

Re: The Combined Use of Atypical Antipsychotics and Cognitive-Behavioural Therapy in Schizophrenia

Dear Editor:

We read with interest Dr Duggal's letter on the combined use of atypical antipsychotics (AAs) and cognitive-behavioural therapy (CBT) in schizophrenia (1). Dr Duggal reports that his patient showed a reduction of 54% in symptom severity as indexed by the Positive and Negative Syndrome Scale (PANSS). His baseline score when unmedicated was 129 and varied from 83 to 102 with medication; when medication was combined with CBT, his PANSS score was 59.

Dr Duggal's finding is consistent with, and adds to, the existing literature on the combined use of second-generation antipsychotics (SGAs) and CBT. Our Symptom-Specific Group Treatment Program (conducted at Bronx Psychiatric Center) was designed to match the 5 symptom dimensions of the PANSS: positive, negative, activation, dysphoria, and autistic preoccupation (2). We found that patients attending symptom-specific groups in addition to receiving standard medications showed an additional 22% decrease in symptom severity when compared with a group of patients receiving standard medications alone (3).

We question only Dr Duggal's speculation that "AAs potentiate CBT." CBT has been found to be useful in patients who receive standard neuroleptics, including those in our sample, as well as in patients receiving SGAs. Further, it may well be that SGAs and CBT do not potentiate one another but that their effects are additive. The 2 treatment modalities may be targeting different facets of schizophrenia. For example, CBT may teach or remediate coping skills, cognitive functions, and social adeptness impaired during acute psychosis; standard neuroleptics target positive symptoms, and SGAs target positive, negative, activation, dysphoria, and autistic preoccupation symptoms.

More work is needed to better understand whether the interaction between antipsychotics and CBT is additive or synergistic, as well as how CBT works with different antipsychotics.

References

1. Duggal HS. Combined use of atypical antipsychotics and cognitive-behavioural therapy in schizophrenia [letter]. *Can J Psychiatry*;47:887-8.
2. White L, Harvey PD, Opler LA, Lindenmayer J-P, Bell M, Caton CLM, and others. Empirical assessment of the factorial structure of clinical symptoms in schizophrenia: a multisite multimodel evaluation of the factorial structure of the Positive and Negative Syndrome Scale (PANSS). *Psychopathology* 1997;30:263-74.
3. Shelley AM, Battaglia J, Lucey J, Ellis A, Opler L. Symptom-specific group therapy for inpatients with schizophrenia. *Einstein Quarterly:Journal of Biology and Medicine*, 2001;18(1):21-8.

Anne-Marie Shelley, PhD
Lewis A Opler, MD, PhD
Joseph Battaglia, MD
Jeffrey Lucey, MD
Mount Vernon, New York

Reply: The Combined Use of Atypical Antipsychotics and Cognitive-Behavioural Therapy in Schizophrenia

Dear Editor:

I thank Dr Opler and colleagues for their comments, and I agree that more work needs to be done to improve our understanding of the interplay between cognitive-behavioural therapy (CBT) and second-generation antipsychotics (SGAs). Dr Opler's definition of CBT includes teaching or remediating coping skills, cognitive functions, and social adeptness; I have broadly covered this under the domain of cognitive remediation, a part of which involves CBT. The point that SGAs may potentiate the effect of CBT in schizophrenia derives from reports of other medications interfering with CBT (for example, benzodiazepines have a detrimental effect in anxiety disorders, because they impair memory function). Thus if SGAs improve new learning, which in part is the cognitive mechanism involved in CBT, it may be reasonable to

hypothesize that SGAs potentiate the effect of CBT. I endorse Dr Opler's view that CBT and SGAs may target different symptom profiles, but CBT in schizophrenia has been used for positive symptoms, including delusions, somatic passivity, and hallucinations.

Harpreet S Duggal, MD
Pittsburgh, Pennsylvania

Re: Should Psychologists Be Granted Prescription Privileges? A Review of the Prescription Privilege Debate for Psychiatrists

Dear Editor:

According to its objective, the article by Lavoie and Fleet is "informational" (1). However, while cogently written with regard to some pivotal events in psychology's developmental history, it also contains some flagrant inaccuracies.

The authors allege that the clinical psychological subspecialty of clinical psychopharmacology is currently undeveloped, restricted to the prescription of psychotropic drugs (rather than also encompassing other medicines and the provision of medical care in general), and deviates from psychology's theoretical approach to mental illness.

