



Translation and Validation of Adolescent Personality Questionnaire: A Confirmatory Factor Analysis

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ABSTRACT

Personality assessments are reliable method to measure the behavior, potential and individual differences among the human beings. The present study aims to translate and validate the Adolescent Personality Questionnaire into Urdu for the sample of adolescents in the context of Pakistan. Adolescent Personality Questionnaire adapted by Rogers & Glendon (2018) is one the world well renowned questionnaire to assessing personality. The scale comprising on 25 items with five subscales, measure five personality traits namely, Agreeableness, Neuroticism, Extraversion, Openness to Experience, Conscientiousness. The study aimed to ensure the Urdu translation accurately reflected the original English version and to confirm its factor structure in a sample of (N=410) adolescents' aged 13-18 years. The study employed a two-step process. First, the APQ was translated into Urdu using a forward-backward translation method to ensure linguistic equivalence. A pilot study indicated good reliability for both the English ($\alpha=0.85$) and Urdu ($\alpha=0.96$) versions. Cross-language validation, assessed after a two-week interval using Pearson's correlation, the findings showed a significant positive relationship ($r=0.88$) between the two versions of APQ. The second step involved examining the psychometric properties of the Urdu APQ with the main sample. By using correlational method scale item total correlation is highly significant, and confirmatory factor analysis validated the factor structure of a measurement model. The validated version of APQ would be helpful for the researchers and mental health professional in context of using culturally sensitive diagnosis.

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1. Introduction

Personality is a combination of traits, characteristics and constructs in every human being, individual has unique personalities with impact of psychophysical and cultural variations. Research has consistently shown that personality traits can effect on an individual's emotional stability, coping strategies, and overall behavior functioning (Soto & Tackett, 2015). The five-factor model of personality, which includes extraversion, agreeableness, conscientiousness, neuroticism, and openness to experience, provides a framework for understanding individual differences in personality (McCrae et al., 2002). During adolescence, personality traits can impact an individual's ability to navigate social relationships, academic pressures, and emotional changes. For example, adolescents high in extraversion may be more likely to seek out social support and engage in extracurricular activities, while those high in neuroticism may be more vulnerable to anxiety and depression (Shiner & Caspi, 2003). Adolescent relationships are closely tied to the Big Five personality traits. Peer acceptance plays a vital role in teenage development, providing opportunities for social skill-building, self-discovery, and a sense of belonging. Agreeableness and extraversion are very important traits in developing relationships, with agreeable person being supportive, maintain healthy relationships, and always avoid clashes

(Buhrmester, 1998). Extraverted adolescents tend to be sociable, extrovert, and have more courage to about making friends (Asendorpf & Van Aken, 2003; Selfhout et al., 2010). Conscientiousness and openness also maintain and developed positive relationship with individuals who have conscientious trait to retaining friendships and also seeking that type of individual with open minded qualities (Selfhout et al., 2010). In contrast, neuroticism can perceived many social situations as threatening and make efforts to deal with others individuals and social interaction (Shokrkon & Nicoladis, 2021). As for as Adolescents' personality concern, the parenting styles have strong impact on adolescent personality traits and psychological qualities, So adolescent suffering with these types of impact was on personality growth throughout their life (Rohner & Smith, 2019).

Research on personality development in adolescents has yielded different findings. According to literature review the studies shows that personality traits change during puberty and early adolescent (Kawamoto & Endo, 2015), while others researches find out that personality remains relatively stable. For instance, (McCrae et al., 2002) found that openness traits are common in both boys and girls, while neuroticism is high in girls, with other traits remaining stable. (Pullmann, Raudsepp, & Allik, 2006) also find out that openness is high. In contrast, (Kang & Malvaso, 2024) reported that personality traits remain constant between the 6-18 years and increased gradually between the ages of 18-22 years. Studies have also identified varying levels of stability across traits, with conscientiousness being one of the most stable and agreeableness being less stable (Judge et al., 1999). Additionally, research suggests that the adolescent with emotional maturity always experience fewer personality transformations (Donnellan, Conger, & Burzette, 2007). These findings of the research emphasis on the need for further research on personality development during adolescence, perhaps utilizing shorter personality tests to explore the stable attributes of human personality. Personality traits in youth, like big five personality traits, go through many changes during the psychological and physiological developmental stages (Soto & Tackett, 2015). Research indicates that in early adolescence conscientiousness and agreeableness tend to decrease temporarily, while neuroticism is high (Roberts, Walton, & Viechtbauer, 2006). During Puberty many hormonal fluctuations and physical development, Remarkably effect on adolescent personality traits (Goldberg, 1990). All the changes can give invaluable advice to understand the behavior and adolescent personality. In Pakistan, where cultural and linguistic factors can impact access to mental health services, the aim of this study to address this gap by translating personality questionnaires into Urdu can help increase availability and accuracy in assessing adolescent personality. The translation of the Adolescent Personality Questionnaire into Urdu can provide a valid instrument for researchers and mental health professionals to better understand the personality dynamics of adolescents in Pakistan and develop culturally relevant interventions to support their mental health and well-being."

