RELATIONS BETWEEN THE EXPERIENCE AND CONTROL OF ANGER, AND SOMATIZATION AND INTERNALIZING PSYCHOPATHOLOGY AMONG MIDDLE-SCHOOL CHILDREN IN VIETNAM

By

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CHAPTER I

BACKGROUND

To truly understand mental health, it is necessary to understand the cultural context within which it occurs, and the culturally-defined meaning of different symptoms and disorders (U.S. D.H.H.S, 2001). Cultural influences and social forces may encourage some behaviors or affects and discourage others, and may as well at least to some extent define what is considered normal or abnormal (Butcher & Bemis, 1984; Matsumoto, 2007). For instance, in Asian cultures avoiding eye contact is a sign of respect and thus conversely, if a child makes eye contact, he or she is seen as challenging and disrespecting the speaker, which could be a symptom of Oppositional Defiant Disorder. In contrast, in Western cultures making eye contact is a sign of honesty, sincerity, and helps develops social relationships and a failure to make eye contact may be indicative of anxiety (Harper, Wiens, & Matarazzo, 1978).

Underlying such culture effects may be three fundamental dimensions upon which Western and non-Western cultures differ (Lewis-Fernández & Kleinman, 1994): (a) *egocentricity*, the extent to which the self is seen as *autonomous* with unique internal attributes that determine behavior, versus *allocentric* wherein the self is defined by its relations to others; (b) *mind-body dualism*, where the mind and body are two separate entities, versus monism which is the integration of mind-body wherein the mind and body

are one entity that are interchangeable, and (c) the view that *culture is arbitrary*, a somewhat random phenomenon that is superimposed on an invariant homogeneous biological reality ("biological basis", typical of Western cultures), versus the view that both human psychophysiology and culture values and morals shape health and illnesses ("cultural consideration", more typical of Asian cultures).

Somatization and Psychologization

One specific area of psychopathology upon which cultural research has focused is somatization. Environmental events that are aversive and that exceed an individual's normal coping abilities often lead to dysfunction, in a variety of somatic and / or psychological domains. Although there is not a universally accepted definition, in general the term "somatization" is used to refer to psychologically-based changes in physiological and physical functioning or experience in response to stress whereas "psychologization" is used to refer to effects on cognitive, emotional, and affective functioning (Simon, VonKorff, Piccinelli, Fullerton, & Ormel, 1999; Katon, Kleinman, & Rosen, 1982). Definitions of somatization also generally entail that underlying physical pathology does not fully explain the somatic symptoms (APA, 2000). Somatic symptoms include a wide range of problems, including fatigue, gastrointestinal complaints, stomachaches, headaches, neurological dysfunction, and other bodily pains. Psychological symptoms generally include unpleasant affects such as anxiety or sadness, anxiety, and cognitions such as a sense of worthlessness or excessive guilt, difficulty concentrating, etc.

For several decades there has been evidence, although not entirely consistent, that suggests that individuals from Western cultures may respond differently to stress compared to individuals from Asian cultures, with individuals from Western cultures possibly more likely to respond with unpleasant affect and negative cognitions as compared to individuals from Asian and other developing cultures who may be more likely to respond with somatic symptoms. In an early study investigating depression and somatic complaints, Kleinman (1977) found that 88% of Taiwanese psychiatric patients initially reported somatic complaints in the absence of affective complaints, whereas for Euro-Americans the statistic was 20%. In a subsequent study, Kleinman (1982) found the prevalence of depression in Western nations was 3.2% for males and a range of 4.0-9.3% for females, but the prevalence of depression diagnoses in his Chinese sample was close to zero. Similarly, in a review of epidemiological studies, Cheung (1991) found that rates of affective disorders in China were between 0.37-0.89 per thousand. Weissman and the Cross-National Collaborative Group (1996) assessed prevalence rates of major depressive disorder in several Western and Asian nations and found that rates for depression in Western nations such as the U.S. were 2.8% for males and 7.4% for females, in France 10.5% for males and 21.9% for females, and in Italy 6.1% for males and 18.1% for females. In Asian nations, in contrast, rates in Taiwan were 1.1% for males and 1.8% for females, and in Korea 1.9% for males and 3.8% for females.

In contrast to rates of depression, rates for somatization have been found to be relatively higher in non-Western countries. In a Chinese psychiatric outpatient clinic, 18.7% of patients' reported affective symptoms and 17.3% of patients reported cognitive, symptoms; however, 45.3% of patients reported somatic symptoms, with 28% of patients

reporting somatic symptoms only (Kleinman, 1977; Cheung & Lau, 1982). Waza, Graham, Zyzanski and Inoue (1999) found in a medical records study that among patients who had received a diagnosis of depression from their family physicians, 27% of the Japanese patients reported only physical symptoms whereas only 9% of the Euro-American patients reported only physical symptoms, and the reverse was true in regards to psychological symptoms. In fact, somatization symptoms in medical patients seeking help have been considered the most common clinical expression of mental distress worldwide, affecting both genders, all age groups, social classes, and ethnicities/races (Kirmayer & Young, 1998; Isaac, Janca, & Orley, 1996; Reid, Wessely, Crayford, & Hotopf, 2002). Studies reviewing patient records from Saudi Arabia, Iraq, India, Japan, and Korea all have similarly found somatization to be the predominant expression of distress in those countries (Racy, 1980; Bazzoui, 1970; Teja, Narang, & Aggarwal, 1971; Sethi Nathawat, & Gupta, 1973; Waza, Graham, Zyzanski, & Inoue, 1999; Rhi, 1983; Kim & Rhi, 1976).

Most of the research reviewed above has focused on non-Western populations in their home countries. Another body of research has focused on non-Western populations that have immigrated to the U.S. as refugees, assessing depression and somatization in these populations. These studies have produced mixed results, which is perhaps not surprising given that immigrant and refugee populations represent a mixture of influences. Some studies actually have found Asian-Americans reporting higher rates of depression than the general U.S. population (Kinzie, Ryals, Cottington, & McDermott, 1973; Franks & Faux, 1990; Kuo, 1984; Ying, 1988; Ying & Miller, 1992). Kinzie et al. (1973), for instance, found that Chinese-American and Japanese-American had higher

rates of depression as compared to Euro-Americans. When examining sex differences, they found Asian females had the highest rates of moderate to severe depression whereas Asian males had the highest rates of mild to moderate depression (Kinzie et al., 1973). Buchwald, Manson, Dinges, Keane and Kinzie (1993) found that 20% of Vietnamese refugees scored high enough on the Vietnamese Depression Scale to be considered depressed. In this sample, cognitive and psychological symptoms (e.g., difficulty concentrating, sadness, feeling downhearted and low-spirited) were much more prevalent than physical symptoms. This study also highlights the importance of using questionnaires to evaluate the patient's problems, to assess areas that the patient may not spontaneously reveal or report.

Help-seeking behavior

Other research has found that even if Asian Americans tend to report less depressive affect symptoms than Euro-Americans, they may have higher levels of social anxiety than their Euro-American counterparts, which contradicts some previous findings that Asians tend to have overall lower levels of affective symptoms than Euro-Americans (Okazaki, 2000). Follow-up interviews in this study suggested that these results may have been due in part to Asian Americans being more reticent than Euro-Americans about discussing mental distress, and more disinclined to use mental health services of any type (Zhang, Snowden, & Sue, 1998). Several other studies have speculated that the reported rates of depressive disorders may be due to differences in help seeking behavior (Nakane, Ohta, Radford, et al., 1991; Lee, 1997). Rather than actual differences in rates

of depression and somatization disorders, differences in rates may reflect differences in help-seeking behaviors, with people of Asian ancestry more likely to present somatic problems than psychological problems as part of their strategies to help seeking.

Another possible reason for the discrepancies in rates is that Asian patients may selectively present symptoms according to what they perceive as appropriate for the particular setting in which they are in, and thus tend to focus on somatic suffering when in health care settings (Cheung, 1985). However, Zhang, Snowden and Sue (1998) interviewed Asian Americans and Euro-Americans living in Los Angeles and found that rates of reported somatic symptoms at a health care facility were comparable for Asian Americans and Euro-Americans but that Asian-American's reports of somatic concerns were independent of their discomfort with discussing mental health issues, which argues against the selective presentation hypothesis.

In another study of somatization and depression in immigrants, Pang (1998) found that elderly Korean immigrants who were more self-directed, and those who were more independent emotionally, financially, or residentially tended to present sadness and other symptoms of depression, whereas more other-directed participants, and those who more passive, less independent or living with their adult children presented more somatic symptoms. The self-directed Korean immigrants were generally more acculturated to the Western culture. These results are compatible with Kleinman's original hypothesis that Asian populations tend to display more somatic symptoms than Western populations, in part because Asian cultures tend to be more other-directed and Western culture in general

tends to be more self-directed, with depressive symptoms seen as more disruptive of group functioning.

Research using college samples has found either comparable rates of depression and somatization across Asian and Caucasian samples, or higher levels of depression for Asian samples compared to Caucasian samples. In a study on self-reported depressive symptoms among college students from four countries (Korea, Philippines, China, and Euro-Americans in the U.S), it was found that the rates of depression were highest among Koreans and Filipinos, then the Chinese, with Euro-Americans reporting the lowest rates of depression (Crittenden, Fugita, Bae, Lamug, & Lin, 1992; Fugita & Crittenden, 1990). More recently, a study using the modified version of the Center for Epidemiological Studies – Depression scale (CES-D, Radloff, 1977) with Chinese, Chinese-American, and Euro-American college students found that Chinese students had significantly lower scores on the "Somatic" factors than Chinese-Americans and Euro-American, who had comparable scores with each other (Yen, Robins, & Lin, 2000). Furthermore, there were no group differences on the "Affective" factors.

Another study by the same research group (Yen, Robins & Lin, 2000) focused on a comparison of Chinese college students with a history of psychiatric treatment to similar students without such a history. Yen et al. (2000) found that students with a psychiatric treatment history had relatively higher scores on "somatic" factors whereas their non-patient counterparts had higher scores on "affective" factors. This suggests that for Chinese students, those seeking psychiatric help may be more likely to report somatic symptoms. However, several design issues in these studies complicate interpretation of

the results. First, Chinese-Americans and Chinese college students in general may report higher depressive symptomatology as a result of having been more Westernized than general samples from China. Second, this study used a community sample that excluded clinical patients, which undoubtedly excluded the people with the worst symptoms, which may have biased the results in unknown ways, such as eliminating participants with the highest scores for "somatic" and thus increasing the relative levels of "affective" symptoms.

To resolve conflicting results such as those reviewed above, it is important to consider each study's methodology, such as their sampling frame, data collection procedures, and measures. Studies that have found higher rates of somatization and lower rates of depression in Asian populations as compared to Western population have tended to use clinical samples, and with data based on clinical observations or data extraction from clinical records, or open-ended interviews (e.g., Kleinmann, 1977; Weissman and the Cross-National Collaborative Group, 1996; Kleinmann, 1982; Cheung, 1991; Cheung & Lau, 1982; Waza, Graham, Zyzanski, & Inoue, 1999). Because these data were obtained from medical settings, it is possible that responses were biased towards somatic complaints due to a lack of questions specifically assessing psychological symptoms; i.e., that is, without specific prompting patients in medical settings may tend to not report emotional symptoms. Studies that have found comparable rates of somatization and depression between Asian and Western populations, or higher rates of depression in Asian population have generally used structured interviews and questionnaires with non-representative community samples, in particular from immigrant or college populations (e.g., Zhang, Snowden, & Sue, 1998; Pang, 1998; Yen, Robins, &

Lin, 2000; Crittendon et al., 1992; Fugita & Crittendon, 1990; Kinzie, Ryals, Cottington, & McDermott, 1973). It may be likely that both the sampling frame and data collection procedure and measures contribute to the inconsistent findings. Studies that did not explicitly ask about psychological symptomatology may have failed to detect its presence. On the other hand, studies that used samples that have unique attributes may not be representative or generalizable of Asian populations in general. Reconciling these differences, future studies should focus on following procedures and administering measures that explicitly inquire about both somatic and psychological symptoms, and should focus representative community samples that have not been through a selection procedure (e.g., such as occurs with clinical samples) .

