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Validation and Reliability of the Turkish Adaptation of the Observation Inventory of the Preschool Children Enneagram

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ABSTRACT

The aim of this study is to determine whether the Observation Inventory of the Preschool Children Enneagram is a valid and reliable measurement tool in its Turkish adaptation. The study sample consisted of 394 parents and 141 teachers. Among the children of the participating parents, 194 were girls and 200 were boys, with an average age of 65.1 months. Among the children evaluated by the participating teachers, 64 were girls and 77 were boys. The results of the Exploratory Factor Analysis confirmed the nine-factor structure of the Observation Inventory of the Preschool Children Enneagram. The Cronbach's Alpha reliability coefficient for all dimensions was found to be above .70, indicating strong internal consistency. The total correlation values of the dimensions ranged between .35 and .77. Additionally, the Confirmatory Factor Analysis demonstrated that the scale had acceptable fit indices. Overall, the findings suggest that the adapted version of the scale is a valid, reliable, and applicable tool for use in the field.

KEYWORDS

Preschool children enneagram; teacher enneagram; parent enneagram; scale validation

INTRODUCTION

Educators and caregivers are increasingly prioritizing the comprehension of children's personality characteristics and integrating these insights into the learning environment. This paradigm shift can be attributed to the evolving nature of parental roles, which have transcended the traditional caregiver, protector, and disciplinarian functions. In addition to these roles, it also includes the roles of clarifier, connector, challenger, and motivator (Montross, 2004). Therefore, it is crucial for parents to possess a comprehensive understanding of their children's characteristics and strengths, and to provide guidance that fosters the realization of these qualities. Existing research highlights the Enneagram theory as a fundamental framework that aids parents and educators in identifying children's strengths and areas for improvement. Since 1982, the Enneagram theory has been the subject of over 100 publications, including 20 theses that have examined the personality aspects claimed by the Enneagram model and various Enneagram inventories (Pacwa, 1992; Rohr & Ebert, 1990; IEA, 2006). The Enneagram model (Yılmaz et al., 2014) posits the existence of nine distinct personality types (Palmer, 1988), emphasizing both the individual's strengths and weaknesses. In particular, The Enneagram is a personality model that provides an understanding of personality that enables the individual to see the process from childhood to adulthood in a holistic way. It investigates the impulse underlying one's behavior and goes from the clues of personality to temperament (Bozik, 2021). It is regarded as a significant gateway to self-awareness and the understanding of others (Acarkan & Zencer, 2021; Chestnut, 2008; Daniel & Price, 2016). Rather than emphasizing behavioral modification, it places emphasis on the cultivation of self-awareness by recognizing and understanding intrinsic motivations that frequently operate at an unconscious level. This approach aims to foster compassionate acceptance of diverse aspects of the self (Heuertz, 2020; Rohr, 1990).

Based on existing research, Enneagram scholars have classified fundamental fears and desires into nine distinct personality types (Riso & Hudson, 1999). At its core, each type is characterized by the concepts of "power" and "passion." Rohr (1990) describes power as one’s most authentic and ideal self, whereas passion represents a misguided approach. In other words, passions function as defense mechanisms that help individuals navigate their interactions with the world. These traits manifest as either genuine self-expression or defensive reactivity. The types are arranged numerically without implying any hierarchical ranking. In the Enneagram typology, there is no hierarchical ranking of types from "better" to "worse." This is in contrast to other personality models, which are evaluative in nature. Instead, the Enneagram typology is descriptive. In this section, the types are summarized within the framework of these characteristics. Type 1 (Reformer) characteristics: Principled, organized, responsible, self-controlled, and meticulous (Yılmaz,2019). The fundamental ambition of type 1 is to embody goodness and perfection, while the predominant fear is to be regarded as bad, imperfect, or corrupt (Palmer, 2014). Type 2 (Helper) characteristics include generosity, empathy, and a

