

Sweat Therapy Theory, Practice, and Efficacy

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The purpose of this article is to examine the potential application of sweat rituals to group counseling, adventure therapy, and other forms of group work by describing a theoretical model for how sweat rituals work and presenting the results of a randomized comparative outcome study on the efficacy of sweat therapy. The theoretical model proposes five factors that reciprocally interact to produce the positive effects of sweat rituals: cultural priming, exercise, self-regulation, metaphorical and contextual elements, and interpersonal factors. To investigate efficacy, 85 university students were randomly assigned to either a sweat condition (group counseling in a sauna), or a non-sweat condition (group counseling in a standard office setting) for six weekly sessions. Measures included the Critical Incidents Questionnaire, Therapeutic Factor Inventory, Exercise Induced Feeling Inventory, and the Subjective Exercise Experiences Scale. Results indicated that participants in the sweat condition perceived a greater availability of therapeutic factors, especially for group cohesion and interpersonal learning, and had better attendance, less attrition, and reported sessions to be more useful. Implications for future research and practice are discussed.

Keywords: Sweat Therapy, Group Counseling, Indigenous Sweat Practices

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Sweat therapy is the integration of a sweat practice with therapeutic group work. A sweat practice is a ritual activity in which intense heat exposure is utilized to promote well-being, typically within a group. Examples include the American Indian sweat lodge, the Finnish sauna, the Russian banya, and the Islamic hammam. Sweat practices have strong potential for use within group counseling and adventure therapy programming (Colmant, Eason, Winterowd, Jacobs, & Cashel, 2005; Colmant & Merta, 2000; McGowan, 1991; Quinn & Smith, 1992). Sweating involves physical and mental exertion and can be used for therapeutic purposes, which is consistent with the key concepts and characteristics of adventure therapy (Gillis & Thomsen, 1996). Despite the strong potentials for the use of sweat practices in group counseling and adventure therapy, theory and research within these fields have been mostly absent.

The purpose of this study was to examine sweat therapy in terms of its potential transferability to adventure therapy, group counseling, and other treatment programs. To accomplish this purpose, prior research is presented on the physiological, spiritual, and psychological effects of sweating. The mechanism of how sweat practices operate to produce therapeutic effects is explored in a theoretical model. Lastly, the authors conducted a randomized comparative outcome study to evaluate the efficacy of sweat therapy.

Review of Literature

Physiological, Psychological, and Spiritual Effects of Sweat Practices

Hannuksela and Ellahham (2001) completed a meta-analysis using 271 studies completed in the previous 40 years to examine the physiological effects of sauna bathing. The health effects and risks of sauna bathing were updated five years later by Kukkonen-Harjula and Kauppinen (2006). Sweating produces prominent acute physiological effects that have many health benefits and few risks. The acute physiological effects include an increase in skin and rectal temperature, sweating, skin blood flow, heart rate, cardiac output, and systolic blood pressure. Sweating practices activate the sympathetic nervous system, the rennin-angiotensin-aldosterone system, and the hypothalamus-pituitary-adrenal hormonal axis. Sauna is known to be beneficial in the prevention and treatment of lung, heart, and skin problems. Additionally, research has shown that sweating promotes deeper sleep, pain relief, muscle relaxation, and has been helpful in treating insomnia, arthritis, and as an adjunct to

cancer treatment (Berger & Rounds, 1998; Hannuksela & Ellahham; Kukkonen-Harjula & Kauppinen).

The longest standing forms of sweat practices have each incorporated sweating as a form of spiritual expression, frequently involving preparatory ritual or prayer and used for rites of passage including birth, puberty, weddings, and death (Aaland, 1988; Hibbard, 2005; Leimu, 2002). It may be that the spiritual benefits of sweat practices are due to symbolic representation of spiritual powers, the activation of an altered state of consciousness, the promotion of introspection, and the dynamics of close interpersonal interaction (Aaland; Hibbard; Kerr, 2004; Law, 1978; Waegemakers-Schiff, 2005). Kerr described these factors as key aspects of spiritual intelligence—the adaptive use of spirituality to facilitate everyday problem solving and goal attainment.