2. Method

In this study the schools and colleges Adolescent boys and girls belong to Mirpur AJK, Pakistan aged 13 -18 years were included by using simple random sampling technique. Adolescents suffering with any type of disability were not allowed to participate in the study. There are many phases involved in the translation procedure to ensure the accuracy and cultural relevance to ensure the cultural relevance and the accuracy. The study based on two phases, First phase was based on the pilot study, and second phase was the scale translation and cross cultural validation procedure were followed. In first phase, step one based on APQ was translate into Urdu forward by five bilingual subject experts. All the language experts were have high level of English and Urdu proficiency. So in the Step 2, five language experts translate scale by applying backward translation method. In the same subject matter experts (SMEs) from Step 2 critically analyzed these backward translations, selecting the final items for the Urdu version based on accuracy and precision. In first phase, step three, a pilot tested with a small group of (n=60) school adolescent to find out the reliabilities of both Urdu and English version of the APQ. The finalized Urdu translation was then administered to two groups of boys and girls adolescents alongside the original English version. This process was repeated after 15 days with the same participants to check the consistency. Demographic information, including age, gender, and class, was collected from the adolescents. Personality is assessing by using the Adolescent Personality Questionnaire (APQ) consisted on twenty five items. The phase two objective of the study is Urdu translation of APQ and run confirmatory factor analysis to check the reliability and validity of the scale on the sample (N=410). For the translation forward-backward translation method (Harkness et al., 2010) were used to ensuring linguistic and cultural equivalence. The translation

process based on backward and forward translation method was used to check the validity and the reliability of the questionnaire. Statistical Package for Social Sciences (SPSS version 23) and (AMOS 21) were used to measure the factor analysis of the questionnaire. In the first phase, mean, standard deviation was done and accuracy and consistencies of English and Urdu versions were also measure. The Pearson correlation were done for measuring the relationship between the two versions and inter item correlation of the scale, and in second phase, correlation method were used to measure item total correlation and Confirmatory factor analysis of the scale was done.

3. Results

The Urdu version of the Adolescent Personality Questionnaire (APQ) demonstrated excellent internal consistency with a 0.96 reliability value (Table 1). The English version also showed high internal consistency ($\alpha = 0.85$). Table 2 indicated acceptable to high reliability for each subscale, with Cronbach's alpha values ranging from 0.80 to 0.89, supporting their use in assessing the five-factor personality model. Table 3 describes inter item correlation between the scales items. The result shows that all items are significantly correlated with each other's, which describe the scale effectiveness. Furthermore, significant positive correlations were observed between the subscales items, suggesting they are related constructs. Table 4 Confirmatory factor analysis (CFA) indicated a good model fit for the APQ. The values of (GFI) were 0.86, suggesting a satisfactory fit. Comparative Fit Index (CFI) values of 0.91 indicated an acceptable fit, while the (RMSEA) values of 0.05, they represent a reasonable fit model. Overall, the CFA results support the accuracy and consistency of the APQ, confirming its intended factor structure and consistent measurement of underlying constructs. These robust psychometric properties establish the APQ as a valuable tool for researchers and practitioners. These findings have positive implications for the scale's application in future research and practical settings.

Table 1: Reliabilities of Urdu and English versions of Adolescent Personality Questionnaire Urdu (n=60)

APQ	Test Urdu	Test English	p-value
Mean+ SD	79.66±25.73	96.00±13.45	0.001
Alpha Reliabilities	.96	.85	
No of items	25	25	

Note: APQ= Adolescent Personality Questionnaire

Table 2: Correlation Coefficients, Reliability analysis of Subscales of APQ (n=60)

APQ Sub-scales	Number of Items	Cronbach Alpha α	Correlation
1-Agreeableness	05	.89	.73
2-Neuroticism	05	.86	.78
3-Extraversion	05	.80	.76
4-Openness to Experience	05	.89	.69
5-Conscientiousness	05	.84	.83

Note: APQ= Adolescent Personality Questionnaire

Table 3: Corrected item total correlation of Adolescent Personality Questionnaire (APQ) (n= 410)

Scale	Item Total -Correlation
QA1	.64
QA2	.71
QA3	.84
QA4	.72
QA5	.69
QN6	.85
QN7	.77
QN8	.76
QN9	.57
QN10	.67
QE11	.77
QE12	.62
QE13	.69
QE14	.64
QE15	.77
QO16	.86
QO17	.87

