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The Role of Culture, Family Processes, and Anger Regulation in Korean American Adolescents' Adjustment Problems

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The Role of Culture, Family Processes, and Anger Regulation in Korean American Adolescents' Adjustment Problems

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Abstract

Using an ecologically informed, developmental psychopathology perspective, the present study examined contextual and intrapersonal predictors of depressive symptoms and externalizing problems among Korean American adolescents. Specifically, the role of cultural context (self-construals), family processes (family cohesion and conflict), and anger regulation (anger control, anger suppression, and outward anger expression) were examined. Study participants were N = 166 Korean American adolescents ranging from 11-15 (M = 13.0; SD = 1.2) years old. Results showed that depressive symptoms were significantly associated with lower levels of perceived family cohesion, higher levels of perceived family conflict intensity, and higher levels of anger suppression. Externalizing problems were associated with male gender, a weaker interdependent self-construal, higher levels of perceived family conflict, lower levels of anger control, and higher levels of outward anger expression. The distinction between specific vs. common factors associated with depressive symptoms and externalizing problems was discussed with an eye towards prevention or intervention strategies targeting specific coping mechanisms (e.g., generating alternatives to anger suppression) or developing psychoeducational approaches to facilitate family processes.

Keywords: Anger; emotion regulation; cultural contexts; family processes; psychological adjustment; Korean American adolescents.

The Role of Culture, Family Processes, and Anger Regulation in Korean American Adolescents' Adjustment Problems

Despite demographic trends showing that Asian American youth are one of the most rapidly growing portions of the U.S. population (Nguyen & Huang, 2007), there is a dearth of empirical research on their mental health needs (U.S. Department of Health and Human Services, 2001). Korean American adolescents represent one growing segment of this population. There are approximately 1.3 million Koreans living in the United States, placing them in one of the top five most populous Asian groups in this country (U.S. Census Bureau, 2007). As a recent immigrant population, approximately 75.8% of Korean Americans were foreign-born as of 2004 (U.S. Census Bureau, 2007). Thus, Korean immigrant youth face unique stressors related to acculturation and adaptation to a new country (e.g., Hwang, 2006), in addition to the usual developmental mastery tasks, thereby heightening the importance of examining their psychological adjustment within a cultural context.

To gain a clearer and more comprehensive understanding of Korean American adolescents' adjustment, the present study integrated a developmental psychopathology perspective (Sroufe, 1990) and an ecological framework (e.g., Bronfenbrenner, 1977). By examining how "normal and abnormal" processes work together (Sroufe, 1990), a developmental psychopathology perspective enables the identification of both risk and protective mechanisms towards the prevention of psychological disorders. More recently, theorists have called attention to the importance of contextualism in developmental psychopathology (e.g., Cicchetti & Aber, 1998), particularly cultural contexts (e.g., Garcia Coll, Akerman, & Cicchetti, 2000). Bronfenbrenner's (1977) ecological approach allows researchers to move beyond "social address models" (e.g., limited environmental labels such as ethnicity, race, socioeconomic status, etc.; see

Bronfenbrenner, 1986) to more complex models that incorporate dynamic processes influencing the interaction between individuals and the multiple contexts comprising their environment. Thus, the present study also used an ecological approach to examine Korean American adolescents as embedded within their cultural and familial contexts.

To address some gaps in the literature on Asian American youths, we investigated contextual and intrapersonal factors related to depressive symptoms and externalizing problems in Korean American adolescents. The contextual variables encompassed culturally-based self-construals (Markus & Kitayama, 1991) and family processes, and the intrapersonal variables were those related to anger regulation. While some studies have examined how one or both of these psychological adjustment outcomes are associated with cultural context (e.g., Norasakkunkit, & Kalick, 2002), family processes (e.g., Greenberger & Chen, 1996), anger regulation (e.g., Zeman, Shipman, & Suveg, 2002) or some combination of two of these domains (e.g., Hwang & Wood, 2009), no studies have yet done so integrating all three domains for both depressive symptoms and externalizing problems. An integrative approach allows for a fuller examination of the youth's ecological environment and a more careful identification and differentiation of potential sources of risk and resilience for depressive symptoms and externalizing problems.

