

Complementary Therapy for Addiction: “Drumming Out Drugs”

Michael Winkelman, PhD, MPH

Recent publications¹⁻⁸ reveal that substance abuse rehabilitation programs have incorporated drumming and related community and shamanic activities into substance abuse treatment. Often promoted as “Drumming out Drugs,” these programs are incorporated in major rehabilitation programs, community centers, conference workshops and training programs, and prison systems. Although systematic evaluations of the effectiveness of drumming activities are lacking, experiences of counselors and clients indicate that drumming can play a substantial role in addressing addiction. Evidence suggesting that drumming enhances substance abuse recovery is found in studies on psychophysiological effects of drumming⁹⁻¹³ and the therapeutic applications to addictions recovery of altered states of consciousness,¹⁴ meditation,¹⁵⁻¹⁹ shamanism,^{20,21} and other shamanic practices.²²⁻²⁴

METHODS

This report is based on information acquired from observations of drumming activities in substance abuse programs; interviews with program directors and counselors about the effects and experiences induced; a pilot program introducing drumming for recovering addicts; and on-line discussions and published material on drumming effects. Because of confidentiality issues, the programs observed did not permit interviews with clients. Clients' perspectives were provided by the directors and counselors involved in the program.

RESULTS

The following summarizes research done during 2001 on programs in Pennsylvania, Virginia, Wisconsin, and Missouri. Participant observation was carried out in the first 2 locations; interviews and published material were used for descriptions of activities and assessment of their effects at all sites.

Objectives. This article examines drumming activities as complementary addiction treatments and discusses their reported effects.

Methods. I observed drumming circles for substance abuse (as a participant), interviewed counselors and Internet mailing list participants, initiated a pilot program, and reviewed literature on the effects of drumming.

Results. Research reviews indicate that drumming enhances recovery through inducing relaxation and enhancing theta-wave production and brain-wave synchronization. Drumming produces pleasurable experiences, enhanced awareness of preconscious dynamics, release of emotional trauma, and reintegration of self. Drumming alleviates self-centeredness, isolation, and alienation, creating a sense of connectedness with self and others. Drumming provides a secular approach to accessing a higher power and applying spiritual perspectives.

Conclusions. Drumming circles have applications as complementary addiction therapy, particularly for repeated relapse and when other counseling modalities have failed. (*Am J Public Health.* 2003;93:647-651)

Mark Seaman and Earth Rhythms of West Reading, Pa

Seaman is recovering from addiction; he began drumming as a way to express himself and become part of a community. He was searching for natural altered states of consciousness. His engagement with drums led to a personal transformation and an involvement with the recovery industry through counselors he knew at the Caron Foundation in Wernersville, Pa.³ They wanted to expose adolescents in substance abuse treatment to drumming. The counselors said that these shut-down, angry, disenfranchised youth came alive as drumming gave them an avenue of expression. Initially, his programs were closely tied to the therapeutic process. Now, however, they are offered as recreational activity, and use drumming to create healing energy.

Activities. Seaman's programs begin with his drumming as people enter the room. They pick up drums and are free to play them as they choose. He then introduces warm-up exercises to make people feel comfortable with the drums, teaching people how to hit the drums without emphasizing anything technical. A vocal element is introduced to engage the group in coordinated chanting/singing activities to get their energy going. He allows

people to play spontaneously to lay the groundwork for nonverbal communication and asks participants to show how they feel through playing a rhythm on the drums. Call-and-response activities are used to connect the group. A subsequent activity gives each participant the opportunity to briefly use the drum to express feelings. The group engages in the creation of improvisational music that produces a feeling of great accomplishment and engages a “letting go” process through visualization. Seaman ends his program with an application of the Alcoholics Anonymous' 11th step (meditation), using meditation music and a variety of percussion instruments to reinforce a visualization process to connect with a higher power. “I get people relaxed, give them permission to leave their body and go on a journey. I talk about forgiveness, acceptance and surrender. I work [on] release of guilt from the wreckage that they have produced through their addictions. The visual imagery connects with the inner child, to release baggage, to awaken true potential, to image contact with higher power that covers and embraces them in a space of joy and healing.”

