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**Abstract.** Adolescents regulate their anger expression more than other negative emotions. Unlike childhood aggression and externalizing behavior problems, the children and adolescents' experience and expression of anger has received relatively little empirical attention. The State-Trait Anger Expression Inventory-2 Child and Adolescent (STAXI-2 C/A; Brunner & Spielberger, 2009) was developed to measure how a child or adolescent experiences, expresses and controls anger. **Objectives:** The purpose of this study was to explore about the relationship between state anger and trait anger, and to investigate the gender difference in internalized anger. **Methods:** 100 secondary school students in Malaysia (45 males; 55 females) were recruited through convenience sampling for a cross-sectional survey by using the STAXI-2 C/A ( $\alpha = .85$ ). Data analysis were conducted by using Cronbach's alpha reliability test, Pearson correlation, and independent sample *t*-test. **Results:** The findings revealed that: (1) there was a significant positive relationship between state anger and trait anger; (2) there was a significant difference between male and female students in the Anger Expression-In (AX-I) score. **Conclusion:** Students with high personality trait anger showed relatively high state anger. Internalized anger was significantly higher among males than females, indicating that males were more likely to suppress their feelings. Recommendations for future research to draw attention to adolescents' anger experience and expression, as well as to implement effective school-based anger management programs were suggested for the sake of adolescents' well-being.

**Keywords:** adolescent, anger, STAXI-2 C/A

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## INTRODUCTION

Anger permits a 'fight' response and has been associated with hostility, aggression, and violence, particularly among adolescents (Alaka Mani, Sharma, Marimuttu, Omarkar, & Nagendra, 2016; Brunner & Spielberger, 2009). Brunner and Spielberger (2009) described anger as a fundamental emotional state that contributes to healthy human functioning and survival. Besides leading to physical and verbal aggression (Rubio-Garay, Carrasco, & Amor, 2016), anger is found to be a strong emotional predictor of violence that is strongly connected to cognitive distortion (Chereji, Pintea, & David, 2012). Anger experience can take the form of a temporary response to situations at a particular time (i.e., State Anger; S-Ang) as well as a chronic tendency experienced over time (i.e., Trait Anger; T-Ang). On the other hand, an individual can express anger outwardly (i.e., Anger Expression-Out; AX-O) and/or suppress his or her anger (i.e., Anger Expression-In; AX-I) (Carlozzi, Winterowd, Harrist, Thomason, Bratkovich, & Worth, 2010; Spielberger 1999).

The development of the State-Trait Anger Expression Inventory-2 Child and Adolescent (STAXI-2 C/A) is guided by the driving force to capture the process of anger among children and adolescents, starting from an experiential state to a set of personality traits which indicates to what extent a child expresses, suppresses, and/or controls their anger-based thoughts, feelings, and behaviors (Brunner & Spielberger, 2009). State Anger and Trait Anger are conceptualized as the two major components of anger experiences (Brunner & Spielberger, 2009). When compared to those who obtain lower Trait Anger scores, individuals who are high in Trait Anger, experience State Anger more often and with greater intensity (Brunner & Spielberger, 2009).

From the children's self-report, they regulate their anger expression more than other negative emotions such as sadness (Shipman & Zeman, 2001), and may display their anger more greatly in specific setting such as their homes (Kerr & Schneider, 2008). Based on display rules that govern when and how anger should be expressed, boys and younger children have higher tendency to express their anger more outwardly than girls, older children, or adolescents (Kerr & Schneider, 2008). Traditionally, as opposed to adolescent girls who react to anger verbally or nonviolently, adolescent

males react to anger with physically aggressive responses and physical attacks on objects (Puskar, Ren, Bernardo, Haley, & Stark, 2008). Although it may not be less frequent, girls and older children and adolescents' anger expression seems to be more complex and seeking to maintain social relationships (Kerr & Schneider, 2008).

High anger levels and poor cognitive processing skills have made school children at risk for poor relationships, underachievement in school, and health problems (Lamb, Puskar, Sereika, Patterson, & Kaufmann, 2003). Unlike childhood aggression and externalizing behavior problems, the children and adolescents' experience and expression of anger have received relatively little empirical attention (Kerr & Schneider, 2008). Therefore, the present study is of interest to explore the meaningful relationship between State Anger and Trait Anger, apart from investigating whether there is a gender difference in internalized anger. The following research questions were addressed in this study:

1. Is there a significant relationship between state anger and trait anger?
2. Is there a significant difference between males and females in the Anger Expression-In (AX-I) score?

## METHODOLOGY

### Research Design

A quantitative approach was adopted in this study. The study was conducted from April to May 2017 by using a cross-sectional survey design.

### Study Population and Sampling

The participants were selected from a secondary school in Penang, Malaysia. A sample of 100 students (45 males and 55 females) with ages ranging from 16 to 18 years were recruited based on convenience sampling.

