The Relationship Between Exposure to Violence and Anger in Thai Adolescents

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Abstract
Youth violence is a serious public health problem in Thailand, and yet is poorly understood and is thought to vary considerably between metropolitan and rural areas. This article reports the findings of a cross-sectional study involving 1,170 technical college students who completed self-report questionnaires assessing the frequency of violent acts, antisocial behavior, and angry emotion. There were no differences in self-reported violent activities between metropolitan and rural participants, but those attending colleges in the metropolitan areas reported more acts involving weapons. Scores on the measure of anger expression predicted physical and verbal assault, specifically punching and name calling, suggesting that the implementation of interventions which help students to improve control over anger may be a useful violence prevention approach.

Keywords
adolescence, anger, technical colleges, Thailand

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Introduction

Youth violence is a significant global problem for both developed and developing countries, which can involve a range of different behaviors from verbal assault to aggravated assault and murder (Haegerich & Dahlberg, 2011). According to the World Health Organization (WHO; 2014), there were 475,000 deaths worldwide in 2012 as a result of homicide, with young males identified as the main group of both victims and perpetrators (see also Krug, Mercy, Dahlberg, & Zwi, 2002). However, WHO statistics clearly illustrate the extent to which rates vary across regions and continents, highlighting the importance of local research into the causes and correlates of violence. For example, youth homicide rates have been reported to range from 0.9 per 100,000 in developed countries (Europe and some Asia and the Pacific) to 36.4 per 100,000 in Latin America. Japan has the lowest rate of homicide (0.4 per 100,000), whereas the highest rate is in El Salvador (50.2 per 100,000; Krug, Dahlberg, Mercy, Zwi, & Lozano, 2002).

The aim of this study was to understand adolescent violent behavior in Thailand, South East Asia. Thailand has a homicide rate of 8.3 per 100,000 population, much of which can be understood in terms of a broader pattern of interpersonal violence perpetrated by young men aged 15 to 19 years (WHO-Kobe Centre, 2007). In 2009, for example, nearly 3,000 young men were arrested for physical assault in Bangkok alone (Royal Thai Police, 2010). This represented an increase of nearly 50% from the previous year and attracted widespread public concern. Most of those arrested were male students from technical colleges who were enrolled in vocational educational programs (Royal Thai Police, 2010), and yet very little is known about the factors associated with violent behavior in this population, and whether differences exist between those who attend college in Bangkok, the capital city, or in rural areas of the country.

According to developmental theories of violence, young men use various forms of aggression to protect and control their social position and fulfill their social needs (Cairns & Kroll, 1994). Intense, uncontrolled feelings of anger are commonly identified as key antecedents to violence, although considerable individual differences exist (Anderson & Bushman, 2002; John & Gross, 2004). Individuals with high levels of trait anger are, for example, more likely to express anger outward, unable to suppress anger, and less likely to have cognitive control over their emotions (Clay, Hagglund, Kashani, & Frank, 1996; Denson, Pedersen, Friese, Hahm, & Roberts, 2011). Trait anger is a term used to refer to the disposition to experience angry feelings as a personality-like trait over lengthy time periods. It is associated with high levels of anger expression (the extent to which an individual either suppresses
anger or expresses it through aggression) and low levels of anger control (the extent to which an individual either controls the expression of anger through attempts to calm down, or actively monitors and limits overt expression; see Fernandez, Day, & Boyle, 2014). As a consequence, it has been suggested that high levels of anger expression and low levels of control are associated with both risky behavior and violence (Halperin, 2008; Parrott & Zeichner, 2003), although there have been no previous studies that have investigated the relationship between anger and violence in youth from developing countries. The purpose of the study, then, was to report baseline data on the prevalence of violent behavior which policy makers and practitioners in Thailand can use to inform the development of policy aimed at reducing violence in Thai youth, as well as examining differences between urban and rural locations and the role that anger plays in violent and antisocial behavior in this population.

Method

A cross-sectional study was conducted in nine different technical colleges in two cities in Thailand. Five were colleges in Bangkok (capital city), and four in the Nakhon Ratchasima provinces (rural). To ensure that the sampling was representative of all students, those in Years I to III of the Vocational Educational Certificate in every department were recruited.

