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How does Internet delivered Dialectical Behavior Therapy skills training reduce suicide risk? Examining the granularity of suicidal ideation

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Background: The gap between treatment need and treatment availability is troubling, and for people who endorse suicidal ideation and present with other complex behavioral dysfunction have more treatment barriers. Dialectical behavior therapy (DBT) skills training, which effectively targets behaviors associated with emotion dysregulation such as suicidal behaviors, provides a fitting model amenable to computerization. While DBT has considerable evidence indicating that it is effective at ameliorating suicidal behavior, including thoughts, it is unclear how suicidality is reduced within this population. This study is a secondary data analysis of a pilot randomized control trial evaluating the feasibility and preliminary efficacy of a computerized version of DBT skills training (iDBT). Specifically, we will examine between condition changes in suicidal ideation frequency, intensity, and seriousness with the goal to better understand how iDBT functions to diminish suicide risk.

Methods: Participants (N = 59) were randomized to receive iDBT-ST immediately or after an 8-week waiting period. Participants were assessed weekly over the course of 8 weeks on suicidal ideation frequency, highest urge in the past week, seriousness of acting on urges (yes/no), and current urge. Data were analyzed using multilevel modeling for continuous variables (highest urge and SI frequency) and generalized linear mixed models (GLMM) with a binomial distribution for seriousness. Independent variables were time, condition, and the interaction between time and condition.

Results: Participants randomized to iDBT (n = 30) saw significantly faster reductions in highest urge (est = -0.14, 95% CI = -0.24- -0.05, p = .003) and current urge to die by suicide (est = -0.09, 95% CI = -0.18- -0.01, p = .03). However, there were no between group differences in the rates of change for suicidal ideation frequency (p = .13) or seriousness of acting on suicide (p = .24). Moreover, the effect of time for suicide ideation frequency was also not significant suggesting that, on average, all participants continued to think about suicide the same amount.

Discussion: DBT skills training is efficacious at reducing suicidal ideation, compared to individuals not receiving DBT. However, when investigating "suicidal ideation" in more depth, it was revealed that the reduction in suicidal ideation is due to a reduction of suicidal urges rather than frequency of suicidal thoughts. This could be a function of skills taught that are designed to reduce behavioral dysfunction. This aligns with previous research on DBT that indicates its

clinical efficacy at reducing suicidal behavior compared to controls. Future treatment studies should examine the clinical utility of reducing frequency of suicidal thoughts.