CHAPTER II

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A large number of research studies have been carried out in context to anger and its management. In the following pages, pertinent investigations have been reviewed.

In their study, Lotfian, Ziaee, Amini and Mansournia (2011) showed that the effect of martial arts on adolescents' behavior, especially aggression, is controversial. The aim of this study was to assess and compare anger ratings among adolescent girl athletes of different martial arts. 291 female adolescents between the ages of 11 and 19 were assessed according to the Adolescent Anger Rating Scale designed by DM Burney. In the case group, the martial arts practiced were either judo (n=70) or karate (n=66) while the control group was composed of swimmers (n=59) and nonathletes (n=96). Total anger scores showed statistically significant differences between the groups (P=0.001) decreasing from girls who practiced judo to non athletes, karate, and swimmers. Instrumental and reactive anger subscales also showed significant differences between the groups, but this difference was not found for anger control. As a conclusion, the anger rate did not differ between judo and non athletes, but that both of these groups received higher scores in total anger than karate and swimmers.

Down, Willner, Watts and Griffiths (2011) compared the efficacy of, and adolescents’ preferences for, a Cognitive Behavioural (CBT) and Personal Development (PD) Anger Management (AM) group. The CBT group aimed to help adolescents develop skills to manage predominantly reactive aggression. The PD group aimed to enhance motivation to develop less aggressive identities with less use of proactive aggression. Eighteen adolescents were randomly allocated to a 10-session CBT or PD AM Group; seven additional adolescents formed a control group. They completed pre- and post-intervention questionnaires to assess anger expression and control, use of AM coping skills (also completed by careers) and self-image. Participants were also interviewed pre- and post-intervention; transcripts were subjected to Interpretive Phenomenological Analysis. Both treatment groups demonstrated significant improvements in anger coping and self-esteem, relative to the control group. Participants’ age was significantly correlated with self-image and
anger control outcomes in the CBT group. Qualitative analysis identified factors associated with improved outcomes, particularly regarding participants’ age, motivation and readiness to change, engagement in the therapeutic process, group dynamics and emotional expressiveness. Their ability to interpret data clinically was enhanced by the use of a mixed quantitative-qualitative methodology. The results help them to better match interventions to clients.

Feindler and Engel (2011) studied the development, implementation, and evaluation of anger management programs that have proliferated over the past decade. The programs aim to moderate the intensity, frequency, and severity of anger expression, and facilitate alternative nonaggressive responses to conflict and frustration. Cognitive-behavioral theory highlights cognitive processes such as attributions, expectations, interpersonal beliefs, and problem solving as most influential in determining an individual’s response to provocation and identifies anger arousal as a mediator of aggressive behavior. Based on this premise that youth exhibit aggressive behavior due to poor arousal management, social, and problem-solving skills, Feindler and colleagues have developed psychoeducational anger management programs to target these deficits and to teach prosocial, conflict resolution skills. This article will review the development of anger difficulties, suggest tools for screening and outcome assessment, describe the anger management intervention approach, and present an overview of the research supporting implementation in school and community settings.

Park et al. (2010) described the levels of anger, anger expression, and suicidal ideation in Korean adolescents. Data from 18,752 adolescents were collected using a self-report questionnaire. Anger, anger expression, and suicidal ideation exhibited significant differences according to school level and gender. The group with higher anger and anger expression showed a higher average suicidal ideation score than that of the group with lower anger and anger expression, suggesting that school-based programs which alleviate anger may be needed to decrease suicidal ideation among Korean adolescents.

In their study, Runions and Keating (2010) studied the moderating role of mother-reported dispositional anger and inhibitory control (IC) in the relationship of children’s hostile attributions of intent (HAI) to aggressive behavior at age 6 years.
was examined using data from the NICHD-SECCYD. For both teacher- and mother-rated aggression (n = 921), a hypothesized moderating effect of anger was observed, such that HAI was only positively associated with aggressive behavior for children high in anger. For maternal-rated aggression a further 3-way interaction was found, indicating that HAI was only significantly positively associated with aggression for children with high levels of anger and low IC. An unexpected negative relationship between HAI and mother-rated aggression was observed for children low in both anger and IC, such that children with low HAI showed more aggressive behavior under this condition than did children with high HAI. Implications for intervention efforts and for integration of emotion and HAI research are considered.

In a study, Brezina (2010) describes that although general strain theory highlights the role of affective processes in the development of offending behavior, the theory also recognizes the role of cognition. In fact, Agnew and other theorists assert that affective and cognitive processes are interrelated and function together in producing crime and delinquency. In the case of aggression, for example, chronic strain/anger may distort the individual’s attitudes, expand the “regulative rules” associated with aggressive behavior, and increase the perceived legitimacy of a violent response. In this study, the author conducts an empirical examination of this argument using data from a national survey of male adolescents. The findings help to shed light on the affective and cognitive foundations of angry aggression; they not only confirm the key role assigned to angry arousal but also indicate that such arousal leads individuals to devalue nonaggressive responses to various provocations. Implications for criminological theory are discussed.

Grych and Kinsfogel (2010) conducted study that investigated romantic attachment style as a potential moderator of the link between family aggression and dating aggression, and examined its relations with documented mediators of the impact of interparental conflict on dating behavior: attitudes about the justifiability of aggression and anger regulation. Participants were 391 ethnically diverse 14- to 18-year-olds (52% female). Attachment style was a significant moderator for boys and girls, but the pattern of results differed by gender. In general, attachment anxiety was a more consistent predictor than avoidance of boys' dating aggression, cognitions, and emotions, whereas anxiety and avoidance both acted as significant moderators for
girls. These results suggest that youths' romantic attachment style can amplify or attenuate the impact of family aggression on abusive behavior in dating relationships by influencing their beliefs about the acceptability of aggression and their ability to regulate anger.

Jackson, Kuppens, Sheeber and Allen (2010) investigated that the expression of anger is considered to be abnormal in depression, yet its role is only poorly understood. In the present study we sought to clarify this role by examining the moderating influence of the family environment on overall levels of anger expression and anger reactivity in depressed and non-depressed adolescents during conflictual interactions with their parents. One hundred and forty one depressed and non-depressed adolescent participants engaged in a problem-solving task with their parents during which their behavioral expression of anger and heart rate were recorded. The results demonstrate that general levels of parental anger in the family environment (as indicated by the overall level of expressed anger by the parents during the interactions) strongly moderates how depressed differ from non-depressed adolescents in terms of their anger, heart rate and reactivity. Overall, the findings suggest that in depressed adolescents anger is much less adaptively attuned to the environment, consistent with models that predict dysfunction in the regulation of anger that prevents depressed individuals responding adaptively to their social environment.

Shortt, Stoolmiller, Smith-Shine and Sheeber (2010) studied the increases in externalizing behaviors during the transition to adolescence may put children at risk for developing mental disorders and related problems. Although children's ability to regulate their emotions appears to be a key factor influencing risk for maladjustment, emotion processes during adolescence remain understudied. In this longitudinal study, we examined a multi-level mediational model in which emotion coaching by parents was posited to influence the ability of adolescents to regulate their emotions, which in turn influences their expression of problem behaviors.

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Brezina (2010) found that in the case of aggression, for example, chronic strain/anger may distort the individual's attitudes, expand the "regulative rules" associated with aggressive behavior, and increase the perceived legitimacy of a violent response. In this study, the author conducts an empirical examination of this argument using data from a national survey of male adolescents. The findings help to shed light on the affective and cognitive foundations of angry aggression; they not only confirm the key role assigned to angry arousal but also indicate that such arousal leads individuals to devalue nonaggressive responses to various provocations. Implications for criminological theory are discussed.

Regan (2009) showed that the youth violence in the city of Philadelphia, PA, has reached epidemic proportions. The majority of homicides related to gun violence is most prevalent among African American males aged 19 to 24 years. Therefore, it is essential to implement youth violence prevention programs to a target population several years younger than this age group to decrease teen violence in the city. A violence prevention program for 9th and 10th graders was developed, implemented, and evaluated at a local urban charter school. Presentations were given on gun and gang violence, dating violence, and anger management/conflict resolution as well as role playing, group activities, and a field trip to a trauma program for youth at a local
hospital. Posttest scores showed an increase in knowledge and skills in several areas, such as therapeutically resolving violent disputes and methods to prevent different types of dating violence. This program provides a blueprint for an adolescent violence prevention program that school nurses could adopt in their communities.

In a study, Lee, Choi, Kim, Park and Shin (2009) found that gender differences in suicidal ideation and anger are limited. Furthermore, these studies focused on linear relationships, which limits the full understanding of the complex relationships and hampers identification of high-risk groups for suicidal tendencies. Hence, this study aims to assess the gender differences in: (1) the level of suicidal ideation and anger; (2) predictors for suicidal ideation; and (3) the varying association between suicidal ideation and anger. The target population for this cross-sectional, correlational study was adolescents aged 13 to 15 years living in South Korea. A total of 258 adolescents (160 boys and 98 girls) completed the Multidimensional Anger Inventory and Suicidal Ideation Questionnaire. Data were analyzed by descriptive statistics, multiple linear, and spline regression analysis. Girls reported significantly higher scores in both anger and suicidal ideation. While anger was a significant predictor for suicidal ideation only in boys, both school life satisfaction and anger were significant predictors of suicidal ideation in girls. After controlling for sociodemographic factors, the spline regression revealed a significant threshold point in the relationship between anger and suicidal ideation, particularly among girls. At the threshold anger point of 117.67, 12.5% of girls belonged to the high-risk group. The gender-specific patterns of the relationship between suicidal ideation and anger and the existence of threshold points confirmed the need for targeted suicidal preventive programs focusing on controlling anger.

