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Merits of psychodynamic therapy

The research suggests that benefits of this therapy increase with time.

Cognitive behavioral therapy (CBT) has emerged, both in the research literature and in the media, as a “first among equals” in psychotherapy—most often studied and most frequently cited in news reports. CBT seeks to change conscious thoughts and observable behaviors by making patients more aware of them. But considerable research also supports the efficacy of other types of psychotherapy, in particular psychodynamic therapy. In fact, a recent review in *American Psychologist* cited evidence that psychodynamic therapy is just as effective as CBT, and that the benefits may increase over time.

Psychodynamic therapy has its roots in psychoanalysis, the long-term “talking cure.” Like psychoanalysis, psychodynamic therapy recognizes that the relationships and circumstances of early life continue to affect people as adults, that human behavior results from unconscious as well as conscious or rational motives, and that the act of talking about problems can help people find ways to solve them or at least to bear them.

Both psychoanalysis and psychodynamic therapy rely on the therapeutic alliance in order to work. The therapeutic alliance is the

personal connection between therapist and patient that enables them to work in tandem so that the patient can gain insight into aspects of experience that may be difficult to talk and think about. As the therapeutic alliance deepens, a therapist helps patients to understand themselves in new ways, and to become more mindful of a greater range of their thoughts, feelings, perceptions, and experiences. Dr. Glen Gabbard, professor of psychiatry and psychoanalysis at Baylor College of Medicine, has called the therapeutic alliance the “envelope” within which psychodynamic therapy takes place.

Although modern therapists frequently question the distinction, it is useful to note that psychodynamic therapy and psychoanalysis differ in some ways. During psychoanalysis, patients generally attend meetings three to five days a week, whereas in psychodynamic therapy, a patient typically sees a therapist once or twice a week. Thus the intensity of the therapeutic relationship is greater in psychoanalysis. Both psychoanalysis and the long-term form of psychodynamic therapy may be conducted in an open-ended manner, over many years, with the patient and therapist/analyst taking as much time as they need to decide about the duration of treatment. Short-term treatment with psychodynamic therapy, in contrast, is time-limited and usually lasts less than six months.

Gaining self-knowledge

A recently published paper compared psychodynamic therapy to CBT. It highlighted notable differences between these two forms of therapy.

Acknowledging emotion. Whereas CBT focuses on thoughts and beliefs, psycho-

KEY POINTS

- Psychodynamic therapy is an option for patients with a variety of mental health disorders and personality disorders.
- Although it is similar in some ways to psychoanalysis, psychodynamic therapy may be shorter in duration or intensity.
- Several reviews suggest that psychodynamic therapy is as effective as cognitive behavioral therapy.

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Editorial Correspondence

E-mail mental_letter@hms.harvard.edu

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Psychodynamic therapy *continued*

dynamic therapy encourages a patient to explore and talk about emotions as well—including those that are contradictory, threatening, or not immediately apparent. The focus is on using therapy to gain emotional, as well as intellectual, insight. Ideally, insight enables a patient to reconsider life patterns that once seemed inevitable or uncontrollable, and leads to the identification of new choices and options. The insight may lead a patient to feel more ready to make changes.

Understanding avoidance. Psychodynamic therapy helps patients to recognize and overcome ingrained and often automatic ways in which they avoid distressing thoughts and feelings. Therapy may bring avoidance into high relief—such as when patients cancel therapy appointments, arrive late, or tiptoe around emotionally charged topics. Psychodynamic therapists point out that such psychological maneuvers often involve painful compromises between the wish to attend sessions in order to get help, and the fear of what may emerge during therapy. Psychodynamic therapy can help a patient become more aware of these maneuvers, which are likely to manifest outside of therapy as well, with the aim of nurturing more flexible and adaptive ways of coping.

Identifying patterns. Psychodynamic therapy recognizes that in mental life, the past is often prologue. Early-life experiences, especially with parents, caregivers, and other authority figures, shape present-day outlook and relationships. The goal of psychodynamic therapy is not to dwell on the past but to explore how prior relationships and attachments may provide insight into current psychological problems. A psychodynamic therapist may work with a patient to identify recurring patterns in relationships, emotions, or behaviors (such as being drawn to a verbally abusive partner) to help the patient recognize them. At other times the patient may already be painfully aware of self-defeating patterns, but needs help to understand why they keep recurring and how to overcome psychological obstacles

to making changes. The aim of this work is to give patients greater freedom to direct their lives.