Neurasthenia

If depressive illnesses are less frequently diagnosed in Asian populations, are there other diagnoses in these cultures that are more frequently diagnosed? One possibility is neurasthenia. Neurasthenia, which literally means 'nerve-weakness,' is characterized by fatigue or weakness, sleep disturbances, poor concentration, poor memory, and pain associated with muscle tension. Neurasthenia is included in the World Health Organization's International Classification of Diseases (ICD-10, WHO, 1992) but not in the Diagnostic and Statistical Manual of Mental Disorders – Fourth Edition (DSM-IV, American Psychiatric Association, 1994). The diagnosis has three specific criteria: (a) either persistent and distressing complaints of increased fatigue after mental effort, or persistent and distressing complaints of bodily weakness and exhaustion after minimal

effort; (b) at least two of the following: feelings of muscular aches and pains, dizziness, tension headaches, sleep disturbance, inability to relax, irritability, or dyspepsia; and (c) autonomic symptoms, such as palpitations, sweating, flushing, and tremors, or depressive symptoms that are not sufficiently persistent and / or severe to satisfy criteria for any of the disorders higher in the hierarchy of classification of neurotic, stress-related, somatoform disorders (World Health Organization, 1992). This follows from the structure of ICD-10 Diagnostic Criteria for Research wherein mood disorders, panic disorder, and generalized anxiety disorder supersede neurasthenia as a diagnosis (WHO, 1993).

In ICD-10, there are two main sub-types of Neurasthenia, with substantial overlap between the sub-types. The main feature of the first sub-type is a complaint of increased fatigue after mental effort, often associated with some decrease in occupational performance or coping efficiency in daily task. The fatigue is typically described as involving unpleasant intrusion of distracting associations or recollections, difficulty in concentrating, and inefficient thinking. The second sub-type focuses on feelings of bodily or physical weakness and exhaustion after minimal effort, accompanied by a feeling of muscular aches and pains and inability to relax. In both sub-types, other unpleasant physical feelings, such as dizziness, tension headaches, and a sense of general instability are common. Other diagnostic features include worries about decreasing mental and bodily well-being, irritability, anhedonia, varying minor degrees of both depression and anxiety, and sleep disturbances.

Neurasthenia has been found to be the most common psychiatric outpatient diagnosis in China, and accounts for one third to one half of all outpatient diagnoses in China, whereas depression and related disorders are the leading diagnoses in Western cultures (Kleinman, 1977; Kleinman, 1982). However, there does appear to be overlap between neurasthenia and depression, with approximately 50% of neurasthenia patients also meeting criteria for major depression (Kleinman, 1982; Yan, 1989; Zhang, 1989). Results such as these have raised questions as to whether neurasthenia might simply best be thought of as a variant of depression. However, although nearly half of the sample diagnosed with neurasthenia also meet the criteria for major depression, the other half did not, which supports neurasthenia as a distinct disorder. One of the reasons that the diagnosis of neurasthenia persists today is that it is much more widely accepted in general Asian populations than depression.

Somatization in Children

The studies reviewed above have focused on cross-cultural comparisons of adults in regards to somatization, but somatization may be particularly common in children, and particularly debilitating (e.g., Perquin, Hazebroek-Kampschreur, Hunfeld et al., 2000; Campo & Fritsch, 1994; Garber, Walker, & Zeman, 1991; Garralda, 1996, Bernstein, Massie, Thuras, Perwien, Borchardt, & Crosby, 1997). A meta-analysis conducted in 1993 reviewed 119 studies assessing somatic symptoms in children and adolescents, and found somatic complaints to be prevalent (Campo & Fritsch, 1994). The somatic symptoms found to be most prevalent are headaches, autonomic and gastrointestinal

complaints, and general aches and pains (Walker et al, 2006; Berstein, et al., 1997; Campo, Jansen-McWilliams, Comer, & Kelleher, 1999). A recent study using the Children's Somatization Inventory with 1,173 nonclinical children between the age of 11- to 16- (with three 17-year-olds) reported that over one-third (37%) of participants had at least one frequent somatization symptom, and 12% endorsed four or more symptoms (Vila, Kramer, Hickey, Dattani, Jefferis et al. 2009). They found that the most frequently endorsed symptoms were headaches (66% overall and 13% overall endorsing it "a lot" or "a whole lot" respectively), low in energy (49% overall and 11% overall endorsing it "a lot" or "a whole lot"), sore muscles (49% overall and 11% overall endorsing it "a lot" or "a whole lot"), nausea (44% overall and 12% overall endorsing it "a lot" or "a whole lot"), stomach pain (43% overall and 9% overall endorsing it "a lot" or "a whole lot"), and lower back pain (40% overall and 11% overall endorsing it "a lot" or "a whole lot").

Not only are somatic complaints common in children but many studies have found that somatic complaints in children and adolescents are significantly associated with functional impairment, including increased school absences and poorer school performance (Vila et al., 2009; Robinson, Alverez, & Dodge, 1990; Campo et al., 1999). Vila et al. (2009), for instance, found that somatic symptoms were significantly related to functional impairment in everyday activities, with 30% of the participants not going to school, and 47% impaired in their ability to concentrate. Furthermore, somatization among children in pediatric primary care settings has been found to be significantly associated with psychopathology, family conflict, parent-perceived ill health, excess use of health and mental health services, and may predict emotional disorder and functional impairment in adulthood (Campo, Jansen-McWilliams, Comer, et al., 1999; Campo,

DiLorenzo, Chiappetta, et al., 2001; Hotopf, Carr, Mayou, et al., 1998). Steinhausen (2006) followed 1,964 adolescents for seven years in a Swiss community, and found that somatic symptoms were stable into early adulthood, with children showing somatization during childhood showing a four-fold increase of somatization in adulthood over base rates. Furthermore, increased somatic symptoms in late adolescence significantly predicted phobic disorders and PTSD in males, and somatoform and anxiety disorders in females. Thus, somatization is a relatively common form of psychopathology in children, and is not only debilitating among children but often continues into adulthood.

Several studies have found that rates of somatization may peak in late childhood or early adolescence, with recurrent abdominal pain more common in early childhood, peaking in prevalence around age 9, and headaches peaking at age 12 (Garber et al., 1991; Domenech-Llaberia et al., 2004; Campo & Fritsch, 1994). Vila, Kramer, Hickey, et al. (2009) reported that the 11- to 12- year old group reported significantly higher scores on the Children's Somatization Inventory than the 13- to 14- year old group.

This is perhaps not surprising, since the pre-adolescence and early adolescence period of life is when some of the most substantial changes in the human body and brain occur. Furthermore, some researchers believe that because children have immature cognitive and verbal skills, they have not yet acquired or are still in the process of learning a language for feelings, a vocabulary to express emotions (Garralda, 1992, Lloyd, 1986). Hence, some scholars believe that among children psychological distress manifests and is communicated somatically because of this lack of language (Campo & Fritsch, 1994; Campo et al., 1999; Egger, Costello, Erkanli, & Angold, 1999).

Models for Western vs. Asian differences in rates of somatization and depression

Several explanatory models have been proposed for cultural differences in observed rates of somatization and depression. One of these models focuses on what has been called "Monism vs. Dualism," and a second on "Group Harmony" (Lewis-Fernández & Kleinman,1994).

Dualism, the philosophy that the mind is separate from the body (Kirmayer & Santhanam, 2001; Lee, 2001), is an integral part of Western medicine wherein physical diseases and illnesses such as cancer or diabetes generally have physical symptoms or corresponding signs, whereas mental or emotional diseases or illnesses such as schizophrenia or depression have psychological symptoms or corresponding signs (Fabrega, 1991). Furthermore, although Western medicine does acknowledge co-morbidity between diseases (i.e. having both cancer and depression), it sees each disease or illness as ontologically separate, or independently existing, and thus each disease or illness has its own set of interventions and treatments. Somatization, defined previously as exhibiting physical symptoms in the absence of underlying physiological disease, is in discordance with the Western medical system, and thus the term *psychosomatic* has become synonymous with somatization in an attempt to conform it to the Western medicine system where somatic symptoms do have an underlying disease that may be psychologically based. Recent studies have used terms such as "medically unexplained symptoms" as well "functional somatic symptoms" in lieu of the term somatization (Dhossche, Ferdinand, van der Ende, & Verhulst, 2001; Steinhausen, 2006; Eminson, 2007) to avoid implications suggested by the term psychosomatic. In contrast, depression

is seen as a psychiatric illness with psychiatric symptoms, in accordance with the Western medical system, although depression may have medical components. This makes depression easier for the medical profession to diagnose than somatization, which requires biologically based illnesses be ruled out.

In Asian cultures, Monism is the prevailing philosophy, which sees the mind and body as one interchangeable entity, and this idea of holism does not involve a mind-body dichotomy (Bhui, 1999). Lin (1980) has suggested that one reason for higher rates of somatic complaints among Asian populations may be due to this philosophy. Whereas Western culture view somatization and depression as distinctly different diseases, non-Western culture may not differentiate them and view them simply as distress. Many Eastern medicine models, such as the Ayurvedic system from India or traditional Chinese medicine have the perspective that all diseases have both somatic and psychological causes and symptoms (Fabrega, 1991). They may see a diagnosis of depression as redundant, when symptoms of depression such as sadness or anhedonia may be an indicator of liver disease. One consequence of this perspective is that individuals may feel it sufficient to report only one complaint, generally somatic complaints, to describe both their bodily and mental distress, as they are not viewed as separate from each other. The Japanese, for example, often associate the abdomen with emotions and feelings (Lock, 1980), and will present abdominal complaints and other body sites to indicate their psychological pain (Waza, et al., 1999). Therefore, when a patient reports to the doctor that his/her throat hurts, the patient may also be implying to the doctor that they are sad, and that this is culturally understood. Similarly, from a monism perspective, an individual who describes psychological problems may also be implicitly implying

relevant somatic problems. If a patient says that s/he is sad, a doctor might also ask if the patient had pain in the throat or lungs. However, reporting of somatic complaints is generally more prevalent, perhaps partly due to the fact that in Asian cultures, internal and emotional features are not necessarily regarded as the most important diagnostic characteristics of an individual, and generally are widely considered to be less treatable (Kitayama & Markus, 1995; Corrigan & Watson, 2002).

Although this may suggest that Asians are more likely to seek out medical help for somatic problems, monism does not preclude Asians from being aware of only somatic symptoms, nor does it preclude being unaware of or not focusing upon emotional or psychological states. When a clinician directly asks about psychological or emotional symptoms, Asian patients have been found to be aware of and generally understanding of such states (Cheung, 1995). Three community survey studies using Vietnamese refugee samples found that these participants initially reported only physical symptoms, but when they were specifically asked about psychological symptoms, they did not have any difficulty understanding or reporting their psychological symptoms (Lin, Tazuma, & Masuda, 1979; Lin, Masuda, & Tazuma, 1982; Masuda, Lin, & Tazuma, 1980). However, it is emphasized that although these patients were aware of their mental distress, many believed that their symptoms stemmed from bodily malfunctions rather than from psychological stress (Lin, Masuda, & Tazuma, 1982). For example, Lin et al. (1982) found that although patients reported anxiety symptoms when specifically asked (along with reporting insomnia and indigestion), they interpreted the anxiety symptoms as "kidney insufficiency" or some other direct physiological dysfunction (e.g., "liver problems") rather than stemming from an excessively stressful situation. This suggests

that because of the body-mind unity, once physiological discomfort or symptoms are identified, because there is no separate attention paid to emotions, psychological symptoms were fully integrated with other physiological problems and viewed as part of the larger whole (Lin, 1980), and may be unnecessary to report, unless directly asked. What this suggests is that Asians may tend to prioritize physical maladies over emotional or psychological ones, and even when emotional or psychological symptoms are identified, tend to combine them with physiological ones.

A second model that has been used to explain Asian and Western differences in symptoms has been called the 'Group Harmony' model. This model posits that in certain cultures individuals work primarily towards the betterment of the group, rather than the betterment of the individual. This is often called collectivism, where the needs and goals of the groups supersede the needs and goals of the individual (Smith, Dugan, Peterson, & Leung, 1998). Collectivist cultures place a heavy emphasis on relationships and interdependence, with behaviors and emotions controlled by the norms and responsibilities to the group (Triandis, 1994). Kleinman (1977) suggested that somatic symptoms may be perceived as less self-centered and therefore less disruptive to group harmony than depressive symptoms.

This model has stimulated a number of studies on Asian populations' expression of depressive or sad affect. Various studies have shown that culture is related to differences in personality, family dynamics, behavior patterns, and one's understanding of health, illness, and treatment (Uba, 1994), and in general Asian cultures have been found to favor emotional control and inhibition of affective expression (e.g., Uba, 1994).

