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Relaxation, Reduction in Angry Articulated Thoughts, and Improvements in Borderline Hypertension and Heart Rate

Gerald C. Davison,[1,3] Marian E. Williams,[1] Elahe Nezami,[1] Traci L. Bice,[1] and Vincent L. DeQuattro[2]

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An intensive 7-week relaxation therapy was evaluated in a sample of unmedicated borderline hypertensive men. All subjects were provided state-of-the-art medical information regarding changes known to affect hypertension favorably, e.g., lower salt intake and regular exercise. In addition, relaxation subjects were trained in muscle relaxation that entailed audiotaped home practice. As predicted, relaxation combined with hygiene lowered blood pressure more than did hygiene alone. Neither treatment favorably affected a paper-and-pencil measure of anger but relaxation did lower anger-hostility on a new cognitive assessment procedure, Articulated Thoughts in Simulated Situations (ATSS). Moreover, ATSS anger-hostility reduction was correlated with blood pressure or heart rate reductions, for all subjects and especially for those in the Relaxation condition. This represents the first clinically demonstrated link between change in a cognitive variable and change in cardiovascular activity. Finally, results were especially strong in subjects high in norepinephrine, suggesting its importance in essential hypertension.

KEY WORDS: relaxation; hypertension; anger; articulated thoughts; cognitive assessment.

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[1]Department of Psychology, University of Southern California, Los Angeles, California 90089-1061.
[2]Department of Medicine, University of Southern California.
[3]To whom correspondence should be addressed.

INTRODUCTION

The beneficial effects of training in muscle relaxation have been demonstrated often (e.g., Agras *et al.,* 1983) although not consistently (Johnston, 1985) in the clinical research literature. From the very beginning (Jacobson, 1929), a key dependent measure was reductions in blood pressure. It is not surprising, therefore, that the increased popularity of behavioral interventions in the 1970s saw attention paid to the possibility that relaxation training could effect clinically significant reductions in *high* blood pressure, especially that considered to be primary or essential, that is, chronically elevated levels of blood pressure not due to known physical causes (Seer, 1979).

Anger, Essential Hypertension, and Relaxation

When relaxation has been studied as a way to reduce blood pressure, psychological dependent measures have occasionally included assessments of anxiety, rarely of anger. This neglect of systematically assessing anger is surprising because for many years, beginning perhaps with Franz Alexander's (1939) classic psychoanalytic formulation, links have been postulated and sometimes also found between both the experience and the suppression of anger and essential hypertension or transient increases in blood pressure (e.g., Diamond, 1982; Dimsdale *et al.*, 1986; Gentry *et al.*, 1982; Harburg *et al.*, 1973; Hokanson and Burgess, 1962; Spielberger *et al.*, 1985). Perhaps the relatively more frequent inclusion of anxiety measures in relaxation studies, including those aimed at reducing essential hypertension, is due to the context in which relaxation developed in behavior therapy. From Jacobson onward, relaxation has been employed to help people feel less anxious, and these anxiety-inhibiting effects formed the basis for Joseph Wolpe's systematic desensitization (1958) as well as for related behavioral procedures for reducing fear/anxiety and managing stress.

Seldom found in the research literature are studies which (a) examine the effects of relaxation training on (b) clinically hypertensive individuals with respect to (c) both blood pressure reduction and changes in anxiety and/or anger (Bali, 1979; Wadden, 1983). Our examination of the literature suggests that the most widely used instrument is Spielberger's State-Trait Anxiety Inventory (STAI) and that decreases in state anxiety are much more widely found than decreases in trait anxiety (e.g., Barlow *et al.*, 1984; DeBerry, 1982; Lehrer, 1983). In contrast, the relaxation literature has very little in the way of anger reduction from relaxation training, and those studies that suggest a beneficial effect (e.g., Deffenbacher *et al.*, 1986; Hazaleus and Deffenbacher, 1986) had treatment packages of which relaxation was but one component.