Harty (2009) examined the self-reported expression of overt aggressive behaviors and covert emotional and cognitive processes in adolescents diagnosed with ADHD and comorbid disruptive behavior disorders (DBDs) during childhood. Participants were a clinically referred sample of 85 individuals diagnosed with ADHD, initially recruited in the early to mid 1990s when they were 7-11 years of age. At that time, 44 (52%) met criteria for a comorbid diagnosis of ODD and an additional 22 (26%) met criteria for a comorbid diagnosis of CD. Approximately 10 years later, these youth, along with an age-matched comparison sample (n=83), were
re-evaluated to assess a wide array of outcomes including physical and verbal aggression, anger, and hostility. Individuals diagnosed with ADHD + CD in childhood reported elevated levels of physical aggression when compared to Controls and the ADHD-only group. Individuals diagnosed with ADHD + ODD had elevated levels of verbal aggression compared to Controls. Additionally, both comorbid groups experienced significantly greater amounts of anger, but not hostility, as compared to Controls. Importantly, the persistence of ADHD symptoms into adolescence accounted for most group differences in verbal aggression and anger at follow-up, but not physical aggression, which was accounted for by childhood CD. Adolescents diagnosed with ADHD and comorbid disruptive behavior disorders during childhood report high levels of aggression associated with increased emotionality in the form of anger, but not hostile cognitions. These findings suggest that in addition to inattention and hyperactivity/impulsivity, emotional dysregulation may be an important component of ADHD, particularly as it presents in adolescence.

Branje, Doorn, Valk and Meeus (2009) examined the moderating role of conflict resolution on the association between parent–adolescent conflicts and adolescent problematic adjustment. Participants were 1313 Dutch early and middle adolescents who completed measures on conflict frequency, conflict resolution with parents, and internalizing and externalizing adjustment problems. Using a person-centered approach, five types of adolescents could be distinguished that were characterized by different patterns of conflict resolution. These types meaningfully differed in conflict frequency with parents and adjustment problems. Furthermore, these types moderated the relation between conflict frequency and externalizing problems and internalizing problems. When withdrawal was the only strategy used to resolve conflicts with parents, conflict frequency was more strongly related to externalizing problems, but when withdrawal was used in combination with other styles, conflict frequency was more strongly related to internalizing problems.

Ronen and Rosenbaum (2009) studied a school-based aggression reduction intervention program aiming to impart highly aggressive adolescents with a learned resourcefulness repertoire, using Ronen and Rosenbaum’s four-module self-control model. Intervention aimed to teach adolescents that aggression is changeable behavior resulting from how they think and feel, emphasizing cause-effect relations; to
facilitate their identification of internal cues, sensations, and emotions and their links to behavior; and to help them identify and acquire self-control skills, e.g., delaying temptation, using self-talk, and planning steps toward achieving goals. Participants were 447 ninth graders: 167 underwent intervention, and 280 from the same schools received no intervention (controls). Outcomes indicate the model’s efficacy in reducing aggression. In the intervention group, both objective and subjective aggression rates decreased significantly compared to baseline and controls. Hostile thoughts and negative emotions did not change, suggesting adolescents could now control these without behaving aggressively. Analysis attributed aggression reduction to increased self-control skills.

Martinez, Schneider and Toro (2008) found in their study that culture influences the acceptability of the overt expression of anger. In many cultures, overt expression of anger is considered legitimate for males but not for females. We explored the implications of anger expression among early adolescents in Cuba, expecting that overt, explosive expression of anger would be particularly maladaptive in a society that is collectivistic by virtue of both its cultural heritage and ideology. Given the sharp gender-role distinctions in traditional Latin American society, we expected to find more overt expression of anger by males. However, the analyses revealed no significant gender differences in anger expression. Overt expression of anger was significantly associated with multiple measures of maladjustment. Evidence that the inhibition of anger is associated with maladjustment was not as consistent, but holding anger in was linked with internalizing difficulties. Sociometric data indicated that early adolescents who demonstrate control of their anger are highly accepted and considered as leaders.

Bolgar, Janelle and Giacobbi (2008) purposed this study and its aim was to determine whether high-trait-anger adolescent athletes appraise and cope with anger-provoking events differently than lower-trait-anger athletes. A second purpose was to assess gender differences in anger appraisal and coping. A sample of 103 competitive adolescent tennis players completed the protocols and observed significant differences in appraisal and coping with anger provoking events among high trait and low trait anger athletes.
In their study, Turner, Russell, Glover and Hutto (2007) found that anger has been shown to be an important factor in occupational maladjustment, family conflict, physical and sexual assault, criminal behavior, and substance abuse. It has also been linked with such adverse health outcomes as hypertension, heart disease, and cancer. Focusing on anger proneness, conceptualized as a relatively enduring propensity to experience and express anger, this article examines both early and recent antecedent factors that predict and may condition levels of anger proneness. The roles of both prospectively and retrospectively assessed factors are considered. Data from an ethnically diverse and representative sample of young adults reveals clear gender differences and, at least for short-tempered anger, decreasing levels of anger with increasing socioeconomic status. Prior exposure to violent events, prior exposure to other forms of social stress, and certain personal attributes were found to be significant antecedents of both hostility and short-tempered forms of anger proneness.

Weyandt and DuPaul (2006) made their objective as: According to the American Psychiatric Association, 3% to 7% of the school-age population has ADHD and many children continue to display significant symptoms throughout adolescences and adulthood. Relative to the childhood literature, less is known about ADHD in adults, especially college students with ADHD. The principle purpose of this review articles is to summarize the major research findings concerning ADHD in the college student population with regard to prevalence of symptoms, neuropsychological and psychological functioning. Overall, findings suggest that college students with ADHD are at greater risk for academic and psychological difficulties, and they perform similar to non-ADHD controls on many neuropsychological tasks. These findings are preliminary, however, and are tempered by the small number of studies that have been conducted as well as the methodological limitations of these studies. Conclusion: Future research using larger sample sizes, rigorous assessment criteria, and a longitudinal design is needed to better understand the psychological, academic, and neuropsychological functioning of college students with ADHD. Studies are also needed to elucidate the effects of pharmacological and nonpharmacological effects of treatment on the functioning of college students with this disorder.

Spielberger and Reheiser (2006) studied the nature of anger, hostility, and aggression and the relations among these concepts are considered in their study. The
evolution of the concepts of anger and aggression from the ancient writings of Plato
and Aristotle to those of Darwin and Freud is noted. Recent research findings on the
relationships between anger, Type A behavior, and coronary heart disease (CHD) are
also reviewed, and the essential distinction between anger as an emotional state and
individual differences in anger as a personality trait is clarified. Conceptual
definitions of anger, hostility, and aggression are examined as components of the
AHA! Syndrome, in which anger is clearly an essential emotional motivator of both
hostility and aggression. The chapter concludes with a discussion of the ubiquitous
nature of anger in daily life and the use of the State–Trait Anger Expression Inventory
(STAXI) to assess the experience, expression, and control of anger in research and the
diagnosis and treatment of anger-related problems.

Peled and Moretti (2007) examined anger rumination and sadness rumination
in clinic-referred adolescents (N = 121). Factor analysis indicated that items from
analogous anger and sadness rumination measures loaded onto 2 factors tapping anger
rumination and sadness rumination, respectively. Structural equation modeling
confirmed unique relations between each form of rumination and specific emotional
or behavioral problems. Anger and anger rumination were independent predictors of
aggression, suggesting that both the affective component of anger (i.e., angry
feelings) and the cognitive process (i.e., recurrent thoughts about anger) are important
in predicting aggressive behavior. Girls reported higher levels of both forms of
rumination compared to boys; however, no sex differences were found in the relations
between either form of rumination and outcomes.

Acremont and Linden (2007) have shown that cognitive processes like the
attribution of hostile intention or angry emotion to others contribute to the
development and maintenance of conduct problems. However, the role of memory has
been understudied in comparison with attribution biases. The aim of this study was
thus to test if a memory bias for angry faces was related to conduct problems in youth.
Adolescents from a junior secondary school were presented with angry and happy
faces and were later asked to recognize the same faces with a neutral expression. They
also completed an impulsivity questionnaire. A teacher assessed their behavior. The
results showed that a better recognition of angry faces than happy faces predicted
conduct problems and hyperactivity/inattention as reported by the teacher. The
memory bias effect was more pronounced for impulsive adolescents. It is suggested that a memory bias for angry faces favors disruptive behavior but that a good ability to control impulses may moderate the negative impact of this bias.

A study performed by Ireland and Culpin (2006) recently examined both the quantity and quality of sleep reported by male adolescents detained in prison, with a focus on exploring the association between the quantity and quality of sleep with aggression, impulsivity, or anger. This represents a novel area of study not yet explored among incarcerated male adolescents.