Additionally, "forbearance," an important social virtue of Confucianism, advocates taking control of one's emotion (The Chinese Culture Connection, 1987). Behaviors that are upsetting to the social group are discouraged; among Chinese, for instance, socialization teaches that when an emotion is experienced, one should suppress the emotion and transform it into something more tangible, such as somatic complaints (Lin et al., 1982). Asian Americans consider behaviors to represent mental illness if the behaviors are disruptive to the social group (Moon & Tashima, 1982). When asked in a survey on different mental disorders and help-seeking behaviors, Chinese Americans indicated that somatoform disorders were the least socially disruptive as compared to anxiety disorders and depression, and in this study research participants were more willing to acknowledge somatoform problems, and seek help for them as opposed to any other mental disorders (Kung & Lu, 2008).

Anger Expression

Most research investigating links between somatization and affect expression in non-Western cultures has focused on depressive affect – i.e., sadness – or occasionally on anxious affect. However, another important affect that is likely influenced by cultural processes is anger. The few studies focusing on anger do suggest that there may be cross-cultural differences in the expression and people's reactions to anger. A study with participants from 48 countries including many Western and Asian countries assessed adults' preferences and desires for their children's emotions and emotional expression. This study found that parents in countries such as Thailand, Malaysia, Nepal, Indonesia

reported among the highest levels of desire for anger suppression whereas parents in countries like Canada, Italy, Australia, and the U.S. were among the lowest (Diener & Lucas, 2004). These parental preferences represent social norms for the children that suggest that, since expression of anger represents violation of such social norms, it may result in distress for the individual; in fact, one of the most common sources of emotional distress is expression of anger (Deffenbacher & Stark, 1992; Greenberg, 2002).

Much of the research stemming from Kleinman's (1977) early work has suggested that somatic symptoms may be perceived as less self-centered and hence less disruptive to group harmony than depressive symptoms. Hence, according to the perspective of Kleinman and others, situations that might give rise to depressive symptoms in Western cultures may give rise to somatic symptoms in Asian cultures (and vice versa). However, it is possible -- even likely that -- anger is perceived as even more disruptive to group harmony than depressive or anxious symptoms. Anger is an emotion that has been described as '*ego focused'* because the primary reference is the individual and his or her own internal attributes (Markus & Kitayama, 1991), and anger generally involves dissatisfaction with others. Publicly displaying anger can be at odds with maintaining interdependence, cooperation, and when unguarded can result in confrontation and conflict in the group. For many cultures that emphasize group harmony, expression of anger is considered childish and dysfunctional. Furthermore, some cultures such as the Japanese socialize children from an early age to control the expression of anger and avoid disruption of the harmony in a social situation (Miyake, Campos, Kagan, & Bradshaw, 1986). In their study, Miyake et al. (1986) found that among 11 month old American and Japanese infants, the Japanese infants took 2.5 times

longer to recover playing after hearing an angry vocal expression of their mothers as compared to the American children, which suggests even by this age, anger was aversive and disruptive to behavior. Further, in Asian cultures anger was found to be highly disruptive to group harmony because it facilitates individual domination (Barrett & Campos, 1987), whereas shame is seen as more appropriate because it facilitates submission to the group.

However, it has been found that under some circumstances, excessive avoidance of angry affect can have negative consequences, at least in Western cultures. For example, studies conducted in Western nations have found that suppressed anger is associated with depressive symptoms in adults (Biaggio & Godwin, 1987; Clay, Anderson, & Dixon, 1993). In fact, there is a belief in Western culture, partly from classic Greek literature and psychoanalytic psychology, that some anger expression is good since it is seen as a release or catharsis (Schaar, 1961; Breuer and Freud, 1957), although moderation and appropriate expression is essential since expressing anger can itself cause negative reactions in the recipient, and negative consequences for the individual expressing the anger (Zeman & Shipman, 1996). Another study with women with breast cancer found that holding negative emotions internally instead of venting anger eventually lead to feelings of anxiety, worry, and develop a sense of despair (Fernandez-Ballesteros, Ruiz, & Garde, 1998).

Several studies have found differences in reactions to anger expression between Asian and Western populations. A study of Asian Indian-American and Euro-American males found that when asked to express anger in a social confrontation, the Asian Indian-

American participants showed delayed diastolic blood pressure recovery and increased introspective cognitive strategies such as repression and rational coping self-statements rather than direct expression of anger, which may result in this population having relatively little experience or familiarity with direct expression of anger (Suchday & Larkin, 2004), although it could also reflect increased discomfort with expression of anger. In this study, participants engaged in an interaction with a non-acquiescent male experimental confederate, with the research participant asked to suppress or express their anger towards the confederate. Following the interaction, they were asked to rate the level of their anger as well as resentful and reflective cognitions related to anger, and blood pressure and heart rate responses were recorded throughout the interaction and afterwards. When Asian Indian-American participants were asked to actively show their anger, they had increased blood pressure and their blood pressure took a longer time to return to normal after the confrontation than Euro-Americans.

Present Study

The present studied assessed relations between the experience and control of anger, and somatization and internalizing psychopathology among a group of middle-school children in Vietnam. In a review of published psychological research, Arnett (2008) found that across several journals, including *Developmental Psychology*, *Journal of Personality and Social Psychology*, *Journal of Abnormal Psychology*, *Journal of Family Psychology*, *Health Psychology*, and *Journal of Educational Psychology*, only a small portion of studies published between 2003 and 2007 included non-American

samples, despite the fact that Americans represent only about 5% of the human population. In fact, for Asian samples in particular, across those six journals and five years, only about 3% involved Asian samples. Arnett (2008) found little change in these results from 1988 to 1993 to 1998. He concluded by stating "the restricted focus of American psychology makes it an incomplete science, a field that cannot truly be said to represent the human population. It does seem dubious that American psychology can claim status as a human science if its focus is on only 5% of the human population" (p. 613), urging the field to expand its breadth geographically beyond American borders. Thus, one of the goals of the present study is to culturally broaden research focusing on the relation affect and child psychopathology. Our sample is a representative sample of non-referred Vietnamese middle school children, which will help shed light on how non-Caucasian samples experience and respond to anger, and the consequences of their actions.

More specifically, purpose of the present study was to determine the relation between the experience and expression of anger, vs. suppression of the expression of anger, and various forms of psychopathology among Vietnamese children. We focused on children in grades six and nine, which is the time period where some researchers believe somatization peaks (Garber et al., 1991, Domenech-Llaberia et al., 2004, Campo & Fritsch, 1994) while it is also a time period when children are solidifying and learning cultural suppression and display of emotions (Garralda, 1992).

Based on the literature reviewed above, our primary hypotheses were that among Vietnamese children (a) behavioral expression of anger (AX-O) would be positively

correlated with anxious and depressed symptoms, because of both the social (e.g., rejection) and intra-personal (negative self-evaluation) consequences of behavioral expression of anger, (b) behavioral expression of anger (AX-O) also would be positively correlated with somatic symptoms because of the autonomic arousal associated with behavioral expression of anger, but at a lower level than behavioral expression of anger was correlated with depression and anxiety, (c) experience of anger but behavioral suppression of anger (AX-I) would be positively correlated with somatic symptoms because of the autonomic arousal associated with the experience of anger, (d) experience of anger but behavioral suppression of anger (AX-I) would also be positively correlated with depression and anxiety because of the intra-personal (negative self-evaluation) consequences of experience of anger, but at a lower level than it is correlated with somatic symptoms, (e) control of anger (AC-O, AC-I) would be significantly correlated with somatization, because of the autonomic arousal associated with anger; (f) this effect would be stronger at higher levels of Trait Anger, because these individuals would be experiencing more anger, and hence more arousal. Trait Anger refers to the frequency, intensity, and duration state anger is experienced.

We also made hypotheses in regards to the relation between the STAXI variables and the CBCL Aggressive Behavior scale: (a) that anger experience (AX-O and AX-I) would be positively correlated with CBCL Aggressive Behavior, (b) that this relation would be higher for higher levels of trait anger, as individuals with higher levels of trait anger would likely be expressing more anger and hence more aggression; (c) that anger control (AC-O and AC-I) would be negatively correlated with CBCL Aggressive Behavior, and (d) that this relation would be larger for higher levels of trait anger, as

among individuals with higher levels of trait anger a lack of control of anger would be associated with more aggression.

CHAPTER II

METHODS

Participants

The sample for the present study consisted of 365 grade 6 and grade 9 students in the Danang City School System, in Vietnam. Participants were randomly selected using a stratified sampling procedure across the district. There was over-sampling of ethnic minorities from the mountain region, because of their relatively small numbers. The participant's mean age was 12.68 (SD 1.54), 50.7% were in the 6^{th} grade, and 49.6% were male. The Danang City is a rapidly growing port city located in the center of Vietnam with a population of slightly less than one million. It is the fourth largest city in country.

Measures

Translation Procedures. Following the suggestions of a number of authors (e.g., van-de-Vijver & Hambleton. 1996; van Widenfelt et al., 2005) as well as based on our own experience, we did not use a strict translation / back translation method, because an item can be translated literally correctly, but translated conceptually incorrectly, and back translation will not capture this error. Rather, we used a consensus approach

recommended by these authors. The first author of the present study, who is a graduate student in child clinical psychology, and a native English and Vietnamese speaker, made the initial translation for the instruments. This translation was then reviewed by the author's graduate advisor, a child clinical psychologist who is a native English speaker fluent in Vietnamese and by their colleague, Dr. Lam Tu Trung, a Vietnamese psychiatrist who is a native Vietnamese speaker conversant in English. They then discussed their translations with each other, and in places of disagreement with each other or with the original translation, discussed the translation with the first author, until there was agreement on the translation.

Child Behavior Checklist. Child psychopathology data were obtained using the Child Behavior Checklist (CBCL; Achenbach, 1991; Achenbach & Rescorla, 2001), a 118-item parent-report checklist that covers a wide range of child emotional and behavioral problems (e.g., "Too fearful or anxious," "cruel to animals"). Parents report whether their child has each problem, by circling 0 ("Not True"), 1 ("Somewhat or Sometimes True"), or 2 ("Very True or Often True"). It generates 8 cross informant scales, including Internal consistency (Cronbach's alpha) of total problem scores has ranged from .94 to .97 across the various samples, and one-week test-retest reliability of total problem scores, via the intra-class correlation coefficient (ICC), was found to be .95 ($p<.01$; Achenbach, 1991; Achenbach & Rescorla, 2001).

Youth Self-report Form. Child psychopathology data were obtained from the students, using the Youth Self-report Form, a child-report version of the CBCL (Achenbach & Edelbrock, 1983). It is a 118-item checklist that covers a wide range of

child emotional and behavioral problems (e.g., “Too fearful or anxious,” “cruel to animals”). Adolescents report whether they have each problem, by circling 0 ("Not True"), 1 ("Somewhat or Sometimes True"), or 2 ("Very True or Often True"). It generates 8 cross informant scales, with internal consistency estimates (Cronbach's alpha) for total problem scores ranging from .94 to .97 across various samples, and one-week test-retest reliability of total problem scores, via the intra-class correlation coefficient (ICC), was found to be .95 (Achenbach, 1991; Achenbach & Rescorla, 2001).

State-Trait Anger Expression Inventory-2. Assessment of the experience of anger was obtained from the State Trait Anger Expression Inventory-2 (STAXI-2; Spielberger, 1999), a self-report questionnaire with six scales, five subscales, and an Anger Expression Index, as well as an overall measure of anger expression. Participants were asked to rate the frequency of each behavior or feeling across a 4-point Likert-type scale ranging from 1 (“almost never”) to 4 (“almost always”).

STAXI-2 scales used in the present study included: (a) Trait Anger (T-Ang), a 10-item scale that measures how often angry feelings are experienced. Internal consistencies (Cronbach's alpha) are .84 to .86 (Spielberger, 1999); (b) Anger Expression-Out (AX-O), which measures how often angry feelings are expressed towards other people or objects; (c) Anger Expression-In (AX-I), which measures how often angry feelings are suppressed (i.e., not directly expressed); (d) Anger Control-Out (AC-O), which measures how often a person controls the outward expression of angry feelings towards other people or objects; (e) Anger Control-In (AC-I), which measures how often a person attempts to control angry feelings by relaxing and cooling off. Internal consistencies range from .74 to .95

and the scales have been validated against various indices of anger-related physiological arousal and other self-report measures of anger and hostility (Spielberger, 1999; Deffenbacher, 1992).