Focusing on relationships. Interpersonal relationships—with loved ones, friends, and colleagues—are a core focus of psychodynamic therapy. A person's characteristic responses to other people often emerge in relation to the therapist, a phenomenon known as transference. For example, a patient who experienced hostility or dependency in an early important relationship may find the same feelings arise during a therapy session. Thus the therapeutic relationship provides a window into the dynamics of a patient's relationships outside the office, and offers an opportunity to recognize and change self-defeating patterns.

Psychodynamic therapy often addresses not just transference, but also the therapist's responses to the patient, often called "counter-transference." Such reactions may reflect the therapist's own formative relationships, but they often signify the "pull" the therapist feels to play out the patient's relationship patterns. Either way, the psychodynamic therapist tries to help patients understand how they contribute both to beneficial and painful relationship patterns, and how such reactions often originate within the self, yet foster the tendency to see the outside world (including relationships) as the exclusive source of disappointment or other painful emotion.

Encouraging free associations. In CBT and other structured therapies, the clinician tends to lead the discussion. In psychodynamic therapy, the clinician encourages a patient to speak as freely as possible about thoughts, desires, dreams, fears, and fantasies, as they come to mind. Psychodynamic therapists believe this unstructured, uncensored process of reporting provides access to thoughts and feelings that might otherwise remain outside of awareness. These thoughts and feelings might then become the raw material for helpful insight, or be reworked in ways that expand freedom and choice. However, it is not true that psy-

chodynamic therapy is entirely “non-directive.” For example, good dynamic therapists frequently direct the attention of their patients to issues that they are avoiding.

Benefits improve over time

Randomized controlled studies are the ideal way to evaluate treatments in medicine, but psychodynamic therapy, with its individualized technique and complex aims, has not lent itself readily to this type of study. It is not surprising that it has taken longer for researchers to develop and validate rigorous methods for studying this treatment. Nevertheless, randomized controlled studies support the use of psychodynamic therapy for anxiety, borderline personality disorder, depression, eating disorders, post-traumatic stress disorder, panic disorder, somatoform disorders, and substance-use disorders.

Meta-analyses are another way to judge efficacy of treatment. These reviews convert findings from multiple studies using different methods and populations into a common metric, most often an “effect size” that estimates overall treatment benefit.

Short-term therapy. A meta-analysis by the Cochrane Collaboration, an international group of experts, included 23 randomized controlled studies involving a total of 1,431 patients with varying diagnoses, most often depression and anxiety. All underwent short-term psychodynamic therapy (defined in this review as less than 40 hours in duration). When compared with controls (a waiting list, minimal treatment, or treatment as usual), short-term psychodynamic therapy significantly improved symptoms, with modest to moderate clinical benefits. When patients were assessed nine months or more after treatment ended, to determine long-term outcomes, the effect size of psychodynamic therapy had increased, suggesting that therapy led to lasting psychological changes that yielded more benefits as time went on.

A meta-analysis in *Archives of General Psychiatry* included 17 randomized controlled trials involving patients with a range of diagnoses. It concluded that short-term psychodynamic therapy was significantly more effective than a waiting list control or treatment as usual in the community, and that it was just as effective as other types of psychotherapy, such as CBT, supportive therapy, and interpersonal therapy.

Long-term therapy. A meta-analysis published in *The Journal of the American Medical Association* compared long-term psychodynamic therapy (defined in this paper as lasting at least a year or consisting of at least 50 sessions) with various short-term psychotherapies. It included 11 randomized controlled trials and 12 observational studies (included to provide results of psychodynamic therapy as practiced in real-world clinical settings). The studies enrolled 1,053 patients diagnosed with personality disorders or hard-to-treat mood or anxiety disorders. The analysis showed that long-term psychodynamic therapy significantly benefited patients with complex psychiatric disorders, and that patients continued improving after therapy ended (see *Harvard Mental Health Letter*, December 2008).

Another meta-analysis, published in the *Harvard Review of Psychiatry*, included 27 studies of long-term psychoanalytic therapy (most often psychodynamic therapy), enrolling more than 5,063 patients and lasting an average of 150 sessions. Only one of the studies was a randomized controlled study; five were surveys and 21 were epidemiologic studies (most of them prospective). Diagnoses included anxiety, depression, and personality disorders, but often were unspecified. Based on a comparison of effect sizes, this meta-analysis concluded that long-term psychoanalytic therapy may be particularly useful for patients with severe personality disorders, who benefited more from treatment than patients with mixed or moderate pathology.