Ireland and Culpin (2006) evaluated the implications of internalized anger, self-control and experience of mastery for adolescent girls with severe anorexia nervosa (AN). The methods include Internalized and externalized anger, internal and external control, mastery, use of methods for self-control, and severity of anorexic symptoms were measured by self-report questionnaires in inpatient anorexic teenagers (N=26), inpatient female adolescent psychiatric patients (N=24), and a normal female comparison group (N=29). The results showed that Internalized anger was significantly higher in both the anorexic and general psychiatric patients as compared to normal controls, but this difference was significant only for the anorexic patients. Anorexic and general psychiatric patients experienced significantly less mastery than normal controls, but again this difference was significant only in the anorexic group. Within the anorexic group, severity of symptoms correlated significantly with internalized anger, low mastery, and external locus of control, and negative significant correlations among control measures and anger were found. Total length of hospitalization correlated positively with internalized anger only for the anorexics. It was thus concluded that the findings support the notion that internalized anger and defective experience of self-control are important factors in the psychopathology of adolescent anorexic inpatient females. The results may have implications for the clinical management of patients with severe AN.

Kitamura and Hasui (2006) have studied the effects of anger feelings (rated by the State-Trait Anger Expression Inventory) and witnessing family violence on anxiety and depression (rated by the Hospital Anxiety and Depression Scale) were examined in 457 junior high school students. Anxiety and depression scores were correlated with frequencies of witnessing family violence. In a regression analysis,
however, after controlling for the demographic variables and depression score, the anxiety score was predicted by State Anger, Anger-Out, and Anger-Control; the depression score was predicted, after controlling for the demographic and anxiety score, by State Anger, Anger-In positively, and by Anger-Out and Anger-Control negatively. Witnessing family violence failed to add significant contribution in predicting anxiety or depression. These results were generally supported by structural equation modeling. The effects of witnessing family violence on dysphoric mood may be mediated by anger feelings. The style of dysphoric mood may be predicted by the style of anger expression.

Leary, Twenge and Quinlivan (2006) review the literature on the relationship between interpersonal rejection and aggression. Four bodies of research are summarized: laboratory experiments that manipulate rejection, rejection among adults in everyday life, rejection in childhood, and individual differences that may moderate the relationship. The theoretical mechanisms behind the effect are then explored. Possible explanations for why rejection leads to anger and aggression include: rejection as a source of pain, rejection as a source of frustration, rejection as a threat to self-esteem, mood improvement following aggression, aggression as social influence, aggression as a means of reestablishing control, retribution, disinhibition, and loss of self-control.

Salisch and Vogelgesang (2005) showed that as anger in close relationships is not only a source of strain, but can also serve to further emotional competence, a questionnaire was constructed on nine strategies of anger regulation within a same-sex friendship (SAR). A factor analysis of the children's version resulted in four factors. A confirmatory factor analysis corroborated the comparability of the factor structures of the children's and the adolescents' version of the SAR. Results of a 5-year longitudinal study suggest that participants tended to use negotiation more frequently as adolescents than as children. Aggressive and distancing strategies declined in adolescence. Results are discussed under the perspective that learning to manage conflicts of interest and anger without resorting to hostility (or avoidance) is a social task in friendship.

Fitzgerald and Behav (2005) hypothesized that youth with elevated coronary heart disease (CHD) risk who exhibit diminished social-emotional competence and
frequent anger in adolescence experience increased occupational stress after becoming adults. Perceived job control and support from coworkers in 57 young Black and White men and women were regressed on measures of social problem-solving skill (SPS) and anger arousal (AR) obtained 5 years earlier when participants were in high school. In models controlling for grade point average (GPA), SPS and GPA independently predicted coworker support in adulthood; anger in high school predicted diminished job control. These findings suggest that occupational stress may have identifiable social-emotional antecedents early in life.

Johnson et al. (2005) using logistic and multiple regressions, examined the association between hostility, level of depressive symptoms, and smoking in a sample of 1699 ethnically diverse students in California. Self-reports were collected twice from each student, at the beginning of the 6th and 7th grade years. Among 6th graders who had not smoked, depressive symptoms and hostility were associated with smoking initiation by the 7th grade. Among those students who had already tried smoking, increases in depressive symptoms and hostility were associated with more frequent smoking. The association between hostility and smoking was stronger for students reporting higher levels of depressive symptoms.

Phillips, Henry, Hosie and Milne (2005) proposed that emotion regulation has been argued to be an important factor in well-being. The current study investigated the effects of adult aging on emotional expression, emotional control and rumination about emotional events, focusing on an emotion which is particularly important in social interaction: anger. Measures of anger regulation and well-being were obtained in a sample of 286 adults aged between 18 and 88. Older adults expressed anger outwardly less often, and reported more inner control of anger using calming strategies compared to their younger counterparts. These age differences were not explained by variance in social desirability of responding. Age improvements in negative affect and anxiety were partly explained by age differences in anger regulation suggesting an important role for anger management in good mental health amongst older adults. Further, age improvements in quality of life were explained by variance in anger regulation indicating that improved management of emotions with age is an important factor in maintaining well-being in old age.
Boxer and Butkus (2005) presented a case of successful treatment provided to an early-adolescent African American male diagnosed with conduct disorder. Treatment in this case was conceptualized using a cognitive-ecological framework for understanding the development of aggressive behavior. Specific interventions included individual social-cognitive psychotherapy, family psychoeducation, and school collaboration. Implications for research and practice involving the treatment of aggressive youth are discussed, and recommendations for clinical work based on the cognitive-ecological framework are offered.

Martsch (2005) compared two group treatments for aggressive behavior in adjudicated male adolescents: a cognitive-behavioral program (low process) and a program integrating group interaction with cognitive-behavioral training (high process). Method: The court-ordered adolescents were divided into two age groups, younger and older, and randomly assigned to one of the two treatment conditions for 10 weekly 2-hour sessions. Data were collected at pretest, posttest, and 9-month follow-up. Dependent variables included recidivism, behavior ratings, parent-teen conflict, anger control, social problem-solving, and social skills. The analysis was ANOVA on the ranks of adjusted gain scores. Results: High process was more effective for the older boys, and low process was more effective for the younger boys on conduct disorder and parent-adolescent conflict. Conclusions: The older boys appeared more cognitively and socially able to take advantage of the self-determined, interactive format, whereas the younger boys seemed to respond better to the leader-guided, highly structured format.

Chi (2004) found that Ten to 30% of students engage in bullying behavior. Bullies stand out on account of increased anger, poor interpersonal relationships, and poor quality of life. Our aim was to determine the effectiveness of outpatient family psychotherapy as a monotherapy for anger reduction and improvement of behavior and interpersonal relationships and of health-related quality of life in male youths with bullying behavior. Twenty-two boys with bullying behavior took part in a family therapy program for 6 months. The control group was also composed of 22 youths and took part in a placebo intervention program. Every 2 weeks, results were checked with the Adolescents Risky-Behavior Scale (ARBS), the State-Trait Anger Expression Inventory (STAXI), the Inventory of Interpersonal Problems (IIP-D), and the SF-36
Health Survey (SF-36). Follow-up testing took place 12 months after treatment. In comparison with the control group (according to the intention-to-treat principle), bullying behavior was reduced (family therapy group: from n = 22 to n = 6; control group: from n = 22 to n = 20). Significant changes on all ARBS scales and on the STAXI scales State-Anger, Trait-Anger, Anger-Out, and Anger-Control were observed after 6 months. In the IIP-D, significant differences were found on the scales for overly autocratic, overly competitive, overly introverted, overly expressive, and exploit/able/compliant. In the SF-36, significant differences were observed in general health perceptions, vitality, social functioning, role-emotional, and mental health. The reduction in expression of anger correlated with a reduction in several scales of the ARBS, IIP-D, and SF-36. Follow-up after 1 year showed relatively stable, lasting treatment effects. The results of this study show that outpatient family therapy seems to be an effective method of reducing anger and improving interpersonal relationships and health-related quality of life in male youths with bullying behavior.

Currie (2004) describes Doing Anger Differently (DAD), a group treatment for young adolescent boys with high levels of anger. The approach is school-based, 10 weeks long, and utilizes music in the form of percussion to engage this difficult to treat population into treatment and to represent the experience of anger. A tri-level intervention is described: the experience of anger and its influence on action; the formation of meaning and identity resulting from anger and aggression; and the emphasis on group work and the interpersonal basis of anger. Techniques used throughout the group are discussed and illustrative case vignettes are provided.

Yukawa (2004) investigated sex differences in the relationships among anger, depression, and coping strategies. Undergraduate students, 77 men and 130 women, not identified by sex, voluntarily participated. Participants made ratings on a self-report about anger, depression, coping strategies, and mental health. Analyses showed that women who reported themselves as angry tended to cope with stress by optimistic and active strategies, while women who reported themselves as depressed tended to cope with stress by withdrawn and passive strategies. Men who reported being depressed tended to select emotion-focused cognitive coping, while men who reported being angry selected no specific coping. Adoption of engaged emotion focused coping strategies were related to mental health only for women.
Starner and Peters (2004) studied the clinical significance of childhood hypertension is important as elevated pressures during childhood are found to follow a progressively increasing track into adulthood. Little work has been done to examine the relationship of emotions and emotional behavioral factors to the development of hypertension in children. Using the Roy Adaptation Model as a guide, this study investigated the relationship of anger expression and blood pressure (BP) among adolescents 16–18 years of age. Participants were 63 urban high school seniors. Measurements included the Anger Expression Inventory, a Demographic Questionnaire, and measures of systolic and diastolic blood pressure. Analysis revealed significant positive relationships between anger expression with blood pressure, and a significant inverse relationship between blood pressure and the control of anger for girls. No significant relationships between anger expression and blood pressure were noted for boys. The majority of students (53%) were found to have high normal or hypertensive blood pressure readings, putting them at increased cardiovascular risk.