Children's Somatization Inventory. Information regarding the children's somatization symptoms were obtained from the Children's Somatization Inventory (CSI; Garber, Walker & Zeman, 1991; Walker & Garber, 2003; Walker et al., 1991). The CSI assesses the severity of 35 somatic symptoms (e.g., headaches, fatigue) that participants have experienced during the past two weeks. Symptoms are rated using a 5-point scale, ranging from "not at all" to "a whole lot."

Procedures

Within Danang City School System, there are a total of 50 middle schools (which cover grades 6 through 9). To obtain a representative sample, the school district was broken down into eight different types of regions (coastal plains; fishing community; fishing community near a market; urban; urban center; industrial; middle class; mountain). From this categorization, 18 schools were representatively selected and from these 18 schools, 102 classrooms were selected proportional to the number of students in the school, relative to the total student population in the city. These was an oversampling of the mountain region in order to be able to obtain more accurate estimates of mental health functioning of the small number of ethnic minorities, who live in the mountain regions.

Once these schools were identified and the schools' participation enlisted by the Danang Department of Education, under whose auspices the survey was collected, parents in the participating schools were informed of the study and their consent for the study was requested. As is not atypical in Vietnam as a socialist country (e.g., McKelvey, Daves, Sang, & Tu, 1999), participation was 100%. Data from students were collected in interviews in small groups (n=6-8) at the schools.

CHAPTER III

RESULTS

Correlations

We first computed correlations between the various variables, to provide estimates of first order relations among the variables. As Table 1 shows, the STAXI anger expression and anger control variables were significantly correlated with the CBCL Anxious / Depressed and Somatic Complaints scales, although the STAXI anger control variables showed smaller relations than the STAXI anger experience variables. The STAXI anger expression variables but not the anger control variables were significantly correlated with CBCL Aggressive Behavior. Among the four STAXI variables, Anger Experience Inward was significantly more highly correlated with both Anxious / Depressed Behavior and Somatic Complaints (all $t>2.50$, all $p<.01$); i.e., Anger Experience Inward was more highly correlated with internalizing psychopathology than the other aspects of anger. In addition, in three out of four instances the experience of anger was more highly related to internalizing psychopathology than the control of anger ($t>2.31$, all $p<.05$); the one exception was the correlations between anger experience out vs. anger control out with somatic complaints, the difference of which was not significant.

Table 1

Correlation matrix of measures and demographics

	Age	Gender	AX-O	AX-I	AC-O	AC-I	TA	ADB	SC	AB
Age	1.00									
Gender	-.04	1.00								
AX-O	0.14**	-.03	1.00							
AX-I	0.13*	-.08	0.48****	1.00						
AC-O	0.12*	-.10	0.05	0.32****	1.00					
AC-I	0.09	0.04	0.11*	0.29****	0.79****	1.00				
TA	0.11*	-.04	0.56****	0.53****	0.05	0.09	1.00			
ADB	0.02	0.08	0.27****	0.46****	0.11*	0.15**	0.45****	1.00		
SC	-.01	0.05	0.24****	0.37****	0.14**	0.12*	0.34****	0.58****	1.00	
AB	0.19***	-.07	0.49****	0.40****	-.06	-.04	0.44****	0.49****	0.34****	1.00

Notes: AX-O = STAXI Anger Experience Outward; AX-I = STAXI Anger Experience Inward; AC-O = STAXI Anger Control Outward; AC-I = STAXI Anger Control Inward; TA = STAXI Trait Anger. AB = YSR Aggressive Behavior scale. *=.05, **=.01, ***=.001, ****=.0001

Aggression

We next examined relations between anger control and aggression, to determine the extent to which anger control was related to the most obvious form of psychopathology to which it might be connected. In these analyses we also assessed the extent to which relations between the anger variables and aggression differed as a function of the participants' levels of trait anger, since it seemed logical that trait anger might moderate the effects of anger (i.e., for individuals who tended to be less angry, there would be a smaller relation between anger control and aggression) . In four separate models, the anger control variable, Trait Anger, and their interaction were analyzed with YSR Aggressive Behavior as the dependent variable.

All four interactions were significant, indicating that the relation between each of the anger control variables and aggressive behavior varied significantly as a function of the level of Trait Anger (see Table 2). To interpret these interactions, we followed the recommendations of Cohen and Cohen (1983), estimating the slope for the relation between each anger control variable and aggression at -1 and +1 standard deviations from the mean for Trait Anger. As can be seen in Table 3, the relation between the two anger expression variables and aggression was positive regardless of the level of Trait Anger, although the relation was larger at lower levels of Trait Anger. That is, as Trait Anger increased from -1 to +1 standard deviations from the mean, the relation between the experience of anger and aggressive behavior decreased. In addition, the main effects for the relation between the two experience variables and aggressive behavior were significant. In contrast, the relation between the two anger control variables and

Table 2.

Effects of STAXI anger control variables and trait anger on YSR Aggressive Behavior

Model	Factor	F	Slope	
			Slope at -1 TA	Slope at +1 TA
1.	AX-O	58.07****	.41	
	TA	34.64****		
	AX-O x TA	19.53****	.51	.31
2.	AX-I	25.46****	.27	
	TA	54.78****		
	AX-I x TA	22.06****	.40	.14
3.	AC-O	2.58		
	TA	91.90****		
	AC-O x TA	15.29****	.06	-.22
4.	AC-I	3.46		
	TA	94.25****		
	AC-I x TA	10.85**	.06	-.23

Notes: AX-O = STAXI Anger Experience Outward; AX-I = STAXI Anger Experience Inward; AC-O = STAXI Anger Control Outward; AC-I = STAXI Anger Control Inward; TA = STAXI Trait Anger. * = $p < .05$; ** = $p < .01$; *** = $p < .001$; **** = $p < .0001$.

aggression was negative (the higher anger control the lower aggression) for high levels of Trait Anger but essentially flat at low levels of Trait Anger. The main effect for the relation between the two anger control variables and aggressive behavior was non-significant.

Internalizing Problems

We next assessed the relations between YSR Internalizing Problems (combining Anxious / Depressed and Somatic Complaints scales), and the anger control variables, using the same model as in the previous analyses of YSR Aggressive Behavior. For Anger Experience Out, the main effect was non-significant but the interaction with Trait Anger was significant, whereas for the other three STAXI variable, the main effects were significant but the interactions with Trait Anger were non-significant (see Table 3). In regards to the interaction between Anger Experience Out and Trait Anger, at 1 standard deviation below the mean on Trait Anger the relation between Anger Experience Out and Internalizing Problems was small and positive whereas at 1 standard deviation above the mean on Trait Anger, the relation between Anger Experience Out and Internalizing Problems was essentially zero.

Anxious / Depressed Behavior, and Somatic Complaints

Finally, we assessed whether the effects of the anger variables on internalizing problems differed as a function of the sub-domain of internalizing problems (YSR

Table 3.

Effects of STAXI anger control variables and trait anger on YSR internalizing psychopathology

Model	Factor	F	Slope	
			Slope at -1 TA	Slope at +1 TA
1.	AX-O	3.31		
	TA	66.07****		
	AX-O x TA	12.26***	.19	.02
2.	AX-I	39.90****	.33	
	TA	26.49****		
	AX-I x TA	2.81		
3.	AC-O	6.59*	.12	
	TA	88.45****		
	AC-O x TA	2.23		
4.	AC-I	5.73*	.11	
	TA	84.89****		
	AC-I x TA	0.98		

Notes: AX-O = STAXI Anger Experience Outward; AX-I = STAXI Anger Experience Inward; AC-O = STAXI Anger Control Outward; AC-I = STAXI Anger Control Inward; TA = STAXI Trait Anger. * = $p < .05$; ** = $p < .01$; *** = $p < .001$; **** = $p < .0001$.

Anxious / Depressed Behavior vs. Somatic Complaints). The model for these analyses was similar to the two previous models, but also included a two level, within subject "Domain of Psychopathology" factor representing the contrast between the two CBCL scales, Anxious - Depressed Behavior and Somatic Complaints (standardized so that the contrast was equally weighted across the two variables). Thus, each of the four models (across the four anger control variables) had three factors, (a) the main between-subjects effect of the anger control variable, (b) the main within-subject effect Domain, which tested whether participants differed in their levels on these two scales (this test was not of interest for the present study and is not reported); and (c) the interaction of these two variables, which assessed whether the relation between the anger control variable and the two CBCL scales differed across the two CBCL scales.

As can be seen in Table 4, for three of the four anger control variables (Anger Expression Out, Anger Control Out, Anger Control In) the three way interaction was significant. Anger Experience In did not interact with Domain, indicating that relations between Anger Experience In and internalizing psychopathology (which as reported above was the strongest effect among the STAXI variables) did not differ as a function of the domain of internalizing psychopathology. To interpret the significant interactions, we estimated the slope for the relation between the anger control variable and anxiety / depression or somatic complaints, at +1 and -1 standard deviations from the mean of Trait Anger. The two anger control variables showed similar patterns with a small but significant positive main effect on anxiety / depression but no interaction with Trait Anger. For somatic complaints there was a significant interaction with Trait Anger, reflecting essentially a 0 relation between anger control and somatic complaints at -1

Table 4

Within-subject effects of STAXI anger control variables and trait anger on YSR internalizing psychopathology

Model	Dependent Variable	Factor	F	Slope	
				Slope at -1 TA	Slope at +1 TA
1.	Domain	Domain X AX-O	0.00		
		Domain X AX-O X TA	6.89**		
	AnxDep	AX-O	2.72		
		AX-O X TA	20.31****	.20	-.01
	Somatic	AX-O	2.27		
		AC-O X TA	2.75		
2.	Domain	Domain X AX-I	1.31		
		Domain X AX-I X TA	3.31		
3.	Domain	Domain X AC-O	0.33		
		Domain X AC-O X TA	7.48**		
	AnxDep	AC-O	3.90*	.09	
		AC-O X TA	0.00		
	Somatic	AC-O	6.08*	.12	
		AC-O X TA	6.83**	.02	.22
4.	Domain	Domain X AC-I	0.16		
		Domain X AC-I X TA	5.69*		
	AnxDep	AC-I	5.41*	.11	
		AC-I X TA	0.12		
	Somatic	AC-I	3.38		
		AC-I X TA	4.00*	.00	.18

Notes: Domain = within subject factor Domain of Psychopathology, represented by the two YSR

scales (Anxious-depressed behavior vs. Somatic complaints); AC-O = STAXI Anger Control Out scale; Trait = STAXI Trait Anger scale; AC-I = STAXI Anger Control In scale; AAnxious – depressed = YSR Anxious – depressed scale; Somatic = YSR Somatic Complaints scale; * = p< .05; ** = p< .01; *** = p< .001; **** = p< .0001. Main effects for Trait Anger and Domain, and their interaction, were included in models but because they are not of substantive interest are not included in the above table to conserve space.

standard deviation Trait Anger, and about a .2 relation between anger control and somatic complaints at +1 standard deviation Trait Anger.

CHAPTER IV

DISCUSSION

Anger has not been as well studied as other affects. This is despite the fact of its known importance in mental health; for instance, studies conducted in the U.S. have found anger linked to various forms of psychopathology, including depression as well as aggression (Biaggio & Godwin, 1987; Clay, Anderson, & Dixon, 1993; Clay, Hagglund, Kashani, et al., 1996). Further, there has been little research regarding relations between anger and psychopathology among Asian populations where expression of anger is highly discouraged (Diener & Lucas, 2004), which may influence its effects on psychopathology. In the present study, we examined several important research questions regarding the experience and expression of anger among Asian adolescents, in particular Vietnamese. We focused on the relations between various aspects of anger in relation to (a) aggressive behavior, (b) anxiety / depression, and (c) somatization. Overall, our results indicate that among our Vietnamese adolescents the experience, expression, and control of anger are related not only just to aggressive behavior, but also to various forms of internalizing psychopathology, in relatively complex ways.

