Introduction
Adolescents’ environment plays a significant role in their development. The family, friends, neighbourhood, community, school and teachers can help adolescents complete the developmental task of forming an identity. The same factors can also act as barriers in identity formation. These interpersonal factors are determinants of adolescent mental health. Moreover, socioeconomic status (SES) is another contributing external factor affecting the mental health of adolescents. Both environmental and individual factors contribute to positive development and growth of adolescents.

The most important role in adolescents’ lives is played by their parents and the first and closest interaction in life is with parents. Parental dealing of the child’s emotional and behavioural problems determines the way the child will handle difficulties in the future. Perception of parents helps children become emotionally stable.

How children perceive their parents not only impacts their coping skills but also affects their academic life. These early childhood perceptions and experiences have a significant influence on adult life. Perceived parental involvement is significantly associated with scientific competence and relatedness in school among college students. There is a possibility that when individuals perceive high parental involvement, their academic performance increases, leading to healthier adult lives. Likewise, autonomy support from fathers and mothers affects the emotional functioning of children. Research indicates that a higher level of psychological control by fathers leads to an increase in internalising and externalising problems in adolescents. Children tend to incorporate parental standards in their daily life. Such introjection of parental attitudes formulates children’s own personality.

Research suggests that autonomy supportive relationships with parents facilitate positive subjective well-being in adolescents. Adolescents feel independent and confident when provided with such encouragement from the parents. Moreover, youngsters experience better emotional functioning when parents are more involved in their lives. Thus, parental involvement facilitates healthy emotional growth in adolescence.

There is significant importance of self-determination for...
adolescents’ relationship with their parents. It is the parents’ responsibility to help children flourish and let them be capable of internalising different attitudes and behaviours. Self-determination facilitates the psychological well-being of adolescents. According to the self-determination theory, the needs for competence, autonomy and relatedness must be present in order to have healthy functioning.

On the basis of the self-determination theory, Perception of Parents-Child Scale (POPS-Child Scale) was developed. The scale has 22 items; 11 each related to the mother and the father. The scale yields 4 scores for the subscales of mother involvement (MI), mother autonomy support (MAS), father involvement (FI), and father autonomy support (FAS). The developers studied the motivational mediators of perception of parents; and three motivation variables were included, namely control understanding, perceived competence, and perceived autonomy. Psychometric properties of the scale were evaluated, indicating good reliability and validity. Findings revealed that perceived maternal autonomy and involvement had a positive association with perceived competence, control understanding, and perceptions of autonomy. Moreover, perception of paternal autonomy and involvement were found to be related to perceived competence and autonomy.

The current study was planned to determine how well POPS-Child fits into the Pakistani culture. This was done by way of developing the Urdu version of the scale.

**Subjects and Methods**

The study was conducted in schools from different areas of Karachi (Happy Palace Grammar School, Beacon Askari School, The Educators, and Clifton Grammar School) from October, 2017 to March, 2018. It was conducted in two phases. In phase 1, translation was completed while in phase 2, reliability and validity analyses were conducted. The translation was done according to the guidelines provided by International Test Commission (ITC). First, permission was obtained from the authors. They were briefed regarding the purpose of this research and the need to translate and adapt the scale. After getting their permission, the process of translation and adaptation was started. An expert panel was gathered to analyse the forward and backward translations of the scale. The panel was responsible for modifying the items. The members of this panel were bilingual and natives of the language as per the ITC criteria. In consideration of these guidelines, four experts were selected for the panel. A team-based multistep forward translation approach of double translation was utilised. The translators, both forward and backward, were experts in the source and target languages. They were familiar with the Pakistani culture and were aware of the construct. The experts participated in this process voluntarily. Two of the three translators involved in forward translation had a doctorate degree (PhD) in Clinical Psychology and one had Master of Philosophy (M.Phil) in Clinical Psychology. They were given copies of the scale and were briefed. They translated the scales individually and three forward translations were obtained. These translations were reviewed by the expert panel and the suggested changes were made in the item analysis.

The translated Urdu version of the scale was finalised, typed and provided to three translators for backward translation. One of them was PhD in Clinical Psychology and two were Masters in English Linguistics. The translators completed the backward translation in English language. They were not aware of the construct and its original version. The expert panel reviewed all the items one by one and compared them with the original items of the POPS-Child in English language.