In a major study, Lowenstein (2004) suggested that contrary to popular belief, anger has both positive and negative aspects, and hence, there is a value to anger. Properly directed anger can lead to positive action and produce feelings of being in control of situations perceived to be threatening. On the other hand, there are a large number of negative repercussions with the feeling and expression of anger, i.e., negative physiological reactions such as increased blood pressure and heart rate. Anger appears to be age and gender related and is likely precipitated by a particular situation. There are a number of diagnostic and treatment approaches to anger management that are discussed here with reference to their usefulness with adult and child and adolescent populations. Programs that are used early and long enough appear to promise good results in preventing further expressions of anger or internalised anger.

Kerr and Schneider (2004) found that understanding the links between anger expression by children and adolescents, their health, and their interpersonal interactions is important given the evidence that anger is associated with maladjustment and illness among adults. This review covers: 1) possible origins of the awareness and expression of anger; 2) assessment of anger in children and
adolescents, including both self-report and observational approaches; 3) implications of anger expression for interpersonal relationships; and 4) outcomes of anger expression. Dimensions of anger expression found in adults have been corroborated to some extent in child and adolescent data. Reliable and valid measures of these dimensions have been developed. There has been much less research on the correlates of maladaptive anger expression in children or adolescents than in adults. Nevertheless, the current data base provides some confirmation that youth who cope inappropriately with their anger are at risk for problematic interpersonal relationships and negative outcomes in terms of both mental and general health.

It their study, Weiner et al. (2004) Examined the relationships among selected predictors of violence, including victimization, low conflict management efficacy, hostile anger and drug use in 8th-, 10th-, and 12th-grade adolescents. The study was a secondary analysis of data from a population-based, cross-sectional survey of health behaviors among adolescents (N = 3922). For each cohort, it was hypothesized that victimization and low conflict management efficacy would predict low hostile anger control, which would predict gateway drug use, and the subsequent development of hard drug use and violence. Overall model fit and the magnitude of specific paths were expected to increase across grades. Using structural equation modeling (SEM), results indicated acceptable model fit for 8th-grade (CFI = .95), 10th-grade (CFI = .93) and 12th-grade (CFI = .94) cohorts. Results suggest that the influence of relational victimization and conflict management efficacy on hard drug use may be mediated through low hostile anger control and gateway drug use.

Reyes, Meininger, Liehr, Chan, Mueller (2004) kept their Objectives as (a) to test ethnic, sex, and age group differences in STAXI scores in a sample of 11-to-16-year-old African, Hispanic, and European American adolescents; and (b) to assess the psychometric properties of the STAXI among these same adolescents with special emphasis on Hispanic youths, for whom no data are available. A cross-sectional design was used with stratified quota sampling techniques. Participants (N = 394) were African, Hispanic, and European Americans aged 11-16 years and were drawn from one public middle school and two public high schools in Houston, Texas. Internal consistency reliability for the anger scales (STAXI) ranged from 0.61 (anger-in) to 0.91 (state-anger) for the younger group (aged 11-13 years), and 0.68 (anger-in)
to 0.88 (state-anger) for the older Hispanic Americans (aged 14-16). No notable differences were seen among the three ethnic groups in regards to internal consistency. Results of factor analyses of the five anger scales were similar to those reported originally by the scale author. Ethnicity and age had statistically significant main effects on the anger scales, and there was only one interaction.

Sigfusdottir and Silver (2004) investigated the effects of negative life events on anger and depressed mood among a sample of 7,758 Icelandic adolescents, measured as part of the National Survey of Icelandic Adolescents (Thorlindsson, Sigfusdottir, Bernburg, & Halldorsson, 1998). Using multiple linear regression and multinomial logic regression, we find that (a) girls and boys tend to experience different negative life events, (b) negative life events are associated with comparable levels of anger among boys and girls, (c) negative life events predict depressed mood more strongly among girls than among boys, and (d) conflict with family and friends predicts anger and depressed mood more strongly than other negative life events among boys and girls. These results raise questions about the role of anger and depressed mood in explaining gender differences in stress-related delinquent behavior.

Clark and Phares (2004) conducted study which explored the relations between aspects of family functioning (parent-child relationship, family and self-expressiveness, and interparental conflict) and young adults’ patterns of anger expression. Contrary to the hypothesis that family and self-expressiveness would be related to interparental conflict, the results suggested that young adults’ retrospective reports of interparental conflict were related only to family expressiveness. Self-expressiveness, however, appeared to be associated more with the socialization of emotional expression within a family than with how parents handled angry emotions between themselves. As hypothesized, negative self expressiveness was associated with negative family expressiveness. Positive self-expressiveness, however, was related to positive and negative family expressiveness. Interparental conflict was related to the experience and expression of anger, especially with violent marital conflicts. The findings supported the hypothesis that interparental conflict would be negatively related to perceptions of the parent-child relationship and parental emotional availability. The findings better illustrate the relationship between one’s
Kaufmann et al. (2003) found in their study that anger and aggression in school children are a major concern in American society today. Students with high anger levels and poor cognitive processing skills are at risk for poor relationships, underachievement in school, and health problems. This article describes characteristics of children who are at risk for high anger levels and aggression as well as those who are able to modulate their anger. Results of a survey are reported which describe levels of anger in 624 rural high school students. This sample reported lower levels of anger, compared to the normative group. Differences among the sample include higher internal anger expression in girls, higher trait anger in boys ages 15–16, and higher trait anger in girls ages 16–17. Recommendations are made for future research and specific steps that school nurses can take.

Hogan, Linden (2003) used a new model of anger responding that comprises 6 independent anger response styles in 2 dimensions: Aggression, Assertion, Social Support Seeking, Diffusion, Avoidance, and Rumination. Linear and interactive relations between the anger response styles and resting and ambulatory BP were tested, controlling for traditional risk factors and level of hostility. Data from 2 samples of different cardiovascular health status were examined. In Study 1, 109 healthy participants (45 men and 64 women) were recruited. Study 2 involved a sample of 159 hypertensive patients (90 men and 69 women). All participants provided demographic and health information; completed the Behavioral Anger Response Questionnaire, a hostility measure; and underwent resting BP measurement. Study 2 participants also provided 24-hr ambulatory BPs. Examination of linear effects revealed inconsistent associations between anger response styles and BP. The moderating effect of Rumination on the relationship between the other anger response styles and BP was examined next. Rumination had a deleterious influence on the relation between Avoidance and Assertion and resting and ambulatory BP levels. The moderating influence of Rumination on Social Support Seeking varied between the genders. Overall, the results suggest that rumination is a critical moderating variable in the relation of anger and BP.
Bongard and Absi (2003) found that anger expression has been linked to hypertension, although assessment of anger expression has not accounted for situational influences. We predicted that anger expression style varies across social situations. Two studies assessed reported anger expression in three domains (home, work, and during free time) and compared findings to those obtained using a global assessment. Participants reported expressing anger more openly when at home and they tend to exert greater control when at work. The domain-specific assessment was also more sensitive to sex differences than the general assessment. The second study examined the influence of this domain-specific anger expression assessment on blood pressure (BP) at rest and during acute challenge. In addition to replicating the first study, the second study showed that open anger expression particularly at work was associated with elevated BP. These studies represent a first step towards improving assessment of anger expression and determining how anger might relate to hypertension risk.

Pica, Engel and Welches (2003) found Groups that target aggression on the inpatient milieu usually use psycho-educational and cognitive-behavioral techniques. In contrast, this article presents an experiential approach that targets the moment-by-moment experience within the inpatient group. It makes unique use of group-closing relaxation exercises that facilitate cohesion, consolidate the affectively charged material generated during the session, and reorganize patients' emotional/cognitive understanding of themselves and the world around them. These groups also give patients the opportunity to negotiate the affective residue associated with past aggressive acts, and the opportunity to examine the personal meaning and underlying assumptions behind ongoing group interactions. We describe several techniques or modes of intervention. The authors also use case examples to illustrate the theory, technique, and impact the approach can have on its members.

Howells and Day (2003) found that anger management methods are a common and successful feature of contemporary cognitive behavioral therapy. Meta-analyses and narrative reviews of the outcome of anger management have been broadly supportive of the view that it is an effective approach. We argue in this paper that an important impediment to the future success of anger management is the failure to fully address the issue of treatment readiness. We discuss distinctive features of anger
that make readiness a more important issue than it is for other problem emotions and affects. Relevant theoretical models of readiness are discussed and we review the components of a lack of readiness, including difficulties in establishing a therapeutic alliance. Progress in this area requires greater attention to the measurement and analysis of readiness, to its inclusion as an independent variable in outcome studies and to its clinical modification when readiness is low.