Effects. The participants enthusiastically receive the drumming. Staff emphasized that the youths particularly need drumming when

group dynamics are stressed because of conflict within the group, and when the group's sense of unity and purpose is disrupted by a client's relapse to drugs. Seaman finds that drumming pulls a group together, giving a sense of community and connectedness. The terminal meditation activity induces deep relaxation, eases personal and group tensions, and often leads to strong emotional release. Seaman suggests that drumming produces an altered state of consciousness and an experience of a rush of energy from the vibrations, with physical stimulation producing emotional release. Because addicted people are very self-centered, are disconnected, and feel isolated even around other people, the drumming produces the sense of connectedness that they are desperate for, he says. "All of us need this reconnection to ourselves, to our soul, to a higher power. Drums bring this out. Drums penetrate people at a deeper level. Drumming produces a sense of connectedness and community, integrating body, mind and spirit." Seaman's program is designed to induce a spiritual experience that is upbeat and fun. Meditation, "letting-go," and "re-birthing experiences" allow people to leave behind the things they don't want (e.g. their addictions) and engage the themes of recovery within the dynamics of group drumming.

Ed Mikenas and the Lynchburg Day Program

Ed Mikenas^{6,25} has a background as a musician, music therapist, and substance abuse counselor; he has also taken training from the Foundation for Shamanic Studies. He first discovered the positive effects of drumming for recovery when he worked as a substance abuse counselor at a group home for girls. Mikenas' interest in drumming preceded this program, beginning with a concert for the Partnership for Prevention of Substance Abuse. Currently, his programs are provided in colleges, after-school programs, city programs, and psychology and addiction conferences. The drumming reinforces other programs for both prevention of and recovery from addiction in a community context. Drumming emphasizes self-expression, teaches how to rebuild emotional health, and addresses issues of violence and conflict through expression and integration of emotions, says Mikenas.

Activities. Mikenas uses group drumming in substance abuse counseling to activate and reinforce the recovery process. Participation as a group leader or follower induces experiences that can mirror the recovery process—confidence, uncertainty, insecurity in leading, security in following, desire for change, or novelty. Drumming activities allow spontaneous expressions of leadership skills. Mikenas exposes participants to a variety of percussion instruments and helps them learn basic sounds, rhythms, and complex polyrhythmic dances. Sessions begin with warm-ups on bass tones to give safe and easy exercises and to coordinate the group. These are followed by edge tones at greater acceleration and the use of stop and start signals. More complex movements (heel-to-toe, switching hands, slap tones) are then introduced, emphasizing the use of the non-dominant hand. Mikenas uses Afrocentric traditions, particularly Afro-Cuban and Brazilian rhythms and the Afro-Caribbean Yoruba-based religions.²⁵ The gods are used as representations of archetypes to help people access their unconscious dynamics and connect their experiences with spirituality and community. Mikenas says that these spiritual experiences connect clients with a "higher power" and reestablish connections with their "natural selves."

Effects. Mikenas finds that the activities of drumming produce entertainment, an altered state of consciousness, and an energy that draws people in. Drumming also provides opportunities for coordinating sound and movement to assist in mental, physical, and emotional development processes. The pulse of drumming in a context that combines self-expression helps coordinate activities and solve problems, says Mikenas. Drumming gives an opportunity to learn leadership and discover one's own potentials. The drum's sounds, rhythms, and energy elicit emotional issues and may work as an "craser" to remove effects of trauma. Mikenas suggests that "with drumming, a group of people go from chaos and noise to an orderly sense of feeling all the same. Drumming helps express and address unhealthy emotional reactions that allow drugs to appear to meet emotional needs." He says drumming entrains the brain and stimulates pleasurable feelings without drugs. "Drumming makes you feel good. When they

connect, it makes them glow. It helps people fit in. Drumming teaches nurturing, respect, participation, and personal relationships. Drumming changes speaking, feeling, and acting, and helps you learn to act from the heart." Because group drumming gives participants different roles, individuals have to coordinate their parts. Therefore, they must focus on others. This gives them an experience with working together in a structured way. Mikenas says that a structured positive learning experience in lives that are often chaotic helps participants establish contact with themselves and connect with the collective consciousness. Mikenas considers benefits of drumming to include enhanced sensorimotor coordination and integration, increased bodily awareness and attention span, anxiety reduction, enhanced nonverbal and verbal communication skills, greater group participation and leadership skills and relationship building, and self-skills for self-conscious development and social and emotional learning.²⁵