STAXI-2 Factor Labels

Before discussing our specific findings, it will be useful first to consider the labels for the STAXI anger control and anger experience scales. Although the scales are well developed, the labels that have been applied to the scales may not fully reflect the complexity of their content. In fact previous versions of the Spielberger STAXI as well as a similar measure, the Pediatric Anger Expression Scale – 3rd Edition (PAES-III: Jacobs, Phelps, & Cottington, 1989), have found a three factor structure (anger-out, anger-in, anger control), and a later factor analysis of the PAES-III found a fourth factor differing somewhat from the STAXI-2 -- anger-distraction. This suggests that to most accurately interpret our results it may be useful to further clarify the content of the scales. We will continue to use the labels originally designated for the STAXI (AX-I, AX-O, AC-I, and AC-O) but here we will give a more precise description of each of the scales so that we can better understand the scales' relations to our dependent variables.

The items that cluster to form Anger Expression-Out (AX-O) involve angry, aggressive verbal and physical behaviors such as saying nasty things or slamming doors. Thus, the content of this factor is relatively well described by its label. However, "Expression" in the label should not be taken to imply that the individual is intentionally or volitionally expressing anger.

The items that cluster to form Anger Expression-In (AX-I) reflect an intense, uncontrolled experience of anger, but also reflect a reported ability to control the behavioral expression of this anger (i.e. to boil inside with anger but not show it). What is probably central to this factor is an intense, internal experience of anger. However,

despite the content of the items, the anger of individuals endorsing these items may not be completely oblivious to others given the intensity of the anger, and there thus may be social ramifications for the behaviors associated with these items, similar as for the overt expression angry aggressive behaviors. In addition, as with Anger Expression – Out, "Expression" in the label should not be taken to imply that the individual is intentionally or volitionally expressing anger; the items on this scale appear to reflect more of an out of control, intense experience of anger.

The items that load on to the Anger Control factors (AC-I and AC-O) reflect coping strategies that generally would be considered adaptive and healthy, if implemented successfully. Anger Control-In (AC-I) involves a cluster of items that describe the attempt to control angry feelings (i.e. trying to simmer down), but these items could still be endorsed even if the attempt to control the angry feelings is not successful. This factor is similar to the anger-distraction factor found for the PAES-III (i.e. do something relaxing to calm down). Finally, Anger Control-Out (AC-O) describes an ability to control the outer expression of anger (e.g., control ones temper; control the urge to express ones anger) but as with AC-I the content of the items on this factor do not directly imply that the emotional aspect of anger is actually controlled). This is important to consider when interpreting our results.

There are two other issues related to the STAXI that should be considered in interpreting our results. First, on the STAXI informants are asked how they *generally* react or behave when angry. However, it is possible that informants may recall and report on different occurrences of anger they've experienced where their reactions and

behaviors differed. Thus, it is possible for someone to be high on both anger control and anger expression. Second, the STAXI instructions ask informants to rate how often they respond a certain way *when they are angry* (e.g., how often they slam doors when they are angry) rather than rate often they respond a certain way because of anger (e.g., how often they slam doors in anger). This distinction is subtle but important, because the former wording controls for the frequency of anger. That is, if the instructions are followed correctly, someone who becomes angry once a year but always slams doors during that one time should receive the same score on the slamming doors items as someone who is constantly angry and constantly slamming doors. When interpreting relations between the STAXI and other variables it is important to keep this distinction in mind, but it is unclear the extent which the informants fully understand and follow these instructions precisely.

Aggression

The first set of analyses examined relations between anger and aggression (as measured by the CBCL). Our correlational analyses indicated that expressing anger behaviorally (AX-O) and intense anger that is suppressed behaviorally (AX-I) were significantly correlated with CBCL aggression. Additional analyses indicated that there was a stronger relation between anger expression (AX-O and AX-I) for those with low Trait Anger than participants with high Trait Anger. The moderate correlation between AX-I and CBCL aggression supports the possibility that participants' anger assessed by the AX-I scale may not be as suppressed as the AX-I items would suggest.

These results contradict our hypothesis that there would be a larger relation AX-O and AX-I to aggressive behavior among individuals with high trait anger than among individuals with low trait anger. One factor underlying this result may be that the items for the Youth Self-Report (YSR) Aggressive Behavior scale include a relatively small number of angry aggressive items (e.g., temper tantrums) but a larger majority of non-angry aggression (e.g., being stubborn) or ambiguous (e.g., bullying; fighting) items. Thus, it is possible that people with high levels of TA tend to express angry aggression, and hence for these participants AX-O and AX-I correlate at a lower level with CBCL aggression because CBCL aggression assesses primarily non-angry aggression. In contrast people with low levels of TA who may tend to express non-angry aggression, and hence AX-O and AX-I may correlate at a higher level with CBCL aggression since CBCL aggression assesses primarily non-angry aggression. The reason this could produce the observed correlations is that, if participants follow the STAXI instructions and report on the frequency of the angry emotions and behaviors assessed by AX-O and AX-I *when angry*, this would equate individuals high and low on Trait Anger in regards to the overall scores on the AX-O and AX-I, yet the relative distribution of angry vs. non-angry aggression (and hence the correlation to AX-O and AX-I) would differ for individuals high and low on Trait Anger.

Another possible explanation for these findings is that individuals with low and high trait anger may experience shame and guilt differently, which may influence the relation between anger expression and CBCL aggressive behavior. Specifically, because anger represents a significant social norm violation, when they are angry individuals with low trait anger may be more sensitive to norm violations and they may tend to experience

guilt relatively closely linked to shame (which reflects a negative evaluation of the psychological or moral self). In contrast, individuals with high trait anger may be less sensitive to norm violations and hence may tend experience guilt without shame (which also is negative evaluation but one wherein the behavior is evaluated separately from the self). A study by Tagney, Wagner et al. (1992) supports this possibility. These authors investigated shame and "shame-free" guilt in relation to aggression, and found that participants who experienced shame were more likely to show indirect aggression and hostility but not physical or direct aggression, whereas for those who tended to experience "shame-free" guilt-prone, the inverse relation was true. Given that the YSR Aggressive Behavior scale contains many items of indirect aggression (e.g., suspicious, sullen, stubborn), the relation between anger expression and aggression may vary as a function of trait anger, through a link to shame-proneness.

At high Trait Anger the anger control variables (AC-I, AC-O) were negatively correlated with CBCL aggressive behavior, and essentially uncorrelated with CBCL aggressive behavior at low Trait Anger. This fits with our hypotheses, suggesting that those who are easily angered but have strategies to control the anger exhibit less aggressive behaviors than those who are easily angered but who have fewer strategies to control the anger. There was no relation between anger control and CBCL aggressive behavior at low trait levels perhaps because these people have relatively little anger to control.

Previous studies have found relations between anger and aggression. For instance, in a longitudinal study conducted with incarcerated adolescents in the U.S., self-

reported anger predicted future aggression. Correlational data indicated that verbal and physical aggression were positively related to Trait Anger and Anger Expression-Out whereas physical aggression was negatively related to Anger-Control (Cornell et al., 1999); this is similar to our results, although we were not able to separate verbal and physical aggression. A study with children with rheumatoid arthritis, diabetes mellitus, and healthy children also found positive correlations between Anger Expression-Out and aggression, and negative correlations between Anger Control and aggression (Hagglund, Clay, Frank, Beck, & Kashani, 1994). The relations found in these two studies were similar to those in the present study, but were not as strong for Anger Expression-Out but much stronger for Anger Control than the present study. One possible reason may be due to sample differences. Cornell et al. (1999) had incarcerated adolescents, where aggression may already be high and there may not be much variability. Another possible reason for the differences between studies may be to the manner in which the measures were administered. In Hagglund et al. (1994) the measures were verbally administered and thus may have elicited more socially desirability responses, reflected by the fact that these children endorsed greater use of Anger Control than either Anger Expression-In or Anger Expression-Out. Another difference between the studies is that Cornell et al. (1999) and Hagglund et al. (1994) did not find any relation between Anger Expression-In and aggression. This may be due to the use of different measures of aggression. The measure used in the present study, the CBCL, may be tapping into non-angry aggression items that may be more likely to be endorsed since they may be less socially undesirable than physical aggression.

Additionally, another major difference between these and the present studies is that in Asian cultures anger and aggression are much more highly discouraged than in Western cultures. This could produce a stronger relation between Anger-Expression Out and aggression in Asian culture compared to Western culture, since in order to express anger verbally and behaviorally one must be relatively deviant, and individuals deviant enough to express anger overtly may also be sufficiently deviant to broadly engage in aggressive behavior. In addition, there was a weaker relation between anger control and aggression in our data compared to Western culture, which could be a result of the fact that controlling anger is strongly culturally normative of among Asian populations, so there may be less variability among Asians in controlling anger producing a smaller relation to aggression.

Internalizing Problems

Our next set of analyses examined the relation between anger and internalizing problems overall (the combined of anxiety / depression and somatic complaints scales). Three of the four anger variables interacted with Domain of Internalizing Problems (anxiety / depression vs. somatization) and these results will be discussed in the next section where internalizing problems are separated by their sub-domain, Anxious / Depressed Behaviors vs. Somatic Complaints. The one anger variable that did not interact with Domain of Internalizing Psychopathology was AX-I, which represents an intense, uncontrolled inner experience of anger. Similarly, also in contrast to the other anger variables, AX-I did not interact with Trait Anger. Overall, then, regardless of the

form of internalizing problems, and regardless of the level of trait anger, AX-I showed a moderate (.33) correlation with internalizing psychopathology. One possible explanation for this correlation is that the intense anger represented by AX-I has a negative impact on an individual's self-perceptions and self-evaluations because intense anger violates social norms and expectations, leading to anxious and depressed reactions; the intense anger that AX-I represents also likely involves significant physiological arousal, which could be linked to development of somatic complaints. It is also possible that although the AX-I items state that the behavioral expression of this anger is contained, the anger may be so intense that others sense it, and the individual then may experience the social consequences of violation of social norms around anger, leading to anxious and depressed affect as well as physiological arousal associated with somatic complaints associated with negative social reactions. The fact that AX-I did not interact with Trait Anger could be due to the fact that such intense anger as assessed by AX-I may be viewed as so deviant of social norms among Vietnamese adolescents, both by the self and well as by others, that its effects asymptote quickly. These speculations represent one causal direction, from AX-I to internalizing psychopathology. It is somewhat harder to come up with reasonable speculations regarding the other causal direction, wherein anxiety / depression and somatic complaints lead to the intense anger represented by AX-I.

Anxious / Depressed Behaviors, and Somatic Complaints

The other three anger variables (AX-O, AC-I, AC-O) were involved in significant three way interactions with Trait Anger and Domain of Internalizing Psychopathology. For AX-O, at high Trait Anger the relation between AX-O and depression / anxiety was essentially zero whereas at low Trait Anger, AX-O was positively correlated with anxiety and depression. This contradicts our hypothesis that AX-O would be correlated with internalizing problems more highly at high Trait Anger rather than low Trait Anger, because individuals with high trait anger would experience more negative social and intra-personal consequences of anger because they would be expressing more anger, which is socially deviant in Vietnam. Within the AX-O x Domain x Trait Anger interaction, AX-O was not related to somatic complaints, either as a main effect or in interaction with Trait Anger.

A possible explanation for the fact that the relation was stronger at low Trait Anger is that in Vietnam, people with high trait anger are relatively deviant from social norms (because they have high levels of trait anger), and part of this deviance may involve a lack of feeling guilty or anxious about their verbal and physical expression of anger, and a lack of concern of negative social evaluations of their anger. In contrast, people with low trait anger likely are more socially normative, so that the more they express the anger they do experience, the more they become anxious and depressed as a result of the consequences of violating social norms. Additionally, it may be that people who have high trait anger may be more habituated to the consequences of expressing anger, so the overt expression of their anger (AX-O) is not related to anxiety or

depression. The fact that somatic complaints were not related to AX-O in these models suggests the factors underlying somatic complaints, such as increased physiological arousal, physical sensitivity to pain, or a concrete interpretational style, are unrelated to AX-O. That is, the verbal and physical expression of anger (AX-O) may be more associated with emotional rather than physiological arousal.

For both anger control variables (AC-I and AC-O) , there was a positive relation with somatic complaints at high Trait Anger and essentially a zero relation with somatic complaints at low Trait Anger, whereas the relation between the anger control variables and anxiety / depression was positive but did not vary as a function of Trait Anger. At a broad level, this suggests that whatever processes link anger control and internalizing psychopathology may differ for anxiety / depression, and somatization. The finding of positive relations for both AC-I and AC-O with somatic complaints at high Trait Anger is congruent with our hypotheses. Controlling anger (e.g., trying to calm down as quickly as possible; controlling the urge to express ones angry feelings) may actually increase physiological arousal, and hence somatic complaints; in this context, it is important to remember that the AC-I and AC-O do not directly assess successful control of angry affect. Those with low trait anger may not experience anger sufficiently often for their control of anger to be related to somatic complaints.