Challenges and conclusions

One ongoing challenge in the research is that the studies of psychodynamic therapy often involve patients with different diagnoses, making it hard to draw conclusions about how effective this approach will be for individual patients. Moreover, many studies provide inadequate details about treatment methods or use “control” situations (such as a waiting list) that don’t actually control for the benefits of active intervention, no matter what technique is being employed.

Nevertheless, there is now enough research available to support the claim that psychodynamic therapy is an evidence-based treatment with effect sizes similar to or superior to those reported for other psychotherapies. In the current reimbursement environment, however, a significant practical challenge is whether psychodynamic therapy will also prove to be cost-effective—especially in the “real world,” where practitioners vary in terms of skills and experience, and patients vary in commitment to continuing therapy.

Yet it is encouraging that the benefits of psychodynamic therapy not only endure after therapy ends, but increase with time. This suggests that insights gained during psychodynamic therapy may equip patients with psychological skills that grow stronger with use. ♥

De Maat S, et al. “The Effectiveness of Long-Term Psychoanalytic Therapy: A Systematic Review of Empirical Studies,” *Harvard Review of Psychiatry* (Jan.–Feb. 2009): Vol. 17, No. 1, pp. 1–23. *

Gabbard GO, ed. *Textbook of Psychotherapeutic Treatments* (American Psychiatric Publishing, 2009).

Shedler J. “The Efficacy of Psychodynamic Psychotherapy,” *American Psychologist* (Feb.–March 2010): Vol. 65, No. 2, pp. 98–109.

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Autism spectrum disorders

Diagnosis and management involve time and patience.

The *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition* (DSM-IV) describes five pervasive developmental disorders: autistic disorder, childhood disintegrative disorder, Asperger's disorder, Rett's disorder, and pervasive developmental disorder not otherwise specified. Although they differ in some specifics, these disorders share three core features: impaired social interactions, difficulty in communicating with others, and repetitive or inflexible behavior. Recognizing that these disorders differ mainly in terms of severity, authors of the draft *DSM-V*, now undergoing review, have proposed deleting Rett's disorder and including the other four under the single category of autism spectrum disorder (ASD).

It remains unclear what causes an ASD, but most risk factors are genetic. When one identical twin develops an ASD, then 82% to 92% of the time the other one (who shares the same genes) will also develop the disorder. The concordance rate drops to 10% or less in fraternal twins, who share only some genes.

ASDs affect roughly one in 150 children, although some studies suggest the prevalence may be higher. ASD diagnoses have been increasing since the 1960s, but it remains unclear whether this is because of better awareness and assessment, or some unknown environmental factor that triggers these disorders in children who are genetically susceptible (see *Harvard Mental Health Letter*, January 2010).

There is no cure for any ASD, but early interventions—mainly educational and psychosocial—take advantage of the developing brain's ability to change in response to experience. As such, early interventions may help improve a child's ability to communicate and interact with others. An ongoing challenge, however, is making the diag-

nosis as early as possible. In the United States, children are 4 to 5 years old, on average, when first diagnosed with an ASD, even though parents generally express concerns about atypical development much earlier, when children are 12 to 18 months old.

Screening and diagnosis

There is no blood test for an ASD, or any other reliable biological marker. As such, diagnosis is made on the basis of a careful assessment of signs and symptoms. The earliest signs are subtle but detectable, such as problems making eye contact and inability to follow objects visually, turn in response to hearing their own name, smile, or imitate other people. The best assessment covers multiple developmental domains. The American Academy of Pediatrics (AAP) has published recommendations for pediatricians that provide useful guidance for other clinicians and parents.

Screening. The AAP recommends that pediatricians evaluate children's development on an ongoing basis during regularly scheduled appointments, and ask parents about any concerns they might have, in order to increase chances that subtle delays and aberrations are detected as early as possible. The AAP recommends that pediatricians use a standardized developmental tool to assess the child whenever there is a concern about whether the child is developing normally. In addition, the AAP recommends that clinicians screen children with such a standardized developmental instrument at 9, 18, 24, and 30 months of age. An ASD-specific screening tool is recommended at ages 18 and 24 months.