The present study focused on depressive symptoms and externalizing problems during adolescence for three main reasons. First, the assessment of these two adjustment outcomes has the potential to maximize public health impact. Major depression is projected to become the second leading cause of illness-related disability affecting the world's population by the year 2020 (Murray & Lopez, 1996). In a report issued by the National Institute of Mental Health, *Taking Stock of Risk Factors for Child/Youth Externalizing Behavior Problems*, Hann (2001) emphasized that "the most serious gap is in research with [Native American and] Asian

American populations" (p. 39), especially with regard to the influence of culture on malleable family processes related to externalizing problems. Second, adolescence is a critical time in the emergence of internalizing and externalizing symptoms. Data show that overall morbidity rates increase significantly between mid-childhood and late adolescence (Resnick, Bearman, et al., 1997), and this increase appears to be related to problems with emotional regulation and behavioral control. Third, the investigation of both depressive symptoms and externalizing problems led to a more comprehensive investigation of psychopathology. Thus, informed by an ecologically grounded, developmental psychopathology perspective, the present study was guided by two research questions: What are significant contextual and intrapersonal predictors of a) depressive symptoms and b) externalizing problems, respectively, among Korean American adolescents?

Contextual & Intrapersonal Factors Related to Depressive Symptoms & Externalizing Problems

Three sets of variables (i.e., culture, family, intrapersonal), representing different ecological levels (i.e., macrosystem and microsystem) were examined.

Role of cultural context: Models of self. Markus and Kitayama (1991) proposed that cultural differences in the definition of the self have major implications for basic psychological processes. An *independent* self-construal assumes that individuals are autonomous and have a unique set of internal attributes that regulate behavior and represent the core self. In contrast, the *interdependent* model of self emphasizes connectedness with other people; the self becomes meaningful only in the larger context of social relationships.

Several empirical studies have found positive associations between an *interdependent* self-construal and depressive symptoms or psychological distress among Asian American youths (Liu & Goto, 2007) and Asian American college students (Norasakkunkit, & Kalick, 2002; Okazaki,

1997). Individuals with an interdependent self-construal tend to pay careful attention to social cues (Okazaki, 1997) and avoid situations that can harm relationships (Cross & Vick, 2001) resulting in greater vulnerability to psychological distress. Individuals with an independent self-construal are more likely to promote what is beneficial to the self, such that they experience less internalizing symptoms (Hong & Woody, 2007).

The few relevant studies on externalizing problems among Asian American adolescents indicate a positive association between individualism and delinquency or risky sexual behaviors (Le & Kato, 2006; Le & Stockdale, 2005). Conversely, collectivism has been found to be negatively associated with delinquency (Le & Stockdale, 2005). Youths with an interdependent self-construal may shy away from direct aggression due to relational concerns. However, those with an independent self-construal may be more likely to engage in risk-taking or antisocial activities in the interest of identity assertion or self-expression (Le & Stockdale, 2005).

Role of family context. Parent-child conflict and family cohesion have been associated with child and adolescent internalizing and externalizing symptoms (Ackard, Neumark-Sztainer, Story, & Perry, 2006; Resnick et al., 1997). Whereas parent-child conflicts typically involve disagreements (often intergenerational in nature), there may be an additional layer of cultural value conflicts and language barriers in immigrant populations due to differential acculturation rates between parents and their children (Hwang, 2006; Lee, Choe, Kim, & Ngo, 2000). Among Asian American children and adolescents, family conflict has been found to be positively associated with depressive symptoms (Hwang & Wood, 2009; Lim, Yeh, Liang, Lau, & McCabe, 2009; Ying & Han, 2007) and externalizing problems (Choi, He & Harachi, 2007; Le & Stockdale, 2008).

Typically conceptualized as the degree of emotional bonding and connectedness between family members, family cohesion plays a particularly important role in immigrant families, including Asian American families (Hardway & Fuligni, 2006). Family cohesion is negatively associated with depressive symptoms among Asian American adolescents (e.g., Greenberger & Chen, 1996; Liu & Goto, 2007), highlighting its role as a protective mechanism. Although no studies, to our knowledge, have examined family cohesion and externalizing symptoms among Asian American youths, evidence from the mainstream psychological literature suggests that family cohesion is associated with fewer externalizing problems (e.g., Lucia & Breslau, 2006; Richmond & Stocker, 2006).

Role of intrapersonal characteristics: Anger regulation. Emotion regulation and dysregulation are central features of various forms of childhood and adolescent psychopathology (Cole, Michel, & Teti, 1994; Keenan, 2000). Recently, researchers have called for greater specificity in studying how individual emotions (versus global positive or negative emotions) are regulated (e.g., Zeman, Cassano, Perry-Parish, & Stegall, 2006). Anger dysregulation is empirically associated with the development and maintenance of both depression and externalizing behaviors among children and adolescents (see review by Kerr & Schneider, 2008). A growing body of empirical data suggests that anger regulation is implicated in depressive symptoms among children and adolescents (Kashani, Dahlmeier, Borduin, Soltys, & Reid, 1995; Zeman, Shipman, & Suveg, 2002). The link between anger dysregulation and externalizing problems has been even more strongly established (Cole, Zahn-Waxler, Fox, Usher, & Welsh, 1996; Gilliom, Shaw, Beck, Schonberg, & Lukon, 2002; Rydell, Berlin, & Bohlin, 2003).