Participants

A total of 1,770 students (975 in Bangkok and 795 in the Nakhon Ratchasima provinces) were invited to take part in the study. Of these, 62 students did not want to participate in the study, and approximately 10 to 20 students were absent from classes in each department when data were collected. A total of 80 students did not complete all sections of the questionnaires and were excluded from subsequent analyses. The majority of the participants were male (96.95%), aged 16 years (30.96%; $M \pm SD = 16.89 \pm 1.17$), and reported an average daily income of 50 to 100 Baht (US$2-US$4). The majority had a “good” or a “very good” grade point average (57.88%).

Instruments

The self-report measures described below have been translated in Thai and shown to be both reliable and valid when used with Thai technical college students (Wongtongkam, Ward, Day, & Winefield, 2013).

Violent behavior. The self-report measure of violent behavior was modified from Pittsburg Youth Study’s measure of serious violence (Loeber et al.,
which uses items that describe four different types of violence ("gang fights," "robbery," "sexual assaults," and "attacks with weapons"). Respondents were asked to rate the frequency of these behaviors over the previous 6 months on a 6-point scale (never; 1-2 times, 3-5 times, 6-9 times, 10-19 times, 20 or more times). The internal consistency (Cronbach’s α) for this scale in this study was .73. Given the unequal distribution of scores across response categories, this measure was coded as a dichotomous variable (never committed a violent act vs. committed one or more violent acts) for use in the analyses.

**Violent offenses.** Violent offenses were assessed using a slightly modified version of the Overt Victimization subscale of the Problem Behavior Frequency Scale (Kelder, Orpinas, McAlister, Frankowski & Friday, 1996). Respondents were asked to report whether they had, over the previous 6 months, “hit, pushed, or shoved”; “threatened to hit”; “yelled or called mean names”; or “threatened or injured someone with a weapon.” Responses were coded on a 6-point Likert-type scale ranging from never (0) to 20 or more times (5). Cronbach’s alpha for this scale was .94. Scores were dichotomized to distinguish between those who had never engaged in these behaviors or had done so once or more over the previous 6 months.

**Anger.** The State–Trait Anger Expression Inventory–2 (STAXI-2; Spielberger, 1999) scale was used to rate the frequency of angry feelings using a 4-point Likert-type scale ranging from 1 (almost never) to 4 (almost always). The scale has been widely used to assess anger in college students and has been shown to have acceptable reliability and validity (Culhane & Morea, 2010; Garcia-Leon et al., 2002). The Cronbach’s alpha for the STAXI-2 in this study was .90. Scores were dichotomized (above and below the 75th percentile) to represent normal or high anger levels.

**Results**

No significant differences in self-reported violence between participants from Bangkok (capital) and Nakhon Ratchasima provinces (rural) were observed, although rates of violence were slightly higher in Bangkok (see Table 1) as were two specific violent behaviors: “chased someone with weapons,” \( t(1723) = 2.87, p < .05 \), and “injured someone with weapons,” \( t(1716) = 2.38, p < .05 \).

Table 2 shows that anger expression and suppression were higher in the rural than in the city setting.

Linear regression methods were then used to establish the extent to which angry emotion (suppression or expression) predicted self-reported violence.
Odds ratios (ORs) were used to determine the probability that risk or protective effects were similar or differed between groups (Bland & Altman, 2000) after potentially confounding factors (age, gender, grade, department, and daily income) had been controlled for in the model. Multicollinearity between the independent variables was also checked (variance inflation factors [VIFs] = 1.01).

High anger expression scores were not associated with all violent activities (see Table 3), although high anger expression was identified as a risk factor for “punching” and “pushing,” with 1.75 (95% confidence interval [CI] = [1.19, 2.57]) and 1.58 (95% CI = [1.08, 2.33]) for adjusted ORs, respectively. Similarly, anger control appeared to act as a risk for “punching” and “name calling.” One third of students with high control were more likely to engage in “punching,” and almost half were more likely to be involved in “name calling” (see Table 4).