Myron Eshowsky's Shamanic Counseling Approach

Myron Eshowsky was trained as a shamanic counselor by the Foundation for Shamanic Studies. His experiences, beginning in the mid-1980s, range from inpatient psychiatric acute care settings to private practice, community mental health centers, and prisons. Eshowsky worked with adults in a community mental health center in Madison, Wis, employing shamanic counseling approaches to apply spiritual perspectives to address psychological, emotional, and spiritual problems.¹ His success led the drug/alcohol unit of his agency to refer clients with a history of severe addiction and significant mental health issues. He subsequently worked with at-risk youth and gangs at an alternative high school and provided programs for mental health centers, community-based antiviolence groups, hospitals, health maintenance organizations, public schools, and prisons.^{1,2,26,27}

Activities. The shamanic drumming programs provided by Eshowsky include a mix of activities—story telling, journeying, healing work, dancing, spiritual divination, and group ceremonies. He engages adolescents in drumming activities and teaches them to journey on their own; he also often journeys himself to do

healing work. Eshowsky uses shamanic journeying²⁸ to find out information about clients, their power animals, spiritual intrusions, and soul loss.²⁹ These shamanic activities may provide healing (e.g., "soul retrieval") or information subsequently used in ritual therapeutic interactions that involve other family members to provide community support. He uses ceremony and ritual to provide a context for clients to connect with their issues while simultaneously placing them in a global context. He says that this provides healing and a sense of belonging that helps clients define who they are.

Effects. Participants report that drumming and shamanic journeying calm them down and help them deal with their high-stress lives. "Drumming helps them to experience a kind of peacefulness and provides a spiritual learning context that allows them to talk about their deeper concerns. It provides an opportunity for being heard that they don't often feel [they have]." Eshowsky reports that participants have a major reduction in crack cocaine and marijuana use as well as a reduction in drug-related violence and contact with the criminal justice system. This also enhances their school participation and performance. Eshowsky's work with shamanic healing is often effective for people in desperate situations, when other counseling modalities have failed; he reports a number of remarkable recoveries.^{1,2,26,27} A particularly successful application has been with youth in street gangs, for whom application of the principles of core shamanism has been useful in providing healing and spiritual justice by addressing issues of despair and powerlessness.

Daniel Smith's Shamanic Approach

Daniel Smith⁷ is the former director of the Center for Addictive Behaviors and program director of the Herman Area District Hospital Alcohol and Drug Unit in St. Louis, Mo. After years of use of shamanic drumming techniques and training by the Foundation for Shamanic Studies, Smith introduced drumming into his work as a licensed clinical social worker in a substance abuse rehabilitation program. He has taught drumming and shamanic techniques as an alternative and complementary therapy for addiction at wellness events, professional trainings, large conferences, and weekend retreats.

Activities. Incorporation of core shamanic principles within managed care has created tensions, but Smith says that he has found an uneasy acceptance among the staff of the psychiatric settings through bridging activities such as yoga, breath work, music therapy, mask making, and addressing issues of the inner child and family-of-origin dynamics.^{13,15-19,30,31} Smith uses the shamanic approach for clients who repeatedly relapse. For clients who know what they need to do for recovery but cannot achieve sobriety, the concepts of soul retrieval, depossession (e.g. exorcism), extraction, power animal, and spirit retrieval may be applicable.²⁰ Smith focuses on "rebirthing," a kind of "spiritual surgery" akin to what Alcoholics Anonymous calls a spiritual awakening. This experience causes the addicted person to undergo a profound change in his or her response to life, says Smith.