QO18	.75
QO19	.76
QO20	.71
QC21	.79
QC22	.73
QC23	.67
QC24	.75
QC25	.62

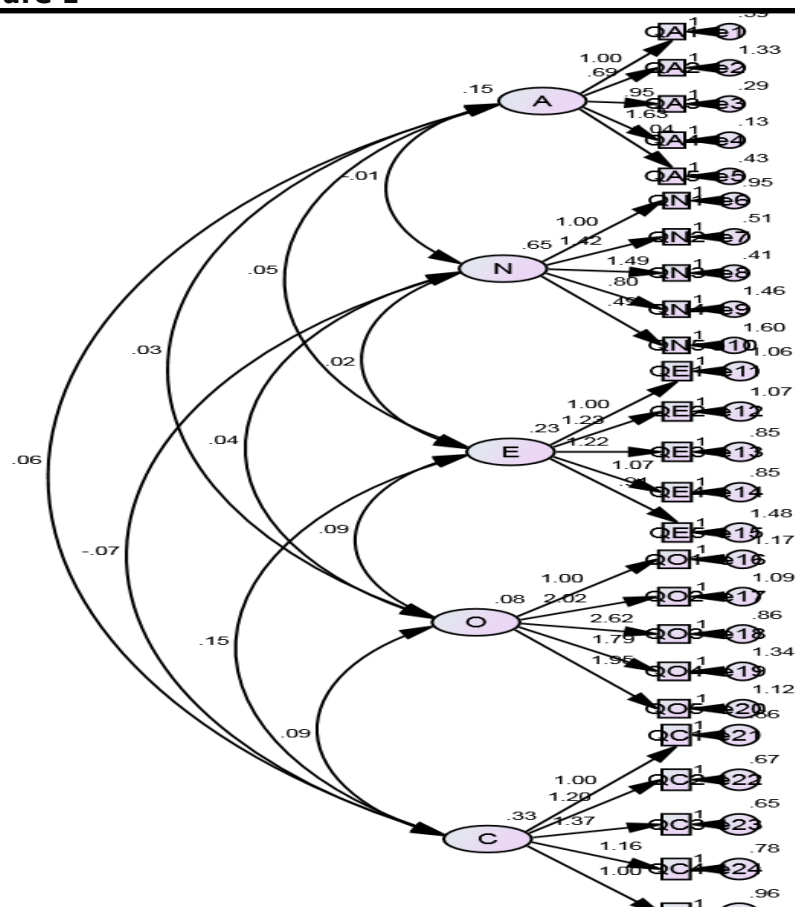
Note: APQ= Adolescent Personality Questionnaire

Table 4: Model-fit Indexes for Adolescent Personality Questionnaire (APQ) (N=410)

Model	X ²	df	X ² /Df	TLI	GFI	CFI	RMSEA
Five factors	.907	300	8.74	.92	.86	.91	0.05

Note: N = 410, Chi-square > .05, CFI = Comparative fit indices, GFI = Goodness of fit indices, RMSEA = Root Mean Square of approximation

Figure 1



4. Discussion

The current study intended to assess the reliability, cross-language validity and confirmatory factor analysis of the APQ. This is the first study that aimed to determine the factor structure of this scale in Pakistani culture, and it was used to study the goodness of fit and the inherent structure of the scale. The results of the present study showed that the Adolescent Personality Questionnaire (APQ) was effectively translated and validated for Urdu-speaking adolescents in Pakistan. The inter-item correlation analysis of the personality questionnaire revealed positive correlations. Moreover, the correlations shows that each item relevantly related to the others, .Confirmatory factor analysis (CFA) further enhanced the APQ's underlying structure. The (RMSEA) values of 0.06 suggest an acceptable model fit (Browne & (Browne & Cudeck, 1992), and (GFI) values of 0.86 point towards a significantly fit, confirming the reliability of APQ (Jöreskog & Sörbom, 1981). In addition, Comparative Fit Index (CFI) values of 0.91 indicate an acceptable fit, suggesting good construct truthfulness for the Urdu APQ (Bentler, 1990). These results focuses on the importance of cross-cultural validation of psychological tools (Hambleton, Merenda, & Spielberger, 2004). Previous literature on the scale describe the psychometric properties of the Urdu APQ are consistent. So the Urdu version

translated questionnaire represents a valid tool for researchers and practitioners working with adolescent's personality in Pakistan. As highlighted by (Rogers & Glendon, 2018), the APQ can be instrumental in identifying key personality traits in adolescents. The availability of this reliable and valid Urdu instrument also paves the way for meaningful cross-cultural comparisons and collaborative research endeavors.

5. Conclusion

The translation and validation of the Adolescent Personality Questionnaire (APQ) into Urdu provide a valuable tool for assessing personality traits among Urdu-speaking adolescents in Pakistan. The results of different analysis show that Adolescent Personality Questionnaire locally accuracy and reliability help to measuring five personality traits in youth of Pakistan.

5.1. Recommendation

The psychometric properties of APQ suggest that this is valuable tool is utilize by the professionals in there research. It is recommend for the future studies that this APQ translated and validate version will be used for measuring adolescent personality along with other various variables in Pakistan.

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