One of the most commonly used screening tools is the Modified Checklist for Autism in Toddlers (M-CHAT), which relies on parent's responses to a questionnaire. The M-CHAT is used to assess components of social interaction

that serve as the basis for more mature skills in communicating and interacting with others. These include the ability of babies to follow the direction of another person's gaze or look where they are pointing, or to point something out themselves.

ASD screening is a process, not an event; it is a starting point for ongoing discussions with parents and informed assessment of the child. As such, the type of screening instrument used may be less important than frequency of use and follow-up. One study that assessed children at two different time points—first at ages 16 to 30 months, and a second time at ages 42 to 54 months—found that clinicians using the M-CHAT questionnaire alone identified only 11% of young children eventually diagnosed with an ASD. However, those who conducted a structured telephone interview with parents to probe more deeply into their answers on the M-CHAT were able to identify 65% of children eventually diagnosed with an ASD.

Diagnosis. If a screening test raises concern that a child has an ASD, a comprehensive assessment is the next step. Ideally this will involve a multidisciplinary team of clinicians, in part to rule out other developmental or neurological problems. For example, a blood test can detect elevated lead levels in the blood that may be retarding intellectual development. An audiologist can detect hearing loss that may cause language problems. In addition, clinicians may want to rule out certain genetic problems that cause mental retardation, such as fragile X syndrome.

One widely used assessment tool is the Autism Diagnostic Observation Schedule (ADOS), a semistructured interview that enables a clinician to assess the child's social behavior, communication skills, and ability to engage in imaginative play. (Clinicians must undergo training in order to adminis-

ter ADOS, however, so some may not be able to offer it.) Other instruments are so time-consuming that they are only used in research settings.

Psychosocial interventions

Home- and school-based psychosocial interventions form the basis of treatment for children with ASDs. The goal is to help a child better communicate and interact with other people.

Several interventions are available, and the choice depends on the child's needs and the options available in the community. In a paper providing advice on management of ASDs, the AAP emphasizes adhering to several broad principles, regardless of the intervention used. For example, the AAP recommends that clinicians provide a referral for early intervention as soon as an ASD diagnosis is suspected, rather than waiting until the diagnosis is definite. In addition, the interventions—usually delivered in an educational setting—should be intensive, lasting at least 25 hours a week and continuing year-round.

Applied behavior analysis (ABA). This approach is based on principles of operant conditioning—the use of positive reinforcement and other techniques to encourage behavior change. Treatments based on ABA are the best-researched intervention for ASDs, although they have evolved over the years. Early on, interventions were individualized, highly structured, and focused on building one skill at a time. Currently ABA programs are focused more broadly on developing a child's motivation and abilities, to increase the chances that a child can apply skills learned during therapy to life at home or school.

Many of the therapies used to treat ASDs rely on principles of ABA. Examples include pivotal response treatment, which aims to improve core or “pivotal” behaviors such as play skills, communication ability, and social behavior, and verbal behavior therapy, which is focused on acquisition of language

skills. The research suggests that about half of children with ASDs who participate in an ABA program improve IQ scores, language skills, school performance, and ability to adapt, as well as socialization skills, when compared with control groups.

Structured teaching. This approach, more formally known as the Treatment and Education of Autistic and Related Communication-Handicapped Children (TEACCH) program, seeks to better organize a child's environment and activities—in essence, changing the environment to accommodate ASD-related deficits. TEACCH is not as well studied as ABA, but a survey of parents, special education teachers, and administrators found that they believe combining both methods is the best way to help children with ASDs.

Developmental models. Investigators are researching a number of developmental programs for very young children. One example is the Early Start Denver Model (ESDM), which combines ABA techniques with developmental and social relationship skills tailored for each child. A small but well-designed randomized controlled trial concluded that ESDM increased IQ and prevented developmental regression, when compared with the control of referral for community treatment.

The study involved 48 children, ages 18 to 30 months, diagnosed with either autistic disorder or pervasive developmental disorder. After two years of intense intervention (25 hours a week), the average IQ of children assigned to ESDM increased by almost 18 points (to 78), while that of children assigned to community care improved by 7 points (to 66)—although still lower in both groups than the average IQ of 100. As for adaptive behavior, children in the ESDM group remained stable over the two-year intervention—indicating a steady rate of development—while those in the control group declined by 11 points on average, suggesting that they were more developmentally delayed.