After the translation was completed, pilot testing of the Urdu version was done. Participants were approached in a secondary school aged 12-16 years. The expert panel evaluated the results and checked item difficulties. The required item modifications were done as per the experts’ evaluation. The finalised version of the scale was compiled after the expert panel’s approval. This was assessed for its psychometric properties in the second phase.

In the second phase, the reliability and validity of the scale was assessed to obtain empirical analysis. Reliability was evaluated through internal consistency reliability (Cronbach’s alpha), test-retest, and split-half reliability. Moreover, construct validity was measured through discriminant and convergent validity.

The study sample comprised secondary school students aged 12-16 years from different areas of Karachi. For test-retest reliability, the Urdu version was re-administered on a group of students with a gap of 14 days. The scores were then correlated to assess reliability.

Measures of the study included a personal information form consisting of demographic information and the scales used to assess psychometric properties.

The POPS-Child scale consists of 22 items; 11 each related to the mother and the father. It is applicable on children as young as aged 8 years to adolescents. POPS has 4 subscales: MI 5 items, MAS 6 items, FI 5 items, and FAS 6 items. On every number in the scale, the participants are asked to circle one of the given four options describing as closest to their mother or father. The first 11 items are related to the mother, and the next 11 are related to the father. The scale has good internal consistency for the subscales with Cronbach’s alpha.
The Centre for Epidemiological Studies Depression Scale for Children (CES-DC)\textsuperscript{11} is a self-reporting questionnaire designed to measure depressive symptomatology in children. The scale is applicable on those aged 6-17 years. It consists of 20 items that are answered on a 4-point ordinal scale in which 0 = Not At All, 1 = A Little, 2 = Some, and 3 = A Lot. Items 4, 8, 12, and 16 are reverse-scored and the other items are positively scored. Scoring is done by calculating the total sum of all the items. A score of 15 or above is an indication of depression.\textsuperscript{11} The CES-DC has good internal consistency with Cronbach’s alpha 0.89= and satisfactory test-retest reliability 0.57. The Urdu translation of CES-DC was used in the current study. Psychometric properties for the Urdu version revealed good internal consistency with Cronbach’s alpha 0.841, test-retest reliability 0.892 and discriminant validity value with trait emotional intelligence being satisfactory at -0.479.\textsuperscript{12}

The Trait Emotional Intelligence Questionnaire-Adolescent Short Form, (TEIQue-ASF)\textsuperscript{13} was used to determine the role of trait emotional intelligence as a moderator between perception of parents and depression in adolescents. This is a short version of the adult form of the TEIQue. This is a simplified version with simple wording and syntactic complexity of the adult version. It consists of 30 short statements. All of the 30 items are sampled from the 15 facets of the adult trait emotional intelligence (EI) sampling domain; two items from each subscale were chosen to develop this version. These facets measure the global trait emotional intelligence. Statements are responded to on a 7-point Likert scale in which 1 = Disagree and 7 = Agree. A total score is obtained after reverse-scoring the items in the scoring manual. Higher scores indicate higher trait emotional intelligence. The TEIQue-ASF shows an internal consistency reliability of 0.84. In this study, the Urdu version was used. The psychometric properties of the scale have been established in the Urdu language with adequate internal consistency and Cronbach’s alpha 0.735), test-retest reliability 0.706), and discriminant validity value with depression being satisfactory at -0.479.\textsuperscript{12}

For phase II, permission was obtained from the respective school administrations and consent was taken from each subject.

Data analysis was done using SPSS 20. Descriptive statistics comprised mean values, standard deviations, frequencies and percentages. Moreover, reliability was evaluated through internal consistency reliability Cronbach’s alpha, test-retest, and split-half reliability. Construct validity was measured through discriminant and convergent validity.

**Results**

Of the 758 subjects, 383(50.5%) were boys and 375(49.5%) were girls. The overall mean age was 13.57±1.24 years. Of the total, 509(67.2%) participants were living in a nuclear family system, while 249(32.8%) belonged to the joint family system (Table-1). Cronbach’s alpha values for POPS subscales were MI 0.592, MAS 0.777, FI 0.653, and FAS 0.717. The test-re-test sample had 142 students; 71(50%) boys and as many girls. Coefficient values were MI 0.803, MAS 0.791, FI 0.874 and FAS 0.845. There were significant positive