However, it is still unclear whether or not the linkage between anger regulation and maladjustment generalizes to diverse ethnic and cultural groups, given that much of the research

has been conducted using primarily White samples. On the one hand, some cross-cultural research has indicated a positive association between anger dysregulation and maladjustment among children and adolescents from various countries (e.g., Eisenberg, Liew, & Pidada, 2004; Martinez, Schneider, Gonzales, & del Pilar Soteras de Toro, 2008), suggesting that the linkage is generalizeable across diverse groups. On the other hand, the linkage may be nuanced by culture. For example, a recent 23-nation study showed that cultural values were linked to differences in emotion regulation processes (e.g., Matsumoto et al., 2008). Also, the deleterious effects of emotion suppression have been shown to be reduced for individuals holding more Asian (vs. Western European) cultural values (Butler, Lee, & Gross, 2007). The present study addressed this tension in the literature by examining the anger dysregulation—maladjustment link within a sample of Korean American adolescents.

Thus, the present study addressed several gaps in the current literature. First, adolescents' adjustment was examined at multiple levels simultaneously: cultural, familial, and intrapersonal, contributing to a more comprehensive understanding of adolescent functioning. Second, the potential contribution of both risk and resilience processes (e.g., family conflict and family cohesion) to youths' depressive symptoms and externalizing problems was tested. Third, the individual emotion of anger was examined in depth with regard to youth adjustment problems. Finally, using a within-group design, Korean American youths were studied as one group that is part of an exploding yet underresearched population of children of immigrants.

In sum, the purpose of the present study was to identify significant predictors of depressive symptoms and externalizing problems in a sample of Korean American adolescents. Guided by an ecological, developmental psychopathology perspective and informed by prior empirical work, the current study investigated three hypotheses. First, at the cultural context level, we

hypothesized that an interdependent self-construal would be positively associated with depressive symptoms, and that an independent self-construal would be negatively associated with depressive symptoms, whereas the opposite was hypothesized for externalizing problems. Second, we hypothesized that family conflict would be positively, and family cohesion negatively, associated with more depressive symptoms and externalizing problems. Finally, we tested whether or not the anger regulation—maladjustment link would be applicable among Korean American youths; due to the mixed findings in the literature, we tested this link in an exploratory manner.

Method

Participants

Participants were 166 Korean American adolescents, 11 to 15 years old (*M* = 13.0; *SD* = 1.2). These adolescents were part of a larger cross-sectional study which investigated anger regulation among Korean American youths and their primary caregivers. The present study focused on the youth data.

The sample consisted of slightly more males (*n* = 90; 54.2%) than females (*n* = 76; 45.8%) and appeared to be relatively acculturated, with participants having spent on average, 83.6% of their lives in the United States. The majority of the sample was U.S.-born (*n* = 119; 71.7%) with the remainder born in Korea (*n* = 47; 28.3%), and length of U.S. residency ranged from less than 1 year to 15 years (*M* = 10.8; *SD* = 3.7). Youths' nativity status was not correlated to their depressive symptoms or externalizing problems and thus, not controlled for in the analyses.

As an approximate indicator of family socioeconomic status, parents' reports of education (*N* = 106) and income level (*n* = 78 for self; *n* = 89 for spouse, due to missing data) were examined. The majority of parent participants (*n* = 73 out of 106) were college graduates (68.9%). The

combined annual household income was approximately $80,000-89,000, indicating that this sample's income is higher than the national median income level ($66,103) for Asian Americans according to the most recent statistics from the U.S. Census Bureau (DeNavas-Walt, Proctor, & Smith, 2008). Family socioeconomic status variables were not correlated with youths' depressive symptoms or externalizing problems and thus, not controlled for in the analyses.

