



STANDARDISATION OF EARLY ADOLESCENT TEMPERAMENT QUESTIONNAIRE-REVISED PARENT REPORT IN TAMIL LANGUAGE

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Abstract: The purpose of this study was to establish the reliability and validity of Tamil version of the Early Adolescent Temperament Questionnaire-Revised (EATQ-R) Parent Report. The original version of the Early Adolescent Temperament Questionnaire-Revised Parent Report which has got 62 questions was translated into Tamil through forward and backward translation. This questionnaire was then sent to experts and their reviews were used to establish the content validity. The Tamil version of (EATQ-R) Parent Report was then administered to parents of adolescents of age 9 to 15. The data collected was used to establish its internal consistency. The internal consistency reliability was determined using Cronbach's alpha. The value ranged from 0.45 to 0.88 with eight out of ten items having a value more than 0.60 showing an acceptable internal consistency. The content validity was established by taking the reviews of experts. It was quantified using content validity index (CVI). Its value was 0.822 indicating a good content validity. The Tamil version of Early Adolescent Temperament Questionnaire- Revised (EATQ-R) Parent Report has acceptable internal consistency and good content validity.

Keywords: Temperament, Activation Control, Affiliation, Attention, Fear, Frustration, Inhibitory Control, Shyness, Surgency, Depressive mood, Aggression, Cronbach's alpha, Content Validity Index (CVI).

I. INTRODUCTION

Temperament

Temperament is the way in which a person emotionally and behaviourally responds to the world. Temperament has been defined as "the constellation of inborn traits that determine a child's unique behavioral style, as well as how they perceive and respond to their environment."^[1] Mary. K. Rothbart defined temperament as the individual personality differences in infants and young children that are present prior to the development of higher cognitive and social aspects of personality.^[2] According to Bates, 1989 temperament is commonly viewed as early appearing, relatively stable, biologically based individual differences in behaviour tendencies. Thomas and Chess (1984), as they conducted various research on temperament defined it as "the individual's characteristics modes of responding to environmental stimuli, including the qualities of mood, activity level, distractibility, adaptability, and attention span".^[3] They

proposed that temperament emerges early in life and is largely consistent over the course of development. It includes the innate predispositions and tendencies that affect how people interpret, process, and react to their environment. While genetics play a role, environmental variables and social interactions also have an impact on temperament. Understanding temperament is important because it sheds light on how people differ from one another in their behaviour, emotions, and interpersonal interactions. It can have an impact on many facets of life, including social interactions, career decisions, and educational attainment.

Temperament as a whole includes the following:

Activation Control: The capability to do an action when there is a strong urge to avoid it.

Affiliation: A person's tendency to seek social interaction and form positive relationships with others.

Attention: The capacity to focus on something as well as to shift focus when desired.

Fear: An apprehension in response to an external danger.

Frustration: Negative affect because of interruption of ongoing tasks or goal blocking.

High Intensity Pleasure/Surgency: The pleasure one gets from activities involving high intensity or novelty.

Inhibitory Control: The capacity to plan, and to repress inappropriate responses.

Shyness: Behavioural inhibition to novelty and challenge.^[4]

Temperament is considered as an integral aspect of understanding and working with individuals in the field of occupational therapy. Since temperament encompasses an individual's innate behavioural tendencies, emotional responses, and interaction styles, recognizing and addressing temperament within occupational therapy allows therapist to create a comprehensive and personalized approach to intervention.

Early adolescence and temperament

Early adolescence typically refers to the period of human development between the ages of 10 and 14. During this time, young people experience significant physical, cognitive, and emotional changes. Emotionally, early adolescence can be a period of both excitement and uncertainty. Young people may experience mood swings, increased self-consciousness, and a desire for independence from their parents. Temperament in early adolescence refers to the characteristic patterns of behaviour, emotion, and attention that are relatively stable across situations and time. During this phase of life, young people may experience intense emotions, such as anger, anxiety, and excitement, and their emotional reactions may be more intense than they were in childhood. Some adolescents may be more prone to emotional reactivity than others, which can affect their behaviour and relationships with others. Self-regulation, sociability, activity level, and attentional focus which are part of temperament are also relevant during early adolescence.