**Discussion**

Assessing and monitoring the rates of violence is the first step in the development of effective and culturally appropriate intervention programs across the universal, selective, and indicated levels of prevention. The results of this study suggest that the most common form of violence in technical college students is bullying involving teasing or name calling. This is best regarded as instrumental aggression used to attain social position and control over
peers (Bosworth, Espelage, & Simon, 1999; Giles & Heyman, 2005), and highlights the need to develop strategies to address student bullying. Rigby (2015) notes that the growth of awareness about the nature and seriousness of bullying has been associated with modest reductions in the prevalence of peer victimization in a substantial number of countries, with some anti-bullying programs producing a reduction in peer victimization of around 20% (Ttofi & Farrington, 2011). There is scope to apply similar approaches in Thailand as well, given the association between angry emotion and aggressive behavior to consider implementing programs that help students effectively regulate their anger (see Lochmann et al., 2013).

The results of this study provide grounds for the development of a national strategy to violence prevention in Thailand in light of the finding that technical college student violence does not differ in frequency between the capital city and rural areas. Although those in the metropolitan area were more likely to possess weapons (possibly for self-defense, see Wongtongkam, Ward, Day, & Winefield, 2015), this was an unexpected finding that may reflect progress made in recent few decades in reducing rural poverty in Thailand. Thailand’s economy has grown rapidly over this time (The World Bank, 2011), and infrastructure has developed across the country that has potentially reduced disparity between urban and rural areas. Conversely, the higher levels of self-reported anger in the rural provinces may be a product of rapid urbanization, which is thought to be strongly associated with various health-risk behaviors (Yiengprugsawan, Caldwell, Lim, Seubsman, & Sleigh, 2011; Yiengprugsawan, Seubsman, Lim, & Sleigh, 2011). Further research is required to better understand the impact of these factors.

In conclusion, this is the first study of this type that has sought to understand youth violence in Thailand. Although a large sample of students participated in the study, the cross-sectional design does not permit inferences to be

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**Table 2. Anger Expression Difference in Two Provinces.**

<table>
<thead>
<tr>
<th>Anger Expressions</th>
<th>Bangkok</th>
<th>Nakhon Ratchasima</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>Anger-out</td>
<td>14.20</td>
<td>14.20</td>
</tr>
<tr>
<td>Anger-in</td>
<td>15.23</td>
<td>15.23</td>
</tr>
<tr>
<td>Control-out</td>
<td>15.44</td>
<td>15.44</td>
</tr>
<tr>
<td>Control-in</td>
<td>15.53</td>
<td>15.53</td>
</tr>
</tbody>
</table>

*p < .05
### Table 3. Relation of Anger Expression to ORs of Violent Activities.

