

Original Research Article

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## Validation of Adolescent Anger Scale

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### ABSTRACT

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Anger is the most frequently and most commonly occurring phenomenon. Anger issues during adolescence lead to many developmental issues and have lifelong impact. Assessing anger at this stage is hence critical and important. Studies report anger experience and expression vary with respect to age, gender and culture. A newly developed adolescent anger scale by the author has been validated in this study. The newly developed scale along with State Trait Anger Expression Inventory for Children and Adolescent was administered to 323 Children in a survey study conducted in schools. The newly developed adolescent anger is robust enough to assess anger expression and anger experience in high school children. Results also suggest STAXI-2-CA can be used in Indian Context with slight modification. Self reporting adolescent scale is in par with the STAXI-2-CA in assessing anger experience and expression.

## Introduction

Anger related issues are on rise in schools and colleges across the globe. Anger is precursor for aggression, violence and many behavioural and conduct disorders (Hubbard, 2006; Lucia, 2015; Pullen, 2015). Aggressive behaviour during adolescence is considered as a risk factor for adulthood violence and criminal behaviour (Rowell, 2002).

Uncontrolled adolescent anger is a contributing factor for deaths due to homicide, suicide and injuries (CDC, 2015). Anger is associated with violence, cognitive distortion (Simona, 2012) and physical and verbal aggression (Rubio, 2016; Cornell, 1999). Intense, uncontrolled feelings of anger are often associated with externalizing behavior problems, particularly aggression (John, 2005).

Centre of Adolescent anger leading to violence is identified as a health disparity (CDC, 2012). Studies have documented significant association between anger and depression, stress (Pullen 2015; Zimmer, 2015; Deffenbacher, 1996) in adolescents; Association is also seen with suicidal attempts, conduct disorders, hyper tension, heart diseases, psychosomatic ailments (Dale, 2009; Stephanie, 2009; Ahmad, 2007; Grunbaum, 1997). Negative life events, anxiety and drug have shown significant positive correlations with anger in adolescents (Kathryn Puskar, 2008). Studies on premenstrual syndrome in adolescent girls reported high prevalence (59%) of anger/irritability as a most common symptom (Raval, 2015; Doerte, 2014).

High trait anger in adolescence have shown negative relationship with health, social, and academic consequences (Colleen, 2014). Adolescents exposed to violence had poorer school performance and adjustment scores (Munni, 2006). Trait anger also has negative relationship with Self-esteem in adolescents and anger control has shown positive correlation with self-esteem (Coskun, 2009). Significant correlation is observed between trait anger and proneness to shame in youth (Jennie, 2011).

Studies on Indian adolescent population indicate a rise in anger related issues such as angry behaviours, bullying, aggression and violence. Study on adolescent violence reports 23% of victims and 13% perpetrators of violence (Munni, 2006) among 1500 Indian adolescents. In a survey conducted in many cities of India, reports 18% of 5476 youths shown high aggression scores. Higher anger-aggression scores were observed in males than females and also in the age group of 16-19 years (Sharma, 2015). Parental anger styles tend to have strong impact on anger expression in Indian adolescent females (Kavitha D, 2014). Aggression has shown negative correlation with interpersonal and romantic relationships among Indian youth (Sharma, 2013). Indian alcohol-dependent youths reported low levels of anger control, high level of trait anger and poor quality of life (Sharma, 2012).

Though the physiological activities during anger arousal is universal in its characteristics and behaviour, there exists variation in terms of its conceptualisation, perception and expression pattern (Potegal, 2010). Studies also indicate variation intra and intercultural context in addition to age and gender (Tara, 2015). This has led to emergence of several theories of anger and adolescent anger inventories (Kovacs, 2010). Most popular theory of anger is Spielberger's State-Trait

anger taxonomy which is considered fundamental and widely adopted theory. Based on this theory an array of Anger Inventories has been developed for children, adolescents and adult population (Spielberger, 1988; Brunner, 2009). The scale has been adapted to many languages and many cultures.