caring disposition, often regarded as amiable (Yılmaz, 2019). The core aspiration of Type 2 is to receive love, whereas their greatest fear is feeling unworthy and unappreciated (Palmer, 2014). Individuals classified as Type 3 (Achiever) are driven by success, highly competitive, adaptable to various situations, and particularly mindful of their public image (Daniels & Price, 2016). They have a strong desire to be valued and successful, and they are driven to avoid feelings of insignificance and worthlessness (Ramos-Vera et al., 2022). Type 4 (individualistic) traits: These individuals are dramatic, sensitive, introverted, and deeply feeling. The fundamental aspiration of type 4 is self-discovery and self-worth, while its predominant fear is the absence of identity and personal significance (Acarkan & Zencer, 2021). Type 5 (Investigator) characteristics: This personality type is characterized by its cerebral, perceptual, and isolated nature, along with a marked degree of privacy. The fundamental desire of type 5 is competence and capability, while its predominant fear is the perception of inutility, incompetence, and helplessness (Daniels & Price, 2016). Type 6 (Loyalist) is characterized by a strong sense of dedication, a focus on security, unwavering reliability, and deep loyalty (Yılmaz, 2019). The primary motivation of Type 6 is to seek security and reliable support, while their greatest fear is facing uncertainty without guidance or protection (Selçuk & Yılmaz, 2018). Individuals with Type 7 (Enthusiast) traits are adventurous, spontaneous, highly optimistic, and full of enthusiasm (Yılmaz, 2019). Their deepest desire is to experience joy and fulfillment, whereas their main fear revolves around suffering or feeling trapped (Daniels & Price, 2016). Type 8 (Challenger) characteristics: These individuals possess a strong sense of determination, confidence, and a propensity for making decisions (Daniels & Price, 2016). Their primary ambition is to exercise control over their environment and to safeguard themselves and others from harm. Conversely, their primary fear is being controlled or harmed by others (Yılmaz, 2019). Type 9 individuals embody qualities of composure, tranquility, and openness to different perspectives. They are inclined to seek compromise and maintain a neutral stance (Acarkan & Zencer, 2021). The primary desire of the Type 9 individual is to attain mental and external world stability, while their primary fear is the loss of connection and separation (Daniels & Price, 2016).

The adaptability of the Enneagram system to psychological assessment has been tested by different researchers by developing various measurement tools. In this regard, Zinkle (1974) developed a reliable and valid inventory based on the Enneagram typology and examined the extent to which the types were found in the general population. However, only 52% of the individuals could be classified correctly. Randall (1979) developed a blind inventory that could correctly classify individuals compared to expert assessments, but it was found that the inventory could only classify 23.3% of the individuals correctly. In a subsequent study, Wagner (1981) developed an inventory in which individuals could be correctly classified. This inventory was developed with 390 adults familiar with the Enneagram system. Palmer (1988) utilised a combination of qualitative and quantitative methods, employing the inventory that had been developed based on long-term workshop and panel interviews conducted on 172 individuals. The Enneagram questionnaire developed by Pangrazzi (1997) is structured on nine different

types and consists of 180 yes/no items, each comprising 20 items. The Riso-Hudson Enneagram Type Indicator (RHETI), developed by Riso and Hudson (1999), consists of 144 items and is regarded as one of the most comprehensive scales based on the Enneagram system. In addition, the Korean Enneagram Personality Type Indicator (KEPTI), developed in South Korea and applied to an adult sample, consists of 81 items and is answered with a 5-point Likert-type scale (Youn, 2006). Couple's Enneagram Questionnaire (CEQ), which focuses specifically on couple and family relationships, has also been developed based on the Enneagram theory (Youn, 2006). The CEQ is a scale consisting of 45 items and aims to evaluate the relational dynamics of individuals on the basis of Enneagram theory (Eckstein, 2002). The findings of these studies indicate the existence of diverse assessment tools for the development of measurement tools based on Enneagram theory at the international level. A considerable body of research has been conducted in Turkey on the development of personality and temperament assessment tools based on the Enneagram theory, a popular personality typing method that has gained global recognition. One notable study is the Enneagram Personality Scale developed by Subaş (2017), which comprises 27 items and was administered to school administrators. The Enneagram Turkey Personality Inventory, a 54-item scale with nine sub-factors developed by Şirin (2020), was studied with a sample of 17-62-year-olds. The Enneagram Personality Types and Subtypes Scale was conducted on a sample of university students. The scale encompasses nine distinct personality types and three subtypes, with a total of 69 items for types and 30 items for subtypes, as reported by Yanartaş et al. (2022). Notably, the Temperament Characteristics of Preschool Children Scale represents the inaugural study in Turkey to examine temperament types and subtypes within the framework of the Enneagram model, offering a novel perspective on early childhood development. The scale comprises 15 items for each temperament type, encompassing domains such as social interaction and communication style, stress levels, play preferences, learning style, and distinctive characteristics. The total number of items for the nine types is 135 (Akar, 2024). In summary, a review of these scales reveals a predominant focus on the assessment of temperament traits in adult individuals, with only a single scale having been developed for young children. The present study aims to address this gap by adapting a measurement tool, the Observation Inventory of Preschool Children Enneagram Personality , to Turkish culture. This adaptation is expected to facilitate the identification of temperament strengths and weaknesses in preschool children, thereby contributing to the advancement of the field. With this objective in mind, the current study focuses on the localization and adaptation of the Observation Inventory of Preschool Children's Enneagram Personality for the Turkish context.

