# Development and Validation of Parental Attachment Styles Scale for Adolescents

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**Objective:** To construct an instrument and establish psychometric properties to measure parental attachment styles for adolescents in Urdu language

**Study Design:** Cross-sectional analytical study.

**Place and Duration of Study:** This research was carried out in the Department of Psychology, University of Gujrat, Pakistan, . 20. 20. 20. 20 2019 to Jan. 5 Jan. Jan. 5 5 2021.

**Material and Methods:** Initial item pool (150 items), based on Ainsworth et al. (1985) attachment styles theory, intensive review of the literature, and focus group interviews (Girls=30, Boys=30. Among the 141 items, shortened by an expert panel, the pilot study retained 137 reliable items for final administration. Furthermore, 1200 adolescents (12-19 years) from the community and educational institutions were approached to gather information in district Gujrat..ereh here data was analyzed with the help of exploratory factor analysis, confirmatory factor analysis, and reliability analysis on SPSS-22 and Amos-22. F

 **Results:** Exploratory factor analysis on SPSS-22 explored 38 reliable items for the Parental Attachment Styles scale under three -sub-factors; Secure Attachment, Anxious-Resistance Attachment, and Anxious-Avoidant Attachment, whereas 15 items were confirmed for the final instrument through model fit (P-value=.000, CFI=.947, GFI=.947, AGFI= .927, RMSEA=.064) of Confirmatory Factor Analysis.

**Conclusion:** An assessment tool in the Urdu language to estimate Parental Attachment Styles for adolescents is competently developed and validated with 15 items and three sub-scales.

**Keywords:** Parental Attachment Styles, Exploratory Factor Analysis, Confirmatory Factor Analysis

## Introduction

Different environmental and psychological factors significantly influence the ''adolescence development processes, such as experiences in early life. Studies are recognizing the value of early life incidences to an ' 'individual's physical and mental health across the lifespan [1]. Mothander and Wang [2] indicated that attachment plays an extremely vital function in the development of different behaviors in the early childhood phase and influences individuals throughout their life span as a mental construct. It is a deep, durable, and profound affectionate bond among persons across time [3], [4]. Further, parental attachment has been defined as a sense of association between parent and child categorized by comfort, trust, and reliability [5], and ''it's been theorized to play an important part in predicting directions of personal development and adjustment throughout the life span [6].

According to Bowlby [7], attachment operates on the principle of evolution when it protects and secures a child from dangerous and difficult circumstances. It has biological foundations and promotes connectedness among children and caregivers. Ainsworth et al. [3], in a strange situation experiment, classified three attachment styles of children to parents and with other significant individuals. Later, Main and Solomon [8] identified and explored one additional disorganized attachment style. With a secure attachment style, children actively discover the environmental conditions when they get separated from their attachment. Upon reunion, they again form a healthy connection and attachment with them and exhibit appropriate and socially accepted behaviors [9]. Conversely, Anxious-Avoidant children were unable to enjoy or explore the surrounding environment and demonstrated crying upon separation from attachments.igure f[10]. Furthermore, the Anxious-Resistant children become very aggressive to attachment figures when reunited after separation and demonstrate the inability to get a secure attachment base. They show aggression and push their mothers away from them. These children are very sensitive, submissive, easily tempered, finicky, immature, feeble, or exhibit resistant behavior towards their parents [10], [11]. Children with Disorganized attachment styles have no obvious attachment pattern and are very irritable, brutal, and antisocial. They are usually anxious, disorganized, nervous, uncertain about their attachments[8].

Several studies have indicated that attachment insecurity was frequent in individuals suffering from different mental health problems, ranging from mild anxiety or distress to severe personality disorders and even schizophrenia [12]. For instance, insecurities (anxious-avoidant or anxious-resistance) are linked with depression [13], obsessive-compulsive disorder [14], clinically significant anxiety [15], post-traumatic stress disorder [14], eating disorders [16] and suicidal tendencies [17].