Compared to the research on the physiological effects of sweat practices, little research has been conducted on the psychological effects (Colmant, 2005; Kauppinen & Vuori, 1986). However, there have been some interesting findings that have important implications for therapeutic and preventive mental health purposes. These findings include that sweating promotes positive effects on sleep, mood, and affect, and on hyperactivity (Colmant, 2005). Positive mood, especially relaxation and stress relief, is the most frequently cited psychological effect of sweating (Colmant & Merta, 2000; Frankva & Franek, 1990; Gutierrez, Vazquez, & Boakes, 2002; Kuusinen & Markuu, 1972; Sudakov, Sinitchkin, & Khasanov, 1988). In one of the larger studies ($N = 100$), Frankva and Franek found that sweating resulted in improvements in mental satisfaction, energy, relaxation, frustration, and anxiety.

Beyond establishing baseline psychological effects of sweat practices, some investigators are beginning to investigate the use of sweat practices with clinical populations. Guitierrez, Vasquez, and Boakes (2002) examined the effects of sweating on anorexia and reported positive effects on hyperactivity, depression, and stress levels. In the past 10 years innovative experiments investigating therapeutic uses of sweat practices have been performed in Japan. Masuda, Nakazato, Kihara, Minagoe, & Tei (2005a) examined the effects of sauna with mildly depressed inpatients with general fatigue, appetite loss, and somatic and mental complaints. In another study, researchers found that attending a Jim Jil Bang, also known as a charcoal kiln sauna, reduced both state and trait anxiety (Shinya, Yosikazu, Eiji, Masahiro, Yosuke, Tatsuya, Chiyoe, Katsutaro, & Toshiyuki, 2008).

Sweat Therapy Theory

In this section the authors examine the complex processes underlying the benefits of sweat practices (see the Sweat Therapy Theoretical Model, Figure 1). This theoretical model espouses five factors to account

for how sweating operates: cultural priming; exercise; self-regulation; metaphorical and contextual elements; and interpersonal factors. The authors hypothesize that these factors will interact in a reciprocal manner to produce positive effects upon the body, mind, and spirit.

Cultural priming. The authors propose that before ever entering a sauna or sweat lodge, many participants already have beliefs and expectations about the experience. Sweat practices have been present throughout the world for thousands of years and are central to community life among many cultural groups (Aaland, 1978; Colmant et al., 2005; Wilford, 2001). The oldest sweat ritual structure was recently found in Scotland and dates between 1500 BC and 1200 BC (Urquhart, 2008). Different forms of indigenous sweat practices have been found across many geographically and culturally distinct regions of the world: American Indian Sweat Lodge; Finnish Sauna; Greek Sweat Bath; Irish Sweat House; Japanese Mushi-Buro and Korean Jim Jil Bang Jewish Shvitz; Islamic Hammam; Mayan Sweat House; Mexican and Central American Temescal and Inipi; Roman Balnea and Thermae; Russian Bania; Scythian Sweatbath, and South African Sifutu (Eason & Colmant, 2006a). While there are variations in the different forms of sweat rituals, the common purposes include promoting physical and mental health, spirituality, and socialization (Aaland, 1988; Colmant, 2005; Finnish Sauna Society, 2004). Because sweat rituals have existed for thousands of years throughout the world, the authors suggest that people will be attracted to it and are primed to receive benefits from it that are consistent with their cultural background. The authors hold that the more prominent the practice exists in the individual's background, the stronger the priming.

Exercise. The effects of exercise on mental health include reduction of anxiety, depression, and stress and improving body image, self-esteem, and sense of well-being (Berger, 1996; Raglin, 1997; Shephard, 1996). From the authors' clinical experiences, sweating induces commonly observed effects of exercise on mental health (Colmant et al., 2005). Sweat practices are similar to exercise as they cause the stimulation of the sympathetic nervous system, activation of the hypothalamus-pituitary-adrenal hormonal axis, and an increase in noradrenaline (Kukkonen-Harjula & Kauppinen, 2006; Vescovi et al., 1992). The sweating experience appears to produce profound physiological changes and perceptions of physical symptoms (Colmant et al., 2005; Hannuksela & Ellahham, 2001).

