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Therapy Frequency and Depression Outcomes

According to the results of a randomized trial, depression outcomes are improved when psychotherapy is provided in twice weekly, rather than weekly, sessions. Compared with weekly sessions, twice weekly sessions produced a greater reduction in symptoms and were associated with a shorter time to response and lower attrition.

Methods: Subjects in the multicenter study were 200 adult outpatients (mean age, 38 years; 62% women) with a confirmed diagnosis of major depressive disorder and a score of ≥20 on the Beck Depression Inventory-II (BDI-II). Patients who had initiated antidepressant therapy or underwent a dosage change in the previous 3 months were excluded, as were those with drug or alcohol dependence or at acute risk of suicide. Participants were randomly assigned to receive 16 sessions of cognitive behavioral therapy (CBT) or interpersonal psychotherapy (IPT) with either weekly or twice weekly sessions, followed by 4 biweekly follow-up sessions. Randomization was stratified by depression severity (with a cutoff of 28 on the BDI-II) and treatment site. Both treatments were manualized and consisted of between 12 and 20 face-to-face sessions depending on patient progress and monthly online assessments for 6 months. The primary outcome was change in depression severity measured with the BDI-II at 6 months.

Results: The mean baseline BDI-II score was 35, and 43% of patients had recurrent depression with a self-reported duration of nearly 4 years. There was no between-group difference in the total number of psychotherapy sessions attended (mean, 16.5). However, significantly more patients assigned to weekly therapy withdrew from the study (32 vs 16; p=0.02).

Twice-weekly sessions produced a significantly greater improvement in depression severity. At the 6-month evaluation, BDI scores were decreased to 20–21 points in the twice weekly groups, compared with 23–24 in the weekly groups (estimated mean difference, 3.85 points; effect size,* 0.55). There were no significant differences in improvement between those who received CBT and IPT. A sensitivity analysis that controlled for total number of sessions, presence of comorbid anxiety, and antidepressant use had similar results. Response, defined as a ≥9-point reduction in BDI-II score at 6 months was evident in 60% of patients who received twice weekly CBT and 53% of those who received twice weekly IPT, compared with 44% of patients who received weekly CBT and 32% who received weekly IPT (p=0.03). After controlling for treatment

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modality and baseline BDI-II baseline scores, time to response was significantly shorter in patients who received twice weekly therapy (hazard ratio,* 1.48; p=0.049). However, there were no significant between group differences in rates of remission (defined as a BDI score of ≤9) or time to remission.

Discussion: The study authors note that although a substantial portion of patients met study-defined response criteria, mean final BDI-scores indicated a moderate level of depression remained. Nevertheless, patients who received twice-weekly therapy had better outcomes, possibly because higher session frequency leads to better recall of the content and better development of therapy-specific skills, or it may lead to a better working alliance, which can improve patient adherence and motivation.

Bruijniks S, Lotte H, Lemmens S, et al: The effects of once- versus twice-weekly sessions on psychotherapy outcomes in depressed patients. *British Journal of Psychiatry* 2020; doi 10.1192/bhp.2019.265. From Vrije Universiteit Amsterdam, The Netherlands; and other institutions. **Funded by ZonMw and Stichting tot Steun VCVGZ. The authors did not include disclosure of potential conflicts of interest.**

***See Reference Guide.**

Online Mindfulness Therapy for Residual Depression

Mindful Mood Balance (MMB), an online mindfulness-based cognitive therapy, was effective as an adjunctive treatment for residual depressive symptoms in a large randomized controlled trial. Following up on promising pilot data, this study was designed to be a definitive trial of MMB compared with usual depression care within an integrated health system.

Methods: All study participants were members of a statewide Kaiser Permanente plan and received usual depression care according to Kaiser's medication guideline, adapted from STAR*D. Patients also had access to individual or group psychotherapy. The study enrolled adults with ≥1 prior depressive episode and a current Patient Health Questionnaire-9 (PHQ9) score of 5–9, indicating moderate residual symptoms. MMB, delivered as a randomized add-on to usual care, consisted of 8 self-administered online sessions providing education, vicarious learning, and experiential practice. Treatment was completed over 12 weeks. MMB participants received motivational and technical support from a health educator coach, which consisted of a 45-minute orientation by phone and periodic brief check-ins. The primary study outcome, assessed by blinded raters, was change from baseline to treatment completion on the PHQ-9. Remission and relapse, assessed over 12 months of follow-up, were defined as PHQ-9 scores of <5 and ≥15, respectively.