In light of the assumed connection between anger and hypertension, it is interesting that little research has examined reductions in anger in a hypertensive sample (e.g., Lee *et al.*, 1988), and no study has reported any relationships between anger reductions and drops in blood pressure. Both psychological and biomedical investigators continue to view essential hypertension as being caused in part by relatively high levels of anger and/or the tendency to hold that anger in when it is experienced. The continued popularity of the anger and anger-in hypotheses calls for the assessment of experienced anger in studies on the reduction of high blood pressure. The present report sheds light on these issues.

Norepinephrine, Hypertension, and Relaxation

Over the past 20 years there have been proposals linking some forms of borderline hypertension with high levels of peripheral norepinephrine and associated high sympathetic nervous system (SNS) arousal. Confirmation comes from a number of sources. Indirect evidence can be adduced from the lowering of blood pressure by drugs which reduce SNS activity. For example, Esler *et al.* (1977) found that propranolol, a beta-adrenergic blocker, reduced heart rate and cardiac output more in hypertensives with high levels of sympathetic nervous system activity as indexed by high renin and norepinephrine (NE) than in those low on these measures. Psychologically, they found that High NEs scored higher in suppressed hostility than did Lows. This led them to speculate on a possible connection between sympathetic arousal and anger—keeping anger in might contribute to chronic elevation of the sympathetic nervous system and high NE levels. Thus, as they suggest, some forms of hypertension might be neurogenic (SNS) in character and psychogenic in origin. A treatment implication explored in the present study is that High NEs might be particularly suitable for a sympathetic-dampening psychological therapy such as relaxation. For this reason, two interactions would be expected: (a) relaxation, while lowering blood pressure generally, would be especially effective for High NEs; and (b) in High NE hypertensives reductions in blood pressure would be associated with reductions in anger.

Cognition and Blood Pressure

Notably missing from the work so far in psychological approaches to hypertension are studies of cognitive processes, both as causes of high blood pressure and as dependent measures. It may be, for example, that people "work themselves up" by the things they tell themselves or by the implicit assumptions that can be inferred from their self-talk and that this internal

dialogue and schemata change when they learn to relax. The therapeutic approaches of Albert Ellis (1962) and Aaron Beck (1967) are the two best known of such cognitive behavior therapies. It may be that an intervention which favorably affects hypertension also changes an aspect of cognition—anger and hostility—that has a theoretical connection with elevated blood pressure (Chesney, 1985; Novaco, 1985).

This does not mean, of course, that only a cognitive intervention will have a cognitive effect, nor does it mean that a noncognitive intervention will *not* have a cognitive effect, for it is obvious that a given variable can have a wide variety of consequences. A loud and unexpected noise, for example, leads to changes in both the autonomic and the motoric nervous systems, as well as to changes in the contents of our thoughts and in our experienced emotional states. With respect to relaxation and hypertension, it may be that one of the effects of relaxation is to change cognition. And since the experience of anger has been central to hypotheses about essential hypertension, it seemed to us worthwhile to include some cognitive assessments of anger in an evaluation of the beneficial effects of relaxation on essential hypertension.

Hypotheses of the Present Study

(1) Relaxation training will reduce blood pressure, heart rate, and anger in clinically hypertensive individuals.
(2) Decreases in anger will be associated with reductions in blood pressure and pulse rate.
(3) High levels of norepinephrine as an index of sympathetic tone will strengthen the above effects.

In addition, we were interested in determining whether a new think-aloud procedure—Articulated Thoughts in Simulated Situations (ATSS)—is a useful cognitive measure of anger and in comparing its utility to that of a widely used paper-and-pencil endorsement trait measure, the Spielberger State-Trait Anger Scale (STAS-T).

METHODS

Subjects

The subjects were 58 adult, English-speaking, Caucasian males with borderline hypertension, defined by mean diastolic blood pressure (DBP) in the range of 90–100 mm Hg. They were recruited by media advertise-

ments and physician referral from the greater Los Angeles area. Ages ranged from 32 to 55 (mean, 46) and the average education was 4 years of college. Exclusionary criteria included major psychiatric or medical illness, secondary hypertension, history of heart attack or stroke, diabetes, clinically significant arrhythmias, systolic blood pressure (SBP) above 160 mm Hg, smoking, weight over 30% above actuarial tables for weight and height, history of drug or alcohol abuse, and being treated with guanthidine, reserpine, or monoamine oxidase inhibitors during the preceding 8 weeks.