Coles, Greene and Braithwaite (2002) suggested that a multitude of psychological and social factors can interact to place adolescents at risk for aggression and violence. This study examined three of these factors: personality, affect, and family. Using a heterogeneous sample of male adolescents at risk for violence, a hierarchical, agglomerative cluster analysis was conducted to categorize these adolescents in terms of personality characteristics. Results of the analysis suggested three clusters of at-risk adolescents. Examination of the three cluster types found distinctions between groups on anger expression, trait anger, and trait anxiety, but not family control. It was concluded that, among male delinquents, elevated psychopathology is associated with higher anger and anxiety, but not higher family control.

Richards, Deffenbacher and Rosén (2002) examined differences between college students with high and low symptoms of Attention-Deficit/Hyperactivity Disorder (ADHD). Fifty-nine introductory psychology students completed ADHD diagnostic measures and were compared on measures of driving anger and driving anger expression; accident-rotated, aggressive, and risky driving behaviors; general anger; and general anger expression. Results indicated high ADHD symptom college students experience more driving anger, display such anger in more hostile/aggressive ways, are more aggressive and risky on the road, experience more crash-related outcomes, are more generally angry, and tend to display anger in socially unacceptable ways. Results are discussed in regard to the understanding and treatment of ADHD.

Lamb, Puskar, Sereika, Patterson, Kaufmann (2002) studied the Anger and aggression in school children are a major concern in American society today. Students with high anger levels and poor cognitive processing skills are at risk for poor relationships, underachievement in school, and health problems. This article describes
characteristics of children who are at risk for high anger levels and aggression as well as those who are able to modulate their anger. Results of a survey are reported which describe levels of anger in 624 rural high school students. This sample reported lower levels of anger, compared to the normative group. Differences among the sample include higher internal anger expression in girls, higher trait anger in boys ages 15-16, and higher trait anger in girls ages 16-17. Recommendations are made for future research and specific steps that school nurses can take.

Clark, Novak and Dupree (2002) examined the relationship of perceived parenting practices to anger and coping in a sample of 70 African-American adolescents. Regression analyses revealed that perceptions of parental strictness were negatively related to anger temperament, anger-out, and avoidance (all p less than 0.05), and was positively associated with engaging in demanding activities (p less than 0.02). Additionally, perceptions of parental involvement were positively related to seeking diversions (p less than 0.04), and perceptions of parental autonomy granting were negatively related to anger-out (p less than 0.02). These findings highlight the potential importance of the perceived parent-adolescent relationship for African-American adolescents.

Park, Han, Shin, Kang, Moon (2002) designed the study to identify anger-expression types of adolescent women and investigate the relation between the identified anger-expression types and their problem behaviors and health status. One hundred ninety nine high school freshmen were recruited from September to November, 2003. Data was analyzed using descriptive statistics, cluster analysis, chi(2)-test, ANOVA, and Duncan's multiple comparison test. Three anger-expression types in adolescent women were found; Anger-out/in, Anger-control/in, and Anger-control type. Adolescent women with frequently using the anger-out/in type and with higher state anger reported more delinquent behaviors, more health risk behaviors, and higher psychosomatic symptoms. However, adolescent women with lower state anger and frequently using the anger-control type reported more depression scores. There is a need to further clarify the relationship between anger-expression types and depression in adolescent women. The findings suggest the necessity of a development of the program for lowering the anger level and controlling the unfavorable anger expression types such as the anger-out in.
Yarcheski, Mahon, Yarcheski (2002) put the objectives of this study as to examine sex differences in anger in early adolescents, and to examine the relationship between anger and several health variables, e.g., current health status, clinical health, eudaimonistic health for boys and girls separately. This study compared differences in five anger variables between boys and girls, and examined relationships between the anger variables and health variables for boys and girls separately. The final sample consisted of 148 seventh and eighth graders, ages 12 to 14; 81 were girls and 67 were boys. They responded to the State-Trait Anger Expression Inventory and instruments measuring three health variables. Using multisample analysis via LISREL 7 and independent t tests, findings indicated that boys and girls did not differ in the experience and expression of anger. Pearson correlations were used to examine the relationships between the anger variables and the health variables for boys and girls separately. Of the 30 relationships examined, 12 were statistically significant; seven of these correlations were for girls, while five were for boys. Early adolescent boys and girls may not differ in any meaningful way in self-reported experiences and expressions of anger, but they may differ in health outcomes in relation to various types of anger.

In a study, Armstead and Clark (2002) examined the psychometric properties of the Spielberger state-trait anger expression inventory (STAXI) and Framingham (FAS) anger scales in 86 African American youth. Significant gender differences were not observed for the STAXI or FAS subscales scores (all p>0.17). Inter-scale correlations revealed that the anger-in and anger-out subscales of the STAXI and FAS were measuring similar, yet different constructs. For the STAXI, intra-scale correlations indicated that the anger-in and anger-out subscales were not independent (p<0.001), whereas the anger-in and anger-out subscales (FAS) were not statistically related (p>0.05). The component structures for the anger-control subscale (STAXI) and the anger subscales (FAS) were similar to those reported by the scale authors.

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Steven and Paul (2002) explored the relationship between self-report measures of anger and anger expression with those of social rank (unfavourable social comparison and submissive behaviour) and feelings of entrapment in a student population (n=197). We further investigated if the social rank/status of the target of one's anger affects anger experience and expression. Students were given Spielberger's (1988) [Spielberger, C.D. (1988) Manual for the state-trait anger expression inventory (STAXI)]. STAXI measure of anger and asked to complete it in three ways. First, in the normal way, and then two further times after reading two scenarios that involved lending an important and needed book which the lender fails to return, where the lender was either an up rank/authority figure (one's tutor) or a down rank, fellow student. It was found that self-perceptions of unfavourable rank (inferior self-perceptions and submissive behaviour) and feeling trapped significantly affect anger suppression. It was also found that the rank of the target significantly affects anger expression and that people who respond angrily to criticism tend to show more down rank-anger when they are frustrated by a lower rank target and modulate their anger according to the rank of the person they are angry with.

Taylor (2002) investigated that rates of aggression amongst people with intellectual disability (ID) have been found to be high in studies conducted on several continents across a number of service settings. Aggression is the primary reason for people with ID to be admitted or re-admitted to institutional settings, and it is also the main reason for individuals in this client group to be prescribed behaviour-control drugs. Anger is a significant activator of aggression, but little is known about the emotional aspects of the lives of people with ID. There are many reasons for this, but a lack of reliable and validated assessment measures is chief among them. The present review found that very little work has been conducted to date concerning the development of robust tools for assessing anger and aggression in this population. A narrative review of interventions for reducing aggression and anger in people with ID
showed that there is virtually no evidence to support the use of psychotropic medications. Research has shown that behavioural interventions can be effective; however, they are intrusive and have not been tested in naturalistic settings with higher-functioning clients and low-frequency aggression. More recently, cognitive-behavioural interventions have shown promise, but the mechanisms for effective change have yet to be delineated. Priority research questions relating to assessment, treatment and therapeutic skills in working with anger and aggression problems are offered by the present review.

Thomas (2002) proposed the project to examine age differences in anger frequency, intensity, and expression in a nonclinical sample of students, faculty, and staff who participated in a health fair at a large southeastern university. This descriptive study involved a predominantly white sample, ranging in age from 18 to 76 years. There were 206 men and 199 women. Anger variables were measured by an instrument to assess anger at home and at work or school. No significant age differences were found in anger experienced at home. Women in their 40s scored significantly higher on anger at work than did women of other ages; moreover, their scores were almost twice as high as the scores of men in their 40s. Significant age and gender differences were found in the propensity to overtly express anger, with younger women (those in their 20s and 30s) having the highest mean scores on Total Expressed Anger. Findings of this study suggest the need for continued exploration of anger in samples of diverse ages so that anger management interventions can be appropriately tailored for clients.

Foley, Hartman, Dunn, Smith, Goldberg (2002) suggested that self-report instruments can provide useful information as part of a thorough clinical assessment. However, their use in forensic settings can be problematic. The State-Trait Anger Expression Inventory (STAXI) has recently been proposed as an effective instrument for screening and outcome measurement in anger management programs. This study evaluated the effectiveness of this instrument in a sample of both voluntary and court-ordered anger-management clients, all of whom were determined through diagnostic interviews to have significant anger problems. Contrary to findings in nonforensic samples, the STAXI Trait Anger scale identified only about half of the participants as having anger-management problems severe enough to require intervention.
Supplemental analysis with two additional scales did not significantly improve sensitivity. In addition to thorough diagnostic interviewing, forensic use of the STAXI (like similar assessment methods) may require additional validity scales to detect denial or socially desirable response patterns.

Cautin, Overholser, Goetz (2001) suggested that anger can play an important role in depression and suicide risk among adolescents. The present study evaluated internalized and externalized anger in 92 adolescent psychiatric inpatients. Results indicated that adolescents who internalized their anger were more likely to be depressed and to experience feelings of hopelessness. In addition, adolescents who internalized their anger made more serious suicide attempts than did those who externalized their anger. In contrast, adolescents who externalized their anger were more likely to have alcohol-related problems. Thus, different modes of anger expression appear to be related to different manifestations of psychopathology. It was concluded that assessment of mode of anger expression in adolescents may enhance our understanding of suicide and its risk factors.

Adolescent Anger Rating Scale (Burney, 2001), the coping function questionnaire (Kowalski & Crocker, 2001), and measures of primary and secondary cognitive appraisals of recent anger provoking events. High-trait-anger athletes used significantly more problem- and emotion-focused coping strategies than those who scored lower. Additionally, those participants who scored higher in reactive anger reported significantly more anger outbursts than those who scored lower. No gender differences were observed. Applied cognitive and behavioral recommendations are discussed.