On the contrary, the specialty's development has progressed substantially: the American Psychological Association has established strict standards for the psychopharmacological and medical education and training of psychologists, and this has been followed by the establishment of similar North American guidelines published by the Association of State and Provincial Psychology Boards (2). Further, a postdoctoral education and training program, along with a credentialing body (that is, the International Collee of Prescribing Psychologists [ICPP]), has been established to board certify psychologists in the medical evaluation and management of

serious mental illness and related medical disorders (for example, hypothyroidism-induced depression, side effects of drugs, and adverse drug interactions), consistent with psychology's theoretical approach to mental illness (3). Psychiatrist board members consistently note that the pharmacologic training of their student psychologists surpasses training provided within traditional medical schools, and legislation has been passed to allow duly qualified psychologists to prescribe medicine in US federal hospitals, in the US territory of Guam, and most recently, in New Mexico. In the case of New Mexico, after all the evidence both for and against was reviewed, legislation that consigned autonomous prescribing authority to duly qualified psychologists passed with a vast majority of favourable votes and with the support of both the New Mexico Medical Association and a psychiatrist who provided expert medical testimony. In Canada, the province of Alberta has reportedly modified its health care legislation to allow duly qualified health care professionals to request prescribing authority.

In sum, clinical psychopharmacology is a well-established clinical psychological subspecialty (and hence, well past the "debating" stage of development) with a wealth of data from both psychiatrists and psychologists documenting the qualifications of practitioners within this specialty to prescribe medicine competently and safely. Psychiatrists should question why 2 psychologists, neither of whom is board certified to practice this specialty, are attempting to "stimulate the interest" of psychiatrists and to "educate" them so that they may become involved in this discussion—a discussion about whether duly qualified specialists within another discipline should be allowed to provide health care services within their scope of practice.

References

1. Lavoie KL, Fleet RP. Should psychologists be granted prescription privileges? A review of the

prescription privilege debate for psychiatrists. *Can J Psychiatry* 2002;47:443–8.

2. Melnyk WT, Allen MF, Nutt RL, Connor T, Robiner B, Pacht A. Guidelines for prescriptive authority. Montgomery (AL): ASPPB Committee on Education and Training for Credentialing, Association of State and Provincial Psychology Boards (ASPPB); July 2001.
3. Litman LC. Differences in prescribing practice between board-certified prescribing psychologists and psychiatrists. *UWO Med J* 2001;71(2):59–60.

Larry C Litman, PhD, Cpsych, FACAPP, FPPR, FSMI, FICPP, FSICPP
London, Ontario

Reply: Should Psychologists Be Granted Prescription Privileges? A Review of the Prescription Privilege Debate for Psychiatrists

Dear Editor:

Further to Dr Litman's letter, in no way did we intend to convey the message that the psychological subspecialty of psychopharmacology is currently "undeveloped." We did state that the act of prescribing psychoactive medication deviates, not from psychology's theoretical approach to mental illness but, rather, from its traditional foundations as an academic discipline. We do not argue that psychopharmacology is inconsistent with psychological principles but that the feasibility and safety of actual prescribing has not been adequately evaluated. Clearly, the academic discipline of psychopharmacology is a well-established and evolving psychological specialty. Even as an academic discipline, however, it is relatively young, compared with the psychological specialties of cognitive science, abnormal psychology, or behaviourism.

We agree that standards for psychopharmacological training for psychologists have been established and pilot projects are underway. Nevertheless, there is a difference between medical evaluation and management of mental illness and actual prescribing. Psychologists have been competently diagnosing mental illness and monitoring medication side effects

for years. The observation that some student psychologists received pharmacologic training surpassing that provided within traditional medical schools seems to underscore a problem within medical training; it is not necessarily sufficient to qualify psychologists to prescribe.

We agree that psychopharmacology is a well-established psychological specialty. Our article aimed to inform Canadian psychiatrists of the major issues and controversies of this debate. As for whether prescription privileges are within psychologists' scope of practice, we believe this question, at least for the time being, remains debatable.

Kim Lavoie, MA, PhD
Montreal, Quebec

Re: Should Psychologists Be Granted Prescription Privileges? A Review of the Prescription Privilege Debate for Psychiatrists

Dear Editor:

The review paper on the subject of whether psychologists should be granted prescription privileges (1) should be ensconced in the annals of psychiatric literature as characterized by obfuscation rather than enlightenment, notwithstanding the statement at the very end of the article that "psychologists need not go beyond the boundaries of psychological practice to expand into new treatment areas"—a mere sop in an article meant to condition and somehow advance the untenable practice of prescribing privileges to psychologists.

It is certainly a truism that allowing psychologists to prescribe would widen the scope of their practice and that this profession's accessibility to psychoactive medication would result in more people being "treated."

This tautological argument flies in the face of common sense. Perhaps bartenders, barbers, and hairdressers should also

be given limited prescription privileges and, in the case of barbers, the right to do trephining as well! According to the spurious argument that length of education is a rationale for allowing psychologists to prescribe, nuclear physicists should be given unlimited prescription privileges in all areas of medicine and to all and sundry.