The relation for both AC-I and AC-O with Anxious / Depressed behaviors was positive and did not vary significantly as a function of Trait Anger. This contradicts previous findings that have suggested a link between depression and poor cognitive control of anger in a U.S. children's sample (Kashani, Dahlmeier, Borduin et al., 1995).

A possible reason for the discrepancy in results may be due to the cultural differences, as for people in Vietnam the more they focus on controlling their anger, the more they may experience anxiety and depression because this may increase awareness for them of their anger and their violation of social norms by being angry.

Another way of looking at the finding that anger control interacted with Trait Anger with somatization as the dependent variable but not with anxiety / depression is that the link to somatization may involve the actual experience of anger whereas the link to anxiety / depression does not. That is, it is possible that the more that attempts at control of anger are exerted, the more physiological arousal and hence the more somatic complaints the adolescents may experience. The frequency of attempts of control of anger will be a function of two things: (a) the tendency to try to control anger when it occurs (high scores on AC-I/O), and (b) frequent anger (high Trait Anger). In contrast, it is possible that the link between anger control and anxiety / depression represents a common cognitive style, wherein individuals who desire and attempt to control their anger are also individuals who negatively self-evaluate, both in regards to their competency to cope with challenges (linking to anxiety) as well as their self-worth (linking to depression). Such a path would be independent of the frequency with which the individuals attempted to control their anger.

In one of the first studies published in this area, Kleinman (1982) found different rates of somatization and depression in Chinese and American patients, which he suggested may reflect cultural differences in the level of stigmatization of different symptoms of psychological distress. Several studies have suggested that depression may

be a more stigmatized form of display of psychological distress in Asians (e.g. Hsu, Wan, Chang, Summergrad, Tsang et al., 2008; Fogel & Ford, 2005). The results of our study provide some support for this perspective. For individuals with low trait anger, the verbal and behavioral expression of anger was related to anxiety and depression (but not somatic complaints), perhaps as a result of the social and intra-personal consequences of violating important social norms involving anger. In contrast, among those with high Trait Anger the expression of anger was unrelated to internalizing psychopathology, perhaps because these people have a tendency to disregard social norms, as reflected by their having high trait anger, or they may have become habituated to social rejection. However, for those with low trait anger, the more they verbally and behaviorally express their anger, the more they are anxious and depressed, suggesting that disregarding social norms or being socially rejected for expressing anger may lead to psychopathology that is relatively less socially acceptable (i.e., affect problems such as depression and anxiety, vs. somatic complaints). In contrast, in our data controlling anger was related to somatic complaints, perhaps because controlling anger is a more socially acceptable behavior, for which there are however still consequences vis-à-vis psychopathology, but consequences that are less stigmatized than anxiety / depression (i.e., somatic complaints).

Another way to say this is that if one violates social norms (as among Asian cultures) by expressing anger, then one may be more likely to show the psychological distress that comes from this norm violation via a more stigmatized psychopathology (i.e., depression and anxiety). In contrast, if one is able to control the anger which one experiences anger, this suggests that one is more sensitive or able to fit within cultural

norms, and hence the consequences of the control of anger are expressed in a less stigmatized and more acceptable psychopathology, somatization.

There have been some previous studies that have found anger and depression linked. Many of these studies were conducted with adult depressed patients who were more likely to report stronger subjective experiences of anger, greater amounts of anger expression, and that they exerted more efforts to suppress the expression of anger (e.g., Riley, Treiber, & Woods, 1989; Goldman & Haaga, 1995; Luutonen, 2007; Koh, Kim, & Park, 2002). Riley et al. (1989) found that among a U.S. depressed patient sample, the severity of depression was positively correlated with levels of anger experienced but not with anger expression, and only weakly related to anger suppression Goldman and Haaga (1995) found that U.S. depressed patients scored higher on self-report measures of anger and anger suppression. In sum, these studies have focused on depressed individuals and found that the experience and expression of anger differs for individuals with and without depression.

Another study using a sample of U.S. adults (Bridewell & Chang, 1997) found that Anger Expression-In and low Anger Control predicted both depressive and anxious symptoms. In the present study, we used a community sample and found that anxiety/depressive symptoms were associated with Anger Expression-In and Trait Anger. The relation between Anger Expression-In and internalizing problems in Bridewell and Chang (1997) were comparably strong with our study, however, Bridewell and Chang (1997) found a much stronger negative correlation between Anger Control and anxiety / depression. Again, this suggests that Anger Expression-In is highly problematic in both

Asian and Western cultures, but the relations between Anger Control and anxiety / depression is more complex. There may be a weak relation between Anger Control and anxiety / depression in Asian cultures because Anger Control is more normative and anxiety / depression is more deviant.

A few studies have focused on children. A study with children found that Anger Control was the only anger variable that significantly differentiated depressed from non-depressed psychiatric inpatients (Kashani et al., 1995). Clay, Hagglund, Kashani and Frank (1996) found in a sample of children not diagnosed with depression, sadness was associated with Trait Anger in both boys and girls, and with Anger Expression-Out in boys. Many of these studies produced complex relations between anger and depressive symptoms; for instance, Clay et al. (1996) found significant interactions between age, sex, Trait Anger, and anger expression styles in predicting aggression and sadness in children.

Overall, these results of these studies with children are mixed. The previous studies with adults found that trait anger, anger suppression, and anger expression were all associated with depression. The studies with children have reported that in addition to the level of anger and anger expression styles, anger control is an important factor related to depression, although results are not entirely consistent. The results from the present study found a small relation between Anger Control and anxious/depressive symptoms. Again, similar to the explanation for the weaker relation between anger control and aggression, anger control may be more normative among Vietnamese people, and thus, there may be less variability in anger control compared to U.S. samples. Our study

highlights the complexity of the relation between anger and anxiety/depression. For those who experience anger but suppress the verbal and behavioral expression of anger, there was a strong relation to anxious / depressive symptoms although the relation to anxious / depressive symptoms was weaker for all other anger expression variables except at low trait anger.

The literature investigating anger and somatic symptoms is fairly small, with the majority of research in this area investigating relations between anger and somatic symptoms such as blood pressure and hypertension (e.g., Suls, Wan, & Costa, 1995; Gallacher,Yarnell, Sweetnam, Elwood, & Stansfeld, 1999; Suls & Bunde, 2005; Schum, Jorgensen, Verhaeghen, Sauro, & Thibodeau, 2003), which is not directly relevant to the present study. However, one study with middle aged Korean women found that those who suppressed the expression of their anger had higher psychosomatic symptoms (Choi, 2009) as reported on the Symptoms Checklist-90-Revised, which is similar to our results. A study with children (Jellesma, Rieffe, Meerum Terwogt, & Kneepkens, 2006) found that anger, fear, and sadness were all associated with higher somatic complaints, and a study that examined anger and somatic complaints among adolescents (Miers et al., 2007) found that the level of anger was positively related somatic complaints. The majority of these studies have not focused on anger expression per se, but have identified a relation between anger and somatic complaints similar to the present study.

Study limitations

The present study has several limitations that should be noted. First, the study was cross-sectional and thus provides no information regarding the direction and causality. Anger expression and control may lead to or protect against anxiety, depression, and somatization, but it also may be that these psychopathologies influence the type of anger expression or control that is utilized. Additionally, there could be a third variable that influences both. Understanding the causal relation will require longitudinal research that examines how anger expression and psychopathology change over time. This study was also limited by its reliance on self-reported anger expression and control styles and symptoms of psychopathologies. Although internalizing psychopathology such as anxiety and depression, and the experience of emotion and emotion control strategies probably are best assessed via self-report, direct measurement of the physiological arousal of anger might be useful; however, this would be limited by the fact use of physiological measures of anger would require assessment during incidents where the individual was actually experiencing anger, which would be difficult.

Clinical implications

Expression of anger is negative in that it is linked to higher levels of aggressive behavior, and the control of anger positive in that it is linked to lower levels of aggressive behavior, at least under some circumstances. However, control of anger as assessed by the STAXI is less than optimal as it is also linked to higher levels of internalizing problems. One possible explanation is that although control-based strategies may reduce

overt behavioral consequences of anger, they may actually increase subjective awareness and distress in regards to the thoughts, feelings, and sensation associated with the affect (Hayes & et al., 1999). This suggests that when intervening with adolescents to help them reduce anger, strategies other than or in addition to those reflected in the STAXI anger control variables may be useful. For instance, there is growing evidence that "acceptance-based" strategies and therapy, as opposed to "control-based" strategies are useful in reducing substance abuse (Twohig, Shoenberger, & Hayes, 2007), food cravings (Forman et al., 2007), pain (Paez-Blarrina & et al., 2007), generalized anxiety disorder (Roemer & Orsillo, 2002) and many of forms of psychopathology. Acceptance refers to the active awareness and acceptance of the unavoidability of internal experiences, both aversive and pleasant, without attempts to diminish, resist, or avoid them, and acceptance has been found to be linked to reduced affect as well as reduced consequences of negative affects (Hayes, et al., 1999).

Future directions

Two areas for future study may be particularly fruitful. First, assessment of how adolescents view and evaluate both the external expression as well as the internal experience of anger feelings, as well as the successful control of anger (e.g., is the experience of anger, even if successfully controlled, seen as a violation of social norms) will be important to further increase our understanding of the effects of anger. In addition, research using a longitudinal, multi-method approach would be useful to understand the causal links between anger and various forms of psychopathology.

Conclusions

The results of this study among a population where anger and its expression are relatively stigmatized, the experience and control of anger are associated with different forms of psychopathology, in particular aggression but also anxiety and depression, and somatization. Additionally, the ability to control anger was associated with lower aggression for those with high trait anger and higher anxiety and depression for those with low trait anger. This study has several strengths. The present study is the first to examine the relations between anger and child psychopathology in Vietnam. By using Vietnamese adolescents, the study extended the range of psychological research and literature that mostly has been focused on Western samples. Overall, the present study establishes that the link between anger expression and control and psychopathology are not as clear-cut and in some cases moderated by the level of trait anger.

REFERENCES

Achenbach, T.M. (1991). *Manual for the Child Behavior Checklist/4-18 and 1991 Profile*. Burlington, VT: University of Vermont, Department of Psychiatry.

Achenbach, T.M., & Edelbrock, C. S. (1983). *Manual for the Child Behavior Checklist and Revised Behavior Profile*. Burlington: Department of Psychiatry, University of Vermont.

Achenbach, T.M., & Rescorla, L.A. (2001). *Manual for the ASEBA school-age forms & profiles.* Burlington: University of Vermont Research Center for Children, Youth, & Families.

American Psychiatric Association (2000). *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision (DSM-IV-TR).* Washington, DC: American Psychiatric Association.

Arnett, J.J. (2009). The neglected 95%, a challenge to psychology. *American Psychologist, 64, (6),* pp. 571-574.

Barrett, K., Campos, J. (1987). Perspectives on emotional development: II. A functionalist approach to emotions. In Osofsky, J. (Ed.), *Handbook of infant development* (2nd ed., pp. 555-578). New York: Wiley.

Bazzoui, W. (1970). Affective disorders in Iraq. *The British Journal of Psychiatry, 117,* pp. 195-203.

Bernstein, G.A., Massie, E.D., Thuras, P.D., Perwien, A. et al. (1997). Somatic symptoms in anxious-depressed school refusers. *Journal of the American Academy of Child & Adolescent Psychiatry, 36, (5),* pp. 661-668.

Bhui, K. (1999). Common mental disorders among people with origins in or immigrant from the Indian subcontinent. *International Review of Psychiatry, 11,* pp. 136-144.

Biaggio, M.K., & Godwin, W.H. (1987). Relation of depression to anger and hostility constructs. *Psychological Reports, 61, (1),* pp. 87-90.

Breuer, J., & Freud, S. (1955). *Studies on hysteria*. New York: Basic Books. (Original work published 1895)

Bridewell, W.B., & Chang, E.C. (1997). Distinguishing between anxiety, depression, and hostility: relations to anger-in, anger-out, and anger control. *Personality and Individual Differences, 22, (4),* pp. 587-590.