Burney and Kromrey (2001) found that the Adolescent Anger Rating Scale (AARS) was designed to (a) measure two distinct types of anger: instrumental and reactive, and (b) assist researchers and practitioners in identifying specific types of anger in adolescents. The present study investigated the construct validity of AARS scores. Seven hundred ninety-two 12-to 19-year-old adolescents in Grades 7 through 12 participated in the study. Factor analysis yielded three factors: Instrumental Anger, Reactive Anger, and Anger Control. Moderate to moderately high Cronbach alphas and test-retest reliability coefficients indicated that scores from the AARS are internally consistent and stable when measuring anger subtypes. Discriminant validity
evidence supported the AARS scores' ability to measure specific types of anger different from constructs of anger measured by the Multidimensional Anger Inventory (MAI).

Lutwak, Panish, Ferrari and Razzino (2001) conducted a study on College students (174 females, 91 males) completed measures of shame, guilt, expectations for future success, and styles of anger expression. Significant gender differences were found in proneness for both shame and guilt, with young women exhibiting a greater propensity for shame and guilt than young men. For both females and males, however, shame-proneness was positively related to expressions of inward anger. Among males and females, guilt-proneness was negatively related to outward anger, but positively related to anger control. For females, guilt-proneness was also negatively related to expectations for future success. Multiple regression analyses indicated that for male and female late adolescents, the best positive predictor of shame-proneness was inward anger. Gender differences emerged in predicting guilt-proneness; greater anger control, lower outward anger, and lower expectations for future success significantly predicted this variable among females.

Hatch and Forgays (2001) investigated that there has been an increase in research on anger in girls and women. However, few researchers have examined anger across different groups of females. The goal of this study was to examine the experience and expression of anger in individuals who differ by age and employee/student status. Two female populations, university students and employees, described their reactions to a hypothetical work/school-related situation. Similar factors elicited an angry emotion, but there were group differences in the responses to the anger experience. The results are interpreted from a gender schema perspective, taking the contextual influence of developmental period and employee/student role into account.

Dworkin and Larson (2001) utilized the Family Environment Scale and the Experience Sampling Method to evaluate how overall family discord and discord in immediate family interactions were related to adolescents' age, in 101 single-mother families. Mothers' reports of overall family discord decreased across adolescence. In immediate interactions, adolescent boys reported feeling more anger towards their mothers with age, while girls reported feeling less anger with age.
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In one study, Cautin, Overholser and Goetz (2001) investigated that anger can play an important role in depression and suicide risk among adolescents. Their study evaluated internalized and externalized anger in 92 adolescent psychiatric inpatients. Results indicated that adolescents who internalized their anger were more likely to be depressed and to experience feelings of hopelessness. In addition, adolescents who internalized their anger made more serious suicide attempts than did those who externalized their anger. In contrast, adolescents who externalized their anger were more likely to have alcohol-related problems. Thus, different modes of anger expression appear to be related to different manifestations of psychopathology. It was concluded that assessment of mode of anger expression in adolescents may enhance our understanding of suicide and its risk factors.

Wyatt, Laura and Haskett, Mary (2001) examined aggressive and non-aggressive young adolescents' attributions of intent in hypothetical teacher-student interactions. Found that when teachers' intentions were ambiguous, aggressive adolescents were more likely than non-aggressive adolescents to attribute hostile intentions to teachers, were more likely to blame teachers for the outcome, and reported higher anger levels. With benevolent teacher intention, aggressive and non-aggressive youth responded similarly.

In another study, Donnell, Robert, White and George (2001) describes how a Reality Adjustment Program involving interactions with prison inmates stresses the consequences of decisions made during adolescence and the program's impact on four
highly angry students for whom other interventions had failed. Suggests that by offering a variety of anger-related programs, middle level educators can learn what approaches work best with their most difficult students.

Fleming et al (2000) conducted a study on Nineteen troubled teens who participated in a nontraditional intervention to teach peaceful negotiation were recruited for a pilot study of anger management, violent behavior, and academic performance. The results showed that (a) anger mismanagement was unrelated to violent behavior, but was negatively related to control over time and concentration; (b) verbal assault was associated with an inability to communicate, whereas physical violence was associated with a lack of goal direction; and (c) academic performance was negatively related to self-esteem and teacher support, but positive performance change was associated with mother contact and better time management.

In their study, Sharry and Owens (2000) examined the process of engagement within group work with adolescents identified as having anger problems. We look at how the traditional social learning model of anger management can be complemented by ideas from constructive therapies such as solution-focused therapy, in building cooperation with this client group who are often seen as demotivated or 'hard to engage'. Using the case example, we detail how blocks to group process were created by our assumptions about the boys’ perceptions and understanding of anger, and show how the constructive approaches gave us a way of understanding, which allowed a more cooperative and collaborative way of working.

Cox, Stabb and Hulgus (2000) found that growing body of literature supports the link between anger suppression and depression and females' greater likelihood than males of demonstrating both. Anger suppression was hypothesized to be involved in the development of gendered identity for girls, specifically by rendering girls more likely to experience depression. Employing an ethnically diverse sample of public school children, differences between fifth through ninth grade girls and boys in anger suppression and depression were investigated using self-report data. Results supported the hypothesis that girls suppress anger at higher rates than boys but not the related hypothesis that this suppression results in higher levels of depression. Age was not related to either anger suppression or depression, and no significant relationship was found between suppressed anger and depression for either sex.
Musante, Treiber, Davis, Waller and Thompson (1999) conducted study in which Internal consistency, temporal stability, and principal components structures of two self report anger expression scales used in pediatric health research were examined in 415 youth (216 White, 199 Black; 191 boys, 224 girls; mean age 14.7 years). Participants completed the Anger Expression Scale (AXS) and the Pediatric Anger Expression Scale (PAES) on two occasions separated by approximately 1 year. Psychometric properties of the two scales were examined and compared with those reported by the scale authors. For both the AXS and the PAES, estimates of internal consistency (Cronbach's alpha) were acceptable and comparable to values reported by scale authors. Temporal stability of both scales was significant over 1 year. Principal components structures for both scales were similar to those reported by scale authors. Results were generally consistent for age groupings (<13, 13-18 years), ethnicity, and gender. It is concluded that further research using the AXS and PAES is warranted. The stability of anger expression over time and the assessment of anger suppression is discussed.

Weiner, Pentz, Turner, Dwyer (1999) studied to evaluate the longitudinal relationship of alcohol use in early adolescence to anger in late adolescence. The study showed that alcohol use in early adolescence was associated with increased anger, both in middle and late adolescence, controlling for gender, age, and socioeconomic status. The findings suggest that alcohol and drug prevention programs delivered in early adolescence may have the capacity to prevent risk for later anger and related violent behavior.

Schieman (1999) proposed that age differences in roles, personal and social circumstances, the sense of control, health, and socio-emotional outlook explain the association. I use data from a 1981 representative sample of 951 physically disabled individuals from Southwestern Ontario, Canada and a 1996 national probability sample of 1,450 U.S. respondents—the General Social Survey (GSS). Both surveys show a negative association between age and anger. In the Ontario sample older people are more likely to occupy widowhood and retirement roles, live with fewer people, have less interpersonal estrangement, and have fewer life events; these characteristics explain their lower anger. Also, were it not for their lower control and worse health older people in the Ontario sample would report even lower anger. In the
GSS sample, age differences in household composition, satisfaction with family life and financial circumstances, perceived time pressures in daily life, religious involvement, and socio-emotional outlook contribute to the lower anger among older adults. Collectively, my findings show that the psychosocial and structural environment—experienced differently by age— influences the risk of anger.

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In a study, Tucker, Gold and Garcia (1999) investigated about the increase in aggressive behavior by teenagers is of current concern to society. An area of particular concern is the rise in court-referred placements to residential treatment centers for adolescent males who commit violent acts. The purpose of this study was to investigate the impact of Anger Management Training on reducing aggressive behavior in court-referred adolescent males in a residential treatment facility. Adolescent males (N = 20) were pre-tested on the State-Trait Anger Expression Inventory (Spielberger, 1996) and the Provocarion Inventory (Novaco, 1995). They then participated in 12 anger management training sessions after which they were re-tested. A repeated measures analysis of variance indicated significant differences (p <.01) in post-test scores. Anger management training may be an effective treatment strategy for reducing aggressiveness among adolescent offenders.
Stern (1999) studied that the first outcome investigation of the role of anger management in parent-adolescent conflict. Eighteen parent-adolescent dyads were randomly assigned either to a conflict resolution group treatment (CR Alone) or a combined conflict (anger) management and conflict resolution group treatment (CM+CR). Although parents and teens in both conditions significantly increased communication and problem-solving skills and reduced conflict at home from pretest to posttest, the findings suggest that CM+CR parents and teens were able to manage their anger significantly better than their CR Alone counterparts. Results are discussed in terms of the potential efficacy of anger management and of small group treatment for parent-adolescent conflict and the need for further research.