Assessment Procedures

Subjects who met the exclusionary criteria participated in a 3-week drug washout period followed by extensive psychological and medical assessments. The former included a variety of psychological tests and assessments, one of which was the Articulated Thoughts in Simulated Situations (ATSS) procedure described below. In addition to the psychological measures, each subject underwent extensive physiological assessment for blood pressure, heart rate, and norepinephrine levels. These same assessments were repeated following completion of treatment.

Blood Pressure. The blood pressure measurements used for analysis were taken by a medical technician. We obtained six indices of cardiovascular function: systolic (SBP), diastolic (DBP), and pulse rate, each standing and sitting. Each measure represents the average of nine readings taken over three sessions during the 5-week baseline period and the average of three readings during the posttreatment period.

Norepinephrine. A baseline level of norepinephrine was established as the average of readings from two sessions during which blood was taken from a heparinized needle inserted into the antecubital vein 60 min earlier and after the subject had been resting supine. Plasma NE was measured by high-performance liquid chromatography (HPLC), using a modified method of Eriksson and Persson (1982) and Causon and Carruthers (1982). High-NE assignment was made when the average plasma norepinephrine level fell two standard deviations above normal (147 ± 42 ng/L, which is the mean of a sample of 12 normal volunteers assayed in our clinic and which lies within the medically accepted normal range). This procedure produced the same proportion of high-NE individuals (24%) as has been reported in previous studies.

Articulated Thoughts. The ATSS assessment had the subject verbalize his thoughts in response to prerecorded dramatic scenarios (Davison *et al.*, 1983). Each stimulus tape began with a brief narrative description of the setting, followed by a series of segments which the subject was asked to

imagine were actually unfolding. In between each 15- to 20-sec segment, the subject was given 30 sec in which to "think out loud." He was asked to speak freely the thoughts or feelings going through his mind as he imagined being in the given situation. In this fashion, close to "on-line" assessment was made of cognition in experimenter-controlled circumstances.

Four stimulus tapes were presented, two of which were used for this report. The first tape, "Garage," had the subject overhear two auto mechanics discuss in a cavalier and insensitive way some serious and unanticipated problems with his car. The second tape, "Social Criticism," had the subject overhear people berate his dress style and character. Both tapes were designed to make people angry; in a separate paper this was shown to have been the case (Williams *et al.*, in press).

Transcripts of the subjects' audiotaped responses were first divided into thought units, defined as segments of speech which contain one complete idea that stands on its own. Two coders then listened to the tapes and followed along with the transcripts, underlining responses which expressed the range of angry, hostile, and aggressive feelings and thoughts directed at other people, from mild irritation to extreme rage. Scores were calculated as the percentage of thought units rated as angry, hostile, or aggressive in nature, thus controlling for the amount of verbalizations made by subjects. Coders were blind to NE status and treatment condition. The interrater reliability, calculated using the Pearson *r*, was .84.

Trait-Anxiety Inventory. The trait section of the State-Trait Anxiety Inventory (STAI; Spielberger *et al.*, 1970) measures individual differences in chronic levels of anxiety.

Trait-Anger Scale. The trait portion of the State-Trait Anger Scale (STAS; Spielberger *et al.*, 1983) is designed to measure individual differences in anger proneness as a personality trait. We used the total trait anger scale.

Treatment Procedures

In an additive comparative therapy design, all subjects received extensive up-to-date printed and verbal information on the nature of essential hypertension and generally accepted ways to reduce it, e.g., reduce salt intake, lose weight, exercise regularly, etc. The information was distributed over seven weekly sessions. Subjects in the "Hygiene" condition ($n = 29$) met in small group sessions in which their blood pressures were checked and dietetic and hygienic information was discussed, with encouragement to follow the medical guidelines provided. In addition to this Hygiene information, "Relaxation" subjects ($n = 29$) also participated in a 7-week relaxation training program.