Procedure

Korean American youth and their parent(s) were recruited from the Midwest through 15 Korean ethnic churches and 4 public schools. Inclusion criteria were: 1) Korean American youths 11–15 years old from this Midwestern metropolitan area; 2) residing with one or both parents, also of Korean origin; and 3) youth's birthplace in Korea (1st generation) or the U.S. (2nd generation). In order to participate in the study, youths were required to have parental permission and give informed assent, while parents provided their informed consent. The target child and his/her parent(s) were asked to independently complete a written questionnaire in their preferred langauge (English or Korean). Because a very small subset of youths completed the survey in Korean (n = 9), only the youths who completed the survey in English were included in the present sample to eliminate any potential problems with cross-cultural measurement and construct equivalence. Questionnaires were administered to youths at the churches or in the public schools in groups of 1-26 individuals; parents completed surveys on site or at home (packets were sent home via mail or their child). Participating families received up to $30 as compensation for their time (target adolescent received $10, and the primary caregiver received $20). The present study was approved by the university's human subjects institutional review board prior to implementation.

Measures

Study variables were assessed through written, self-administered questionnaires. Measures relevant to the current study are described below.

Demographic background. Age, gender, ethnicity, length of residency in the United States, and birthplace were assessed.

Cultural context. The 24-item Self-Construal Scale (SCS; Singelis, 1994) contains two 12-item subscales assessing interdependent and independent self-construals. This measure was used to assess one dimension of cultural context, as reflected in an individual's self-orientation. A sample item assessing interdependent self-construal is: "My happiness depends on the happiness of those around me." A sample item assessing independent self-construal is: "I enjoy being unique and different from others in many respects." Each item was rated using a 7-point Likert-type response format (1 = *strongly disagree*; 7 = *strongly agree*). Levels of interdependence and independence were represented by the mean of the 12 items from the corresponding subscale. The SCS has demonstrated adequate internal consistency in prior research, with Cronbach's alphas of .74 and .70 for the interdependent and independent subscales, respectively (Singelis, 1994). The SCS has also been previously administered on Asian samples (e.g., Kwan, Bond, & Singelis, 1997). The SCS displayed adequate internal consistency in the present study, with Cronbach's alphas of .70 for independent self-construal and .70 for interdependent self-construal.

Family processes. The present study focused on two aspects of the family context: a) parent-adolescent conflict and b) family cohesion.

Parent-adolescent conflict. The 10-item Asian American Family Conflicts Scale (FCS; Lee, Choe, Kim, & Ngo, 2000) was used to assess the likelihood, seriousness, and intensity of conflict between adolescents and their mothers and fathers, respectively. This measure was developed specifically for use with Asian American adolescents with regard to family conflict

situations and reflects both intergenerational and acculturation differences between children and their parents. A sample item is: “Your [mother/father] wants you to sacrifice personal interests for the sake of the family, but you feel that this is unfair.” Each item was rated on a 5-point Likert-type scale (1 = *almost never/not at all*; 5 = *almost always/extremely*) on two dimensions: likelihood and seriousness of the problem. Due to the strong correlations between likelihood and seriousness for both mother-child ($r = .72$; $p < .001$) and father-child ($r = .79$; $p < .001$) conflict, an Intensity score was calculated for each parent (average of the likelihood and seriousness mean item scores; see Su, Lee, & Vang, 2005). A composite Family Conflict Intensity score was then calculated by taking the average of the mother and father intensity scores (also highly correlated, $r = .69$; $p < .001$), and this score was used in the main analyses. The FCS has demonstrated adequate reliability and validity among Asian American families, with alpha coefficients of .81 - .89 for Likelihood, .84 - .91 for Seriousness, and .94 for Intensity (Lee et al., 2000; Su et al., 2005). In the present study, the internal consistencies of these three subscales were adequate for adolescent-mother conflict (alpha: likelihood = .85; seriousness = .89; intensity = .92), adolescent-father conflict (alpha: likelihood = .89; seriousness = .90; intensity = .94), and total family conflict intensity (alpha: .96).

Family cohesion. The 16-item Cohesion subscale from the 30-item Family Adaptation and Cohesion Evaluation Scales II-Family version (FACES-II; Olson, McCubbin, Barnes, Larsen, Muxen, & Wilson, 1982) was used to assess family cohesion. A sample item is: “Family members are supportive of each other during difficult times.” Adolescents responded to each item using a 5-point Likert type scale (1 = *Almost Never*; 5 = *Almost Always*). The total Cohesion score was calculated using the formula prescribed by Olsen et al. (1982) and involves a weight summation procedure which accounts for positive and negative items. The FACES-II Cohesion

subscale has demonstrated good internal consistency (alpha = .87), test-retest reliability (.83), and validity in prior research (Olson et al., 1982). The Cohesion subscale has also been previously used with Asian American adolescent samples (e.g., Tseng & Fuligni, 2000). In the present sample, the Cohesion subscale demonstrated adequate internal consistency (alpha = .79).