Wekerle and Wolfe (1999) suggested that Adolescent dating violence is an important juncture in the developmental pathway to adult partnership violence. As a window of opportunity for positive change, the present review considers the theoretical and empirical work on adolescent dating and dating violence. A consideration of the scope of the problem, developmental processes, and theoretical formulations precede a review of six relationship violence prevention programs designed for and delivered to youth. Five programs are school-based and one operates in the community. Prevention is targeted toward both universal (e.g., all high school students) and selected adolescent populations (e.g., youths with histories of maltreatment, or problems with peer aggression). Programs addressed specific skills and knowledge that oppose the use of violent and abusive behavior toward intimate partners; one program addressed interpersonal violence more generally, and was also included in this review because of its implications for dating violence initiatives. Positive changes were found across studies in violence-related attitudes and knowledge, also, positive gains were noted in self-reported perpetration of dating violence, with less consistent evidence in self-reported victimization. However, these findings should be considered preliminary due to limited follow-up and generalizability. Conceptual and methodological issues are discussed with a view toward improving assessment methods and research design.

Kellner, Millicent, Bry and Brenna 1999) showed the results of an anger management program for emotionally disturbed adolescents (N=7) who scored in the clinical range on the Conduct subscale of the Conners Teacher Rating Scale. The
program included psychoeducation, anger discrimination training, and training on prosocial responses to anger. Results indicate evidence of positive effects, including a trend toward fewer incidents of physical aggression.

Snyder, Kymissis and Kessler (1999) investigated the efficacy of a brief, manual-based group therapy for adolescents with poor anger control. A previously developed anger management treatment package of 10 to 12 sessions was condensed to a 4-session package to be given within 2 weeks. Immediate effectiveness and the transfer of skills were investigated; anger management skills not only had to be acquired, they also had to be used in the adolescents' natural social interactions. Fifty adolescent psychiatric inpatients were selected for high levels of anger and randomly assigned to treatment or control conditions. Pre- and posttreatment measures were administered to subjects and adults who rated the subjects' behaviors. Pre/post self-report measures, as well as behavior ratings by adults, indicated that the patients who went through the anger management series exhibited significantly improved skills. These results suggested that the intervention for adolescents was effective even though it was condensed, but it should not be further abbreviated.

Down, Willner, Watts and Griffiths (1999) compared the efficacy of, and adolescents’ preferences for, a Cognitive Behavioural (CBT) and Personal Development (PD) Anger Management (AM) group. The CBT group aimed to help adolescents develop skills to manage predominantly reactive aggression. The PD group aimed to enhance motivation to develop less aggressive identities with less use of proactive aggression. Eighteen adolescents were randomly allocated to a 10-session CBT or PD AM Group; seven additional adolescents formed a control group. They completed pre- and post-intervention questionnaires to assess anger expression and control, use of AM coping skills (also completed by careers) and self-image. Participants were also interviewed pre- and post-intervention; transcripts were subjected to Interpretive Phenomenological Analysis. Both treatment groups demonstrated significant improvements in anger coping and self-esteem, relative to the control group. Participants’ age was significantly correlated with self-image and anger control outcomes in the CBT group. Qualitative analysis identified factors associated with improved outcomes, particularly regarding participants’ age, motivation and readiness to change, engagement in the therapeutic process, group
dynamics and emotional expressiveness. Our ability to interpret data clinically was enhanced by the use of a mixed quantitative-qualitative methodology. The results help us to better match interventions to clients.

Smith, Mullis, Kern and Brack (1999) investigated the perceived parental rejection, family cohesion and adaptability, and levels of trait anger and anxiety and their relationship to the etiology of aggression in adolescents who have been adjudicated for assaultive crimes. An attempt was made to translate these psychological constructs into a theory-based model from the principles of individual psychology by Alfred Adler. This study supports Adler’s aggression theory, which established that aggression may begin with feelings of inferiority or anxiety within the family. When these feelings of anxiety increase, some adolescents may use anger as a safeguard to their self-esteem. Adler described this use of anger as the compensatory movement and suggested that anger used to overcome feelings of inferiority results in aggression. This intense anger appears to direct attention, interests, perceptions, and memory into paths of impulsive aggression.

Swaffer and Epps (1999) looked at the anger assessment of youth at a secure treatment center. The State-Trait Anger Expression Inventory and Novaco Anger Scale proved useful as measures of anger in young people. Only one gender difference was found across both measure, which is consistent with research indicating that young women have greater tendency to direct anger toward self rather than others.

Sullivan, Kung, Farrell (1998) investigated about the relation between witnessing violence and drug use initiation among 6th graders attending middle schools in 5 rural counties and investigated the extent to which family support and parental monitoring moderated this relation. Data were obtained from 1,282 adolescents at 2 time points during the 6th grade. Witnessing violence predicted subsequent initiation of cigarette, beer and wine, liquor, and advanced alcohol use. Adolescents who reported high levels of family support and parental monitoring were less likely to initiate use across all drug categories except beer and wine. High levels of parental monitoring and family support were effective in buffering the relation between witnessing violence and initiation of cigarette and advanced alcohol use at low levels of witnessing violence. With increasing levels of witnessing violence,
however, the protective effects of monitoring and support were substantially diminished. These findings have important implications for research and intervention efforts.

Stevenson (1998) in his study African-American male risk and resilience is viewed as two sides of the same coin in this study that investigates the stability of cluster profiles of racial socialization beliefs. Responses of 208 urban African-American adolescent males from three different samples were used to empirically derive factors of spiritual/religious coping, extended family caring, cultural pride reinforcement, and racial awareness, which were then submitted to exploratory and confirmatory cluster analyses. Three reliable clusters were found across the samples and were identified as protective, proactive, and adaptive racial socialization beliefs. One-way ANOVAs were conducted on each sample separately and then combined with various psychosocial variables including anger expression, depression, religiosity, calamity fears, and kinship social support. The results supported the hypothesis that young males who hold an adaptive or proactive racial socialization identity tend to demonstrate more prosocial adjustment outcomes. The implications for prevention and community services are suggested.

Granic and Butler (1998) identified the tendency for youth to report antisocial beliefs as a major risk factor in delinquency. Advances in emotion research suggest the importance of examining the emotional concomitants of cognitive appraisals such as antisocial beliefs. The present study examined the relation between anger and antisocial beliefs in a sample of young offenders and investigated whether scores on either variable differentiated aggressive from non-aggressive offenders. Twenty-two aggressive and 20 nonaggressive young offenders were compared on two questionnaires measuring anger and antisocial beliefs, respectively. The findings revealed a significant correlation between the two measures. In addition, it was found that the aggressive offenders, compared to their non-aggressive counterparts, scored significantly higher on anger and antisocial beliefs. These findings extended previous research on the characteristics that differentiate aggressive and non-aggressive offenders. Results also support the rationale for incorporating both cognitive and affective components in intervention programs designed for aggressive young offenders.
Puskar, Sereika, Lamb, Tusae-Mumford, McGuinness (1998) Optimism is a stable personality trait that has important implications for behavior, yet little attention has been given to examining optimism in adolescents. This article describes levels of optimism in rural adolescents and the relationship of optimism with depression, coping, anger, and life events. The identification of optimism may be a vulnerability factor when screening adolescent mental health and, as such, has implications for the psychiatric nurse clinician.

Mueller, Meininger, Liehr, Chandler, Chan (1997) found that an uncertain relation between health and angry/hostile behaviour exists in the literature on adolescents. With data from a pilot study, one possible reason for this is explored: health measures such as blood pressure as well as angry/hostile behaviours may change with, or depend upon physical maturity, body size and body fatness. The sample consists of 60 African-, Hispanic-, and Anglo-American adolescents (15 to 16 years of age) drawn from a public school in Houston, TX. Using resting diastolic blood pressure as a model, in a sex stratified analysis, the following conclusions were reached: Physical maturity in girls and body height in boys were related to ethnicity in the sample and were confounders of the blood pressure and anger relationship. In girls secretive anger ('anger-in') and hostility were associated with increased body fat; expressive anger ('anger-out') in boys is associated with increased conicity (central body fat distribution) \( p < 0.01 \). These associations were independent of height and physical maturity. Hostility was not significantly related to diastolic blood pressure in boys after adjusting for height and conicity. 'Anger-in' was significantly and positively related to diastolic blood pressure in girls \( p < 0.01 \). This relationship was strongly mediated by per cent body fat, because the association of 'anger-in' and blood pressure was no longer statistically significant when the model included body fat. The results suggest that measures of physical maturity and more refined measures of body fat and body fat distribution should be considered in studies attempting to link adolescent blood pressure with anger expression.

Nugent, Champlin, and Wiinimaki (1997) describes the research on the effects of an anger control training (ACT) program conducted in a group home for adolescents in state custody for unruly and delinquent behavior. Comparisons were made between changes in antisocial behavior shown by adolescents who went through
ACT and those shown by (a) a random sample of comparable adolescents in state custody and (b) adolescents in a comparison group home. Results suggest that adolescents who received ACT showed greater improvement in overcoming antisocial behavior than did adolescents in either comparison group or those greater improvements were associated with longer involvement in ACT. Time-series data on rate of acting out incidents per week per client over a period of 61 weeks also were analyzed. Results suggest that statistically reliable improvements in rate of antisocial behavior began with the start of ACT and then began to deteriorate after an unplanned cessation of the ACT program.