<table>
<thead>
<tr>
<th>Anger Expressions</th>
<th>Involved in a Gang Fight</th>
<th>Using Weapons to Get Money or Things</th>
<th>Attacked Someone With Weapons</th>
<th>Force Someone to Have Sex With</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Crude ORs (95% CI)</td>
<td>Adjusted ORs (95% CI)</td>
<td>Crude ORs (95% CI)</td>
<td>Adjusted ORs (95% CI)</td>
</tr>
<tr>
<td></td>
<td>Crude ORs (95% CI)</td>
<td>Adjusted ORs (95% CI)</td>
<td>Crude ORs (95% CI)</td>
<td>Adjusted ORs (95% CI)</td>
</tr>
<tr>
<td></td>
<td>Crude ORs (95% CI)</td>
<td>Adjusted ORs (95% CI)</td>
<td>Crude ORs (95% CI)</td>
<td>Adjusted ORs (95% CI)</td>
</tr>
<tr>
<td>High anger-out</td>
<td>0.93 [0.72, 1.20]</td>
<td>1.00 [0.68, 1.47]</td>
<td>0.75 [0.50, 1.15]</td>
<td>0.89 [0.65, 1.18]</td>
</tr>
<tr>
<td></td>
<td>0.74 [0.39, 1.37]</td>
<td>0.84 [0.53, 1.33]</td>
<td>0.74 [0.49, 1.12]</td>
<td>0.76 [0.40, 1.47]</td>
</tr>
<tr>
<td>p value</td>
<td>.57</td>
<td>.99</td>
<td>.18</td>
<td>.34</td>
</tr>
<tr>
<td>Anger-in</td>
<td>1.00 [0.80, 1.25]</td>
<td>0.96 [0.71, 1.31]</td>
<td>1.03 [0.74, 1.44]</td>
<td>1.01 [0.80, 1.33]</td>
</tr>
<tr>
<td></td>
<td>1.01 [0.63, 1.62]</td>
<td>1.03 [0.80, 1.37]</td>
<td>1.03 [0.72, 1.40]</td>
<td>1.00 [0.77, 1.98]</td>
</tr>
<tr>
<td>p value</td>
<td>1.00</td>
<td>0.96</td>
<td>0.84</td>
<td>0.94</td>
</tr>
<tr>
<td>Control-out</td>
<td>1.13 [0.91, 1.43]</td>
<td>1.13 [0.83, 1.54]</td>
<td>0.93</td>
<td>0.93</td>
</tr>
<tr>
<td></td>
<td>0.98 [0.65, 1.32]</td>
<td>0.98 [0.61, 1.58]</td>
<td>0.98</td>
<td>0.90</td>
</tr>
<tr>
<td>p value</td>
<td>.26</td>
<td>.44</td>
<td>.69</td>
<td>.93</td>
</tr>
<tr>
<td>Control-in</td>
<td>0.92 [0.73, 1.16]</td>
<td>0.86 [0.63, 1.19]</td>
<td>0.95</td>
<td>0.88</td>
</tr>
<tr>
<td></td>
<td>0.88 [0.68, 1.36]</td>
<td>0.88 [0.63, 1.08]</td>
<td>0.82</td>
<td>0.71</td>
</tr>
<tr>
<td>p value</td>
<td>.51</td>
<td>.37</td>
<td>.81</td>
<td>.60</td>
</tr>
</tbody>
</table>

Reference: Each Anger Item Below the 75th Percentile

Note. Adjusted: Ages, genders, grades, departments, daily incomes. ORs = odds ratios; CI = confidence interval.
Table 4. Relation of Anger Expression to ORs of Offender Behaviors.