A growing body of research has converged on a relationship between exercise, neurogenesis, and cognitive performance. Cotman and Berchtold (2002) presented neuroscientific evidence that exercise alone increases and maintains brain plasticity, especially in the hippocampal region, which is critical to learning and memory. In a critical review of studies that assessed the effects of acute bouts of physical activity on

adults' cognitive performance, Tomprowski (2003) summarized his findings, "The results of the empirical studies now available, when taken as a whole, suggest that acute bouts of exercise selectively facilitate multiple cognitive processes; exercise can, under certain conditions, enhance response speed and response accuracy, and can facilitate cognitive processes that are central to problem-solving and goal-oriented action" (p. 317). Aerobic steady-state exercise performed at moderate levels facilitates improvements in participants' cognitive performance during and following exercise.

While sweat practices are highly similar to other forms of exercise, there are a few important differences. Unlike typical forms of exercise, sweat practices cause an increase in B-endorphins and do not increase the concentration of adrenaline in the blood stream (Gutierrez, personal communication, August 5, 2004; Kukkonen-Harjula et al., 1989). Sweat practices also contrast with the majority of exercise activities because they do not require muscle tension, the movement of large muscle groups, and attentional capacities to be focused on muscle coordination. Sweat practices are a unique form of exercise as they cause muscle relaxation and allow focal attention to be placed on another activity, such as group content and process.

Self-regulation. Self-regulation is the activity of setting, working toward and achieving goals related to one's personal desires. Sweat rituals seem to promote self-regulation by helping one gain insight through introspection, mark a commitment to personal goals, improve frustration tolerance and maintain balance and harmony. The authors propose that participants in sweat practices respond to the intense heat exposure using a meditative attentiveness characterized by a dynamic balance between alertness and relaxation, which promotes insight and adaptive coping (Eason & Colmant, 2006b). Walsh and Shapiro (2006) defined meditation as the "family of self-regulation practices that focus on training attention and awareness in order to bring mental processes under greater voluntary control and thereby foster general mental well-being and development and/or specific capacities such as calm, clarity, and concentration" (pp. 3–4). The authors have previously described the heat during sweat therapy as a dynamic force (Colmant et al., 2005).

At first, the heat is soothing and as the body begins to respond to the heat through sweating, the body's muscles experience a release of tension, promoting a deeper state of relaxation. However, rather than slipping into a state of relaxation resembling rest or sleep, further heat exposure keeps the mind and body active. As the heat becomes more intense, the participant is challenged to keep the mind relaxed, requiring meditative attentiveness. As the experience moves from relaxation to endurance, it seems that participants are faced with a choice. One can either allow negative thoughts and feelings related to the heat to become the focus of their

experience or one can focus on thoughts and feelings that help one to adapt, cope, and thrive when faced with adversity. Experiencing the heat was commonly identified by group members in previous sweat therapy investigations as promoting a feeling of accomplishment (Colmant & Merta, 2000; Colmant et al., 2005). This meditative attentiveness and sense of positive adaptation seem to encourage problem solving and further build on the state of cognitive arousal produced by sweating as a form of exercise.

Metaphorical contextual elements. Sweat practices are more than just intense exposure to heat. Intense heat exposure unchecked can result in heat disorders such as heat stroke, heat exhaustion, and heat collapse. Sweat practices developed over centuries through human intelligence, creativity, and wisdom use intense heat exposure to promote physical and