The relaxation training was adapted from Goldfried and Davison (1976). First, considerable attention was given to preparing subjects for relaxation, a step that we believe is frequently overlooked or underemphasized in experiments involving relaxation training. For example, 11 specific points were discussed at the first group meeting, including the proper set to adopt (e.g., just let happen what is happening; don't try to get more relaxed, don't worry about how well you are doing; this is not an achievement to be striven after doggedly; go with the flow) and forewarning about unusual feelings and sensations (if you feel prickliness in your fingertips, that's OK; in fact, it probably means you're beginning to let go of tension).

Second, we provided three audiotapes for home practice, the first tape entailing alternate tensing and relaxing of muscles, the second one involving just letting go but with options to return to muscle groups that still felt tense, and the third containing guidelines for differential relaxation (Davison, 1965). The tapes provided a helpful (and, we would suggest, necessary) guide for at-home practice, in contrast to instructions to practice on one's own without such a guide, a feature common in many studies of relaxation. Both the tapes themselves and the instructions for their use emphasized that the subject remained in control at all times and could turn off the tape recorder at any time. Unlike reports of relaxation-induced anxiety (Heide and Borkovec, 1984), we did not have any instances of a negative reaction to relaxation practice. Finally, at-home practice was reviewed during each of the seven weekly small group meetings, permitting discussion of problems and encouragement to practice.

We also provided subjects with weekly practice compliance logs, which required that they record for each daily relaxation session the date, their pre- and post-tape self-report of degree of tension-relaxation, and their pre- and posttape blood pressure. Subjects handed in these logs at each weekly session. In addition to providing data for future process studies, these procedural features were intended to increase treatment compliance. The literature on adherence to home practice and on its relationship to treatment outcome is complex and inconclusive (e.g., Taylor *et al.*, 1983; Hoelscher *et al.*, 1986). An analysis of our own treatment compliance data by Bice *et al.*(1991) suggests that our subjects practiced an average of 5 to 6 days per week.

RESULTS

Effects of Relaxation on Blood Pressure

As predicted, relaxation reduced blood pressure significantly more than did Hygiene. Specifically, as shown in Fig. 1, Relaxation surpassed

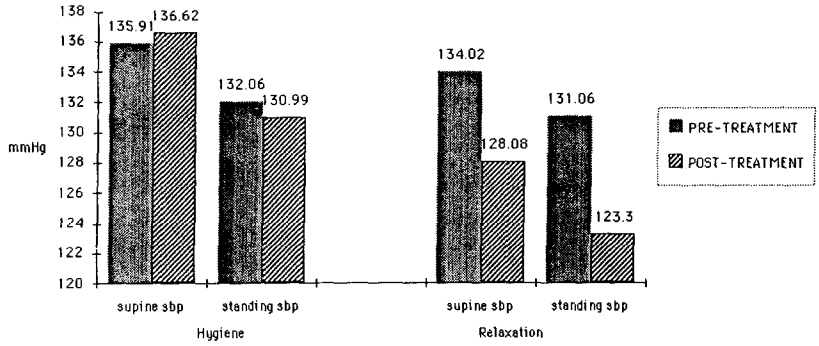

Fig. 1. Systolic blood pressure changes from relaxation and hygiene treatment.