Buchwald, D., Manson, S., Dinges, N.G., Keane, E.M., & Kinzie, J.D. (1993). Prevalence of depressive symptoms among established Vietnamese refugees in the United States: detection in a primary care setting. *Journal of General Internal Medicine,9,* pp. 76-81.

Butcher, J.N., & Bemis, K.M. (1984). Abnormal behavior in cultural context. In *Comprehensive Handbook of Psychopathology* (Eds.) Adams, H.E., & Sutker, P.B.. New York: Plenum Press.

Campo, J.V., Di Lorenzo, C., Ciapetta, L., Bridge, J., Colborn, D.K., et al. (2001). *Pediatrics, 108, 1*, pp. e1.

Campo, J.V., & Fritsch, S.L. (1994). Somatization in children and adolescents. *Journal of American Academy of Child and Adolescent Psychiatry, 33, (9),* pp. 1223-1235.

Campo, J.V., Jansen-McWilliams, L., Comer, D.M., & Kelleher, K.J. (1999). Somatization in pediatric primary care: association with psychopathology, functional impairment, and use of services. *Journal of American Academic Child Adolescent Psychiatry, 38,* pp. 1093-1101.

Cheung, F.M. (1985). *An overview of psychopathology in Hong Kong with special reference to somatic presentation, in Chinese Culture and Mental Health*. Edited by Tseng WS, Wu D. Orlando, Florida, Academic.

Cheung, F.M. (1995) *Facts and myths about somatization among the Chinese, in Chinese Societies and Mental Health*. Lin, T.Y., Tseng, W.S., Yeh, E.K. (Eds.) Hong Kong, Oxford University Press.

Cheung, F.M. & Lau, B.W.K. (1982). Situational variations of help-seeking behavior among Chinese patients. *Comprehensive Psychiatry, 23*, pp. 252-262.

Cheung, P. (1991). Adult psychiatric epidemiology in China in the 1980's. *Culture, Medicine, & Psychiatry, 15,* pp. 479-496.

Choi, I.R. (2009). Anger expression type and mental health in middle aged women. *Journal of Korean Academy of Nursing, 39, (4),* pp. 602-612.

Clay, D.L., Anderson, W.P, & Dixon, W.A. (1993). Relationship between anger expression and stress in predicting depression. *Journal of Counseling and Development, 72, (1),* pp. 91-94.

Clay, D.L., Hagglund, K.J., Kashani, J.H. , & Frank, R.G. (1996) Sex differences in anger expression, depressed mood, and aggression in children and adolescents. *Journal of Clinical Psychology in Medical Settings*, *3*, pp. 79–92.

Cornell, D.G., Peterson, C.S., & Richards, H. (1999). Anger as a predictor of aggression among incarcerated adolescents. *Journal of Consulting and Clinical Psychology, 67, (1),* pp. 108-115.

Corrigan, P.W., & Watson, A.C. (2002). Understanding the impact of stigma on people with mental illness. *World Psychiatry, 1, (1),* pp. 16-20.

Crittenden, K., Fugita, S.S., Bae, H., Lamug, C., & Lin, C. (1992). A cross-cultural study of self-report depressive symptoms among college students. *Journal of Cross-Cultural Psychology, 23,* pp. 163-178.

Deffenbacher, J. L. (1992). Trait anger: theory, findings, and implications. In C. D. Spielberger & J. N. Butcher (Eds.). *Advances in Personality Assessment, 9,* pp. 177–201). Hillsdale, NJ: Lawrence Erlbaum Associates.

Deffenbacher, J.L., & Stark, R.S. (1992). Relaxation and cognitive-relaxation treatments of general anger. *Journal of Counseling Psychology, 39, (2),* pp. 158-167.

Dhossche, D., Ferdinand, R., van der Ende, J., &Verhulst, F. (2001). Outcome of self-reported functional-somatic symptoms in a community sample of adolescents. *Annals of Clinical Psychiatry, 13, (4),* pp. 191-199.

Diener, M.L., & Lucas, R.E. (2004). Adults desires for childrens emotions across 48 countries. *Journal of Cross-Cultural Psychology, 35, (5),* pp. 525-547.

Domenech-Llaberia, E., Claustre, J., Canals, J., Ballespi, S., et al. (2004). Parental reports of somatic symptoms in preschool children: Prevalence and association in a Spanish sample. *Journal of the American Academcy of Child and Adolescent Psychiatry, 43, (5),* pp. 598-604.

Ekman, P. (1999). FACIal expression. In Dalgleish, T., & Powers, M. (Eds.), *The handbook of cognition and emotion* (pp. 301-320). Sussex, United Kingdom: Wiley.

Ekman, P., Sorenson, E.R., & Friesen, W.V. (1969). Pan-cultural elements in facial displays of emotions. *Science, 164, (3875),* pp. 86-88.

Egger, H.L., Costello, E.J., Erkanli, A., & Angold, A. (1999). Somatic complaints and psychopathology in children and adolescents: stomachaches, musculoskeletal pains and headaches. *Journal of the American Academy of Child and Adolescent Psychiatry, 38,* pp. 852–860.

Eminson, D.M. (2007). Medically unexplained symptoms in children and adolescents. *Clinical Psychology Review, 27, (7),* pp. 855-871.

Fabrega, H. (1991). Somatization in cultural and historical perspective. In Kirmayer, L.J., Robbns, J.M. (Eds.), *Current concepts of somatization : Research and clinical perspectives.* Washington,DC., American Psychiatric Press, pp. 181-199.

Fernandez-Ballesteros, R., Ruiz, M.A., & Garde, S. (1998). Emotional expression in healthy women and those with breast cancer, *British Journal of Health Psychology, 3,* pp. 41–50.

Fogel, J., & Ford, D.E. (2005) Stigma beliefs of Asian Americans with depression in an internet sample. *Canadian Journal of Psychiatry, 50,* pp. 470-478.

Forman, E.M., Hoffman, K.L., McGrath, K.B., Herbert, J.D., Brandsma, L.L., et. al. (2007). A comparison of acceptance- and control-based strategies for coping with food cravings: An analog study. *Behaviour Research and Therapy, 45, (10),* pp. 2372-2386.

Franks, F., & Faux, S.A. (1990). Depression, stress, mastery, and social resources in four ethnocultural women's groups. *Research in Nursing and Health, 13,* pp. 282-292.

Fugita, S.S., & Crittenden, K. (1990). Towards culture and population specific norms for self-reported depressive symptomatology. *International Journal of Social Psychiatry,36,* pp. 83-92.

Gallacher, J. E., Yarnell, J. W., Sweetnam, P. M., Elwood, P. C., & Stansfeld, S. A. (1999). Anger and incident heart disease in the Caerphilly study. *Psychosomatic Medicine, 61,* pp. 446–453.

Garber J., Walker L..S., & Zeman J. (1991) Somatization symptoms in a community sample of children and adolescents: further validation of the Children's Somatization Inventory. *Psychological Assessment, 3,* pp. 588–595.

Garralda, M.E. (1992). A selective review of children psychiatric syndromes with a somatic presentation. *British Journal of Psychiatry, 161,* pp. 759-773.

Garralda, M.E. (1996). Somatisation in children. *Journal of Child Psychology and Psychiatry, 37, (1),* pp. 13-33.

Goldman, L., & Haaga, D.A.F. (1995). Depression and the experience and expression of anger in marital and other relationships. *Journal of Nervous and Mental Disease, 183,* pp. 505-509.

Greenberg, L.S. (2002). Evolutionary perspectives on emotion: Making sense of what we feel. *Journal of Cognitive Psychotherapy, 16, (3),* pp. 331-347).

Hagglund, K.J., Clay, D.L., Frank, R.G., Beck, N.C., Kashani, J.H., et al. (1994). Assessing anger expression in children and adolescents. *Journal of Pediatric Psychology, 19, (3),* pp. 291-304.

Harper. R.G., Wiens, A. N., & Matarazzo, J. D. (1978). *Nonverbal communication: The state of/heart.* New York: Wiley.

Hayes, S.C., Bissett, R.T., Korn, Z., Zettle, R.D., Rosenfarb, I.S., & et al. (1999). The impact of acceptance versus control rationale in pain tolerance. *Psychological Record, 49, (1),* pp. 33- 47.

Hotopf, M., Carr, S., Mayou, R., Wadsworth, M., & Wessely, S. (1998). Why do children have chronic abdominal pain, and what happens to them when they grow up? Population based cohort study. *British Medical Journal, 3, (16),* pp. 1196-1200.

Hsu, L.K., Wan, Y.M., Chang, H., Summergrad, P., Tsang, B.Y.P., & Chen, H. (2008). Stigma of depression is more severe in Chinese Americans than Caucasian Americans. *Psychiatry, 71*, pp. 210-218.

Isaac, M., Janca, A., & Orley, J. (1996). Somatization: a culture-bound or universal symdorne? *Journal of Mental Health, 5*, pp. 219-222.

Jacobs, G. A., Phelps, M., & Rohrs, B. (1989). Assessment of anger expression in children: The pediatric anger expression scale. *Personality and Individual Differences, 10*, pp. 59−65.

Jellesma, F. C., Rieffe, C., Meerum Terwogt, M., & Kneepkens, C. M. F. (2006). Somatic complaints and health care use in children: Mood, emotion awareness and sense of coherence. *Social Science and Medicine, 63*, pp. 2640–2648.

Kashani, J. H., Dahlmeier, J. M., Borduin, C. M., Soltys, S., & Reid, J. C. (1995). Characteristics of anger expression in depressed children. *Journal of the American Academy of Child and Adolescent Psychiatry, 34*, pp. 322−326.

Katon, W., Kleinman, A., & Rosen, G. (1982). Depression and somatization: A review: Part 1. *American Journal of Medicine, 72*, pp. 127-135

Kim, K., & Rhi, B.Y. (1976). A review of Korean cultural psychiatry. *Transcultural Psychiatric Research, 13*, pp. 101-114.

Kinzie, J.D., Ryals, J., Cottington, F., & McDermott, J.F. (1973). Cross-cultural study of depressive symptoms in Hawaii. *International Journal of Social Psychiatry, 19*, pp. 19-24.

Kirmayer, L.J., & Santhanam, R. (2001). The anthropology of hysteria. In P.W. Halligan, C. Bass, & J.C. Marshall (Eds.), *Contemporary approaches to the study of*

hysteria: Clinical and theoretical perspectives (pp. 251-270). Oxford: Oxford University Press.

Kirmayer, L.J, Young, A. (1998). Culture and somatization: clinical, epidemiological and ethnographic perspectives. *Psychosomatic Medicine, 60,* pp. 420-430.

Kitayama, S.., & Markus, H. (1995). Construal of the self as a cultural frame: Implications for internalizing psychology. In Goldberger, N.R., & Veroff, J.B. (Eds.), *The culture and psychology reader* (pp. 366-383). New York: New York University Press.

Kleinman, A. (1977). Depression, somatization, and the "New Cross-Cultural Psychiatry." *Social Science and Medicine, 11*, pp. 3-10.

Kleinman, A. (1982). Neurasthenia and depression: A study of somatization and culture in China. *Culture, Medicine, and Psychiatry, 6,* pp. 117-190.

Koh, K.B., Kim, C.H., & Park, J.K. (2002). Predominance of anger in depressive disorders compared with anxiety disorders and somatoform disorders. *Journal of Clinical Psychiatry, 63,* pp. 486–492.

Kung, W.W., & Lu, P.C. (2008). How symptom manifestations affect help seeking for mental health problems among Chinese Americans. *The Journal of Nervous and Mental Disease, 196, (1),* pp. 46-54.

Kuo, W.H. (1984). Prevalence of depression among Asian-Americans. *The Journal of Nervous and Mental Disease, 172,* pp. 449-457.

Lee, S. (1997). A Chinese perspective of somatoform disorders. *Journal of Psychosomatic Research, 43,* pp. 115-119.

Lee, S. (2001). From diversity to unity. The classification of mental disorders in 21st-centry China. *Psychiatric clinics of North America, 24, (3),* pp. 421-431.

Lewis-Fernández, R. & Kleinman, A. (1994). Culture, personality, and psychopathology, *Journal of Abnormal Psychology, 103,* pp. 67-71

Lin, K.M. (1981). *Traditional Chinese medical beliefs and their relevance for mental illness and psychiatry, in Normal and Abnormal Behavior in Chinese Culture*. Edited by Kleinman, A., Lin T.Y. Boston, Reidel Publishing Company.