### Instruments

A self-reported questionnaire with three sections was used in this study: (1) informed consent, (2) demographic information, and (3) the State-Trait Anger Expression Inventory-2 Child and Adolescent (STAXI-2 C/A; Brunner & Spielberger, 2009). The STAXI-2 C/A encompassed 35 items

in total, each with 3-point Likert scale (i.e., Not at all, Somewhat, and Very much). Although there were five main scales measuring the State Anger (S-Ang), Trait Anger (T-Ang), Anger Expression-Out (AX-O), Anger Expression-In (AX-I), and Anger Control (AC), only scores for the S-Ang, T-Ang, and AX-I scales were considered in this study to meet the research purposes. The reliability test of the instrument reported  $\alpha = .85$  in the present study.

### Data Collection

Prior to beginning the study, permission from the school authorities was obtained to recruit students as participants. Self-reported questionnaires were distributed to students who were available during their free time. A brief introduction and explanation about the research purposes and confidentiality issues were given. The questionnaires were administered after seeking the students' willingness and informed consent to participate in this study. Immediate response was provided to the participants for any concerns and inquiries regarding the questionnaires.

### Data Analysis

Data analysis was performed by utilizing the Statistical Package for Social Science (SPSS) Version 22.0. Cronbach's alpha reliability test, Pearson correlation, and independent sample *t*-test were conducted to answer the research questions.

## RESULT

Of the participants ( $N = 100$ ), 45% were male students and 55% were female students. Descriptive analysis of the overall mean scores for the participants' state anger, trait anger, and internalized anger were shown in Table 1.

Table 1  
*Descriptive Statistics of the Scores for State Anger, Trait Anger, and Internalized Anger*

Variable ( $N = 100$ )		Mean	Standard Deviation
S-Ang		15.93	5.47
T-Ang		19.91	4.97
AX-I	Male ( $n = 45$ )	10.11	2.45
	Female ( $n = 55$ )	8.80	2.34

Note: S-Ang = State Anger; T-Ang = Trait Anger; AX-I = Anger Expression-In.

In this study, it was hypothesized that there was a significant relationship between the students' state anger and trait anger. The results of the Pearson correlation test indicated that the relationship between the S-Ang ( $M = 15.93$ ,  $SD = 5.47$ ) and T-Ang ( $M = 19.91$ ,  $SD = 4.97$ ) scales were statistically significant (see Table 2). As expected, state anger was positively correlated with trait anger in this sample,  $r(100) = .61$ ,  $p < .01$ .

Table 2  
*Pearson Correlation between State Anger and Trait Anger ( $N = 100$ )*

S-Ang	T-Ang
S-Ang	0.61*

Note: \*  $p \leq .01$ ; S-Ang = State Anger; T-Ang = Trait Anger.

In order to investigate whether there was a significant difference between male and female students' internalized anger, an independent sample *t*-test was carried out. As shown in Table 3, the mean scores of the Anger Expression-In (AX-I) scale for males were significantly different from females in this sample. The findings revealed that the tendency of internalizing or suppressing anger was significantly higher among male students ( $M = 10.11$ ,  $SD =$

2.45) than that of female students ( $M = 8.80$ ,  $SD = 2.34$ ),  $t(98) = 2.73$ ,  $p < .05$ .

Table 3  
*Difference in Anger Expression-In by Gender ( $N = 100$ )*

	Males ( $n = 45$ )		Female ( $n = 55$ )		95% CI for Mean Difference	t	df
	M	SD	M	SD			
AX-I	10.11	2.45	8.80	2.34	.36, 2.26	2.73*	98

Note: \*  $p \leq .05$ ; AX-I = Anger Expression-In; M = Mean; SD = Standard Deviation.

## DISCUSSION

The present study attempted: (1) to investigate the relationship between state anger and trait anger; as well as (2) to determine gender differences for internalized anger among adolescents. Overall, the findings disclosed that state anger was strongly correlated with trait anger; and that male students' scores for internalized anger were significantly different from female students.

In line with past literature (Alaka Mani et al., 2016; Brunner & Spielberger, 2009) which found that individuals with high personality trait anger would possess relatively high state anger, the results of this study showed a significant, positive correlation between the participants' state anger and trait anger. It might because of younger individuals mainly depended on their age and on the audience when deciding whether to express anger outwardly (Kerr & Schneider, 2008). As children aged, greater repression of their anger might be shown since they no longer believed that more emotions should be expressed. Apart from this consideration, expressing anger outwardly might be perceived by the students as less acceptable or socially-inappropriate (Kerr & Schneider, 2008). Substantially, when adolescents were forbidden from physical or social activities, or when adolescents were in the situation of being attacked on their personalities, positions, or societal status, they were angered (Arslan, 2009). Adolescence was particularly vulnerable to parent-adolescent conflicts that mainly included minor disputes when the adolescents constantly tried to shift from being dependent to autonomous (Santrock, 2011). This might increase the possibilities or tendencies for the participants' anger experience due to such prolonged exposure to situations which were more likely to elicit an angry response. Furthermore, anger was four times more likely to occur when parents directed negative emotionality towards their children as compared to other times (Kerr & Schneider, 2008). Hence, a predisposition to state anger (i.e., a temporary response to situations) might contribute to frequent trait anger (i.e., anger episodes experienced over time) when facing daily life challenges. Conversely, the same environmental anger might trigger higher tendency among individuals with high trait anger to experience a more enduring, aroused state anger than individuals with low trait anger (Spielberger, Jacobs, Russell, & Crane, 1983).