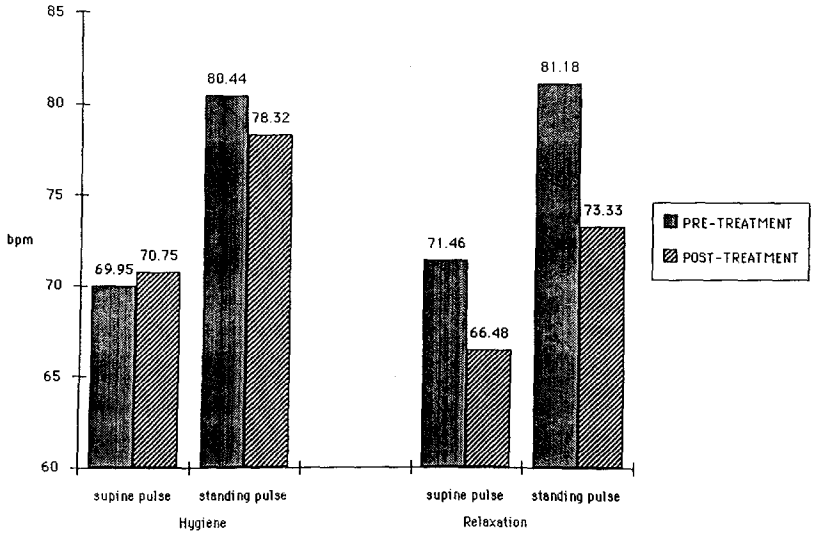

Fig. 2. Pulse rate changes from relaxation and hygiene treatment.

Hygiene on reductions in supine systolic blood pressure (SBP) ($t = 2.13$, $p < .02$) and in standing SBP ($t = 1.94, p < .03$). Figure 2 shows the same pattern with supine pulse ($t = 3.06$, $p < .002$) and standing pulse ($t = 1.92$, $p < .03$). (Except as noted, all statistical tests are one-tailed. Variability in sample sizes is due to missing data on some measures.)

The mean pretreatment norepinephrine level for High-NE *Ss* was 284.58 ng/L (SD, 70.20 ng/L), and that for Lows, 151.17 ng/L (SD, 46.01 ng/L); these two subgroups did not differ on blood pressure at baseline. High-NE subjects who received relaxation reduced their standing diastolic blood pressure more than did Relaxation *Ss* with lower NE levels ($t = 3.20, p < .002$).

Moreover, among those subjects high on NE, those who received relaxation had larger reductions in supine SBP ($t = 3.02, p < .005$), standing SBP ($t = 3.15, p < .005$), supine diastolic blood pressure (DBP) ($t = 2.05, p < .03$), standing DBP ($t = 2.30, p < .04$), and supine pulse ($t = 2.75, p < .01$) than did high NEs in the Hygiene group. Thus, relaxation was more effective overall than hygiene and was particularly effective among those subjects initially high on plasma NE.

Effects of Relaxation on Anger and Anxiety

With these significant blood pressure treatment effects in hand, we examined changes in two of our psychological parameters, anger and anxiety.

Reductions in STAS-T (Trait) Anger. The two conditions did not differ at pretreatment; it is of interest to note that the pretreatment means (Hygiene *Ss* = 29.5, SD = 6.95; Relaxation = 26.7, SD = 6.13) place our sample in the 90th percentile of STAS Anger. Differences in changes were not significant ($t = 0.178, p = 0.43$, N for Hygiene = 23 and N for Relaxation = 26). Furthermore, within-group changes were not significant, and there were no interactions with baseline NE. Thus, STAS trait anger did not diminish as a consequence of either treatment.

Reductions in STAI-T (Trait) Anxiety. As with anger, our two treatment groups did not differ at baseline on our questionnaire measure of anxiety, nor were the changes different from each other. There was, however, a significant interaction with NE ($F = 4.25, p < .05$), indicating that, analogous to the blood pressure findings, High-NE Relaxation *Ss* showed a greater reduction in trait anxiety than the other three subgroups.

Reductions in ATSS Anger-Hostility. At pretreatment, there were no differences in anger-hostility in either tape for Relaxation or Hygiene subjects. Reductions from treatment were significant for the Garage tape ($t = 2.51, p = .01$), that is, Relaxation *Ss* ($n = 28$) reduced their anger more on our cognitive measure than did Hygiene *Ss* ($n = 22$). No such significant difference emerged for the Social Criticism scenario, though it was in the predicted direction ($t = 1.17, p = .13$).

When *Ss* were divided by baseline NE, angry thinking to the Social Criticism tape showed more decrease in Relaxation as compared to Hy-

giene *Ss* ($t = 2.31, p < .03$). Interestingly this significant difference arises more from the *increase* in ATSS anger-hostility among the high-NE Hygiene *Ss* ($n = 5$) than from any decrease among the High-NE Relaxation *Ss* ($n = 4$). These findings support the idea that norepinephrine is important in how relaxation affects anger-hostility in articulated thoughts.[4]

Cross-Method Relationships in Anger. Because we have two different measures of anger—the STAS and the ATSS—we looked at possible relationships between changes in them, although we did not expect them, given the nonsignificant reduction in STAS anger. Indeed, correlations were not significant ($r = .08, p > .61$, for the Garage tape and $r = -.11, p > .46$ for the Social Criticism tape).