For more information

Autism Society of America
www.autism-society.org

Autism Speaks
www.autismspeaks.org

Autistic Self-Advocacy Network
www.autisticadvocacy.org

National Autism Association
www.nationalautismassociation.org

Other interventions. Other types of interventions address deficits that are not specific to ASDs but often occur in children with these disorders. For example, speech and language therapy may be necessary to help a child build language skills. In social skills instruction, the therapist may use games, visual cues, and other methods to encourage a child to engage and interact with other people. Occupational therapy may be necessary to help the child learn self-care, such as getting dressed or using utensils when eating.

Individualized treatment

The AAP and other organizations also provide advice about medical management of symptoms such as irritability or sleep disturbance in children with ASDs. The medications most often used to treat ASDs are selective serotonin reuptake inhibitors, antipsychotics, and stimulants. (We'll explore medical management of ASDs in greater detail in a future issue.)

While multiple options exist for managing ASD, the real challenge is in finding the right mix of therapies for each child—and then ensuring that families have access to them. ♥

Dawson G, et al. “Randomized, Controlled Trial of an Intervention for Toddlers with Autism: The Early Start Denver Model,” *Pediatrics* (Jan. 2010): Vol. 125, No. 1, pp. e17–23.

Levy SE, et al. “Autism,” *Lancet* (Nov. 7, 2009): Vol. 374, No. 9701, pp. 1627–38.

For more references, please see www.health.harvard.edu/mentalextra.

Transcranial magnetic stimulation

Research helps clarify who is likely to benefit from this treatment.

Although multiple psychotherapy and medication options exist for treating major depression, they don't work for everyone. Patients who have not responded to medication, or who have not been able to tolerate other options, may be eligible for repetitive transcranial magnetic stimulation (rTMS). The FDA in 2008 approved the first repetitive rTMS device specifically for treating major depression that has not responded to at least one medication taken at adequate dose and duration (usually defined as at least four weeks). Recently a federally funded study provided further guidance about its use.

First, some caveats. Repetitive TMS is likely to be offered only after several mainstream treatments for major depression have already been tried; this method is not recommended for patients with mild depression or newly diagnosed major depression. And rTMS has not been studied in pregnant women or youths younger than 18.

How rTMS works

Patients receive rTMS treatment while sitting in what looks like a dentist's chair. A technician maneuvers a device containing a magnetic coil into position directly above one side of the patient's scalp. The rTMS device produces a series of strong magnetic pulses—similar in strength to those produced during a magnetic resonance imaging scan—that penetrate to a depth of 2 to 3 centimeters (about an inch) into the brain.

It is not clear how rTMS might improve symptoms of depression. The theory is that the magnetic pulses create a weak electrical current in the brain, which in turn affects regional brain activity. There may be no single mechanism underlying rTMS; instead, its effect on the brain may vary depending on brain target and frequency or intensity of treatment.

Repetitive TMS does not require anesthesia. Patients can read or talk during the treatment and drive themselves home afterward. Ear phones can help block the repetitive clicking sounds that occur as the rTMS device emits magnetic pulses.

A review of three large multi-site studies concluded that the most common side effects of rTMS treatment were mild to moderate headache or scalp pain on the side closest to the device. Tests of cognitive function, short- and long-term recall, and autobiographical memory showed no change after treatment. Seizure is the most serious medical risk of rTMS. Although risk of seizure appears to be less than half of 1%, it's important for clinicians to follow the parameters outlined in federal safety guidelines.

Typically, initial rTMS treatment involves 40 minutes of treatment, five days a week, for four to six weeks. Less frequent maintenance treatment also may be necessary. Medicare and other insurers are currently deciding whether to cover the treatment on a case-by-case basis, but clinics offering the service advise prospective patients that they may have to cover treatment costs themselves. The initial course of treatment may cost from \$6,000 to \$10,000, depending on the clinic and how many sessions a patient needs, and maintenance therapy will add to the bill.

Guidance from studies

The FDA approved rTMS largely on the basis of an industry-sponsored double-blind randomized controlled study of 301 patients with major depression whose current episode had not responded to at least one and no more than four antidepressants. The investigators found that 14% of the rTMS group achieved remission by the sixth week, compared with 5% of those who underwent sham treatment.