Despite of considerable consequences of different attachment styles on the development of psychopathology and vice versa, its measurement is inconsistent [18]. One valid reason for the low rate of screening is the unavailability of a suitable measurement instrument for this construct. Few research scales are available to assess it, which have been adequately validated and developed in western cultures, w . Regarding Pakistan there is a scarcity of such indigenous research tools to measure parental attachment styles, which has become an immense obstacle for researchers. Mostly scale translation method was used to translate western developed scales into the Urdu language. Ashton [19] suggested that research instruments developed and validated in the developed and progressed countries may not be used or translated in developing nations because of differences in individual' ' experiences and socio-cultural conditions. The differences in the Eastern and Western countries are very obvious regarding emotion handling or dealing, which have collectivistic and individualistic cultures, respectively. In collectivistic culture (Eastern) individuals express their emotions and feelings in a way which is acceptable, helpful and appropriate for the intact groups whereas in the cultures with individualistic approach (Western),

individuals utilize their emotional responses to help themselves apart from the well-being of others [20], [21]. Therefore, this inconsistency between both eastern and western cultures indicates the immense need to develop and validate indigenous research instruments related to the language, environmental conditions, and upbringing of the people. Keeping in view the importance of parental attachment styles, the inappropriateness of utilizing existing instruments, and the deficiency of scales development and validation in the field of psychology in Pakistan, the present study is designed to develop and validate parental attachment styles in the Pakistani cultural context.

## Material And Methods

According to Anastasi and Urbina [22], in a scale development procedure, the generation of items is the most significant step. Consequently, Ainsworth et al. [3] attachment styles theory was followed for item generation about parental attachment styles scale, which demonstrated three essential attachment styles: Secure Attachment, Anxious-Resistance Attachment, and Anxious-Avoidant Attachment.
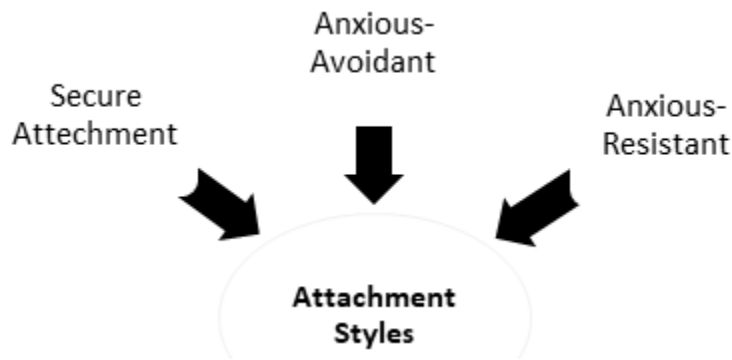


**Figure-1:** Ainsworth et al. (1985) [3] model of attachment styles

The available literature about parental attachment styles was evaluated and considered for item generation. Few secondary items were derived from the existing scales on the targeted construct. All the items of instrument were generated in the Urdu language. Furthermore, o explore phenomenology, 50 adolescents (25 girls & 25 boys) with age ranges of 12-19 were included in focus group interviews. Based on the targeted ''population's experiences and opinions, appropriate items were generated. The confirmed initial item pool for the Parental Attachment Styles scale consists of 150 items. In the scale development procedure, the ''expert's evaluation of the initially generated items was the next step. After explaining the purpose and nature of the research, the initially generated item pool was handover to 5 .D.Ph.D. subject experts with adequate knowledge of targeted variables. The expert panel was asked to check every item for its relevancy, importance, adequacy, and suitability. Additionally, the expert panel was requested to judge the clarity and vagueness concerns of items. The initially generated item pool was reorganized according to the recommendations and suggestions of the experts. A few items have remained the same; some were eliminated, and some were changed. In the Parental Attachment Styles scale, nine items were eliminated, whereas 35 items were reworded or changed. Of 150 initial items, 141 items remained in the pilot study phase to test the difficulties and ambiguities in the newly generated Parental Attachment Styles scale in the targeted population. Furthermore, four-point LLikert scale ranging from 1 to 4 were decided by the expert panel for response options. The pilot study was conducted on 100 conveniently sampled adolescents (Girls=50, Boys=50) with age ranges from 12 to 19 from district Gujrat. Analysis of obtained information confirmed 137 reliable items of the Parental Attachment Styles scale for final administration with three subscales; Secure Attachment, Anxious-Avoidant Attachment, and Anxious-Resistance Attachment. The ethical committee of the Department of Psychology, University of Gujrat,