Different temperaments require different parenting styles. When parents begin to understand their child's temperament, it will help them to modify their approach so that they can easily fulfil their child's needs. Parents can provide opportunities that are more aligned with their child's interests and strengths, which can foster positive development. Misunderstandings between parents and children can arise when they have different temperaments. Overall, early adolescence is a complex and important period of development that lays the foundation for the rest of a person's life. Understanding an adolescent's temperament can be helpful for parents, educators, and other adults who work with young people. By recognizing an adolescent's unique temperament, adults can provide support and guidance that is tailored to the individual's needs and strengths, which can help them to thrive during this important period of development and navigate these changes and develop into healthy, happy adults.

Temperament and personality

Temperament and personality represent clusters of individual difference and thus are really difficult to untangle. This is seen in the complexity of their relations in research. Some argue that temperament and personality are the same construct,^[5] or that temperament is what is seen in infancy and earlier childhood that later transforms into personality with age and experiences.^[6] Others view temperament as different from personality. According to Cloninger, personality is made up of both temperament and character. He referred temperament to emotional and behavioural predispositions and character as a part of self-concept that is socially learned with intentional goals.^[7] According to Rothbart and Ahadi, temperament is a component of

personality, with personality representing a combination of temperament, cognitions, values, and goals as well as perceptions of the self, others, and events.^[8] It is thought that over time temperament traits are strengthened. It allows the individual to use cognitive and affective responses quickly and habitually in different scenarios. According to Rothbart, temperament provides the biologically-based foundation upon which personality develops.^[9]

Investigations of temperament frequently indicate a link between biologically-based temperament and later emergence of personality in adulthood. While the distinction between temperament and personality might be indistinct, there are important differences to consider. While personality is assumed to develop later in childhood, temperament qualities are biologically based and present from birth on. There are aspects of personality that are not included in temperament, such as self-concept, expectancies, and coping mechanisms. Therefore, personality is a more comprehensive notion that encompasses temperament and other areas influenced by life experience.

Measurement of temperament

There are different ways to measure or study temperament. We can ask questions about behaviour, observe behaviour, or use psychophysiological measures. In case of questionnaire parents or teachers answer questions about a child's behaviour across different situations and ages. They rate how often their child shows such behaviour. Early Adolescent Temperament Questionnaire- Revised parent report is one such questionnaires. Another way is to observe child's behaviour in situations designed to show their temperament. For instance, taking away their favourite thing and observe how they react. Observe if they show anger or they seem unemotional. A child's psychophysiological measures teach us about the connections between biology and behaviour. Heart rate, hormone levels, and brain activity are some of these measurements. For instance, timid children tend to have greater resting heart rates. Researchers usually use more than one measure in their studies. These measures when taken collectively can give us a detailed picture of a child's temperament.^[10]

Temperament and occupational Therapy

According to the International Classification of Functioning, Disability and Health (ICF) (World Health Organization, 2001), functioning and disability are viewed at two interacting levels: (1) the body structures and functions level and (2) the activities and participation level. Moreover, contextual factors, in terms of personal and environmental factors, affect functioning and disability. Personal factors include individual traits and psychological characteristics that affect the level of functioning and disability (World Health Organization, 2001). Thus, according to the ICF, the activities and participation level is influenced by the underlying health condition, the body structures and functions level, the environment, and personal factors. In other words, both state-like and trait-like influences have a bearing on the activities people perform and the areas of life in which they participate. Accordingly, personal and trait-like characteristics account for unexplained variance in occupational performance. This means that temperament, one of the personal factors that is trait like is in fact related to occupational performance. Thus, by considering temperament, therapists can select activities, modify the environment, and adapt their communication style to create a therapeutic setting that maximizes engagement and promotes desired occupational performance. Furthermore, recognizing and respecting an individual's temperament is crucial for establishing a positive therapeutic relationship. Occupational therapists adapt their communication style, set appropriate boundaries, and provide support based on the individual's temperament.