Music and dance activities are used for both cognitive restructuring and physical exercise. Smith finds that yoga activities produce mental-physical bridging and the integration clients need to detoxify their bodies. He says breath work produces mental-physical integration and takes clients into altered states of consciousness. Mask making and rituals help solidify powers accessed in the nonordinary reality experiences; mask wearing incorporates helping spirits and the changes in personality necessary to create a new sense of self as a recovering person, says Smith. Shamanic techniques are introduced and reinforced through rituals with symbols of flight (birds, feathers) that help prompt visionary experiences reflecting common themes in recovery—symbolically flying from the hells of addiction and soaring through the sky. The technique to which Smith attributes the greatest success in working with chronic recidivists is "shapeshifting," which borrows from techniques of Perkins.³² Rituals orient clients and help provide a sense of calm, a sense of inner balance, and connection with a greater power. Stone (rock) divination procedures are used: clients look for answers to their questions through what they see in a rock. This process allows them to connect with the power of the universe, to externalize their own knowledge, and to internalize their answers; it also enhances their sense of empowerment and responsibility, says Smith.

Effects. Smith says that drumming and shamanic activities address addiction through reintegrating aspects of the self in rituals for soul retrieval and power animal retrieval. Through these activities, people gain access to traumatic assaults that have driven their abusive relations with drugs. Spirit world journeys provide direct access to these early experiences in a context that reduces barriers to awareness. Ancestor spirits or other helpful spirit guides and allies encountered in rituals and journeys facilitate the resolution of trauma. These experiences are healing, bringing the restorative powers of nature to clinical settings. Shamanic activities bring people efficiently and directly into immediate encounters with spiritual forces, focusing the client on the whole body and integrating healing at physical and spiritual levels.

Pilot Program at the Phoenix Shanti Group

Before conducting the research reported in the previous sections, I presented a shamanic drumming circle based on the principles of core shamanism^{28,33,34} to clients of the Phoenix Shanti Group as part of MPH internship activities. These clients were HIV-positive, and most were addicted to crack cocaine, methamphetamine, or opiates. These drumming activities were not part of regular program activities but were offered as a voluntary supplemental activity. The shamanic drumming activities were explained to the group in terms of their potential for inducing relaxation and natural altered states of consciousness that substitute for drug-induced highs. Suggestions for successful participation from the clinical director that were conveyed to the group included explaining the need for consistent attendance to achieve positive results. Additional recommendations included journaling of the session experiences to integrate them and chart the client's development.

A few clients attended drumming groups held immediately after mandatory group sessions, but most declined. None of the clients currently in the intensive treatment program at Shanti attended the regular weekend evening sessions offered across more than a year, although some of Shanti's prior clients (graduates of the program) did attend. This lack of voluntary participation in supplement-

tal activities suggests that successful introduction of drumming activities in rehabilitation requires that they be incorporated into the mainstream of the program. Clients' interest will likely be strongly affected by the attitudes expressed by regular counselors.

On-Line Discussions: drumminggroups@yahoo.com

Inquiries posted to an on-line drumming Internet mailing list provided additional important information about the use of drumming in rehabilitation and on the relationships between community drumming activities and drug use. One respondent said, "I have found that music, especially drumming, creates that same kind of bonding and interdependent unity without putting chemicals and smoke in my body. I really like being high on community drumming and want to share that." Another noted, "There is no doubt in my mind that the drum circle and other musical initiatives are having a positive effect on the whole community. Drumming prevents children from getting into the drug culture, creating something positive and creative that children can identify with at an early age to build up their confidence and self-esteem. A sense of belonging to a community is the best protection there is. Drum circles give them tools to create a sense of community purpose and groundedness in their lives."

In contrast, others commented on widespread drug use in drumming circles. Many drum circles accept (or fail to challenge and exclude) the use of drugs before, during, and after drumming sessions. This tolerance makes existing community drumming circles an uncertain source of support for maintaining sobriety. Successful use of drumming to guide and maintain sobriety probably requires the creation of programs specifically designed for the recovering community.