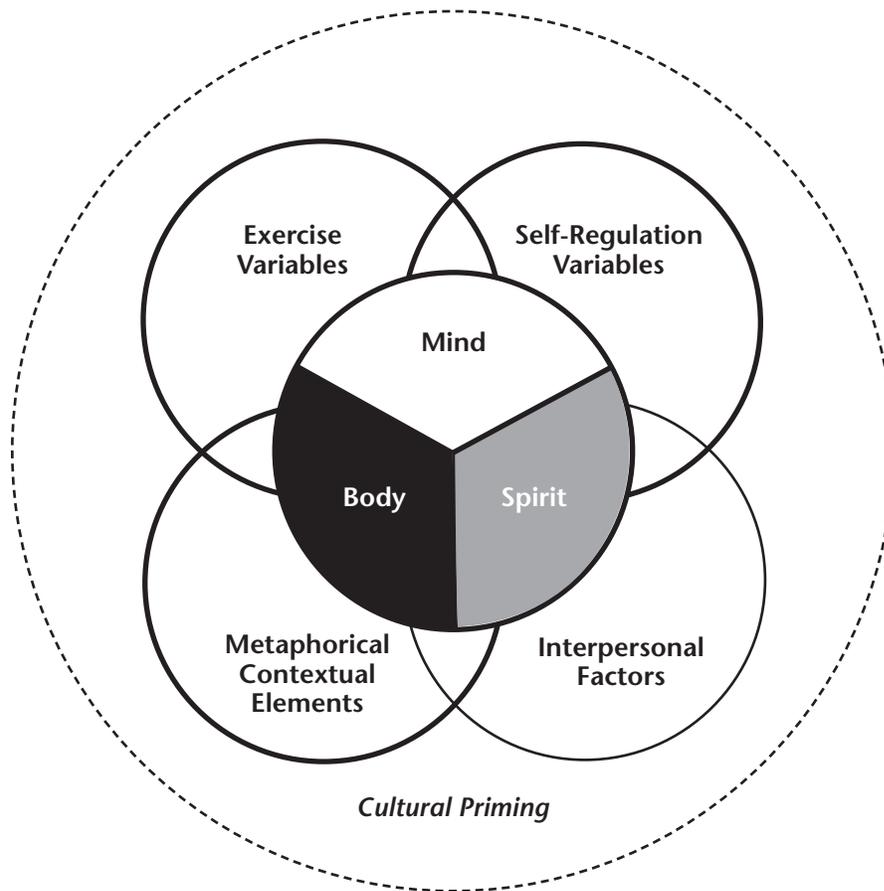


Figure 1. Sweat therapy theoretical model.

mental health, spirituality, and socialization (Colmant & Eason, 2006). Many of the contextual elements common to sweat practices include taking breaks, dimmed lighting, wearing sparse or no clothing, drinking large quantities of water, and the symbolism of fire. The authors hold that these contextual elements are important to facilitating biopsychosocial benefits from sweat practices and promote metaphorical meaning complementary to the other factors in the Sweat Therapy Theoretical Model.

Sweat practices are replete with archetypal images and naturally lend to a range of approaches for metaphorical processing. Bachelard (1938) described the symbolism of fire to be understood across languages and cultures as the basis of heat and light, of warmth and illumination. Whether describing the American Indian sweat lodge or the Finnish sauna, several writers have described the experience of sweat practices as being comforting and “womb-like” (Bucko, 1998; Sorri, 1988). It seems that a safe therapeutic atmosphere is represented by the gentle womb-like warmth of the typically small enclosures used for sweat practices, thus encouraging relaxation and openness versus anxiety and defensiveness. Whereas many social norms encourage us to keep distance from one another, especially when sweating, a sauna or sweat lodge seems to symbolize closeness and promote genuineness. Sitting close together symbolically promotes a safe and open therapeutic atmosphere that may be considered the foundation of effective group therapy.

In addition to safety and openness, change is critical to any therapeutic endeavor. We hold that the intense physical experience of sweating pushes participants to become more introspective and appreciate personal, symbolic reactions to the heat. Thoughts of mind-body purification seem to occur as a natural consequence of intense sweating; toxins are sweated out through the pores of the skin, bringing clarity to the mind and homeostasis to the body (Eason & Colmant, 2006b). The physical experience of submitting oneself to the sweating process often transfers to experiencing the release of anger, frustration, hurt, or anxiety (Law 1978; Walkingstick-Garret & Osborne, 1995). As time passes while sweating, the heat has been described as taking on “stern, masculine and paternal components” (Sorri, 1988, p. 238). Intense heat can represent life’s greatest challenges and enduring the heat can represent a symbol of human will and resiliency. Sweat therapy seems to offer unique opportunities for metaphorical processing, described as *edgework* by Nadler (1995), as well as debriefing. In the authors’ experience, sweat lodge leaders routinely draw comparisons between enduring the heat of the sweat lodge and coping with life’s frustrations. While addressing life’s challenges, taking breaks and drinking water can become symbols of self-care and rejuvenation. The shared experience of sweating and enduring the heat seems to promote group members’ common humanness and a sense of existential togetherness.