On the other hand, the results showed that there was a significant gender difference for internalized anger in conjunction with previous studies on emotional expression and management (e.g., Perry-Parrish et al., 2017; Zeman et al., 2013; Rose & Rudolph, 2006). Surprisingly, this study uncovered a higher tendency among male students in restraining anger when compared to female students. In the contradictory evidences, females frequently exceeded males in internalizing disorders such as depression and anxiety (i.e., directing problematic feelings inward against the self); whereas males showed higher rates for externalizing issues

such as substance abuse and antisocial behaviour (i.e., being destructive and problematic to others) (Rosenfield & Smith, 2010). Moreover, despite not welcomed, anger expression was more tolerated among males because they were presumed to suppress the stereotypical feminine and weak emotions (e.g., helplessness, worry, and insecurity) (Rosenfield & Smith, 2010). Conversely, Kollar et al. (1991) indicated that males were more likely to suppress their feelings whereas females experienced more anger than males (Ghanizadeh, 2008; Alaka Mani et al., 2016) and tended to express their anger outwardly by pouting, sulking, and/or sharing about their feelings. Similar to the past research which stated that boys were less likely to describe their feelings (Ingram, Hondrou, Vasalou, Martinho, & Joinson, 2012), the male participants in this study displayed less anger than they experienced. Perhaps they were being socialized or conditioned to expect negative consequences (e.g., being rejected from peer group) for expressing anger outwardly which violated the normalized display rules (Kerr & Schneider, 2008). However, a long-term anger suppression and over frequently or intensely restriction of emotional expression might lead to cardiovascular diseases, sleep disturbance, and heightened stress level (Johnson & Greene, 1991).

Based on the findings in this study, adolescents with high levels of state anger and trait anger, especially boys might experience intensified pressure to minimize anger reactions during early adolescence even though girls were also discouraged for exhibiting anger to retain politeness and to conform to social norms such as gendered expectations (Perry-Parrish et al., 2017; Denham et al., 2003). However, adolescents' anger management or regulation was exceptionally vital for a healthy physical, mental, and socioemotional development in this challenging transition period, regardless of gender or levels of anger experience. Educational settings for adolescents which were often exposed to violent behaviors and bullying issues that kept rising in urgency could set up anger management programs to help at-risk students handle difficult emotions masked with explosive anger (Candelaria, Fedewa, & Ahn, 2012). School-based anger management interventions with diverse focuses such as coping skills training, emotional awareness and self-control strategies, problem-solving cognitive-behavioral therapy, relaxation techniques, and role-play or modeling, were empirically proven to be effective in diminishing negative anger-related emotions and behaviors (e.g., anger, aggression, and loss of self-control) (Candelaria et al., 2012). It is of importance to implement an accessible evidence-based anger management service in school settings since school aged children and adolescents spend relatively longer hours at school (Candelaria et al., 2012).

### LIMITATIONS

One of the limitations of the current study was the utilization of only one instrument (i.e., the STAXI-2 C/A) which was a self-reported questionnaire. The results were thus limited to a single perspective from the participants in this study, without considering multiple opinions from diverse individuals interacting closely with the adolescents such as parents, teachers, school counselors, and other parties. Although this study revealed an interesting finding that male students were more prone to unvoiced anger than female students, the absence of random sampling might contribute to potential bias and might have affected the generalization of study results.

### IMPLICATIONS AND RECOMMENDATIONS

These findings could draw some attention towards the younger population who might be facing difficulties and hoping for assistance to deal with the strong influences of anger. The possible risks of anger experience and expression on adolescents' health and socialization were also highlighted. Further investigations on effective anger-management strategies for coping with state anger and trait anger among adolescents were highly recommended to reduce the risk of a probable emotional turmoil. Qualitative studies for males' proneness to internalizing anger were suggested for future research to add to the existing knowledge about suppressed anger among boys and men.

### CONCLUSION

This study added to the understanding of adolescents' anger experience and expression by bringing two findings to light: (1) high state anger was strongly correlated with high trait anger; and (2) the noteworthy gender difference in internalized anger, in which male students were more likely to suppress their angry feelings than female students. Overall, these findings underscored the cruciality to keep an eye out for adolescents' anger experience and expression, as well as the necessity to establish school-based anger management programs for the sake of adolescents' well-being.

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