In a study, Swaffer and Hollin (1997) spread some light on the little known topic of adolescent experiences of anger. The present study looks at adolescent anger within the confines of a residential establishment. Using a qualitative methodology to consider young peoples' own accounts of anger-provoking incidents, a description is given of typical settings, reactions, and outcomes in angry incidents. The implications of this information for both staff training and anger management programme were explored.

Moore, Thompson and Whited (1996) studied that fire setting in childhood and adolescence is associated with the more severe end of the conduct-disorder continuum and is considered to be prognostic of later pathology. The literature provides limited understanding of the pathology underlying firesetting in juveniles. This study compared the Minnesota Multiphase Personality Assessment-Adolescent profiles of 28 psychiatric inpatient adolescent boys with a history of firesetting with the profiles of 96 psychiatric inpatient adolescent boys who do not have a history of firesetting. Using multivariate analyses, the firesetting group appeared more pathological than did the nonfiresetting group as reflected by significantly higher scores on three clinical scales: Psychasthenia (Pt), Schizophrenia (Sc), and Mania (Ma). The firesetting group also scored significantly higher than did the nonfiresetting group on eight of the content scales: Adolescent-Depression, Adolescent-Alienation, Adolescent-Bizarre Mentation, Adolescent-Anger, Adolescent-Conduct Problems, Adolescent-Family Problems, Adolescent-School Problems, and Adolescent-Negative Treatment Indicators. Takes together, these results suggest that the pathology associated with juvenile firesetting is more complex as well as more severe than that
associated with nonfiresetting conduct disorder. The firesetting group's profiles suggest that their psychopathology is not merely a severe behavior disorder but rather is indicative of feelings of distress, alienation, depression, and thought disorder or poor reality testing. This degree of inner turmoil may be motivational impetus for the firesetting itself.

Lehnert, Overholser and Spirito (1994) found that anger can play an important role in adolescent suicidal behavior. However, there is disagreement over the relative importance of internalized versus externalized anger. The present study evaluated mode of anger expression in 104 adolescent suicide attempters and 323 high school students. The suicide attempters also completed measures of depression and hopelessness. Results indicated that suicidal adolescents displayed an increased likelihood of experiencing anger, reported significantly higher levels of both internalized and externalized anger, and displayed reduced tendencies for impulse control. Hierarchical multiple regression analyses found that the general inclination to experience anger was most closely related to externalized anger and poor impulse control. Among the adolescent suicide attempters, depression and hopelessness were related to internalized but not externalized anger. Thus, it may be useful to assess the mode of anger expression when evaluating adolescents for suicide risk.

Klingman and Zeidner (1993) investigate major determinants and sources of student anger in the classroom and to identify commonly employed student responses to anger stemming from interaction with students and teachers alike. The sample consisted of 338 students enrolled in five junior high schools. Data were collected on major sources of anger evoked by students' interaction with peers and teachers, as well as students' responses to these anger-evoking situations. Confrontive problem-solving figured prominently among student anger-coping techniques. While adolescent boys prefer coping with their anger through hostile thoughts and aggressive 'acting out' types of behaviors (e.g. cursing, physical assault, retaliatory thoughts and actions, etc.) as well as active or physical palliative forms, females preferred coping through venting emotions (crying, feeling sad), confrontive problem-solving and instrumental social support. The most commonly reported techniques students employed in coping with teacher-related anger were anger-in, instrumental coping, instrumental social support and direct control mechanisms. Relative to girls,
adolescent boys tended to cope more with teacher-related anger via aggression and to employ anger-out expressive behaviors. A number of techniques were found more frequently in coping with teacher than student-related anger, such as consulting with friends, consulting with parents, feeling of hatred. The implications for student counseling were discussed.

Lochman and Lenhart (1993) reviewed social cognitive models of children's aggressive behavior and cognitive-behavioral interventions based on these models. Findings of the distortions and deficiencies that aggressive children have in their social information processing are presented. Several current issues in social cognition research in this area are reviewed, including (a) applicability of the social cognitive models to severe aggression and to adolescents; (b) role of prior expectations influencing social perception; (c) influence of social goals, cognitive operation style, and arousal on information processing; and (d) the more distal influences of parent behavior and parent social cognition on children's social cognition. An anger coping program consistent with the social cognitive model is presented, and the outcome effects for this intervention and similar cognitive-behavioral interventions are reviewed.

Hill and Fortenberry (1992) argued that adolescence in American society was 'medicalized' into a full-blown symptom complex or pathologic condition. Culture-bound syndromes in highly differentiated societies such as the U.S., may be taxonomically sorted by distinctive cultural identity system domains of age, gender, family, vocation and ethnicity.

Hudley (1992) aimed the study at (a) exploring the linkages between attributions and affect and (b) comparing the content of causal thinking among incarcerated delinquent youth and their nondelinquent peers. Study 1 investigated attributions for the emotions of anger, pride, and guilt among 26 incarcerated male adolescents. Relatively few causes were found for anger and guilt, but a larger variety of causes were cited for pride. A follow-up study then compared causal attributions of 56 incarcerated adolescents with those of 57 secondary school adolescents, both male and female, for the affect of pride. Incarcerated youth typically attributed feelings of pride to activities culturally appropriate for adults. In addition, females cited school success as a source of pride at twice the rate of males. The importance of this research
for understanding and ameliorating the impact of typical life experiences on at-risk youth is discussed.

In a study, Hart (1991) examined how adolescents cope with different types of anger-provoking situations. Also explored is the degree to which coping changes or remains the same across different situations. Results showed that focusing-on-the-positive coping was negatively associated with anger reactivity in the face of both affiliation and achievement stress. In addition, individuals who engaged in wishful thinking coping in dealing with anger-provoking interpersonal stressors showed exaggerated anger reactivity, whereas seeking social support was positively related to anger reactivity in the context of stressful situations that threatened achievement needs. Results supported the notion that the emotional consequences of being exposed to stressful anger provocations may be mediated by individual differences in coping, and that the adaptiveness or maladaptiveness of some coping strategies depends on contextual factors such as the nature of the stressor. Moreover, the present data also supported the conceptualization of coping as a dynamic, situation-sensitive process.

Barfield and Hutchinson (1990) investigated that Learning about anger and its effects on self and others is an important aspect of treatment of the emotionally disturbed client. Adolescent boys in residential treatment have a variety of sources of anger, but few healthy ways of controlling and expressing this emotion. Maladaptive expressions of anger often lead to extended time in care or reinstitutionalization. A group setting using a variety of teaching and experiential modalities can offer helpful alternatives to habitual maladaptive expressions of anger. Emotional and learning disabilities must be factored into all teaching methods.

In the present study, Feindler, Ecton, Kingsley and Dubey (1986) presented the Cognitive-behavioral techniques for the self-control of anger and aggressive behavior in institutionalized psychiatric male adolescents during an eight-week group training program. Compared to a waiting-list control group and a within-ward control group, results indicate an increase in reflective and correct responding on the Matching Familiar Figures Test and an increase in self-control ratings by staff members for treatment subjects. Standardized role-play assessments also indicated significant increases in the use of appropriate verbalizations and a decrease in hostile verbalizations during conflict situations from pre-to post assessment for treatment
subjects. Finally, analyses of an already-existing contingency-management system revealed significant differences in frequencies and patterns of aggressive behaviors between treatment and control subjects. Adolescents in the anger-control treatment group evidenced lower rates of fines and restrictions during treatment and follow-up phases than the control subjects. Results are discussed in terms of the effectiveness of group anger-control training for residential adolescent populations.

Andersen and Lou (1985) found that many psychological and physiological disorders may have some etiology in an unconstructive response to anger. Still others may be exacerbated by repressed or suppressed anger. Anger is often a problem for clients seeking therapy, yet psychologists have little research upon which to develop a viable therapeutic approach. While skills in communication appear to be effective in reducing angry feelings to maintain positive physical and mental health and to enhance interpersonal relationships, these skills seem to be difficult to learn. Four self-report measures have been used primarily in the assessment of anger arousal and expression and in the assessment of the effectiveness of anger management techniques. They are the Buss-Durkee Hostility Inventory, the Reaction Inventory, the Anger Self-Report, and the Anger Inventory. Several promising theoretical positions have been developed for treatment of maladaptive anger in people. Among these are the behavioral approaches of desensitization and social skills training. Cognitive behavioral techniques used involve an emphasis on some kind of restructuring of thoughts, with Rational-Emotive Therapy and stress inoculation training having been used primarily. Research has indicated that any direct intervention for treatment of maladaptive anger expression is better than none, and a multifaceted training program consisting of desensitization or relaxation training, stress inoculation, and social skills or problem solving training is best. Further research is needed to determine what role nonverbal communication may have in shaping anger responses.

Biaggio (1980) examined personality differences (California Psychological Inventory) between 150 undergraduates manifesting varying degrees of anger arousal as measured by the Anger Self-Report (ASR) and the Novaco Anger Inventory (AI). MANOVA revealed that high-anger-arousal Ss scored lower on socialization (ASR) self-control, tolerance, psychological-mindedness, and flexibility (AI); low-anger-
arousal Ss scored lower on self-acceptance (AI) and higher on responsibility, socialization, and good impression (ASR).

Review of pertinent literature clearly indicates the importance of anger assessment as well as management. The review is comprehensive and researches have been conducted throughout the globe and on wide range of participants with variety of tools and techniques. With this much background, we may pass on to the next chapter dealing with problem and hypotheses of the study.