<table>
<thead>
<tr>
<th>Anger Expressions</th>
<th>Punching Crude ORs (95% CI)</th>
<th>Punching Adjusted ORs (95% CI)</th>
<th>Pushing Crude ORs (95% CI)</th>
<th>Pushing Adjusted ORs (95% CI)</th>
<th>Name Calling Crude ORs (95% CI)</th>
<th>Name Calling Adjusted ORs (95% CI)</th>
<th>Chased Someone With Weapons Crude ORs (95% CI)</th>
<th>Chased Someone With Weapons Adjusted ORs (95% CI)</th>
<th>Injured Someone With Weapons Crude ORs (95% CI)</th>
<th>Injured Someone With Weapons Adjusted ORs (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>High anger-out</td>
<td>1.32 [1.03, 1.70]</td>
<td>1.75 [1.19, 2.57]</td>
<td>1.23 [0.96, 1.58]</td>
<td>1.58 [1.08, 2.33]</td>
<td>1.10 [0.86, 1.42]</td>
<td>1.41 [0.63, 1.17]</td>
<td>0.86 [0.60, 1.13]</td>
<td>1.02 [0.06, 1.68]</td>
<td>0.82 [0.06, 1.68]</td>
<td>1.06 [0.06, 1.68]</td>
</tr>
<tr>
<td>p value</td>
<td>.03*</td>
<td>.00*</td>
<td>.10 [0.84, 1.31]</td>
<td>.01* [0.77, 1.41]</td>
<td>.43 [0.67, 1.23]</td>
<td>.07 [0.62, 1.23]</td>
<td>.35 [0.58, 1.15]</td>
<td>.92 [0.48, 1.01]</td>
<td>.22 [0.48, 1.01]</td>
<td>.80 [0.48, 1.01]</td>
</tr>
<tr>
<td>Anger-in</td>
<td>1.01 [0.81, 1.27]</td>
<td>0.88 [0.65, 1.19]</td>
<td>1.05 [0.84, 1.31]</td>
<td>0.90 [0.77, 1.19]</td>
<td>0.96 [0.77, 1.41]</td>
<td>1.05 [0.82, 1.31]</td>
<td>0.81 [0.62, 1.06]</td>
<td>0.80 [0.58, 1.15]</td>
<td>0.76 [0.48, 1.01]</td>
<td>0.69 [0.48, 1.01]</td>
</tr>
<tr>
<td>p value</td>
<td>.87</td>
<td>.41 [0.81, 1.39]</td>
<td>.68 [0.81, 1.50]</td>
<td>.52 [0.82, 1.29]</td>
<td>.71 [0.68, 1.26]</td>
<td>.77 [0.79, 1.25]</td>
<td>.13 [0.78, 1.43]</td>
<td>.22 [0.65, 1.11]</td>
<td>.06 [0.62, 1.10]</td>
<td>.05 [0.63, 1.33]</td>
</tr>
<tr>
<td>Control-out</td>
<td>1.11 [0.88, 1.39]</td>
<td>1.10 [0.81, 1.50]</td>
<td>1.03 [0.82, 1.29]</td>
<td>0.93 [0.68, 1.26]</td>
<td>0.99 [0.79, 1.25]</td>
<td>1.06 [0.78, 1.43]</td>
<td>0.85 [0.66, 1.11]</td>
<td>0.83 [0.62, 1.10]</td>
<td>0.95 [0.63, 1.33]</td>
<td>0.92 [0.63, 1.33]</td>
</tr>
<tr>
<td>p value</td>
<td>.35</td>
<td>.52 [0.99, 1.84]</td>
<td>.79 [0.97, 1.53]</td>
<td>.64 [0.93, 1.71]</td>
<td>.97 [0.99, 1.56]</td>
<td>.71 [1.05, 1.93]</td>
<td>.25 [0.78, 1.33]</td>
<td>.79 [0.82, 1.68]</td>
<td>.19 [0.74, 1.29]</td>
<td>.65 [0.79, 1.64]</td>
</tr>
<tr>
<td>Control-in</td>
<td>1.34 [1.06, 1.68]</td>
<td>1.35 [0.99, 1.84]</td>
<td>1.22 [0.97, 1.53]</td>
<td>1.26 [0.93, 1.71]</td>
<td>1.26 [0.99, 1.56]</td>
<td>1.24 [1.05, 1.93]</td>
<td>1.42 [0.78, 1.33]</td>
<td>1.01 [0.82, 1.68]</td>
<td>1.18 [0.74, 1.29]</td>
<td>1.14 [0.79, 1.64]</td>
</tr>
<tr>
<td>p value</td>
<td>.01*</td>
<td>.05 [0.99, 1.84]</td>
<td>.89 [0.97, 1.53]</td>
<td>.13 [0.93, 1.71]</td>
<td>.06 [0.99, 1.56]</td>
<td>.02 [1.05, 1.93]</td>
<td>.89 [0.78, 1.33]</td>
<td>.36 [0.82, 1.68]</td>
<td>.88 [0.74, 1.29]</td>
<td>.48 [0.79, 1.64]</td>
</tr>
</tbody>
</table>

Note. Adjusted: Ages, genders, grades, departments, daily incomes. ORs = odds ratios; CI = confidence interval.
*p < .05.
made about the direction of the relationship between angry emotion and violence, and a number of other potentially relevant factors were not investigated, including family-, community-, and school-level influences. In addition, there is always a risk of obtaining significant results by chance (Type I error) in this type of study. Nonetheless, this study does provide some baseline data on the prevalence of violence which can be used to inform the development of public policy aimed at reducing violence in Thai youth.

**Acknowledgment**

The authors would like to thank the directors and teachers in nine technical colleges in Bangkok and Nakhon Ratchasima provinces for supporting the study and providing facilities for the research, and all participants in the colleges for their willing participation in the study.

**Declaration of Conflicting Interests**

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

**Funding**

The author(s) received no financial support for the research, authorship, and/or publication of this article.

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