Anger regulation. A modified 42-item version (shortened from the original 57-item version to reduce participant fatigue; the State Anger subscale was excluded) of the State-Trait Anger Expression Inventory (STAXI-2; Spielberger, 1999) was used to assess anger regulation, operationalized as anger expression and anger control. The *Anger Expression-In* scale (8 items) assessed the frequency with which an individual generally suppresses angry feelings; that is, the frequency with which angry feelings are experienced but not expressed. Note: The term "anger suppression" will be used interchangeably with "anger expression-in." The *Anger Expression-Out* scale (8 items) assessed the frequency of exhibiting anger outwardly through verbally or physically aggressive behaviors. The *Anger Control-Out* scale (8 items) assessed the frequency with which an individual generally controls outward anger expression, and the *Anger Control-In* scale (8 items) assessed the frequency with which an individual reduces their suppressed anger through coping strategies such as cooling off or calming down. Each item was rated using a 4-point Likert-type scale (1 = *Almost never*; 4 = *Almost always*). Scores for each subscale were calculated using the mean of the items. Due to a strong correlation between Anger Control-In and Anger Control-Out ($r = .64$; $p < .001$), a composite Anger Control score was calculated by taking the sum of the Anger Control-In and Anger Control-Out mean item scores. The internal consistency of the factor-derived STAXI-2 subscales has been reported to be adequate with reliability alphas of .80 and higher (Spielberger, Reheiser, & Sydeman, 1995). The STAXI-2 has also been successfully administered in a sample of Korean American adults (e.g., Kim & Zane,

2004). In the present study, internal consistency was adequate, with Cronbach's alphas as follows: Anger Expression-In = .73; Anger Expression-Out = .67; Anger Control-In = .81; Anger Control-Out = .79; combined Anger Control = .87.

Depression. Youths' depressive symptoms were assessed with the 27-item Children's Depression Inventory (CDI; Kovacs, 2003). The CDI measures cognitive, affective, somatic, and behavioral symptoms of depression during the previous two weeks. The respondent was asked to endorse the sentence that best describes him/her (0 = *absence of symptoms;* 2 = *definite symptoms*). One item (#9) assessing suicidal ideation was not included in this study due to IRB concerns. CDI scores were calculated using the sum of the items. This measure has been found to have adequate reliability and validity (Carey, Faulstich, Gresham, Ruggiero, & Enyart, 1987; Saylor, Finch, Spirito, & Bennett, 1984). The CDI has been successfully administered to children from various ethnic minority groups (Kovacs, 2003), including Asian American adolescents (Siegel, Aneshensel, Taub, Cantwell, & Driscoll, 1998). Internal consistency for the CDI was adequate in the present study with Cronbach's alpha = .82.

Externalizing problems. The 112-item Youth Symptom Report (YSR; Achenbach & Rescorla, 2001) was used to assess youths' report of externalizing problems. The YSR is a widely used measure with well-established reliability and validity that inquires about problem behaviors in the past 6 months including the present. Externalizing problems consists of two subscales: Rule-breaking Behavior (14 items) and Aggressive Behavior (17 items). Each item was rated using a 3-point scale (0 = *Not True*; 2=*Very True or Often True*). As in prior research using the YSR (e.g., Rescorla et al., 2007), untransformed raw scores were used. The Externalizing problems score was calculated by summing the scores of these two subscales. This measure has been used in previous studies examining externalizing problems among Asian

American adolescents (e.g., Sharma, McGue, & Benson, 1998). Internal consistency was adequate in the present study with Cronbach's alpha = .86.

Results

Descriptive statistics (*M*, *SD*, alphas) and bivariate correlations are presented in Table 1. Of the 166 adolescents in the present study, 24 (14.5%) were classified in the clinical range based on their YSR Externalizing scores (*T* scores > 63), and an additional 16 (9.6%) scored in the borderline range (*T* scores = 60–63; Achenbach & Rescorla, 2001). Out of 160 valid youth scores (6 missing) on the CDI, 5 (3.1%) were classified as clinically significant based on *T* scores at or above 65, and an additional 7 (4.4%) were in the "above average" range (*T* scores = 61-64; Kovacs, 2003).

Adolescents who reported more depressive symptoms also reported less family cohesion (r = -.41, $p < .001$), more intense family conflict (r = .43, $p < .001$), more anger suppression (r = .34, $p < .001$), and more outward anger expression (r = .29, $p < .001$). Adolescents who reported more externalizing problems tended to be older (r = .27, $p < .001$) and reported a stronger independent self-construal (r = .15, p = .051), a weaker interdependent self-construal (r = -.24, $p < .01$), less family cohesion (r = -.36, $p < .001$), more intense family conflict (r = .44, $p < .001$), less anger control (r = -.27, $p < .001$), more anger suppression (r = .25, $p < .01$), and more outward anger expression (r = .60, $p < .001$). Externalizing problems and depressive symptoms were also positively associated with one another (r = .50, $p < .001$).