Rachel Diamant did another study in the year 2022 to find out if any relation exists between sensory processing behaviors, executive function, and the temperament characteristics of effortful control in school-aged children. Occupational therapy had already identified sensory processing behavior as factors in behavior self-regulation and emotional development. This study further helped in intervention planning for behavioral self-regulation and positive behavioral outcomes. Significant positive and negative correlations were found between the constructs. In contrast to increased sensory reactivity, which was linked to diminished executive function and effortful control abilities as well as increased expressions of impulsivity, reduced attention, and off-task behaviour, typical responses to sensory experiences were related to appropriate abilities for executive function and effortful control. Results demonstrates the necessity for occupational therapy practice to address sensory responsiveness and reactivity in support of behaviour management for effortful control and executive functions.^[12]

II. METHODOLOGY

Research design:

This is quantitative research.

Sampling technique:

Convenient sampling was used for this study.

Sample population:

Parents of adolescence of age group 9 to 15 years.

Sample size:

92

Selection criteria

Inclusion Criteria:

- Parents of school going adolescents of age group 9-15 years.
- Both male and female gender.

Exclusion Criteria:

- Parents who are unable to read and write.
- Parents with cognitive perceptual deficits.
- Parents who are separated from their children for any reason.
- Parents and children who are having any psychiatric illness.

Procedure

The permission was requested from Professors Mary K Rothbart and Lesa K Ellis who developed Early Adolescent Temperament Questionnaire-Revised Parent Report (EATQ-R) for standardisation of this questionnaire in Tamil language. The permission was granted via email by the concerned authors. The questionnaire was then translated into Tamil through forward and backward translations with the help and guidance of two Professors who were well versed in both English and Tamil. The translated version of the questionnaire was then sent to five experts in the subject for establishing its content validity. The questionnaire was then modified based on the changes suggested by the experts. The parents were asked to sign the consent form and were explained the purpose of the study. Those who had consented to participate were given the Tamil version of the EATQ-R. They were asked to complete the questionnaire. Finally, the collected data was analysed and interpreted for checking the internal consistency of the questionnaire.

