Adolescent anger, aggression, and violent outbursts are social problems significantly affecting each of us. Individual therapeutic management of pathological anger is treated in various ways depending on practitioners’ theoretical orientations and competency levels. Popular psychological individual and group therapies addressing anger and aggression in adolescents focus primarily on cognitive-behavioral techniques that manage anger’s symptoms. Evidence-based cognitive-behavioral therapies often require clients to self-identify emerging antecedents of anger without assistance; such therapies employ predetermined strategies to assist the client to emotionally de-escalate prior to an angry or aggressive episode. However, cognitive responses to an emotional upheaval stemming from an emergence of anger can annul the sensitivities and awareness required to prompt desired or predetermined de-escalation technique commencement. A physiological antecedent of anger is an increase in heart rate, identifiable with a personal heart rate monitor. The use of a systematic continuous heart rate biofeedback technique in antecedent anger management could not be found in the publishable research prior to this study’s development. This empirical mixed methods multi-case study evaluated the efficacy of routine heart rate self-monitoring to enhance the identification of anger’s antecedents in adolescents and subsequently diminish their expressions of anger and aggression. Five adolescents participated in the study; they regularly monitored their heart rates and paired them with their fluctuations of emotional states. Using objective assessments completed by the adolescent participant, homeroom teachers, and parents, the researcher measured five baselines. During post-treatment interviews the adolescents, teachers, and three parents provided their perceptions of the therapy process. Individual and cross-case analysis of the objective and subjective data reinforced the hypothesis that anger expressions and experiences can diminish through heart rate biofeedback therapy. Post-treatment interviews also revealed information for further research and improved therapy applications.