Hierarchical Multiple Regression Analyses

Two sets of hierarchical multiple regression analyses were conducted to examine predictors of Korean American adolescents' depressive symptoms and externalizing problems, respectively. The sequence for entering each set of independent variables was theoretically driven, such that

more distal variables in the adolescent's ecological system were entered first, and proximal variables were entered last.

In both sets of regression models, gender and age were controlled given the empirical and theoretical literature suggesting their influence on depressive symptoms and externalizing problems (e.g., Hankin, et al., 1998; Moffitt, Caspi, Rutter, & Silva, 2001; Rescorla et al., 2007). Sample sizes for the regression analyses (n = 154 for depressive symptoms; n = 159 for externalizing problems) differed from the total sample size (N = 166) due to listwise deletion.

Depressive symptoms. Results from the hierarchical multiple regression analysis indicated that the overall model explained 35.8% of the variance in adolescents' depressive symptoms, F (9, 144) = 8.90, $p < .001$ (see Table 2). In Steps 1 and 2, the control variables and self-construal did not contribute significant variance in adolescents' depressive symptoms. In Step 3, the family process variables significantly contributed to the explained variance in depressive symptoms, such that lower levels of perceived family cohesion ($\beta = -0.29$, $p < .01$) and higher levels of perceived family conflict intensity ($\beta = 0.34$, $p < .001$) were associated with significantly higher levels of depressive symptoms. In the final step, anger suppression emerged as a significant predictor of adolescents' depressive symptoms ($\beta = 0.27$, $p < .001$), above and beyond perceived family cohesion and perceived family conflict intensity.

Externalizing problems. Results indicated that the overall regression model explained 55.9% of the variance in externalizing problems, F (9, 149) = 21.01, $p < .001$ (see Table 3). In Step 1, age ($\beta = 0.27$, $p < .001$) and gender (male = 0; $\beta = -0.28$, $p < .001$) significantly contributed to the variance in externalizing problems. In Step 2, independent ($\beta = 0.20$, $p < .01$) and interdependent ($\beta = -0.29$, $p < .001$) self-construals significantly contributed to the variance in externalizing problems, in addition to age and gender. In Step 3, higher levels of perceived

family conflict intensity ($\beta = 0.33$, $p < .001$) was significantly associated with externalizing problems, in addition to age, gender, independent and interdependent self-construals. In the final step, anger control ($\beta = -0.15$, $p < .05$) and anger expression-out ($\beta = 0.41$, $p < .001$) were significantly associated with externalizing problems above and beyond the other predictors. Gender, interdependent self-construal, and family conflict intensity also emerged as significant correlates.

Discussion

Two main sets of findings emerged from the present study. First, depressive symptoms were significantly associated with not only higher levels of perceived family conflict but also lower levels of perceived family cohesion. Anger regulation, in the form of anger suppression, was also significantly associated with depressive symptoms. Second, externalizing problems were associated with male gender, a weaker interdependent self-construal, greater perceived family conflict intensity, lower levels of anger control, and higher levels of outward anger expression. Collectively, these results show that different factors appear to be salient when examining levels of depressive symptoms versus externalizing problems among Korean American adolescents.

Some of the present findings are consistent with previous research on Asian Americans and the general population. However, to our knowledge, this is the first study which has comprehensively examined this set of contextual and intrapersonal factors associated with both depressive symptoms and externalizing problems in a sample of Korean American adolescents.

Cultural and Familial Contexts

Interdependent self-construal was negatively related to externalizing problems among these Korean American adolescents. This finding is consistent with prior research demonstrating that collectivism was inversely associated with delinquency among Asian American youths (Le &

Stockdale, 2005). Individuals who define the self in a relational manner may be reluctant to engage in behaviors that could potentially disturb social harmony. The present study suggests that an interdependent self-construal may be a culturally salient protective factor against externalizing symptoms for Korean American youths.

In terms of the family context, less perceived family cohesion and greater perceived family conflict were associated with more depressive symptoms. This is consistent with prior research which has shown that Asian American adolescents' depressive symptoms are associated with less perceived family cohesion (e.g., Greenberger & Chen, 1996; Liu & Goto, 2007) and more perceived family conflict (e.g., Lim et al., 2009; Ying & Han, 2007). Family cohesion may thus be a source of resilience that can be maximized in prevention efforts. In addition, our findings are consistent with prior work demonstrating that family conflict is associated with externalizing problems in Asian American adolescents (Choi et al., 2008; Le & Stockdale, 2008). To date, studies examining the relationship between family conflict and youth behavior problems have been mainly conducted on non-ethnic minority samples or multi-ethnic samples. The present study contributed to the limited literature on Asian American youths by testing the relationship specifically between acculturation-related parent-child conflict and youth externalizing problems in Korean American families.