Interpersonal factors. Sweating and interpersonal interaction seem to be natural catalysts for one another. Close interpersonal interaction was a common theme among multiple ethnographies investigating the cultural importance of sweat rituals (Colmant, Eason, Winterowd, Jacobs, & Cashel, 2005). For example, Staats (1994) described the hammam as an important social outlet and a “cultural common denominator among Moroccan women” that is used as a place to exchange information and “where women relax completely and reveal much about themselves” (p. 9). Poulos (1999) emphasized the importance of the shvitz among Jewish men for promoting interpersonal intimacy. Leimu (2002) emphasized the importance of the sauna to community bonding in Finland. Many writers have drawn similarities between modern group counseling and the Native American sweat lodge ceremony (Colmant & Merta, 1999; Lake, 1987; Mails, 1991; Quinn & Smith, 1992; Ross & Ross, 1992; Walkingstick-Garrett & Osborne, 1995).

As previously stated, exercise, self-regulation, metaphorical contextual elements, and interpersonal factors in the Sweat Therapy Theoretical Model interact in a reciprocal manner. When focusing on interpersonal factors, the authors hold that exercise, metaphor, and self-regulation seem to intensify group dynamics. At the same time, group interaction provides an opportunity for participants to process the experience. From our clinical experience with sweat therapy, group members seem to perceive the sweating experience as a moderate challenge to which they respond by seeking social support and engaging in thinking that promotes self-esteem, such as “Although I’m uncomfortably hot, I am staying in the sauna because doing so will make me better in some way.” The sweat group condition seems to prompt altruism that quickly translates into cohesion. The authors have observed group members working together as a unit to get through the challenge by offering towels and water to one another and showing frequent concern for one another’s ability to handle the heat. These seemingly simple expressions of sharing and concern for one another become part of the group norms and transcend into people showing greater care and concern for one another.

Methods

In order to evaluate the efficacy of sweat therapy, the authors conducted a study based on research regarding the physiological, psychological, and spiritual effects of sweat practices, applied principles of group counseling, and implemented a randomized comparative outcome design. The current study replicates a pilot study ($N = 24$) that indicated that group sweating appeared to accelerate and intensify group counseling processes (Colmant, Eason, Winterowd, Jacobs, & Cashel, 2005). The current study replicates the pilot study with a larger sample ($N = 85$), better control, and a more effective measurement strategy.

Participants and Procedure

The sample for this study was college student volunteers completing undergraduate or graduate courses at a major southwestern university in the United States. Participants included 51 women and 34 men with an average age of 21 ($SD = 2.33$). Participants were told in the pre-group screening that the purpose of a six-week group counseling experience was to facilitate personal and interpersonal growth and to help participants become more effective in dealing with daily stressors. Participants were asked to commit to attending a six-session group counseling experience with the understanding that they were free to withdraw at any time.

Treatment Conditions

Participants were randomly assigned to sweat (S) or non-sweat (NS) group counseling conditions. In both conditions there were six groups consisting of between six and eight participants. Due to attrition, the sweat condition group included 46 participants (one dropout) compared to 39 participants (nine dropouts) in the non-sweat condition. The sweat groups were held at local community centers that included sauna facilities, and the non-sweat groups were conducted at a university counseling clinic.

Group counselors consisted of three female and three male doctoral students with each counselor conducting groups in both conditions. In addition to prior clinical experience and coursework in group counseling and psychotherapy, each therapist attended four training sessions that reviewed the Sweat Therapy Treatment Manual (Winterowd, Colmant, & Eason, 2005) and Yalom's interpersonal theory of group psychotherapy (Yalom, 1995). Additionally, each counselor received individual, weekly supervision from one of two licensed psychologists involved in the study.

