH and the federal government, to implement best practices (76). CSCs provide intensive, evidence-based treatment, including case management,

low-dose antipsychotics, psychotherapy and occupational support. Unlike crisis-focused care, CSCs offer a long-term return in recovery/prevention of psychosis. Similarly, the approach from our institutional center, the PHRP, demonstrate effectiveness in resolving suicidality among adults and adolescents after a one-year program of psychotherapy and medication management (69, 77).

Social determinants of suicide & deaths of despair: supporting resilience

Although psychiatric work focuses on addressing individuals, addressing a national suicide crisis requires a multi-level analysis, that includes social "determinants" (risk factors) for mental illness. Increased suicide risk from social determinants appears mediated by overwhelming stress and feelings of meaningless and disconnection.

The influential "Deaths of Despair" theory attributes the crisis of increased suicide among Americans without college degrees to financial stress and community breakdown from off-shoring/automation of manufacturing (78), leading to loss of meaning and connectedness, shame and demoralization (79). The Cultural Theory and Model of Suicide emphasizes minority stress as an important suicide risk factor (80). Minority stress is understood at two levels: The "distal" level involves experiencing chronic discrimination. Psychological consequences at the "proximal" level, such as shame from internalizing prejudicial stereotypes, or concealment, mediate negative impacts, such as suicidality and loneliness (72, 81, 82). Lower socioeconomic standing from poverty/unemployment, or ethnic/sexual minority status, are associated with shame, a lower sense of belonging and chronic, overwhelming stress (15, 83–88).

Possibly excepting ethnic minority groups, these socioeconomic characteristics are associated with increased suicide risk (87, 89).

The psychiatric consequences of marginalization and disempowerment are likely mediated by the neurotoxic and psychological effects of chronic stress (88), which can lead to demoralization (18, 90). Emotion processing deficits, exemplified by transdiagnostic suicide risk factors such as alexithymia (91), experiential avoidance (92, 93) or shame/self-blame (94, 95) can mediate and/or exacerbate the consequences of unemployment/minority stress. Psychiatrists individually cannot change social determinants, but can counteract their impact by remediating emotion processing.

The psychiatry high risk program as an example of a recovery-based suicide prevention model

The Psychiatry High Risk Program (PHRP) offers one example of a specialized long-term outpatient recovery-based suicide prevention model. The PHRP addresses transdiagnostic vulnerabilities, such as emotion processing deficits, low self-compassion, and social alienation to promote transformational healing and resilience in suicidal youth and young adults, aged 14–40 years. The few exclusion criteria, i.e., severe intellectual impairment, severe autism, severe psychosis, and severe malnourishment, relate to suitability for full engagement in psychotherapy.

In a published study, the PHRP treatment approach led to large and significant reductions in rehospitalizations as compared to usual care, and large reductions in depression and suicide ideation, sustained for over 6 months after discharge (69). Another study demonstrated broad based improvements in highly suicidal adolescents (median 7 lifetime suicide attempts), including improvements in suicidality, depression, anxiety, self-harm, functioning, utilization, and self-compassion (77).

Initial PHRP sessions aim to inject hope by laying out a path for recovery and inviting patients to join the clinician on that path. Pros and cons of a recovery pathway versus a chronic illness pathway of care are discussed with patients, emphasizing personal choice and responsibility for health and recovery.

A core required component of the PHRP is weekly individual psychotherapy with Dynamic Deconstructive Psychotherapy (96) for up to 12 months, followed by optional monthly "maintenance" treatment. DDP has shown efficacy across a wide range of outcomes in patients with borderline personality disorder, with improvement continuing even after treatment completion (96–98). Furthermore, evidence supports that DDP promotes recovery of socio-occupational function (96, 97, 99, 100). All PHRP clinicians, including prescribers, are fully trained in DDP, enabling a common theoretical framework and minimizing potential for splitting between team members.

Individual therapy may be supplemented with medications, case management, family therapy, or group therapy within the PHRP. A team approach emphasizes a caring atmosphere and good communication among team members through weekly peer supervision of challenging cases and team meetings. Tight quality control is maintained through video recordings and quarterly outcome measures.

Transdiagnostic vulnerabilities linked to suicidality and treatment-resistance

Although the PHRP specifically employs DDP, we believe other psychotherapies would be effective. DBT, ACT, Good Psychiatric Management and Mentalization-Based Therapy also address transdiagnostic vulnerabilities, including emotion processing deficits, linked to socio-occupational dysfunction, suicidality and treatment-resistance. For example, ACT targets avoidance coping and harsh self-criticism (101). DBT promotes emotion regulation and mindful self-compassion (102–106).

Limitations to the recovery model

The primary difficulty in applying this model relates to front-loading costs, given insurance constraints on long-term

psychotherapy. The limited supply of psychotherapists is another difficulty. Research into may clarify whether, as we believe, front-loading care over a year offers cost-effectiveness over less intensive treatment spread out over a longer term.

Furthermore, public health experts critique the neglect of population-level governmental policies, termed "universal" interventions, relative to individual-level interventions by providers (107). For example, the disproportionate increase in United States suicide rates during the 2010s, over comparable high-income countries, has been attributed to weaker social safety nets that buffer against the loss of manufacturing jobs (108). However effective a recovery approach may be, the society-wide suicide crisis is best addressed when such individual-level interventions are integrated with macroeconomic/social policies that reduce the prevalence and impact of socioeconomic risk factors for suicide (107).

Summary

There is a need to move beyond managing chronic suicidality. We propose a Recovery-Based Model that adds functional recovery as a treatment goal. Suicidality, treatment-resistance and functional impairment commonly stem from underlying transdiagnostic biological, psychological, and socioeconomic vulnerabilities. The PHRP uses DDP for effective recovery-based suicide prevention. Other psychotherapy approaches directly targeting these vulnerabilities are likely effective also. Front-loading investment in more intensive, focused treatment may break the cycle of chronicity, reduce inpatient expenditures, resolve suicidality and improve functioning, restoring purpose and belonging.

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The author(s) declare that no Generative AI was used in the creation of this manuscript.

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