In this study, the Observation Inventory of Preschool Children's Enneagram Personality scale (Jeong, 2008, 2015) was adapted into Turkish. This scale was developed to evaluate the enneagram personality traits of early childhood children through parent and teacher reports. The objectives of the study were defined as follows:

To make validity analyses of Observation Inventory of Preschool Children's Enneagram Personality scale.

To make reliability analyses of the Observation Inventory of Preschool Children's Enneagram Personality scale.

METHOD

Research Model

This research follows a methodological, descriptive, and cross-sectional design for scale adaptation. It assesses the Turkish version of the Observation Inventory of Preschool Children's Enneagram Personality in terms of language adaptation, validity, and reliability.

Participants

The Observation Inventory of the Preschool Children Enneagram Personality was administered to 394 parents and 141 teachers. Convenient sampling was used to determine the sample for the study. The children of 194 parents were girls and the children of 200 parents were boys, with an average age of 65.1 months. Of the children evaluated by the participating teachers, 64 were girls and 77 were boys. To confirm the scale's validity and reliability, the sample was categorized into three distinct groups: one consisting of 200 parents, another with 194 parents, and the last comprising 141 teachers.

Measures

Observation Inventory of the Preschool Children Enneagram Personality Parent and Teacher Form

The Enneagram Personality Types Observation Scale for Preschool Children, developed by Jeong (2008; 2015), is a self-report instrument utilized by parents and teachers to assess the personality types of children between the ages of 48 and 72 months, along with their salient features. The scale is based on observational assessments of children's personality types and comprises teacher and parent forms, with a total of 82 items and nine sub-dimensions. The scale is divided into the following sub-dimensions: reformer (Type 1), helper (Type 2), achiever (Type3), individualist (Type 4), investigator (Type 5), loyalist (Type 6), enthusiast (Type 7), challenger (Type 8), and peacemaker (Type 9). It exhibited strong internal consistency, with a Cronbach's Alpha coefficient and test-retest reliability of .94 for both the teacher and parent versions. The reliability coefficients of each sub-dimension were calculated as .82, .83, .82, .80, .78, .57, .86, .88, and .64, respectively. These findings indicate the scale's overall high reliability (Jeong, 2008; 2015).

Data Collection Process

Before commencing the study's implementation, approval was secured from the Ministry of National Education. Consequently, a meeting was convened with the principals and teachers of preschool institutions affiliated with the Ministry of National Education in Konya. With the assistance of the teachers, the parents of the study participants were contacted, and the study's rationale was explained. Approval was obtained from the mothers and teachers who voluntarily

agreed to participate. The participants signed both the voluntary participation form and the informed consent form. Following the receipt of these documents, the relevant forms were dispatched to the parents and teachers. After a period of two weeks, the forms were received from the participants.

Data Analysis

In explanatory factor analysis, factors are identified as hypothetical variables formed by observed variables (Rencher, 2002). The correlation matrix is analyzed to evaluate whether the data is appropriate for factor analysis. If the correlation coefficients fall below 0.30, the questions are considered compatible with the factor structure (Hair et al., 2010). To evaluate the correlations among variables and assess whether the dataset met the assumptions for factor analysis, Bartlett's test of sphericity was conducted (Bartlett, 1950). The suitability of the dataset for factor analysis was determined through the Kaiser-Meyer-Olkin (KMO) test, which relies on correlation and partial correlation values. The KMO statistic, which ranges from 0 to 1 and serves as an indicator of sampling adequacy, was deemed acceptable when exceeding 0.5 (Cerny & Kaiser, 1977). To identify the underlying factors, the principal component analysis (PCA) method was employed, with factor selection criteria based on eigenvalues greater than one. To enhance the interpretability of the identified factors, a Varimax rotation technique was implemented. The reliability of the scale was assessed through Cronbach's Alpha, with values above 0.70 signifying an acceptable level of internal consistency (Salvucci et al., 1997). Furthermore, an item-total correlation coefficient of 0.20 or higher was regarded as appropriate for an item to be considered consistent with the overall scale (Crocker & Algina, 2008). Before testing the scale's construct validity, an EFA was conducted to assess its structural integrity.