The basic structure of sweat therapy involves spending four, 10-minute intervals in a sauna interspersed by five-minute breaks. Special attention was paid to setting group norms that allowed for continuation of group process through the breaks. The temperature of the sauna was set to 175° F and during breaks the session continued in an adjacent room. Over time, the group was encouraged to gradually build up to completing four, 15-minute intervals in the sauna. The total amount of session time in each group was matched across conditions.

Measures

Critical incidents questionnaire. To measure availability of therapeutic factors and therapeutic utility, the Critical Incidents Questionnaire (CIQ) (Bloch, Reibstein, Crouch, Holroyd, & Themen, 1979) was administered at the end of each session. The CIQ involves having participants respond to the following question: "What event (incident, interaction) from this group session was most helpful to you? Describe what happened, the feelings you experienced, and how the event was helpful to you." The CIQ included a

modification developed by Merta (Colmant & Merta, 2000) to measure group members' perception of how much they benefited from the session. This modification involves having participants rate the following statement, "I found this group very useful" on a 5-point Likert scale. Using the system suggested by Bloch et al. (1979), two researchers blind to condition and who were experienced with the rating system assessed each participant response according to the 11 therapeutic factors (Yalom, 1995).

Therapeutic Factors Inventory. To measure the presence and potency of therapeutic factors, the Therapeutic Factors Inventory (TFI) (Lese & MacNair-Semands, 2000) was administered as a post-test. The TFI is a 99-item, empirically based measure designed to determine the presence or absence of therapeutic factors in a particular group.

Exercise-Induced Feeling Inventory. There were five administrations of the Exercise-Induced Feeling Inventory (EFI) (Gauvin & Rejeski, 1993) at the fourth session: pre, during, post, 2-hour post, next-day post. The EFI is a 12-item adjective scale designed to measure four feeling states that are especially sensitive to the stimulus properties of exercise: positive engagement, revitalization, physical exhaustion, and tranquility.

Subjective Exercise Experiences Scale. The Subjective Exercise Experiences Scale (SEES) (McAuley & Courneya, 1994) was developed to measure exercise-related affect. There were five administrations of the SEES at the fourth session: pre, during, post, 2-hour post, next-day post. The SEES is a 12-item adjective scale requiring the subject to rate current feelings along a 7-point intensity scale. The instrument provides three subscale scores that are sensitive to the stimulus properties of exercise: positive well-being, psychological distress, and fatigue.

Results

Group Therapeutic Factors

A MANOVA (sweat/non-sweat condition x 11 TFI therapeutic factors) and chi square analysis (sweat/non-sweat condition x 11 CIQ therapeutic factors) was conducted to analyze the presence of therapeutic factors. Of the 366 CIQ responses, 82 could not be classified for therapeutic factors. Analysis of the remaining 284 responses revealed that there was 67% more therapeutic factors identified for the sweat groups than the non-sweat groups (198 vs. 87 respectively, $\chi^2(13) = 7.90, p = .005$). The largest differences between the sweat and non-sweat groups were for Cohesion/Acceptance [S = 88 vs. NS = 27, $\chi^2(13) = 7.40, p = .006$]; Interpersonal Learning [S = 40, NS = 14, $\chi^2(13) = 7.70, p = .006$]; Universality [S = 26, NS = 14, $\chi^2(13) = 2.2, p = .12$]; and Self-Disclosure [S = 18, NS = 12, $\chi^2(13) = .82, p = .37$]. Of the 57 TFI forms completed (S = 31, NS = 26), significant differences of 8.06, 7.92, 6.45, and 5.09 were found for altruism,

cohesion, interpersonal learning, and universality, respectively. There were no significant gender differences within or across conditions.

Feeling States

A MANOVA (sweat/non-sweat x seven feeling states) was conducted to analyze mean differences in feeling states from the EFI and SEES. At Time 2 midway through the session, positive engagement was significantly higher in the non-sweat condition ($F_{pe} = 4.09, p = .048$). At Time 4, two hours following the session, fatigue and exhaustion were significantly decreased, and revitalization was significantly increased in the sweat condition ($F_{fat} = 15.47, p = .000, F_{exh} = 21.35, p = .000; F_{rev} = 4.60, p = .037$). There were no other significant differences at any of the five time points.