Pakistan, approved this research project. The finalized instrument with 137 items was administered to 1200 adolescents, 12-19 years old, from different educational institutions and communities after obtaining written and oral informed consent from the adolescents and their parents. They explained the purpose, nature, and significance of the study. Moreover, they were ensured about the confidentiality and the privacy of the obtained information and their right to withdraw research procedure at any time and stage without any explanation. After that, detailed instructions were provided about the items and response categories of the scale. Respondents were encouraged to ask questions freely if they had difficulty understanding any item or response options. ,In the end, participants were acknowledged and appreciated for their cooperation and participation.

**Data Analysis**

Obtained data and information was analyzed on Statistical Package for Social Sciences (SPSS-22) and Analysis of a Moment Structures (AMOS-22) for windows. The exploratory factor analysis, confirmatory factor analysis, and reliability analysis were carried out to obtain desirable results.

**Results**

The Parental Attachment Styles scale with initial 137 items was administered on the sample of 1200 adolescents. The exploratory factor analysis explored 38 reliable items, while the confirmatory factor analysis confirmed 15 items final scale of Parental Attachment Styles from 137 items.

**Table-1:** Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) and Bartlett's Test of Sphericity for Parental Attachment Styles scale for adolescents (N=1200)

| Measure | KMO | Bartlett's Test of Sphericity |
|---|---|---|
| Parental Attachment Styles Scale for Adolescents | .88 | .000 |

The Kaiser-Meyer-Olkin Measure and Bartlett's Test of Sphericity were used to check the adequacy of the sample of 1200 adolescents. Study findings indicated that the sample is highly adequate as the KMO value is .88. Furthermore, the above table depicts that the obtained data can be accepted for additional analysis as the value of Bartlett's Test of Sphericity is also significant.

**Table 2:** Factor Loading of 15 Items on Parental Attachment Styles Scale after Varimax Rotation (N=1200)

| Sr. No | Item No | 1. Secure Attachment | 2. Anxious-Avoidant Attachment | 3. Anxious-Resistance Attachment |
|---|---|---|---|---|
| 1 | 1 | .593 | | |
| 2 | 3 | .896 | | |
| 3 | 7 | .957 | | |
| 4 | 10 | .979 | | |
| 5 | 17 | .584 | | |
| 6 | 88 | | .673 | |
| 7 | 102 | | .573 | |
| 8 | 104 | | .519 | |
| 9 | 123 | | .536 | |
| 10 | 130 | | .505 | |
| 11 | 43 | | | .700 |
| 12 | 60 | | | .566 |
| 13 | 61 | | | .579 |
| 14 | 63 | | | .562 |
| 15 | 72 | | | .585 |

The above table depicts that the Parental Attachment Styles Scale consists of three sub-scales; Secure Attachment, Anxious-Avoidant Attachment, and Anxious-Resistance Attachment. tem number 1, 3, 7, 10, and 17 was retained under the factor of Secure Attachment, whereas the Anxious-Avoidant Attachment factor confirmed item no 88, 102, 104, 123, and 130 during analysis. Furthermore, items no 43, 60, 61, 63, and 72 are considered reliable under the factor of Anxious-Resistance Attachment. Each such sub-scale contained five items.

**Table-3:** Model Fit Summary of 15 Items Parental Attachment Styles scale (N=1200)

| P Value | AGFI | GFI | CFI | RMSEA | RMSR |
|---------|------|-----|-----|-------|------|
| .000 | .927 | .947 | .947 | .064 | .029 |

The above table demonstrated the results of Confirmatory Factor Analysis (CFA) on 15 items of the Parental Attachment Styles scale. Findings indicate Comparative Fit Index (CFI) value as .947, which was within acceptable limit. Moreover, the AGFI value, Goodness of Fit Index (GFI) value, and Root Mean Square Error of Approximation (RMSEA) value 0.927, 0.947, and 0.064, respectively, which validated the usefulness of the newly developed instrument.verall, Confirmatory Factor Analysis confirmed the model of Parental Attachment Styles scale with three factors such as Secure Attachment (5 items), Anxious-Avoidant Attachment (5 items), and Anxious-Resistance Attachment (5-items).