Confirmatory Factor Analysis (CFA) is a statistical method employed to validate the theoretical factor structure identified through EFA (Brown, 2015). While EFA determines the optimal number of factors based on the data matrix, CFA operates under the assumption that the factor structure is predefined. The CFA was performed using the IBM SPSS and Amos software packages.

The dataset was processed using IBM SPSS. Descriptive statistics were presented in terms of sample size (n), percentage (%), mean (M), standard deviation (SD), and median (M) values. To determine whether numerical variables followed a normal distribution, the Shapiro-Wilk test was applied. For comparisons between two groups, the independent samples t-test was applied when the data followed a normal distribution. In cases where the dataset contained more than two categories, analysis of variance (ANOVA) was conducted, and when ANOVA results were significant, post-hoc comparisons were performed using the Bonferroni method. Pearson correlation analysis was used to examine relationships between numerical variables, and a significance level of $p < 0.05$ was applied.

RESULTS

Turkish Adaptation

The Enneagram Personality Types Observation Scale was adapted through a multistep process. Initially, a linguist who is fluent in Korean translated the scale into Turkish. Two experts in the field of child development who are fluent in Korean then selected the most appropriate expressions from the items translated into Turkish. The Turkish form was created as a result. Subsequently, a linguistics expert whose native language is Turkish and had no prior exposure to the original Korean version translated the scale back to Korean. The translation was then compared with the original scale statements, and the final version of the Turkish form was created. This process ensured language validity.

Construct Validity: Exploratory Factor Analysis for Parent Form

Table 1 (see appendix).

As shown in Table 1, the factor loadings for the Type 1 dimension varied between 0.591 and 0.714, while its total correlation values ranged from 0.339 to 0.652. The factor loadings for Type 2 were observed between 0.526 and 0.744, with total correlations spanning from 0.339 to 0.63. Similarly, Type 3 exhibited factor loadings between 0.556 and 0.699, whereas its total correlations ranged from 0.511 to 0.696. For Type 4, the factor loadings fell within the range of 0.511 to 0.713, and total correlations were measured between 0.37 and 0.681. The factor loadings for Type 5 ranged from 0.532 to 0.668, with total dimension correlations between 0.521 and 0.727. In the case of Type 6, factor loadings spanned from 0.587 to 0.742, while total correlations were recorded between 0.206 and 0.501. Type 7 had factor loadings ranging from 0.572 to 0.722, with total correlations between 0.417 and 0.706. Type 8 showed factor loadings within the 0.603 to 0.778 range, and total correlations varied from 0.541 to 0.692. Finally, the factor loadings for Type 9 ranged from 0.513 to 0.722, with corresponding total correlations between 0.217 and 0.549.

Table 2 (see appendix).

Table 2 displays the findings from the Kaiser-Meyer-Olkin (KMO) measure and Bartlett's Test of Sphericity, both of which were assessed to establish the factor structure of the Observation Inventory of Preschool Children Enneagram Personality - Parent Form. The KMO value was determined to be 0.889, while Bartlett's Test of Sphericity produced a statistically significant outcome (χ^2 = 13,968.549; df = 3,321; $p < 0.001$). These results confirm that the dataset is appropriate for factor analysis.

In the EFA, factors with an eigenvalue greater than one formed a nine-factor structure. While a variance ratio between 40% and 60% is considered an acceptable level of explanatory power, in this study, the total variance explained was found to be 63.71%, indicating a satisfactory level of variance explanation. Furthermore, since the Cronbach's Alpha coefficients were above 0.70, the reliability of all nine dimensions was deemed sufficient.

Observation Inventory of Preschool Children Enneagram Personality - Parent Form Confirmatory Factor Analysis

Table 3.