When psychologists become physicians and psychiatrists and, as a result, are subject to the same rigorous discipline and curriculum of etiology and the assessment and treatment of diseases, then no reasonable body or person can deny them prescribing authority.

It appears somewhat ludicrous that an article of this nature would grace the pages of the Canadian Psychiatric Association's journal when we are witnessing an evolution and revolution in psychiatry. Psychiatry is evolving into a truly scientific, neurobiological discipline that is deeply rooted in technological medicine and in rigorous medical scientific method.

Please leave philosophy to the philosophers, psychology to the psychologists, and yes, cheese to the cheese makers.

Reference

1. Lavoie KL, Fleet RP. Should psychologists be granted prescription privileges? A review of the prescription privilege debate for psychiatrists. *Can J Psychiatry* 2002;47:443-8.

Sam Sussman, PhD
London, Ontario

Reply: Should Psychologists Be Granted Prescription Privileges? A Review of the Prescription Privilege Debate for Psychiatrists

Dear Editor:

Although we argued that pursuing prescription privileges at this time may be premature (owing to a relative lack of empirical support for the feasibility and safety of such a course and a lack of consensus among psychologists regarding its desirability), I would hardly call the idea "untenable"—particularly since it is already happening in various North

American sites (for example, in US federal hospitals). We agree that length of education is not a strong argument to present in favour of awarding prescription privileges to psychologists; that is precisely why we listed it as one of the weaker arguments typically offered by proponents of prescription privileges. Listing such arguments was meant to stimulate discussion and rebuttal, and we are pleased that it did just that!

The discipline of psychology is also witnessing a revolution and evolution, a phenomenon that is driving this debate. To suggest that psychology is not also concerned with neurobiology or the scientific method is inaccurate: the psychological disciplines of neuropsychology, psychobiology, and psychoneuroimmunology are all well developed and respected domains of science.

I would also like to point out that for years psychological research has focused on behavioural medicine and that more and more psychologists are finding clinical and research positions within medical faculties—highlighting the pertinence and relevance of psychology in medicine.

Kim Lavoie, PhD
Montreal, Quebec

Breath-Holding in Anxiety Disorders

Dear Editor:

The breath-hold test may be a simple and natural method of inducing endogenous CO₂ increase. We aimed to observe whether anxiety disorder patients (diagnosed according to DSM-IV criteria) respond in a similar way to the induction of panic attacks by a breath-holding test.

We randomly selected 29 panic disorder (PD) patients (18 women and 11 men; mean age 36.8 years, SD 9.6), 27 social anxiety disorder (SAD) patients (15 women and 12 men; mean age 42.8 years, SD 11.3), 21 generalized anxiety disorder (GAD) patients (14 women and 7 men; mean age 35.3 years, SD 15.0), and 23 comorbid anxiety disorder (CAD) patients (14 women and 9 men; mean age 37.5 years, SD 8.9) in the

Laboratory of Panic and Respiration, Rio de Janeiro, Brazil. Our comparison group comprised 30 subjects with no family history of anxiety or mood disorder (18 women and 12 men; mean age 33.7 years, SD 13.8 years). We obtained written informed consent, and our local ethics committee approved the protocol. The inclusion criteria were as follows: age 18 to 55 years, occurrence of at least 3 panic attacks in the previous 2 weeks for PD patients, and a negative urine test for medications. Exclusion criteria were unstable medical condition, cognitive-behavioural psychotherapy during the study, and use of any psychotropic medication for 5 weeks.

To measure the baseline anxiety level, we asked subjects to complete (before and after the test) the Subjective Units of Disturbance Scale (SUDS) (1) and the Diagnostic Symptom Questionnaire (DSQ) (1) adapted for DSM-IV. Based on the DSQ, we defined a panic attack as 1) 4 or more symptoms of a panic attack according to DSM-IV criteria; 2) at least one of the cognitive symptoms; 3) feelings of panic or fear, similar to spontaneous panic attacks; and 4) the agreement of 2 diagnosis-blinded raters at clinical diagnosis evaluation.

The breath-holding test comprised 4 trials as used by Van der Does (2). The panic rates assigned showed that significantly more PD patients had a panic attack in response to breath-holding: 44.8% ($n = 13$) of PD patients, 14.8% ($n = 4$) of SAD patients, 9.5% ($n = 2$) of GAD patients, 13.0% ($n = 3$) of CAD patients, and 4.0% ($n = 1$) of control subjects had a panic attack after the test ($\chi^2 = 23.67$, $df 4$, $P = 0.001$). There was no significant sex difference in any group ($\chi^2 = 0.64$, $df 4$, $P = 0.958$).

Although the SUDS results showed that PD patients tended to be more sensitive than other groups, all groups showed increased anxiety levels after the test. There were no statistical difference among the groups (2-way analysis of variance [ANOVA], group-by-time interaction: $F_{4,125} = 1.283$, $P = 0.238$).