A double-blind randomized controlled study of 190 patients with major depression, funded by the National Institutes of Health, produced similar results. The patients had failed an average of 1.5 previous research-quality medication trials for the current episode of major depression. (Because treatment in the community often does not adhere to strict research standards, the investigators estimated that this was equivalent to not attaining remission after trying three to six antidepressants in the clinical setting.) Although rTMS worked significantly better than sham treatment, the absolute number of people attaining remission was small. At the end of the third week, 13 of 92 patients (14%) receiving rTMS achieved remission, compared with five of 98 (5%) receiving sham treatment.

This latest study adds to the evidence that rTMS is most likely to benefit patients who are the least treatment resistant, based on past medication use. There may be a small group of patients who selectively respond to rTMS and no other treatment, but there is as yet no way to identify those patients in advance. For most patients with depression, then, the standard treatment will remain sequential trials of psychotherapy and medication. And for patients with treatment-resistant depression, the best-studied alternative remains electroconvulsive therapy (see *Harvard Mental Health Letter*, January 2009). ♥

George MS, et al. "Daily Left Prefrontal Transcranial Magnetic Stimulation Therapy for Major Depressive Disorder: A Sham-Controlled Randomized Trial," *Archives of General Psychiatry* (May 2010): Vol. 67, No. 5, pp. 507–16.

Rossi S, et al. "Safety, Ethical Considerations, and Application Guidelines for the Use of Transcranial Magnetic Stimulation in Clinical Practice and Research," *Cleveland Clinical Neurophysiology* (Dec. 2009): Vol. 120, No. 12, pp. 2008–39.

For more references, please see www.health.harvard.edu/mentalextra.

Study suggests there is a silver lining to the “golden” years

With age comes wisdom—and perhaps happiness, according to a national survey to assess psychological well-being in Americans. The study adds to previous research suggesting that people tend to become happier as they age.

In 2008, interviewers from the Gallup Organization conducted a telephone survey of more than 340,000 American adults ages 18 to 85. In addition to asking questions about age, relationship status, health, and income, the interviewers asked respondents to rank their overall life satisfaction on a scale of one to 10. They also asked questions about whether participants experienced specific emotions, such as happiness, sadness, anger, stress, and worry, on the day before the interview. The researchers then tabulated results by three-year age ranges (such as 18 to 21).

Obviously this sort of survey was not designed to probe deeply into the psychology of Americans, but it produced an interesting time-lapse portrait. The survey results suggest that middle age—in particular ages 50 to 53—represents a psychological turning point for Americans.

Starting at age 18, for example, people said they felt less angry and stressed out as they grew older. At age 50, they became markedly less worried about things, and reported

increasing levels of happiness and enjoyment. Overall life satisfaction declined from ages 18 to 50, and then started improving. In fact, people aged 82 to 85 reported higher levels of overall satisfaction than those aged 18 to 21.

The researchers are not sure why ages 50 to 53 are so pivotal in terms of life satisfaction. Demographic factors such as relationship status, employment status, and whether children still lived at home did not predict this psychological shift—as the researchers initially thought they might. The investigators can only speculate that people start becoming happier in middle age because of a combination of psychological factors identified in other studies: increasing emotional intelligence, a greater ability to take things in stride, and the increasing tendency to recall more positive memories and fewer negative ones.

Thus, while older Americans may grumble about the golden years not being quite so “golden” as they expected them to be, this study suggests that there is still a silver lining to the process of aging.

Stone AA, et al. “A Snapshot of the Age Distribution of Psychological Well-Being in the United States,” *Proceedings of the National Academy of Sciences* (June 1, 2010): Vol. 107, No. 22, pp. 9985–90.

Why cell phone conversations distract drivers

Roughly eight in 10 Americans who own cell phones say they talk on them while driving. The results can be disastrous, causing motor vehicle accidents and deaths. About one-third of U.S. traffic accidents each year (about 1.6 million) are attributed to people talking on cell phones.

But many cell phone users remain skeptical that they might be endangering themselves or others. After all, why would talking on a cell phone in a car be any more distracting than talking to a passenger in the next seat? Studies suggest several possible reasons.

One study using a driving simulator found that drivers conversing by cell phone were more likely than those talking to passengers to drift between lanes and to miss an exit they were instructed in advance to take. When the researchers analyzed the complexity of the conversations in this study, they found that drivers and passengers tended to modulate their speech in response to external traffic cues. For example, they stopped talking when a traffic problem developed, or the passenger would offer advice to help the driver navigate. Conversations taking place by cell phone, on the other hand, did not vary much in response to changing traffic conditions (perhaps no surprise,

because only the driver was actually aware of what was happening on the road).