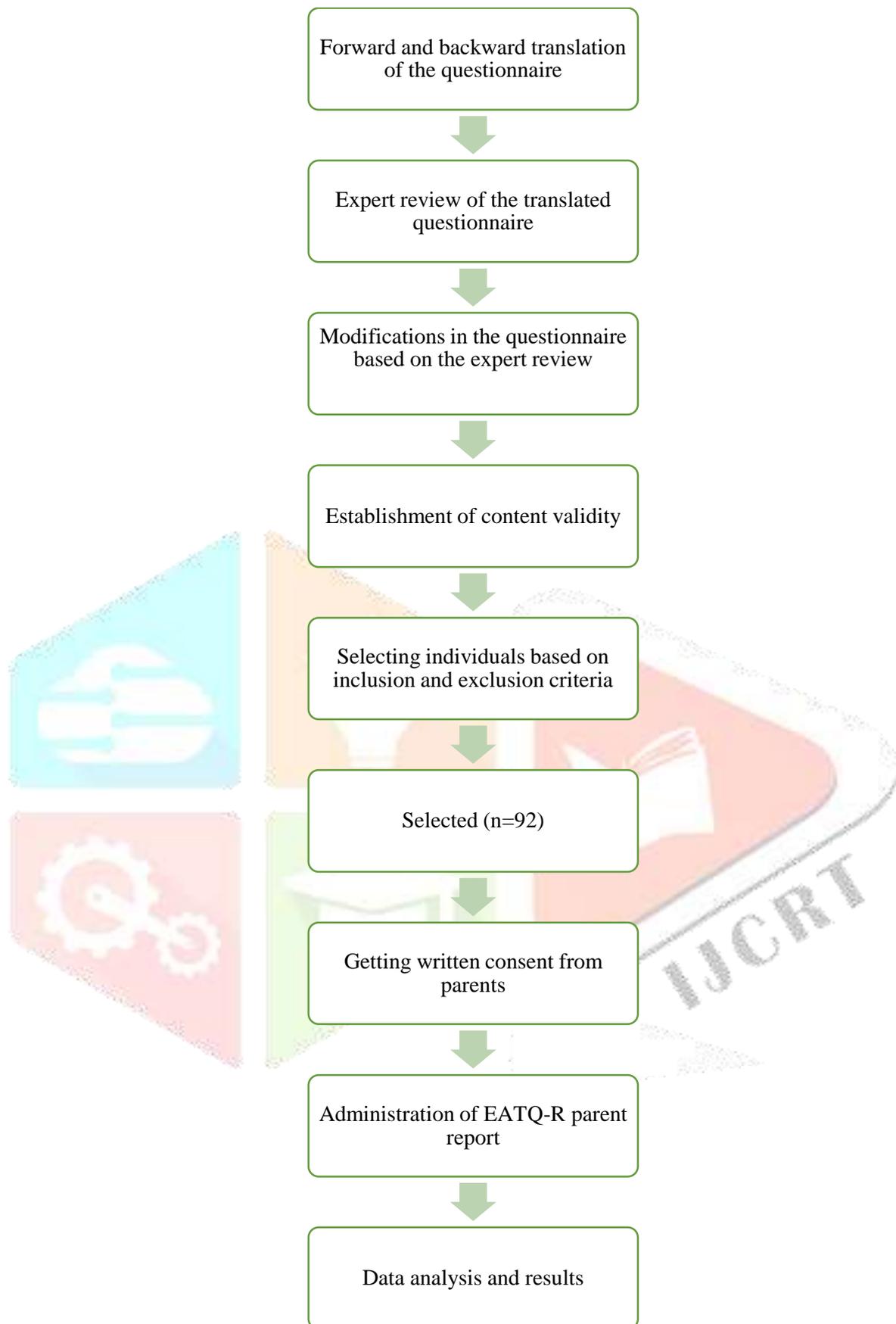


Fig.1: schematic representation of research design

III. RESULT

The aim of this study was to find out the reliability and validity of the EATQ-R Parent Report in Tamil language. Internal consistency reliability and content validity were established. The previous chapter laid out the methodology employed for the current study. This present chapter looks into the analysis of the results obtained.

Internal consistency

As shown in Table 1 the internal consistency reliability of the EATQ-R Parent Report in Tamil language ranges from 0.45 to 0.88.

Cronbach's alpha for each item:

Table.1: Internal consistency coefficients of the EATQ-R Tamil version

	Mean	Std. Deviation	N	Cronbach's alpha
ACTIVATION CONTROL	20.9348	3.83966	92	0.67
AFFLIATION	21.4783	3.95157	92	0.77
AGGRESSION	19.4783	4.98895	92	0.45
ATTENTION	19.7717	3.22457	92	0.83
DEPRESSIVE MOOD	13.3913	2.95741	92	0.64
FEAR	17.1522	4.11359	92	0.57
FRUSTRATION	19.8478	3.97225	92	0.68
INHIBITORY CONTROL	15.7609	2.86076	92	0.88
SHYNESS	14.9239	3.43938	92	0.65
SURGENCY	31.5978	6.10901	92	0.69

INTER-ITEM CORRELATION MATRIX

Table.2: Inter item correlation value.

	Activation Control	Affiliation	Aggression	Attention	Depressive Mood	Fear	Frustration	Inhibitory Control	Shyness	Surgency
Activation Control	NA	.001	-.396	.458	-.030	.344	-.021	.244	.161	-.121
Affiliation	.001	NA	-.102	.087	.062	.159	.053	.050	-.030	.610
Aggression	-.396	-.102	NA	-.153	.256	.029	.427	-.142	-.023	.037
Attention	.458	.087	-.153	NA	-.062	.324	-.018	.455	.272	-.059
Depressive Mood	-.030	.062	.256	-.062	NA	.131	.281	-.093	.272	-.157
Fear	.344	.159	.029	.324	.131	NA	.270	.132	.255	-.061
Frustration	-.021	.053	.427	-.018	.281	.270	NA	-.096	.141	.138
Inhibitory Control	.244	.050	-.142	.455	-.093	.132	-.096	NA	.010	-.022
Shyness	.161	-.030	-.023	.272	.272	.255	.141	.010	NA	-.206
Surgency	-.121	.610	.037	-.059	-.157	-.061	.138	-.022	-.206	NA