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Frequency (N)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (years) (N = 758)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>173</td>
<td>22.8</td>
</tr>
<tr>
<td>13</td>
<td>233</td>
<td>30.7</td>
</tr>
<tr>
<td>14</td>
<td>170</td>
<td>22.4</td>
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<td>15</td>
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<td>14.8</td>
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<tr>
<td>16</td>
<td>70</td>
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<tr>
<td>Gender</td>
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<td></td>
</tr>
<tr>
<td>Male</td>
<td>383</td>
<td>50.5</td>
</tr>
<tr>
<td>Female</td>
<td>375</td>
<td>49.5</td>
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<tr>
<td>Nuclear</td>
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<tr>
<td>Joint</td>
<td>249</td>
<td>32.8</td>
</tr>
</tbody>
</table>

**Table-2:** Cronbach Alpha Coefficients, Coefficients for Test-Te-Test Reliability, and Correlations with CES-DC and TEIQUE-ASF of POPS - Child Scale.

<table>
<thead>
<tr>
<th>POPS Subscales</th>
<th>Cronbach’s alpha</th>
<th>Test-re-test reliability coefficients</th>
<th>CES-DC Correlations</th>
<th>TEIQUE-ASF Correlations</th>
</tr>
</thead>
<tbody>
<tr>
<td>MI</td>
<td>.592*</td>
<td>.803*</td>
<td>-.209*</td>
<td>.253*</td>
</tr>
<tr>
<td>MAS</td>
<td>.777*</td>
<td>.791*</td>
<td>-.240*</td>
<td>.204*</td>
</tr>
<tr>
<td>FI</td>
<td>.653*</td>
<td>.874*</td>
<td>-.230*</td>
<td>.218*</td>
</tr>
<tr>
<td>FAS</td>
<td>.717*</td>
<td>.845*</td>
<td>-.225*</td>
<td>.221*</td>
</tr>
</tbody>
</table>

Note: Significance levels are for two-tailed correlations.
*p < 0.05.
MI=Mother Involvement, MAS=Mother Autonomy Support, FI=Father Involvement, FAS=Father Autonomy Support
TEIQUE-ASF=Trait Emotional Intelligence Questionnaire-Adolescent Short Form
CES-DC: Centre for Epidemiological Studies Depression Scale for Children
POPS: Perception of Parents Scale.
correlations between the subscales, of the Urdu versions of POPS and TEIQue-ASF (Table-2) indicating good validity.

Further, the split-half reliability was assessed as good (Table-3).

**Discussion**
The psychometric properties of the Urdu version of POPS, as evaluated through internal consistency, test-retest reliability and split-half reliability, confirmed that the scale was reliable. In addition, results also depicted that the Urdu version was valid as analysed by discriminant and convergent validity. Larger findings and their interpretations are similar to those found earlier, indicating that parental involvement and parental autonomy support are negatively associated with depression.14,15

Positive, significant relationships were found between the subscales of POPS and TEIQue-ASF, indicating that with higher perception of parents, there is likelihood of higher trait emotional intelligence. These findings are consistent with previous evidence showing that with positive parenting, emotional intelligence increases in adolescents.16

**Conclusion**
The Urdu version of POPS-Child scale was found to be a reliable and valid instrument to determine perception of parents among adolescents. With the help of this version of the scale, determining parent-child relationship conflicts in the Pakistani community will become easier.

**Disclaimer:** The study is part of a PhD thesis.

**Conflict of Interest:** None.

**Source of Funding:** None.

**References**

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**Table 3:** Split-half reliability coefficients for the subscales of POPS — Child Scale, Urdu version.

<table>
<thead>
<tr>
<th>Subscales</th>
<th>Correlations between forms</th>
<th>Spearman-Brown Coefficients - Equal Length</th>
<th>Spearman-Brown Coefficients - Unequal Length</th>
<th>Guttman Split-Half Coefficients</th>
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</thead>
<tbody>
<tr>
<td>MI</td>
<td>.343</td>
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<td>.518</td>
<td>.482</td>
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<td>MAS</td>
<td>.749</td>
<td>.857</td>
<td>.857</td>
<td>.855</td>
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<tr>
<td>FI</td>
<td>.473</td>
<td>.643</td>
<td>.649</td>
<td>.581</td>
</tr>
<tr>
<td>FAS</td>
<td>.678</td>
<td>.808</td>
<td>.808</td>
<td>.783</td>
</tr>
</tbody>
</table>

Note: MI=Mother Involvement, MAS=Mother Autonomy Support, FI=Father Involvement, FAS=Father Autonomy Support

POPS: Perception of Parents Scale.