Relationships Between Reductions in Anger and Reductions in Blood Pressure (BP) and Pulse Rate

As already noted, anger as indexed on the STAS-T did not decrease from pre- to posttreatment. The small variance in change scores, therefore, would be expected to attenuate any possible correlations with changes in BP. Indeed, there were no significant relationships.

In contrast, changes in anger-hostility as measured on the ATSS did correlate with blood pressure and pulse-rate changes, as follows:

(1) For subjects in both treatment conditions ($n = 44$), ATSS anger-hostility decreases were positively correlated with decreases in standing SBP ($r = .39, p < .008$) and with supine pulse ($r = .42, p < .005$). The correlations with other cardiovascular parameters were all in the predicted direction, albeit not statistically significant.

(2) For Relaxation *Ss* ($n = 25$), these ATSS anger decreases were positively correlated with reductions in supine pulse ($r = .43, p < .03$). All other correlations, although not significant, were in the predicted direction.

(3) For Hygiene *Ss* ($n = 19$), ATSS anger decreases were marginally correlated with reductions in standing SBP ($r = .42, p < .07$). As with Relaxation, all other nonsignificant correlations were in the predicted direction.

Thus, regardless of treatment condition, there was a significant relationship between reductions in anger-hostility in articulated thoughts and reductions in standing systolic blood pressure and supine pulse. Further-

[4]Because of the popularity of the anger-in hypothesis of hypertension, the study included Spielberger's Anger Expression Inventory, enabling us to determine whether subjects became less anger-in as a result of our treatment procedures. Analysis of pre–post changes revealed no such effects.

Table I. Correlations Between Reductions in Anger-Hostility in Articulated Thoughts to Social Criticism and Cardiovascular Measures as Moderated by High or Low Epinephrine

	High NE (n = 9, except as noted)	Low NE (n = 35, except as noted)
Supine SBP	.68 ($p < .04$)	−.007 (ns)
Standing SBP	.66 ($p < .05$)	.13 (ns)
Supine DBP	.66 ($p < .05$)	−.02 (ns)
Standing DBP	.50 (ns)	−.05 (ns)
Supine pulse	.73 ($p < .02$)	.20 (ns)
Standing pulse	.75 ($p < .08$) (n = 6)	.13 (ns) (n = 27)

more, cognitive and cardiovascular changes were linked within each treatment group.

NE as a Moderator of Cognitive and Cardiovascular Change Relationships

If we divide our entire sample into High (N = 9)- and Low (N = 35)-NE subjects, we find that the just-mentioned results are stronger and more consistently found among High NEs articulating their thoughts in the Social Criticism scenario; see Table I. NE status does not show this pattern with the Garage tape. In all, it appears that reduction in cognitively assessed anger-hostility is most strongly linked to reductions in cardiovascular parameters among those subjects initially high on norepinephrine.

DISCUSSION

Our Relaxation condition reduced blood pressure in a sample of healthy unmedicated borderline hypertensive men more so than did the Hygiene condition.[5] This predicted treatment effect was especially strong in subjects with initially high levels of norepinephrine, lending support to the hypothesis of Esler *et al.* (1977) that there is a subset of borderline hypertensives—those high in sympathetic tone—who are especially well suited to a sympathetic-dampening therapy such as relaxation.

[5]Strictly speaking, our conclusions regarding relaxation are really conclusions about the *combination* of relaxation and hygiene. Our additive design was intended to determine whether relaxation would *add to* the effects over and above the hygiene condition. We conclude that this was the case. Still, we have not tested the effects of relaxation *alone* on hypertension, anger, or anxiety.

Relaxation therapy, however, did not exert similarly favorable effects on anger as indexed by the widely used Spielberger State-Trait Anger Scale. We did find, however, that trait anxiety was diminished more by Relaxation than by Hygiene in those subjects initially high on NE, which was consistent with the blood pressure findings.