**Table-4:** Reliabilities of the Subscales of Parental Attachment Styles scale (N=1200)

| Subscale | Total Items | Cronbach Alpha r |
|----------|-------------|------------------|
| Secure Attachment | 5 | .886 |
| Anxious-Avoidant Attachment | 5 | .829 |
| Anxious-Resistance Attachment | 5 | .900 |
| Total | 15 | .814 |

To ensure the reliability of the sub-scales and complete scale, Cronbach's alpha was computed. The Cronbach alpha value of the whole scale was 0.874, whereas the reliability of the sub-scales of Secure Attachment, Anxious-Avoidant Attachment, and Anxious-Resistance Attachment was 0.873, 0.786, and 0.825, respectively. Furthermore, the values of all reliability analyses were more than the accepted limit, which is 0.70.

**Split Half Reliability of Parental Attachment Styles Scale**

To find out the reliability of the newly developed Parental Attachment Styles scale, a split-half reliability coefficient was calculated. The split-half reliability of the Secure Attachment scale is 0.842, the Anxious-Avoidant Attachment scale is 0.865, and the Anxious-Resistance Attachment scale is 0.789.

**Validity of Parental Attachment Styles Scale**

To validate the newly developed Parental Attachment Styles scale, the bivariate Correlation was computed through the Pearson product correlation coefficient on two-tailed tests of significance. , The attachment Style Classification Questionnaire is used in this regard to ingexploring convergent validity. This scale is developed by [23] for Latency Age Children, and it is an adaptation of the Hebrew version [24] of Hazan and Shaver's [25] questionnaire for the classification of adults' ' attachment styles. Attachment Style Classification Questionnaire contains 15 items based on ' 'Ainsworth's three attachment styles; secure, anxious/ambivalent, and avoidant. Three factors of the Parental Attachment Styles scale (Secure Attachment, Anxious-Avoidant Attachment, and Anxious-Resistance Attachment) were correlated with the three factors of the Attachment Style Classification Questionnaire (secure, anxious/ambivalent, and avoidant).
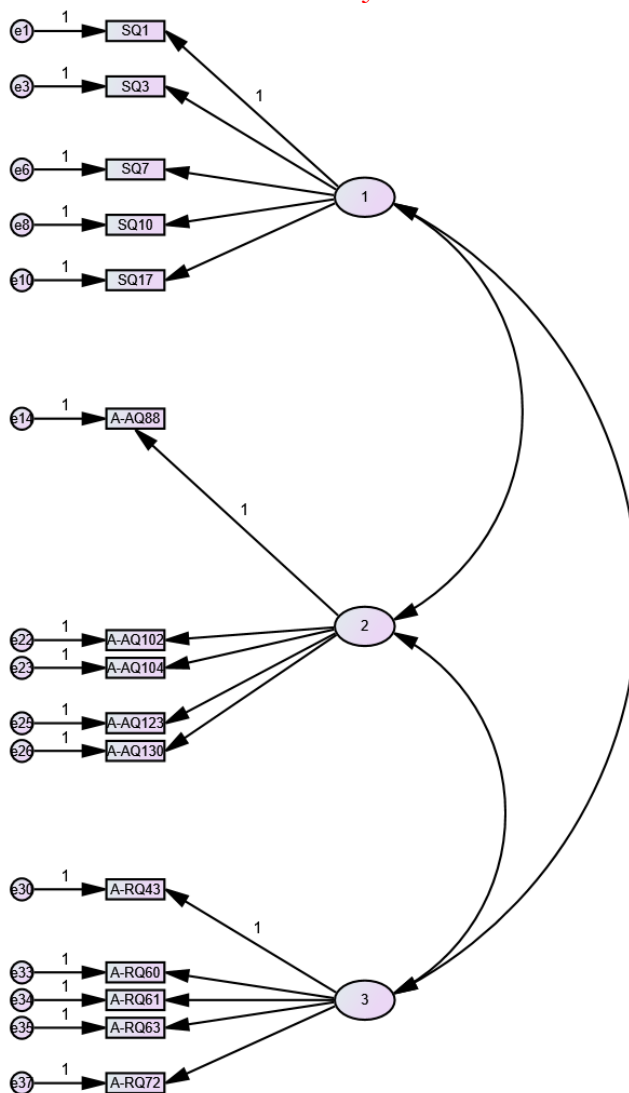
**Figure-2:** Confirmatory Factor Analysis of 15 items Parental Attachment Styles scale (N=1200)