Results: A total of 460 patients (mean age, 48 years; 76% women) reported an average of 7.5 previous depressive episodes; 78% were receiving medication and 50% were receiving psychotherapy. Similar proportions continued receiving these treatments during MMB and follow-up. Of 230 participants assigned to MMB, 144 completed ≥4 of the 8 sessions.

Participants assigned to MMB had larger average decreases in depression scores than those who received only standard care (mean PHQ-9 decreases 2.70 and 0.80, respectively; p<0.001). During the 12 months of follow-up, scores remained stable in the MMB group and continued to decrease in the usual-care group. At the end of treatment, 57% of the MMB group and 36% of the usual-care group met remission criteria (p<0.001). At the end of follow-up, remission rates were 59% and 47%, respectively (p<0.001). MMB was also associated with lower rates of relapse during follow-up (13.5% versus 23%; hazard ratio,* 0.61; p<0.03) and with greater improvement in anxiety, more depression-free days, and greater improvement in mental functioning.

Discussion: These results are consistent with existing research on face-to-face mindfulness-based cognitive therapy and show that the therapy can be efficiently delivered online. In

clinical settings that routinely monitor depressive symptoms, MMB could be incorporated as a routine second step for patients who achieve only partial remission with acute treatment.

Study Rating*—17 (100%): This study met all criteria for a randomized controlled trial.

Segal Z, Dimidjian S, Beck A, et al: Outcomes of online mindfulness-based cognitive therapy for patients with residual depressive symptoms: a randomized clinical trial. *JAMA Psychiatry* 2020; doi 10.1001/jamapsychiatry.2019.4693. From the University of Toronto Scarborough, Canada; and other institutions. **Funded by the NIMH. Two of 9 study authors disclosed potentially relevant relationships with commercial sources; the remaining authors declared no competing interests.**

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Substance Use Disorders and Suicide Risk

Results of a population-based case-control study indicate that substance use disorders (SUDs) are associated with significantly increased risk of suicide mortality. The association is particularly strong for women and for those using multiple substances.

Methods: Study data were collected from the records of patients treated at 8 large US health care systems participating in the NIMH-established Mental Health Research Network. Case patients (n=2674) were those who died by suicide between 2000 and 2013. Each patient was matched by time period and site with 100 randomly selected controls. Information on the most common substance use disorder diagnoses were extracted from patient records and categorized as 1 type only (i.e., alcohol, tobacco, drugs) or multiple types (any combination of the 3) and comparisons were adjusted for psychiatric and medical comorbidity and demographic factors.

Results: Patients who died by suicide were significantly more likely than controls to be male (78% vs. 48%) and to be older (mean age, 45 vs 39 years). Case patients were also more likely than controls to have psychiatric and medical comorbidities. After adjustment, all individual SUD categories were significantly associated with increased risk of suicide death, and risk increased with presence of multiple SUDs. (See table.) Suicide death was more common in men; however risk was greater in women.

Statistically Significant Odds Ratios* for Suicide Death by SUD Category

Substance Use Category	Adjusted Odds Ratio Full Sample	Adjusted Odds Ratio Men	Adjusted Odds Ratio Women
Alcohol Only	5.8	4.6	10.7
Drug Only	5.3	4	5.2
Tobacco Only	2	1.8	2.5
Alcohol Plus Drug	8.1	6.3	11.8
Alcohol Plus Tobacco	6.1	5.5	6.5
Drug Plus Tobacco	5	3.5	10.4
Alcohol Plus Drug and Tobacco	11.2	7.9	16.7

Discussion: Previous research has suggested a link between substance use disorders and risk of suicide mortality, but most studies were conducted in Veterans Health Administration populations and few examined potential gender differences. The present results extend previous findings to the general population and highlight gender differences in risk. Based on the findings, increased screening for suicide risk in patients with SUDs may be warranted.

Lynch F, Peterson E, Lu C, et al: Substance use disorders and risk of suicide in a general US population: a case control study. *Addiction Science and Clinical Practice* 2020;15:14; doi 10.1186/s13722-020-0181-1. From Kaiser Permanente Northwest, Portland, OR; and other institutions. **Funded by NIMH. The authors declared no competing interests.**

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Telemedicine for Opioid Use

In a non-randomized study, women who received treatment for opioid use disorder (OUD) via telemedicine had outcomes similar to those who received in-person treatment. This study supports the feasibility of prescribing controlled substances via telemedicine, which could remove an important barrier to treatment.