Usefulness, Absenteeism, & Attrition

To analyze perceived usefulness of the sessions, weighted means of means were calculated across groups for the 366 CIQ responses. The Usefulness weighted mean of means for the sweat condition was 4.1 (i.e., Very Useful range of 4–5) while the Usefulness weighted mean of the means for the non-sweat condition was 3.1 (i.e., Moderately Useful range of 3–4). There was one dropout and an average of 1.2 (SD = 1.2) absences per person in the sweat condition while there were nine dropouts and an average of 2.0 (SD = 1.8) absences in the non-sweat condition.

Discussion

Areas for Future Research

The most salient areas for future research are the mechanisms underlying the benefits of sweat practices and their application to clinical populations. The authors have proposed a theoretical model of sweat rituals composed of five factors involved in the complex processes of sweat practices: cultural priming; exercise; self-regulation; metaphorical and contextual elements; and interpersonal factors. Further research is needed to evaluate the factors' independent and interactive effects. There are several clinical populations for which previous research and clinical practice suggest that symptoms and psychological functioning improve as a result of sweat practices. Sweat practices have frequently been used to treat substance abuse, especially among Native Americans (Abbott, 1998; Gossage et al., 2003). Therapeutic effects of sweat practices have also been found in youth with behavior disorders (Colmant & Merta, 2000) and criminal populations (Gossage et al., 2003, Sturman, 2005). Cross-cultural research includes research on the positive effects of sweat practices with populations targeting anger, depression, chronic pain, and lifestyle-related diseases (Biro, Masuda, Kihara, & Tei, 2003; Masuda et al., 2005a, Masuda et al., 2005b; Masuda et al., 2005c), as well as body image, bulimia and anorexia nervosa (Guitierrez, Vazquez, & Boakes, 2002;

Vahasoini, Vazquez, Birmingham, & Guterrez, 2004). Sweat practices have also been implemented in the treatment of post-traumatic stress disorder (Gerrity & Solomon, 1996; Wilson, 1988) and are currently being utilized within the New Mexico Veterans Administration Medical Center (Miller, 2007). Treating persons with post-traumatic stress disorder has become an especially high priority in the United States due to the recent increase of veterans with combat experience. The most pressing area of future research is application of the principles of sweat therapy to specific clinical populations rather than a more generalized group.

Considerations for Practitioners

Sweat therapy can be integrated into a wide range of educational and healthcare settings. Using sweat practices with group work requires careful preprogram planning with special considerations for screening and informed consent. With people who never have experienced a sweat practice, the authors have found it helpful to first walk people through the activity without the use of intense heat exposure. The Sweat Therapy Treatment Manual offers safety guidelines and instructions for combining sweating with group counseling (Winterowd et al., 2005).

There are many means of generating ambient heat, and in the study the authors chose to use a Finnish-style sauna. High-quality saunas have been manufactured on a large scale for international use for several generations. Advantages of using a sauna include that there is little set-up time needed and being able to sweat regardless of the weather. Options for obtaining access to a sauna for sweat therapy include utilizing an existing one in a local health club or university, purchasing a prefabricated or pre-cut sauna, or building your own. In our experience, health club owners typically find it advantageous to provide the exclusive use of their saunas for sweat therapy for a small per-person fee. We recently built a prototype of a sauna designed specifically for group work by incorporating circular seating for about \$10,000 U.S. (Colmant, 2007).

Conclusion

For thousands of years, sweat rituals have had a central place in geographically and culturally distinct societies for the purposes of improving well-being. Sweat therapy theory suggests that increasing the potency of any of the five theoretical factors will cause an improvement in benefits to mind, body, and/or spirit. The theory and efficacy of sweat therapy as a group work technique is supported by results from two empirical studies. Sweat therapy appears to be a useful medium for group counseling as it has consistently demonstrated enhanced cohesion and interpersonal learning. To move forward with research in this area, it is critical that researchers, clinicians, and traditional healers work together to develop and evaluate clinically relevant sweat therapy treatment interventions.

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