Our main finding is the clear differentiation of PD patients from other anxiety disorder patients by a simple respiratory test. The precise criteria for induced panic attack may be the crucial point for our results. The data support Klein's

theory (3) and suggest that there is an association between PD and panic attacks in this breath-holding test. In respect to the induction of panic attacks, other anxiety disorders—SAD, GAD, and CAD—may be differentiated from PD by this respiratory test.

References

1. Bech P, Kastrup M, Rafaelsen OJ. Mini-compendium of rating scales for states of anxiety, depression, mania, schizophrenia with corresponding DSM III syndromes. *Acta Psychiatr Scand* 1986;73:1–37.
2. Van der Does AJW. Voluntary breath holding: not a suitable probe of the suffocation alarm in PD. *Behav Res Ther* 1997;35:779–84.
3. Klein DF. False suffocation alarms, spontaneous panics, and related conditions. An integrative hypothesis. *Arch Gen Psychiatry* 1993;50:306–17.

Antonio E Nardi, MD, PhD
 Alexandre M Valença, MD, PhD
 Fabiana L Lopes, MD
 Isabella Nascimento, MD MSc
 Marco A Mezzasalma, MD
 Walter A Zin, MD, PhD
Rio de Janeiro, Brazil

Bright Light, Serotonin Turnover, and Psychological Well-Being

Dear Editor:

Relatively little is known about healthy people in terms of seasonal and weather influences and the effects of exposure to bright light on their serotonergic system and psychological well-being. Recently, Lambert and others reported that the rate of production of serotonin by the brain was directly related to the prevailing duration of bright sunlight and rose rapidly with increased luminosity (1). Studies indicate that exposure to bright

light improves the psychological condition (2). The scientific literature also suggests that increased humidity tends to be related to decreased concentration and increased sleepiness, and uncomfortable temperature is associated with increased aggressive behaviour (3). Most likely, a psychobiological response to seasonal and weather conditions is a result of interacting environmental and genetic factors. Genetic factors can interact with environmental factors in different ways, and 2 such mechanisms have been explored: “genetic control of sensitivity to the environment” and “genetic control of exposure to the environment” (4). “Genetic control of sensitivity to the environment” suggests that genes in part render individuals relatively vulnerable or relatively invulnerable to the effects of seasonal and weather conditions. For example, the effect of light deprivation may be substantially greater in those at high vs low genetic risk for seasonal changes in mood and behaviour (seasonality). “Genetic control of exposure to the environment” suggests that genetic factors influence the probability that individuals will select themselves into certain environments. For example, the genetic risk factors for seasonality may in part express themselves by influencing the probability that individuals will spend more time indoors.

Both genetic and environmental factors operate, at least in part, through the brain serotonergic system (1,5–7). Molecular genetic studies of seasonality have focused on serotonin, and especially on the role of the serotonin transporter gene, in the neurobiology of seasonality (5–7).

It has been reported that a serotonin transporter gene polymorphism is associated with seasonality in the general population (5,6). Possibly, the serotonin transporter gene affects both sensitivity and exposure to the environment.

Exposure to bright light is important for psychological well-being. In the modern industrial world, many people spend a lot of time indoors. They are light-deprived and have a sedentary lifestyle. Combined exposure to bright light and physical exercise can be especially effective for improving mood- and health-related quality of life (2). Various outdoor activities may provide good opportunities to improve health.

References

1. Lambert GW, Reid C, Kaye DM, Jennings GL, Esler MD. Effect of sunlight and season on serotonin turnover in the brain. *Lancet* 2002;360:1840–2.
2. Partonen T, Leppämäki S, Hurme J, Lönnqvist J. Randomized trial of physical exercise alone or combined with bright light on mood and health-related quality of life. *Psychol Med* 1998;28:1359–64.
3. Young MA. Weather. In: Partonen T, Magnusson A, editors. *Seasonal affective disorder. Practice and research*. Oxford: Oxford University Press; 2001. p 169–73.
4. Kendler KS. Major depression and the environment: a psychiatric genetic perspective. *Pharmacopsychiatry* 1998;31:5–9.
5. Sher L, Greenberg BD, Murphy DL, Rosenthal NE, Sirota LA, Hamer DH. Pleiotropy of the serotonin transporter gene for seasonality and neuroticism. *Psychiatr Genet* 2000;10:125–30.
6. Sher L. Genetic studies of seasonal affective disorder and seasonality. *Compr Psychiatry* 2001;42:105–10.
7. Rosenthal NE. *Winter blues: seasonal affective disorder: what it is and how to overcome it*. Rev. ed. New York: The Guilford Press; 1998.

Leo Sher, MD
New York, New York