Anger Regulation

What is particularly striking in the results regarding the intrapersonal predictors is the distinct pattern of emotion regulation correlates of depressive symptoms versus externalizing problems. In the present study, only anger suppression was significantly associated with depressive symptoms, whereas the other two anger regulation variables (i.e., weaker anger control and greater outward anger expression) were significantly associated with externalizing problems.

This finding suggests the possible advantage of examining the regulation of specific, individual emotions such as anger (e.g., Zeman et al., 2006) in relation to specific adjustment outcomes. Future empirical research should verify and replicate this result.

Anger suppression has been theorized (e.g., Keenan & Hipwell, 2005) and, to a limited extent, empirically demonstrated to be positively associated with depressive symptoms among children and adolescents (e.g., Kashani et al., 1995; Zeman et al., 2002). This study is unique as the findings showed that the anger suppression to depression link appears to hold for Korean American adolescents as well. In addition, consistent with prior research on the link between anger regulation and problem behaviors among children and adolescents (e.g., Zeman et al., 2002), the present study demonstrated that weaker anger control and stronger outward anger expression were associated with externalizing symptoms among Korean American adolescents, over and above cultural and family influences on externalizing symptoms.

Study Limitations and Future Research Directions

The current findings should be interpreted in light of its limitations, which in turn guide future research directions. First, because this was a cross-sectional study with a correlational design, no inferences regarding causality can be made. Second, the study findings are limited in generalizeability given the within-group design which focused specifically on Korean American adolescents, recruited primarily through ethnic churches. Future studies may explore the possibility that (non-)involvement in ethnic religious networks may impact youths' cultural values and family processes. At the same time, the current sample appears to be representative of the targeted population as approximately 77% of Korean Americans attend a Korean ethnic church in this metropolitan area (Hurh, 1998). Third, this study did not address comorbidity of symptoms. Internalizing and externalizing symptoms most likely co-occur for some adolescents,

and future research should examine differences or similarities between predictors of comorbid problems versus internalizing or externalizing problems alone. Finally, the study relied on self-report measures and used a select few, though well-researched, approaches to operationalizing the independent variables. Future research should assess culture, family context, and emotion regulation using more varied methods and multiple informants.

The study findings may spur future research in generating new developmental psychopathology models that incorporate familial and cultural contexts for ethnic minority populations in particular (Garcia Coll et al., 2000). Studies using prospective designs would be helpful in discerning the direction of effects. Another promising research direction would be examining anger regulation as a mediator of the influence of cultural and family contexts on adolescents' adjustment problems. Investigation of potential moderators of the links between family processes and anger regulation as well as the links between anger regulation and adolescents' symptomatology would also be useful. Finally, additional research on not only anger, but a spectrum of other basic emotions would also help clarify our understanding of mechanisms underlying emotion regulation and its relation to the development of specific types of broadband syndromes or psychopathology.

Implications for Research and Practice

The findings have some theoretical and clinical implications. It seems that an ecologically informed, developmental psychopathology perspective can be usefully applied to gain a better understanding of potential sources of vulnerability and resilience at multiple levels in this population. For instance, family cohesion may be an important source of resilience to capitalize upon for Korean American youths in prevention or intervention efforts targeting depressive symptoms. Likewise, with regard to externalizing problems, mental health care professionals

may profitably turn their attention towards fostering greater anger control while tempering outward displays of anger expression and possibly, strengthening an interdependent self-construal. The distinction between specific vs. common factors associated with depressive symptoms and externalizing problems may help clinicians hone prevention or intervention strategies by targeting specific coping mechanisms (e.g., generating alternatives to anger suppression) or developing psychoeducational approaches to facilitate family processes (e.g., reducing conflict).

In sum, the present study provides some initial evidence for the utility of an ecologically-informed developmental psychopathology approach to examining depressive symptoms and externalizing problems among Korean American adolescents, and specifically, the role of cultural orientation, family processes, and anger regulation as sources of risk or resilience in this population.