Some drivers have switched to hands-free cell phones in an effort to eliminate the physical distraction of trying to hold onto a cell phone while steering the car. But a review of studies concluded that hands-free cell phones are just as distracting as handheld models. One study found that any cell phone use caused impairments similar to those observed in drunk drivers.

And while people like to think they can multitask, cognitive research suggests that the brain tends to focus on one major activity at a time, while slowing the processing of other external cues. That is why talking on a cell phone may cause “inattention blindness.” In any event, the research provides an important reminder to all drivers: hang up and drive.

Ship AN. “The Most Primary of Care—Talking about Driving and Distraction,” *New England Journal of Medicine* (June 10, 2010): Vol. 362, No. 23, pp. 2145–47.

Strayer DL, et al. “A Comparison of the Cell Phone Driver and the Drunk Driver,” *Human Factors* (Summer 2006): Vol. 48, No. 2, pp. 381–91.



THE QUIRKY BRAIN



What is catatonia?

Q What is catatonia? You hardly hear about it anymore. Has it been cured?

A As a 2009 review in the *Archives of General Psychiatry* aptly put it, catatonia may be forgotten, but it's certainly not gone. Long associated with schizophrenia ("catatonic type"), the latest research indicates that catatonia is a syndrome unto itself, and one that can be effectively treated.

Catatonia is a motor dysregulation disorder that may have more in common with movement disorders like Parkinson's disease than psychotic disorders. Those affected lose the ability to control movement. Some patients freeze or become rigid, while others cannot stop repetitive movements, even when they might injure themselves as a result. Other typical symptoms of catatonia are inability to speak (mutism), resistance to simple commands, apparent refusal to eat or drink, persistent staring, stupor, and lack of response to painful stimuli.

First described in 1874, catatonia quickly emerged as one of the most common psychiatric diagnoses among patients confined to asylums. By the late 1800s, up to 38% of hospitalized patients were given that diagnosis. But in 1899, the influential psychiatrist Emil Kraepelin defined it as a subtype of *dementia praecox*, the precursor of catatonic schizophrenia. By the middle of the 20th century, diagnoses of catatonia as a distinct disorder had plummeted.

Now consensus is growing that catatonia may too often go undiagnosed—with or without being linked to schizophrenia. One study of more than 19,000 psychiatric patients in the Netherlands found that nearly 8% of those who were hospitalized between 1980 and 1989 were diagnosed with catatonic schizophrenia, compared with only 1% a decade later. When the researchers examined diagnoses for a subset of 139 psychiatric patients consecutively admitted for psychosis, they found that clinicians diagnosed catatonia in only 2% of them, while researchers using a systematic catatonia rating scale diagnosed the syndrome in 18%.

It's not clear why catatonia—once so central to psychiatry—has faded from clinical view. Some believe this occurred as the diagnostic emphasis in psychiatry shifted from conducting thorough medical exams to focusing more on psychological symptoms. A larger problem may be that Dr. Kraepelin's legacy has been an enduring one—in the mind of both the public and many clinicians, catatonia is associated exclusively with schizophrenia.

In fact, catatonia has numerous causes. Thus its occurrence should prompt an evaluation of all possible triggers—psychiatric, neurological, or medical. Certainly catatonia frequently appears in patients with psychotic disorders, but not just schizophrenia: it can also affect those with depression or bipolar disorder. It can also occur in patients with systemic infections, autoimmune disorders such as lupus, and other types of general medical conditions.

Recognizing this, the work group charged with revising the section on schizophrenia and other psychotic disorders for the upcoming fifth edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM) have proposed that the catatonic subtype of schizophrenia be removed from the new edition. If the change is accepted, the *DSM-V* will describe catatonia as a syndrome that can occur with schizophrenia, a mood disorder, or a general medical disorder.

If clinicians recognize catatonia, they can first search for and treat any underlying medical cause. They can also provide one of two effective treatments, depending on circumstances. Patients whose movements are rigid or restricted may respond to lorazepam (Ativan), sometimes intravenously and in high doses. Those who are agitated, who are suffering delirium, or who do not respond to lorazepam may benefit from electroconvulsive therapy. Both treatments benefit at least 80% of patients with catatonia, and some studies suggest the success rate may be even higher.

This means that in many if not most cases, catatonia can be both remembered *and* gone.

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