Physiological Effects of Drumming

Drumming produces a variety of physical and psychological effects. A recent popular book on drumming reviews research suggesting the positive effects of drumming in the treatment of a wide range of physical conditions, mental illness, and personality disorders.⁵ Drumming enhances hypnotic susceptibility, increases relaxation, and induces shamanic experiences.³⁵ Drumming and other

rhythmic auditory stimulation impose a driving pattern on the brain, particularly in the theta and alpha ranges.^{9-12,33,35} The enhanced θ - and α -wave entrainment produced by drumming typifies general physiological effects of altered states of consciousness^{33,35,36} and meditation.¹⁹ ASCs involve a mode of consciousness,³³ a normal brain response reflected in synchronized brain-wave patterns in the theta (3–6 cycles per second [cps]) and alpha (6–8 cps) ranges. This response is produced by activation of the limbic brain's serotonergic circuits to the lower brain. These slow-wave discharges produce strongly coherent brain-wave patterns that synchronize the frontal areas of the brain with ascending discharges, integrating nonverbal information from lower brain structures into the frontal cortex and producing insight.³³

Physiological changes associated with ASC facilitate healing and psychological and physiological well-being through physiological relaxation; facilitating self-regulation of physiological processes; reducing tension, anxiety, and phobic reactions; manipulating psychosomatic effects; accessing unconscious information in visual symbolism and analogical representations; inducing interhemispheric fusion and synchronization; and facilitating cognitive–emotional integration and social bonding and affiliation.³³

CONCLUSIONS

Drumming produces physiological, psychological, and social stimulation that enhances recovery processes. Drumming induces relaxation and produces natural pleasurable experiences, enhanced awareness of preconscious dynamics, a release of emotional trauma, and reintegration of self. Drumming addresses self-centeredness, isolation, and alienation, creating a sense of connectedness with self and others. Drumming provides a secular approach to accessing a higher power and applying spiritual perspectives to the psychological and emotional dynamics of addiction. Drumming circles have important roles as complementary addiction therapy, particularly for repeated relapse and when other counseling modalities have failed.

Drumming circles and other shamanic altered state of consciousness activities can ad-

dress multiple needs of addicted populations. These include⁸

- Physiological dynamics, inducing the relaxation response and restoring balance in the opioid and serotonergic neurotransmitter systems
- Psychodynamic needs for self-awareness and insight, emotional healing, and psychological integration
- Spiritual needs for contact with a higher power and spiritual experiences
- Social needs for connectedness with others and interpersonal support

Drumming may reduce addiction by providing natural alterations of consciousness.^{8,18-19} Shamanic drumming directly supports the introduction of spiritual factors found significant in recovery from substance abuse.^{21,37-39} Because recidivism is widespread, treatment success may mirror the natural recovery rate,⁴⁰ and current methods have little success,⁴¹ the use of drumming and other altered states of consciousness as complementary therapies with considerable promise is justified.

Drumming groups may also aid recovery by enhancing health through their effects on social support and social networks. The health implications of social support have been increasingly recognized.⁴²⁻⁴³ These forms of support are of considerable significance for well-being in an increasingly atomized society in which traditional family- and community-based systems of support have become seriously eroded. Thus, deliberate enhancement of social support is a potentially significant contributor to physical, emotional, and mental health. The social support available from community drumming circles is one such source. These social effects are not merely palliative but constitute mechanisms for producing psychobiological effects. Central to these effects is an amelioration of the stress response, a significant factor in drug use and recidivism.¹⁹

The use of drumming as part of substance abuse rehabilitation is far more widespread than the few cases reviewed here might suggest. Incorporation of drumming within Native American treatment programs has been repeatedly mentioned to me. A recent book reviewing the scope of research on the effects

of drumming reports on programs in New York and California in which drumming is incorporated into addictions treatment.⁵ The Foundation for Shamanic Studies has several decades of experience in applying shamanic altered state of consciousness in both training and therapy.²⁰ They have identified a variety of contexts in which shamanic approaches may be useful in reducing substance abuse.

The physiological effects of drumming and the positive effects of group drumming experiences on recovery that are attested to by counselors who have incorporated these activities into substance abuse rehabilitation programs provide a compelling rationale for the utilization and evaluation of this resource. Winkelman⁸ suggests a variety of ways in which the shamanic paradigm and altered states of consciousness can be applied to substance abuse rehabilitation. ■

About the Author

Michael Winkelman is with the Department of Anthropology, Arizona State University, Tempe.