Inference:

Table.3: Inference of the inter item correlation matrix

Correlation coefficient (r)	Description
+1.0	Perfect positive + association
+0.8 to 1.0	Very strong + association
+0.6 to 0.8	Strong + association
+0.4 to 0.6	Moderate + association
+0.2 to 0.4	Weak + association
0.0 to +0.2	Very weak + or no association
0.0 to -0.2	Very weak – or no association
-0.2 to -0.4	Weak - association
-0.4 to -0.6	Moderate - association
-0.6 to -0.8	Strong - association
-0.8 to -1.0	Very strong - association
-1.0	Perfect negative association

Content validity

Content validity was established based on the reviews and suggestions of five experts in the subject. The degree of content validity was calculated using content validity index (CVI). It is calculated as the ratio of number of items agreed by all the experts to the total number of items. The value of CVI for this questionnaire is 0.822.

IV. DISCUSSION

This study determined the psychometric properties such as internal consistency and content validity of EATQ-revised parent report in Tamil language.

Table 1 shows the value of Cronbach's alpha for each component of temperament. From the Cronbach's alpha value of each item, it can be said that the internal consistency for most of the scales were reasonably high. Affiliation (0.77), attention (0.83), and inhibitory control (0.88) are having values more than 0.70 showing a perfect agreement. Five of the components are having values more than 0.60 which are activation control (0.67), depressive mood (0.64), frustration (0.68), shyness (0.65), surgency (0.69). This indicates an acceptable level of internal consistency for these five scales. Aggression (0.45) and fear (0.57) scales are having relatively low level of internal consistency. Since eight components out of ten are having a good internal consistency, it can be said that the questionnaire is having a good internal consistency.

Table 2 is showing the correlations between each of the items in the questionnaire. Activation control is having a positive relationship with affiliation, attention, fear, inhibitory control and shyness. It has a negative relation with aggression, depressive mood, frustration and surgency. Affiliation is having a very weak positive or no relation with attention, depressive mood, fear, frustration and inhibitory control. But it has a strong positive relationship with surgency. Shyness and aggression are negatively related to affiliation with a very weak association. Aggression shows a very weak negative correlation with attention, inhibitory control, shyness. and a very weak positive relationship with fear, surgency and depressive mood. Aggression and frustration are having a moderate positive association with each other.

Attention is having a very weak negative or no relationship with depressive mood, frustration and surgency. It is having a positive association with fear, shyness and inhibitory control. Depressive mood is having a very weak negative or negligible correlation between inhibitory control and surgency. It has a very weak positive association with fear, frustration and shyness. Fear and surgency is having a weak negative correlation. Frustration and shyness are having a moderately positive correlation with fear. Fear and inhibitory control have a positive or no relationship. There is a weak negative correlation between frustration and inhibitory control. Frustration has a weak positive association with surgency and shyness. Inhibitory control has a very weak positive correlation with shyness and a very weak negative correlation with surgency. Shyness and surgency are related negatively to each other. Most of the components are showing positive correlation with each other. This suggest that this questionnaire is a reliable assessment tool in assessing temperament of adolescents.

Based on the reviews of five experts, necessary changes were made in the questionnaire. Items irrelevant to the construct were removed and changes were made to make the questionnaire inclusive and appropriate for the intended population. The content validity index (CVI) for this questionnaire was calculated as 0.822. This ensures that this questionnaire is having a good content validity.

V. CONCLUSION

This study has aimed to determine the internal consistency reliability and content validity of the Tamil version of Early Adolescent Temperament Questionnaire Revised Parent Report (EATQ-R). On statistical analysis the questionnaire has good internal consistency with eight out of ten items scoring above 0.60 value of Cronbach's alpha and also good content validity with a content validity index (CVI) value of 0.822.

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