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Table 1

Zero-order Correlation Coefficients and Descriptive Statistics for the Study Variables (N =166)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
(1) Age	--									
(2) Independent self-construal	.13	--								
(3) Interdependent self-construal	-.03	.29 ***	--							
(4) Family Cohesion	-.21 **	-.09	.21 **	--						
(5) Family Conflict Intensity	.13	.14	.05	-.39 ***	--					
(6) Anger Control	-.11	.19 *	.30 ***	.16 *	-.08	--				
(7) Anger Expression-In	.18 *	.11	.11	-.11	.13	.14	--			
(8) Anger Expression-Out	.18 *	.19 *	-.04	-.13	.29 ***	-.18 *	.30 ***	--		
(9) Depressive Symptoms	.13	.00	-.05	-.41 ***	.43 ***	-.12	.34 ***	.29 ***	--	
(10) Externalizing Problems	.27 ***	.15 +	-.24 **	-.36 ***	.44 ***	-.27 ***	.25 **	.60 ***	.50 ***	--
M	12.97	4.77	4.83	56.11	2.41	45.60	17.36	16.11	8.30	12.20
SD	1.22	.80	.76	9.41	.82	8.19	4.21	3.63	5.57	6.97
Alpha	NA	.70	.70	.79	.96	.87	.73	.67	.82	.86

+ $p = .051$. * $p < .05$. ** $p < .01$. *** $p < .001$.

Table 2

Results of Hierarchical Multiple Regression Analysis Predicting Depressive Symptoms (N = 154)

Variable	*B*	*SE B*	β	
Step 1: Control Variables				
Age	0.57	0.38	0.12	
Gender	-1.33	0.91	-0.12	
Step 2: Cultural Orientation				
Age	0.56	0.38	0.12	
Gender	-1.31	0.91	-0.12	
Independent self-construal	0.00	0.61	0.00	
Interdependent self-construal	-0.39	0.63	-0.05	
Step 3: Family Processes				
Age	0.12	0.34	0.03	
Gender	0.51	0.84	0.05	
Independent self-construal	-0.70	0.54	-0.10	
Interdependent self-construal	0.07	0.57	0.01	
Family cohesion	-0.17	0.05	-0.29	**
Family conflict	2.31	0.55	0.34	***
Step 4: Anger Regulation				
Age	-0.15	0.33	-0.03	
Gender	0.35	0.83	0.03	
Independent self-construal	-0.87	0.53	-0.12	
Interdependent self-construal	0.08	0.56	0.01	
Family cohesion	-0.16	0.05	-0.27	**
Family conflict	1.94	0.53	0.28	***
Anger control	-0.04	0.05	-0.06	
Anger expression-In	0.35	0.10	0.27	***
Anger expression-Out	0.18	0.12	0.12	

Note. R^2 = .03 for Step 1 (*ns*); $\triangle R^2$ = .00 for Step 2 (*ns*); $\triangle R^2$ = .23 for Step 3 ($p < .001$); $\triangle R^2$ = .10 for Step 4 ($p < .001$).

** $p < .01$; *** $p < .001$.

Table 3

Results of Hierarchical Multiple Regression Analysis Predicting Externalizing Problems (N = 159)

Variable	*B*	*SE B*	β	
Step 1: Control Variables				
Age	1.57	0.43	0.27	***
Gender	-3.91	1.05	-0.28	***
Step 2: Cultural Orientation				
Age	1.39	0.41	0.24	**
Gender	-3.74	1.00	-0.26	***
Independent self-construal	1.80	0.67	0.20	**
Interdependent self-construal	-2.71	0.69	-0.29	***
Step 3: Family Processes				
Age	1.05	0.39	0.18	**
Gender	-2.26	0.97	-0.16	*
Independent self-construal	1.31	0.63	0.15	*
Interdependent self-construal	-2.55	0.66	-0.28	***
Family cohesion	-0.06	0.06	-0.08	
Family conflict	2.83	0.63	0.33	***
Step 4: Anger Regulation				
Age	0.54	0.33	0.09	
Gender	-2.00	0.85	-0.14	*
Independent self-construal	0.80	0.54	0.09	
Interdependent self-construal	-1.90	0.57	-0.21	**
Family cohesion	-0.06	0.05	-0.08	
Family conflict	1.81	0.54	0.21	**
Anger control	-0.13	0.05	-0.15	*
Anger expression-In	0.19	0.10	0.11	
Anger expression-Out	0.78	0.12	0.41	***

Note. R^2 = .14 for Step 1 (p < .001); $\triangle R^2$ = .09 for Step 2 (p < .001); $\triangle R^2$ = .12 for Step 3 (p < .001); $\triangle R^2$ = .21 for Step 4 (p < .001).

* p < .05. ** p < .01. *** p < .001.