Methods: Study subjects were pregnant women in South Carolina who sought treatment for OUD in their obstetrician's office, which operated within a university-based behavioral health program. Study participants were judged by a psychiatrist trained in perinatology and addiction treatment to be candidates for buprenorphine (*Subutex*) plus psychotherapy. After an initial in-person evaluation and prescription of medication, women could choose to participate in OUD treatment in the office or via telemedicine. Ongoing OUD treatment consisted of prescription drug monitoring and counseling including motivational enhancement therapy, cognitive-behavioral therapy, and relapse prevention therapy. Study visits occurred weekly for the first 4 weeks, every 2 weeks for the next 4 weeks, and monthly thereafter. The study had 2 primary outcomes: maternal retention in OUD treatment until 6–8 weeks postpartum and neonatal abstinence syndrome. Outcomes were adjusted for propensity scores to reflect factors that might influence a woman's choice of treatment.

Results: The study included 98 women treated at 4 outpatient obstetric practices: 44 opting for telemedicine and 54 for in-person treatment. After the initial evaluation 9 women elected to continue OUD treatment outside of the study.

Treatment retention rates were similar in the 2 groups: 80% for telemedicine versus 93% for in-person treatment (adjusted p=ns). Neonatal abstinence syndrome was present in about 45% of the telemedicine group and 63% of the newborns of women receiving in-person treatment. Secondary outcomes, including the rate of positive maternal urine drug tests at delivery and postpartum, also did not differ between treatments.

Discussion: In South Carolina, prescribing of buprenorphine and other controlled substances is prohibited in the setting of telemedicine unless an exception is granted, as it was for this study. These restrictions limit access to OUD treatment, particularly for poor and rural women. Although these results may not generalize to all OUD patients, as pregnant women may be particularly motivated to reduce substance use, they indicate that OUD treatment can be effective when delivered via telemedicine, thus extending access to care.

Guille C, Simpson A, Douglas E, et al: Treatment of opioid use disorder in pregnant women via telemedicine: a nonrandomized controlled trial. *JAMA Network Open* 2020; doi 10.1001/jamanetworkopen.2019.20177. From the Medical University of South Carolina, Charleston. **Funded by the National Institute on Drug Abuse; and other sources. Four of 8 study authors disclosed potentially relevant financial relationships; the remaining authors declared no competing interests.**

DSM-5 Anxious Distress Specifier Interview

A brief interview based on the DSM-5 Anxious Distress Specifier for depression (DADSI) may be a useful measure of anxiety symptom severity in patients with generalized anxiety disorder, according to a study comparing this scale with the Hamilton Rating Scale for Anxiety (HAM-A). In addition to its brevity, the 5-item DADSI also shows less confounding with measures of depression than the HAM-A.

Background: The HAM-A, a commonly used clinical and research tool for measuring anxiety severity, is not a pure measure of anxiety as it includes several items assessing the features of depression. This may result in poorer ability to discriminate between patients with depressive and anxiety disorders. In addition, each item measures a group of symptoms, increasing the

likelihood of imprecise measurement and discrepancy between raters. Furthermore, it measures somatic symptoms of anxiety that could also be medication side effects; and measurement of symptom severity levels is imprecise. The DADSI, a semi-structured interview that measures the 5 symptoms of the DSM-5 specifier—feeling keyed up or tense, feeling restless, difficulty concentrating because of worry, fear that something awful might happen, and feeling that one might lose control—has previously been validated in patients with depression

Methods: The validity of the DADSI as a measure of anxiety severity in patients with generalized anxiety disorder (GAD) was evaluated as part of the Methods to Improve Diagnostic Assessment and Services (MIDAS) project. Study subjects were 85 adults presenting to a semi-residential intensive treatment program. At intake, patients underwent a structured clinical interview to confirm the diagnosis of GAD without concurrent depression. Additionally, they were assessed with the DADSI, HAM-A, Hamilton Rating Scale for Depression (HAM-D), and several self-report measures of depression, anxiety, and irritability.

Results: The mean scores on the DADSI and HAM-A (9.7 and 19.2, respectively) were significantly correlated (correlation coefficient [r],* 0.52; $p<0.001$). Both measures were more highly correlated with other measures of anxiety than with other symptom domains of depression, irritability, or anger. Correlation with the HAM-D was stronger for the HAM-A than for the DADSI ($r=0.44$ and $r=0.073$, respectively; $p<0.01$). While the HAM-A was equally correlated with psychic and somatic anxiety on the Schedule for Affective Disorder and Schizophrenia (SADS), the DADSI showed a stronger correlation with SADS psychic anxiety. The DADSI and HAM-A interviews were repeated upon discharge from the treatment program in 10 of the 85 patients. Scores on both instruments were significantly lower at discharge, with large effect sizes:* 0.88 for the DADSI and 1.07 for the HAM-A.