In contrast to the questionnaire findings, anger-hostility as indexed by the Articulated Thoughts in Simulated Situations cognitive assessment method (ATSS) did decrease significantly more when *S*s had relaxation than hygiene therapy alone (recall that Relaxation *S*s also had Hygiene in this additive design). There was also a significant interaction with NE: with the social criticism stimulus tape, High-NE *S*s showed a greater reduction in cognitive anger-hostility than did Low-NE *S*s, again consistent with the idea that NE is a moderator of treatment effects in hypertension.

Most importantly, the above-mentioned decreases in cognitively assessed anger via the ATSS method were significantly and positively correlated with reductions in several cardiovascular parameters for all subjects. Thus, the less angry *S*s became in their articulated thoughts, the more their blood pressure declined, whether they had hygiene alone or hygiene combined with intensive relaxation training. And when *S*s were divided into high or low NE, these cognitive change–cardiovascular change relationships were even stronger in high-NE subjects, again supporting the importance of baseline NE.

It is significant to note that nothing emerged from the paper-and-pencil measures employed. In contrast, we did find significant reductions in anger and hostility in our articulated thoughts (ATSS) measure—more so in our Relaxation than in the Hygiene group, and especially so for Relaxation subjects high on norepinephrine. Furthermore, these anger reductions were significantly correlated with blood pressure reduction; we believe that this is the first demonstration of such an association, and it confirms the widely held view that decreases in anger may be a key to blood pressure reduction. It may also be the case that there is an advantage to a think-aloud cognitive assessment technique such as the ATSS as compared to more generalized endorsement techniques, a suggestion made in our first report on the articulated thoughts technique (Davison *et al.*, 1983).

Training in muscle relaxation has generally been thought of as a somatic, noncognitive intervention (cf., Schwartz *et al.*, 1978). The assumption has been, since Jacobson (1929) and Wolpe (1958), that relaxation exerts a dampening effect on the sympathetic nervous system without the mediation of conscious, or, for that matter, unconscious, thought processes. This assumption can be questioned (Davison, 1966a), and the attention in the cognitive behavioral and behavioral medicine literatures on control and the perception of control (Geer *et al.*, 1970; Glass *et al.*, 1973; Sanderson *et*

al., 1989) reflects an increasing sophistication about the "channels" in which a given therapeutic procedure operates. Our findings suggest that relaxation, if it works via a SNS dampening process, has an effect on cognition in a theoretically meaningful way.

Implications for Future Directions in Psychosocial Treatment

The behavioral medicine literature thus far on the alleviation of essential hypertension is almost entirely concentrated on arousal reduction via relaxation, meditation, biofeedback, and combinations thereof (DiTomasso, 1987). The focus on somatic, sympathetic-dampening approaches probably derives from an assumption that "insight" contributes little to meaningful psychological change, a belief that lay at the core of the development of behavior therapy in the 1960s. Lacking almost entirely is research on cognitive points of leverage that might be used to reduce chronically elevated blood pressure [see Achmon *et al.* (1989) for a recent exception].

However, just as behavior therapy has "gone cognitive" (e.g., Bandura, 1969; Davison, 1966b; Goldfried and Davison, 1976; London, 1964, 1985; Mahoney, 1974), so it seems that behavioral medicine concerns itself increasingly with the cognitive dimension of human existence. When, for example, based on Lazarus's (1966) early classic work on cognitive appraisal, Megargee (1985) suggests "cognitive redefinition," sometimes involving a good sense of humor and an ability to laugh at a frustrating situation, is not an appeal being made to cognition? And when, in the classic Type A reduction study by Friedman *et al.* (1982), attention was paid to teaching patients to stop and smell the roses, is reference not being made to something less strictly behavioral than enjoying horticulture through olfaction? A systematic focus on cognitive factors, such as reported in this paper and as suggested by other workers (e.g., Chesney and Rosenman, 1985), might lay the groundwork for the development of empirically based interventions that pay attention to the importance of, to paraphrase Joan Didion (1979), the stories people tell themselves in order to live.

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