Further available adolescent anger inventories appear to have the limitation of culture specificity and sensitivity as the words used to describe anger have variety of meaning in different cultures (e.g. word 'mad') (Alaka Mani, 2016). A review study reports these scales differ from another as they measure different aspects of anger (Burney, 2001). Further a review study on adolescent school anger states that the available psychometric adolescent anger scales do not represent the construct adequately or comprehensively (Mathew, 2008; Smith, 2006). Another study reports self-reporting questionnaires for anger must be adapted for cross-cultural usage and should not be back-translated (Moscoso, 2011).

Indian classical text provides enormous resource on the concepts on anger. According to the scriptures, anger is born out of Rajasic nature and is an internal enemy of man. Anger manifests at behavioral, verbal and mental level. Based on this principle the author of this paper has developed an adolescent anger scale which has shown significant reliability and validity scores. This study is to validate the newly developed scale with reference to well-structured STAXI-2-CA (State Trait Anger Expression Inventory for Children and Adolescents).

### **Methods and Materials**

**Design:** It is school based survey conducted in high schools with one time data collection in groups. Consent to participate in the

survey was obtained in writing by the children and approval obtained from school authorities. Authorised tools and software were used for measurements and assessment.

**Sample:** The participants include 323 healthy adolescents (171 girls & 152 boys) studying in 8<sup>th</sup>, 9<sup>th</sup> and 10<sup>th</sup> standard in English medium private co-education high schools in south Bangalore. Inclusion criteria were ability to read, write and communicate in English while adolescents unwilling to participate were excluded.

**Tool:** Two self-reporting anger scales for adolescents were used. They are

- 1) Author developed Anger Scale: A 23 items, measuring anger at *Kayena* (behavioural), *Vacha* (speech) and *Manasa* (Mental) domains.
- 2) State-Trait Anger Expression Inventory-Child and Adolescents (STAXI 2 CA scale): A 35 item self-report scale that measures anger experience, expression and control in adolescents.

In the STAXI -2-CA Scale, some of the terms like ‘grumpy’ ‘grouchy’ were difficult to understand by the children in the Indian cultural context. The meaning of such terms was explained to the group and also incorporated within brackets in the scale.

Both scales were administered in 3 schools. Children were briefed about the study and then asked to fill up the questionnaire. Children were instructed to answer all the questions and they took around 5-10 minutes for filling up the questionnaire.

**Analysis**

The scores of both the scales were tested for correlation. Pearson Correlation co-efficient value of  $r=0.934$  indicate that the scales do not show significant different pattern while assessing anger in adolescents.

Mean and standard deviation was calculated for the scores of both the scales and tabulated in table 1 below:

**Table.1**

	Boys		Girls		Total Scores	
	Mean	SD	Mean	SD	Mean	SD
Scale 1	39.95	5.76	40.66	5.43	40.33	5.59
Scale 2	63.87	8.71	64.82	7.83	64.38	8.26

Scale 1: Newly developed scale & Scale 2: is STAXI 2 CA Scale

Independent t test was done to compare the mean scores of both the scales which showed a significant difference.

**Results and Discussion**

The newly developed scale established a good correlation coefficient value ( $r=0.934$ ) with respect to widely used STAXI-2-CA scale. However, independent t test failed to validate

this correlation. The scoring range for each scale was different and they are grounded on different theory of conceptualisation of anger. This could be the reason for getting the significant p value. Comparison of Means and Standard Deviation showed a similar pattern of anger experience and expression in both the genders.

A prevalence study conducted by the author using STAXI 2 CA with Indian Adolescents

observed that the children had difficulty in understanding a few items and words as they have a different meaning in the Indian social context (Alaka Mani, 2016). In both the studies, authors have found feasibility of STAXI-2-CA scale for administration in Indian adolescent population and strongly recommend adaptation of this well-structured scale to Indian context.

In conclusion, the newly developed adolescent anger scale showed good correlation with STAXI 2 CA Scale.

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