**Tale-5:** Correlation between the Attachment Style Classification Questionnaire and the Parental Attachment Styles scale (PAS)

| Subscales of Parental Attachment Styles scale | Subscales of Attachment Style Classification Questionnaire | | |
|---|---|---|---|
| | Secure | Avoidant | Anxious/Ambivalent |
| Secure Attachment | **.834** | -.254* | -.128 |
| Anxious-Avoidant | -.279** | **.757** | .543 |
| Anxious-Resistance | -.022 | .483** | **.823** |

**Correlation is significant at the .01 level (2-Tailed)

The three factors model of the Parental Attachment Styles scale indicated the convergence with the -sub-factors of the Attachment Style Classification Questionnaire. Furthermore, Secure Attachment, Anxious-Avoidant, and Anxious-Resistance factors of the Parental Attachment Styles scale were positively and significantly correlated with the secure, avoidant, and anxious/ambivalent factors of the Attachment Style Classification Questionnaire, respectively. The result demonstrated a good convergent validity of the newly developed scale.

**Discussion**

The present study was carried out to develop and establish psychometric properties of the indigenous Parental Attachment Styles scale for adolescents as there is a dearth of such research instruments in Pakistan. Scale development is necessary and mandatory in different countries because tools developed and validated in one culture may not be appropriate to use in other cultures and populations, which increases the likelihood of biases in research findings [26], [27].

The initially generated item pool contained 150 items, and then nine items were discarded according to the ''expert's suggestions. , A pilot study with 141 items, retained 137 reliable items to be used in final administration. Exploratory Factor Analysis (EFA) was computed to explore the factor structure of the newly developed indigenous research instrument. The Construct Validity of scales has been comprehensively established through EFA. This analysis technique extensively distributes items under meaningful factors and indicates significant associations among the observed variables [28]. ly,, A final scale 137 items was administered to 1200 adolescents with age ranges of 12 to 19. The obtained sample size was sufficient because, for factorial analysis, five respondents per item is the minimum acceptable limit [29]. Further, the value of Kaiser-Meyer-Olkin was 0.88, which demonstrated that obtained sample is adequate for the study, whereas ''Bartlett's test of Sphericity is also significant, which indicated significant variance among ''participants' responses [29], [30].

The Exploratory Factor Analysis explored 38 valid items under three -sub-factors. Items with greater than .5 values were considered as they fulfilled the standard criteria of significant Factor Loading [31]. The Varimax Rotation method was used to explore the factors.

Explored factors by Exploratory Factor Analysis were confirmed through Confirmatory Factor Analysis (CFA) on Amos-22. CFA confirmed a 15 items Parental Attachment Styles scale with three sub-factors; Secure Attachment (5 items), Anxious-Avoidant Attachment (5 items), and Anxious-Resistance Attachment (5 items) as proposed by EFA. All the identified sub-factors were clear, well-defined, and theoretically relevant to the main construct. Moreover, the model fit values of the recently developed instrument were; GFI=0.947, AGFI=0.927, and CFI=0.947 which are best because if these values are above 0.90, then the model is best fitted. At the same time, the value of RMSR=0.029 was also fine, as this value is below 0.05 [32], [33]. Overall, the results demonstrated the best model fit of the Parental Attachment Styles scale, as all the generated values of the model were within the acceptable limits [34].

The Cronbach alpha value of the whole 15-items scale was 0.874, whereas the sub-scale of Secure Attachment, Anxious-Avoidant Attachment, and Anxious-Resistance Attachment has the reliability of 0.873, 0.786, and 0.825, respectively. Reliability values of the Parental Attachment Styles scale and its sub-scales are within acceptable limits [35], [36].

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