Discussion: The inclusion of depression items on the HAM-A makes it more difficult to interpret treatment studies of generalized anxiety disorder and of anxiety in patents with depression. Although these results require replication in larger more diverse patient samples, the lower level of confounding with the HAM-D may be a major advantage of the DADSI over the HAM-A in the evaluation of anxiety, suggesting it may be a preferable outcome measure in studies of GAD. The HAM-A may be a better option when the outcome of interest is psychic rather than somatic anxiety.

Zimmerman M, Thompson J, Diehl J, et al: Is the DSM-5 Anxious Distress Specifier Interview a valid measure of anxiety in patients with generalized anxiety disorder: a comparison to the Hamilton Anxiety Scale. *Psychiatric Research* 2020; doi 10.1016/j.psyres2020.112859. From Brown Medical School and Rhode Island Hospital, Providence, RI. S**ource of funding not stated. One of 5 study authors disclosed a potentially relevant financial relationship; the remaining authors declared no competing interests.**

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Occupational Therapy for Women with ADHD

Results of a small pilot study suggest an occupational therapy intervention can have large positive effects on ADHD symptoms and related stress in women.

Background: In contrast to the typical presentation in men, ADHD in women is often characterized by inattention, disorganization, poor time management, and distractibility. These symptoms can make it difficult for women to follow daily schedules and routines, prioritize and manage tasks in a timely manner, and regulate internal and external stressors to maintain consistent emotional responses. The focus of research on adult ADHD has primarily been pharmacological therapy and the differing treatment needs of women have not been specifically addressed.

Methods: Women with a self-reported diagnosis of ADHD were recruited for the study and randomly assigned to an intervention or control group. The control group received no treat-

ment, while the active treatment consisted of 7 weekly 1 hour individual sessions that took place in patient's home and/or community environments. Participants identified the roles (e.g., work, family) they considered most important and/or problematic and all interventions were tailored to each participant's specific goals. The intervention included the establishment of routines for common tasks, creation of strategies to organize physical environments, enhancement of time management skills, sensory regulation, and stress management. ADHD symptoms and stress were evaluated using the Adult Attention Deficit Hyperactivity Disorder Self-Report Scale (ASRS) and the Perceived Stress Scale (PSS), respectively. Function was evaluated using the Canadian Occupational Performance Measure.

Results: A total of 25 women (mean age, 31 years) were randomized: 12 to the intervention group and 13 to the control group. The majority of women (83%) had a formal diagnosis of ADHD and 16 (70%) were receiving medication for ADHD symptoms. Average baseline ASRS and PSS scores were about 70 and 27 respectively, with no differences between groups. Compared with untreated women, mean scores on both measures were significantly reduced in the intervention group at week 8: the ASRS to 52 (effect size,* 2.2) and the PSS to 13 (effect size, 2.7). A total of 10 women (90%) reported improved functioning following the intervention

Discussion: Women with ADHD report more difficulty organizing and implementing tasks associated with major life roles and following schedules and routines needed to support those roles. Few nonpharmacological interventions exist for women with ADHD, and these reported deficits are not typically addressed. The present results suggest an occupational therapy intervention may offer an effective nonpharmacological option for these women.

Gutman S, Balasubramanian S, Herzog M, et al: Effectiveness of a tailored intervention for women with attention deficit hyperactivity disorder (ADHD) and ADHD symptoms: a randomized controlled study. *American Journal of Occupational Therapy* 2020;74 (January–February): doi 10.5014/ajot.2020.033316. From Columbia University, New York; NY. **Source of funding not stated. The authors did not include disclosure of potentially relevant relationships.**

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Correlation Coefficient (r): A measure of the closeness of the relationship between two variables. The value of r can range from -1 to 1. An r value near 1 indicates a strong positive relationship. An r-value close to zero indicates no relationship, and a negative r-value indicates a negative relationship.

Effect Size: The effect size represents the amount of change in outcome that can be attributed to treatment, where 0.2 indicates a small effect, 0.5 a medium effect, and 0.8 a large effect. It is relatively independent of clinical significance, and large effect sizes do not ensure treatment efficacy.

Hazard Ratio: A measure of the risk of an event relative to exposure, or the probability of an event occurring in an exposed group versus a non-exposed group. A hazard ratio of 0.5 indicates that 1 group has half the risk of the other group.

Odds Ratio: A comparison of the probability of an event in 2 groups. An odds ratio of 1 implies that the event is equally likely in both groups. An odds ratio greater than 1 indicates that the event is more likely to occur in that group than in the comparison group.

Study Rating: A measure of how well a study conforms to quality standards. The study rating uses a checklist system based on the comprehensive Strength of Evidence Report from the Evidence-based Practice Center Program of the Agency for Healthcare Research and Quality (AHRQ). The rating checklists are posted at www.alertpubs.com.

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