Requests for reprints should be sent to Michael Winkelman, PhD, MPH, Department of Anthropology, Box 872402, Arizona State University, Tempe, AZ 85287-2402 (e-mail: michael.winkelman@asu.edu).

This article was accepted May 20, 2002.

Acknowledgments

The research was supported by a National Institute of Drug Abuse postdoctoral fellowship awarded to the investigator through the Arizona Center for Ethnographic Research and Training.

I thank the individuals who made this research possible, particularly Scott Reuter and the Phoenix Shanti Group; Mark Seaman of Earth Rhythms, West Reading, Pa; and Ed Mikenas of Urban Wilde, Lynchburg, Va.

Human Participant Protection

Research was approved by the institutional review board of the Arizona State University and by the Shanti internal review board.

References

- Eshowsky M. Practicing shamanism in a community health center. *Shamanism*. 1993;5(4):4–9.
- Eshowsky M. Behind these walls where spirit dwells. *Shamanism*. 1999;12(1):9–15.
- Gallagher M. Beating addiction: addicts learn the rhythm of recovery. *Professional Counselor*. October 1998;31–32.
- Friedman R. Drumming for health. *Percussive Notes*. April 2001;55–57.
- Friedman R. *The Healing Power of the Drum*. Reno, Nev: White Cliffs Media; 2000.
- Mikenas, ed. Drums, not drugs. *Percussive Notes*. April 1999;62–63.
- Smith D. Shamanism and addiction: the mask of therapeutic containment midwife to mental health. *Spirit Talk*. 2000;11:8–12.
- Winkelman M. Alternative and traditional medicine approaches for substance abuse programs: a shamanic perspective. *Int J Drug Policy*. 2001;12:337–351.
- Neher A. Auditory driving observed with scalp electrodes in normal subjects. *Electroencephalogr Clin Neurophysiol*. 1961;13:449–451.
- Neher A. A physiological explanation of unusual behavior in ceremonies involving drums. *Hum Biol*. 1962;34:151–160.
- Wright P. Rhythmic drumming in contemporary shamanism and its relationship to auditory driving and risk of seizure precipitation in epileptics. *Anthropol Consciousness*. 1991;2(3–4):7–14.
- Maxfield M. *Effects of Rhythmic Drumming on EEG and Subjective Experience* [doctoral dissertation]. San Francisco Institute of Transpersonal Psychology; 1990. Cited in: Wright P. Rhythmic drumming in contemporary shamanism and its relationship to auditory driving and risk of seizure precipitation in epileptics. *Anthropol Consciousness*. 1991;2(3–4):7–14.
- Maurer R, Woodside L, Pekala R. Phenomenological experience in response to monotonous drumming and hypnotizability. *Am J Clin Hypn*. 1997;40:2,131–114.
- McPeake JD, Kennedy BP, Gordon SM. Altered states of consciousness therapy—a missing component in alcohol and drug rehabilitation treatment. *J Subst Abuse Treat*. 1991;8:75–82.
- Alexander C, Robinson P, Rainforth M. Treating and preventing alcohol, nicotine, and drug abuse through transcendental meditation: a review and statistical meta-analysis. *Alcohol Treat Q*. 1994;11(1/2):13–87. Reprinted in: O'Connell D, Alexander C, eds. *Self-Recovery: Treating Addictions Using Transcendental Meditation and Maharishi Ayur-Veda*. New York, NY: Haworth Press; 1994. 13–87.
- Gelderloos P, Walton K, Orme-Johnson D, Alexander C. Effectiveness of the transcendental meditation program in preventing and treating substance misuse: a review. *Int J Addict*. 1991;26:293–325.
- O'Connell D. The use of transcendental meditation in relapse prevention counseling. *Alcohol Treat Q*. 1991;8(1):53–69.
- O'Connell D, Alexander C, eds. *Self-Recovery: Treating Addictions Using Transcendental Meditation and Maharishi Ayur-Veda*. New York, NY: Haworth Press; 1994.