Lin, K.M., Tazuma, L, & Masuda, M. (1979). Adaptational problems of Vietnamese refugees: part I. Health and mental status. *Archives of General Psychiatry, 36,* pp. 955-961.

Lin, K.M., Masuda, M., & Tazuma, L.. (1982). Adaptational problems of Vietnamese refugees: part III. case studies in clinic and field: adaptive and maladaptive. *Psychiatric Journal of the University of Ottawa, 7,* pp. 173-183.

Lloyd, G. (1986) Psychiatric syndromes with a somatic presentation. Journal of *Psychosomatic Research, 30,* pp. 113-120.

Lock, M. (1980). *East Asian Medicine in Urban Japan.* Berkeley: University of California Press, pp. 86-87.

Luutonen, S. (2007) Anger and depression – theoretical and clinical considerations. *Nordic Journal of Psychiatry, 61*, pp. 246–251.

Matsumoto, D. (2007). Culture, context, and behavior. *Journal of Personality, 75, (6),* pp. 1285-1320.

Markus, H. R. & Kitayama, S. (1991). Culture and the self: Implications for cognition, emotion, and motivation. *Psychological Review, 98*, pp. 224–253.

Masuda, M., Lin, K.M., & Tazuma, L. (1980). Adaptational problems of Vietnamese refugees: part II. life changes and perception of life events. *Archives of General Psychiatry, 37,* pp. 447-450.

McKelvey, R.S., Davies, L.C., Sang, D.L., Pickering, K.R. & Tu, H.C. (1999). Problems and competencies reported by parents of Vietnamese children in Hanoi. *Journal of the American Academy of Child and Adolescent Psychiatry, 38*, pp. 731-737.

Miers, A.C., Rieffe, C., Meerum Terwogt, M., Cowan, R., & Linden, W. (2007). The relation between anger and coping strategies, anger mood, and somatic complaints in children and adolescents. *Journal of Abnormal Child Psychology, 35*, pp. 653-664.

Miyake,K., Campos, J., Kagan, J., & Bradshaw, D. (1986). Issues in socioemotional development in Japan. In Azuma, H.,Hakua, I., & Stevenson, H. (Eds.), *Kodomo: Child development and education in Japan* (pp. 239-261). San Franciso: Freeman.

Moon, A., & Tashima, N. (1982). *Help seeking behavior and attitudes of Southeast Asian refugees.* San Francisco: PAC-Ific Asian Mental Health Research Project.

Nakane, Y., Ohta, Y., Radford, M., et al. (1991). Comparative study of affective disorders in three Asian countries II. Differences in prevalence rates and symptom presentation. *Acta Psychiatrica Scandinavica, 84*, pp. 313-319.

Okazaki, S. (2000). Asian american and white american differences on affective distress symptoms. *Journal of Cross-Cultural Psychology, 31*, pp. 603-625.

Paez-Blarrina, M., Luciano, C., Gutierrez-Martinez, O., Valdivia, S., Ortega, J., & et al. (2007). The role of values with personal examples in altering the functions of pain: Comparison between acceptance-based and cognitive-control-based protocols. *Behavior Research and Therapy, 46, (1)*, pp. 84-97.

Pang, K.Y. (1994). Understanding depressiong among elderly Korean immigrants through their folk illnesses. *Medical Anthropology Quarterly, 8, (2)*, pp. 209-216.

Pang, K.Y. (1998). Symptoms of depression in elderly Korean immigrants: Narration and the healing process. *Culture, Medicine, and Psychiatry, 22*, pp. 93-122.

Parker, G., Cheah, Y.C., & Roy, K. (2001). Do the Chinese somatize depression? A cross-cultural study. *Social Psychiatry and Psychiatric Epidemiology, 36*, pp. 287-293.

Perquin, C.W., Hazebroek-Kampschreur, A., Hunfeld J., Bohnen, A., et al. (2000). Pain in children and adolescents: a common experience. *Pain, 87*, pp. 51-58.

Racy, J. (1980). Somatization in Saudi women: A therapeutic challenge. *British Journal of Psychiatry, 137*, pp. 212-216.

Radloff, L.S. (1977). The CES-D scale: a self-report depression scale for research in the general population. *Applied Psychological Measurement, 1,* pp. 385-401.

Reid, S., Wessely, S., Crayford, T., & Hotopf, M. (2002). Frequent attenders with medically unexplained symptoms: service use and costs in secondary care. *British Journal of Psychiatry, 180*, pp. 248-253

Renouf, A.G., & Harter, S. (1990). Low self-worth and anger as components of depressive experience in young adolescents. *Development and Psychopathology, 2,* pp. 293-310.

Rhi, B.Y. (1983). *Hangukin of Yunriguan* [Korean Ethos]. Seuol: Hanguk Jungshin Munhwa Yunguwon [Korean Cultural Research Center].

Riley, W.T., Treiber, F.A., & Woods, M.G. (1989). Anger and hostility in depression. *Journal of Nervous and Mental Disease, 177*, pp. 668-674.

Robinson, J.O., Alverez, J.H., & Dodge, J.A.. (1990). Life events and family history in children with recurrent abdominal pain. *Journal of Psychosomatic Research, 34, (2),* pp. 171-181.

Roemer, L., & Orsillo, S.M. (2002). An open trial of an acceptance-based behavior therapy for generalized anxiety disorder. *Behavior Therapy, 38, (1)*, pp. 72-85.

Schaar, J.H. (1961). *Escape from authority: The perspectives of Erich Fromm.* New York (Basic Books).

Schum, J.L., Jorgensen, R.S., Verhaeghen, P., Sauro, M., & Thibodeau, R. (2003). Trait anger, anger expression, and ambulatory blood pressure: a meta-analytic review. *Journal of Behavioral Medicine, 26,* pp. 395–415.

Sethi, B.B., Nathawat, S.S., & Gupta, S.C. (1973). Depression in India. *Journal of Social Psychology, 91*, pp. 3-13.

Simon, G., VonKorff, M., Piccinelli, M., Fullerton, C. & Ormel, J. (1999) An international study of the relation between somatic symptoms and depression. *New England Journal of Medicine, 341, (18),* pp. 1329-1335.

Smith, G.R. (1992). The epidemiology and treatment of depression when it coexists with somatoform disorders, somatization, or pain. *General Hospital Psychiatry, 14*, pp. 265-272.

Smith, P.B., Dugan, S., Peterson, A.F., Leung, W. (1998). Individualism: Collectivism and the handling of disagreement. A 23 country study. *International Journal of Intercultural Relations, 22, (3),* pp. 351-367.

Spielberger, C. D. (1999). State-trait anger expression inventory-revised. Odessa, FL: Psychological Assessment Resources, Inc.

Steinhausen, H.C. (2006). Developmental psychopathology in adolescence: findings from a Swiss study – the NAPE lecture 2005. *Acta Psychiatrica Scandinavica, 113, (1),* pp. 6-12.

Suchday, S., & Larkin, K.T. (2004). Psychophysiological responses to anger provocation among Asian Indian and white men. *International Journal of Behavioral Medicine, 11, (2),* pp. 71-80).

Suls, J., Wan, C.K., & Costa, P.T. (1995). Relationship of trait anger to resting blood pressure: a meta-analysis. *Health Psychology, 14, (5),* pp. 444-456.

Suls, J., & Bunde, J. (2005). Anger, anxiety, and depression as risk factors for cardiovascular disease: the problems and implications of overlapping affective dispositions. *Psychological Bulletin, 131,* pp. 260–300.

Tagney, J.P., Wagner, P., Fletcher, C., & Gramzow, R. (1992). Shamed into anger? The relation of shame and guilt to anger and self-reported aggression. *Journal of Personality and Social Psychology, 62(4),* pp. 669-675.

Teja, J.S., Narang, R.L., & Aggarwal, A.K. (1971). Depression across cultures. *The British Journal of Psychiatry, 119*, pp. 253-260.

The Chinese Culture Connection. (1987) Chinese values and the search for culture-free dimensions of culture, *Journal of Cross-Cultural Psychology, 18*, pp. 143–164.

Triandis, H. C. (1994). *Culture and social behavior.* New York: McGraw-Hill.

Twohig, M.P., Shoenberger, D., & Hayes, S.C. (2007). A preliminary investigation of acceptance and commitment therapy as a treatment for marijuana dependence in adults. *Journal of Applied Behavioral Analysis, 40, (4),* pp. 619-632.

Uba, L. (1994). *Asian Americans: Personality patterns, identity, and mental health.* New York: The Guilford Press.

U.S. D.H.H.S. (2001). *Mental Health: Culture, Race, and Ethnicity–A Supplement to Mental Health: A Report of the Surgeon General*. Rockville, MD: SAMHSA.

van Widenfelt, B.M., Treffers, P.D.A., de Beurs, E., Siebelink, B.M. & Koudijs, E. (2005). Translation and cross-cultural adaptation of assessment instruments used in psychological research with children and families. *Clinical Child and Family Psychology Review, 8*, pp. 135-147.

Vila, M., Kramer, T., Hickey, N., Dattani, M., Jefferis, H, et al. (2009). Assessment of somatic symptoms in British secondary school children using the children's somatization inventory (CSI). *Journal of Pediatric Psychology, 34, (9),* pp. 989-98

Walker L.S., Williams S.E., Smith C.A., Garber J., et al. (2006). Validation of a symptom provocation test for laboratory studies of abdominal pain and discomfort in children and adolescents. *Journal of Pediatric Psychology, 31, (7),* pp. 703–713.

Walker L.S. & Garber J. (2003). *Manual for the Children's Somatization Inventory*. Nashville, TN: Vanderbilt University Medical Center, Division of Adolescent Medicine and Behavioral Science

Walker L.S., Garber J., & Greene J.W. (1991). Somatization symptoms in pediatric abdominal pain patients: relation to chronicity of abdominal pain and parent somatization. *Journal of Abnormal Child Psychology, 19*, pp. 379-394.

Waza, K., Graham, A.V., Zyzanski, S.J., & Inoue, K. (1999). Comparison of symptoms in Japanese and American depressed primary care patients. *Family Practice, 16*, pp. 528-533.

Weissman, M.M., Bland, R.C., Canino, G.J., Faravelli, C., et al. (1996). Cross-national epidemiology of major depression and bipolar disorder. *The Jornal of American Medical Association, 276,* p. 293.

Weisz, J.R., Weiss, B., Suwanlert, S. & Chaiyasit, W. (2006). Testing the syndromal sensitivity model: Culture and psychopathology in Thai and American adolescents. *Journal of Consulting and Clinical Psychology, 74,* pp. 1098-1107.

World Health Organization (1992). *ICD-10: The ICD-10 Classification of Mental and Behavioural Disorders, Clinical Descriptions and Diagnostic Guidelines.* Geneva, Switzerland: World Health Organization.

World Health Organization (1992). *International Classification of Diseases, 10th Revision (ICD-10)*. Geneva, Switzerland: World Health Organization.

World Health Organization (1993). *The ICD-10 Classification of Mental and Behavioural Disorders: Diagnostic Criteria for Research.* Geneva, Switzerland: World Health Organization.

Yan, H.Q. (1989). The necessity of retaining the diagnostic concept of neurasthenia. *Culture, Medicine, and Psychiatry, 13, (2),* pp. 139-145.

Yen, S., Robins, C.J., & Lin, N. (2000). A cross-cultural comparison of depressive symptom manifestation: China and the United States. *Journal of Consulting and Clinical Psychology, 68,* pp. 993–999.

Ying, Y.W. (1988). Depressive symptomatology among Chinese-Americans as measured by the CES-D. *Journal of Clincial Psychology, 44,* pp. 739-746.

Ying, Y.W., & Miller, L.S. (1992). Help-seeking behavior and attitude of Chinese-Americans regarding psychological problems. *American Journal of Community Psychology, 20,* pp. 549-556.

Zeman, J., & Shipman, K. (1996). Children's expression of negative affect: Reasons and methods. *Developmental Psychology, 32,* pp. 842-849.

Zhang, A.Y., Snowden, L.R., & Sue, S. (1998). Differences between Asian and White Americans' help seeking and utilization patterns in the Los Angeles area. *Journal of Community Psychology, 26,* pp. 317-326.

Zhang, M.Y. (1989). The diagnosis and phenomenology of neurasthenia. A Shanghai study. *Culture, Medicine, and Psychiatry, 13, (2),* pp. 147-61.