- Walton K, Levitsky D. A neuroendocrine mechanism for the reduction of drug use and addictions by transcendental meditation. In: O'Connell D, Alexander C, eds. *Self-Recovery: Treating Addictions Using Transcendental Meditation and Maharishi Ayur-Veda*. New York, NY: Haworth Press; 1994:89–117.
- Harner M, Harner S. Core practices in the shamanic treatment of illness. *Shamanism*. 2000;13(1–2):19–30.
- Rioux D. Shamanic healing techniques: toward holistic addiction counseling. *Alcohol Treat Q*. 1996;14(1):59–69.
- Heggenhougen K. *Reaching New Highs: Alternative Therapies for Drug Addicts*. Northvale, NJ: Jason Aronson Inc; 1997.
- Jilek WG. Traditional healing in the prevention and treatment of alcohol and drug abuse. *Transcultural Psychiatr Res Rev*. 1994;31:219–258.
- Singer M, Borrego M. Indigenous treatment for alcoholism: the case for Puerto Rican spiritism. *Med Anthropol*. 1984;8:246–272.
- Mikenas E. *Drumming on the Edge of Leadership: Hand Drumming and Leadership Skills for the New Millennium*. Lynchburg, Va: Urban Wilde; 2000.
- Eshowsky M. Community shamanism: youth, violence, and healing. *Shamanism*. 1998;1(1):3–9.
- Eshowsky M. Shamanism and madness. *Community Shamanism*. Winter 1999:14–28.
- Harner M. *The Way of the Shaman*. 3rd ed. San Francisco, Calif: Harper & Row Inc; 1990.
- Ingerman S. *Soul Retrieval: Mending the Fragmented Self*. San Francisco, Calif: HarperSanFrancisco; 1991.
- Johnson L. Creative therapies in the treatment of addictions: the art of transforming shame. *Arts Psychother*. 1990;17:299–308.
- Soshensky R. Music therapy and addiction. *Music Ther Perspect*. 2001;19:45–52.
- Perkins J. *Shapeshifting*. Rochester, Vt: Destiny Books; 1997.
- Winkelman M. *Shamanism: The Neural Ecology of Consciousness and Healing*. Westport, Conn: Bergin & Garvey; 2000.
- World wide shamanic web. The Foundation for Shamanic Studies Web page. Available at: www.shamanism.org. Accessed November 12, 2002.
- Mandell A. Toward a psychobiology of transcendence: god in the brain. In: Davidson D, Davidson R, eds. *The Psychobiology of Consciousness*. New York, NY: Plenum Press; 1980:379–464.
- Winkelman M. Altered states of consciousness and religious behavior. In: Glazier S, ed. *Anthropology of Religion: A Handbook of Method and Theory*. Westport, Conn: Greenwood Press; 1997:393–428.
- Booth J, Martin JE. Spiritual and religious factors in substance use, dependence, and recovery. In: Koenig HG, ed. *Handbook of Religion and Mental Health*. San Diego, Calif: Academic Press; 1998:175–200.
- Green L, Fullilove M, Fullilove R. Stories of spiritual awakening the nature of spirituality in recovery. *J Subst Abuse Treat*. 1998;15(4):325–331.
- Miller WR. Researching the spiritual dimensions of alcohol and other drug problems. *Addiction*. 1998;93(7):979–990.
- Sobell L, Ellingstad T, Sobell M. Natural recovery from alcohol and drug problems: methodological review of the research and suggestions for future directions. *Addiction*. 2000;95(5):749–764.
- Amaro H. An expensive policy: the impact of inadequate funding for substance abuse treatment [editorial]. *Am J Public Health*. 1999;89(5):657–659.
- Pilisuk M, Parks S. *The Healing Web: Social Networks and Human Survival*. Hanover, NH: University Press of New England; 1986.
- Berkman L, Glass T, Brissette I, Seeman T. From social integration to social health: Durkheim in the new millennium. *Soc Sci Med*. 2000;51(6):843–857.

Copyright of American Journal of Public Health is the property of American Public Health Association and its content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use.