Statistical Values for Model Fit of the Observation Inventory of Preschool Children Enneagram Personality - Parent Form (N=194)

	(χ^2/sd)	RMSEA	SRMR	IFI	CFI	GFI	TLI
Type 1	1,247	0,036	0,043	0,984	0,983	0,970	0,976
Type 2	1,310	0,040	0,047	0,976	0,975	0,952	0,968
Type 3	2,466	0,077	0,050	0,945	0,944	0,948	0,917
Type 4	1,914	0,069	0,047	0,951	0,950	0,943	0,934
Type 5	1,747	0,062	0,051	0,959	0,958	0,958	0,938
Type 6	1,019	0,010	0,039	0,999	0,999	0,981	0,998
Type 7	1,586	0,055	0,043	0,970	0,970	0,941	0,960
Type 8	2,530	0,079	0,066	0,919	0,918	0,913	0,907
Type 9	3,042	0,073	0,068	0,911	0,909	0,939	0,905

Table 3 presents the model fit indices examined in the CFA, covering χ^2/df, RMSEA, SRMR, IFI, TLI, CFI, and GFI. Among these, RMSEA is the least influenced by sample size, with cutoff values near 0.06 or 0.08 generally deemed acceptable. A model is considered to exhibit a good fit when IFI, TLI, CFI, and GFI values surpass 0.90. In this study, the following thresholds were adopted: RMSEA ≤ 0.05, IFI, TLI, and CFI ≥ 0.90, and GFI ≥ 0.85. The Turkish adaptation of the Observation Inventory of Preschool Children Enneagram Personality - Parent Form comprises nine subdimensions, and the corresponding fit indices confirm that the model achieves an acceptable level of fit.

Figure 1 and 2 (see appendix)

Figure 1 presents the results of the tested model for Type 1, Type 2, Type 3, and Type 4.

Figure 2 presents the results of the tested model for Type 5, Type 6, Type 7, Type 8 and Type 9.

Observation Inventory of Preschool Children Enneagram Personality - Teacher Form Confirmatory Factor Analysis

Table 4.

Observation Inventory of Preschool Children Enneagram Personality - Teacher Form Confirmatory Factor Analysis (N=141)

	(χ^2/sd)	RMSEA	SRMR	IFI	CFI	GFI	TLI
Type 1	1,623	0,067	0,031	0,991	0,991	0,955	0,984
Type 2	1,745	0,073	0,034	0,978	0,978	0,923	0,968
Type 3	1,837	0,077	0,029	0,989	0,989	0,952	0,979
Type 4	1,839	0,077	0,044	0,977	0,977	0,942	0,964
Type 5	1,568	0,064	0,025	0,992	0,992	0,956	0,986
Type 6	1,448	0,057	0,015	0,995	0,995	0,979	0,986
Type 7	1,873	0,079	0,037	0,977	0,977	0,909	0,966
Type 8	1,628	0,067	0,022	0,988	0,988	0,935	0,982
Type 9	1,673	0,069	0,043	0,985	0,984	0,953	0,974

Table 4 summarizes the fit indices employed to assess the factor validity of the models within the framework of CFA, including χ^2/df, RMSEA, SRMR, IFI, TLI, CFI, and GFI. Among these indices, RMSEA is the most resilient to variations in sample size, with cutoff values around 0.06 or 0.08 generally being considered appropriate. A model is deemed to have an adequate fit when IFI, TLI, CFI, and GFI values exceed 0.90. In this study, the adopted thresholds were RMSEA ≤ 0.05, IFI, TLI, and CFI ≥ 0.90, and GFI ≥ 0.85. The Turkish adaptation of the Observation Inventory of Preschool Children Enneagram Personality - Teacher Form comprises nine subdimensions, and the corresponding fit indices confirm that the model meets a satisfactory level of fit.

Figure 3 (see appendix).

Figure 3 presents the results of the tested model for Type 1, Type 2, Type 3, and Type 4.

Figure 4 (see appendix).

Figure 4 presents the results of the tested model for Type 5, Type 6, Type 7, Type 8 and Type 9.

Table 5 (see appendix).

The Pearson correlation coefficient (r) and descriptive statistics are displayed in the table. Bolded values denote statistically significant results ($p < 0.001$).

Table 5 indicates that the scale has a minimum possible score of 1 and a maximum of 5, with scores calculated based on the average of item responses. A statistically significant positive correlation exists among the dimensions of the Observation Inventory of Preschool Children

Enneagram Personality. The mean and median scores for each type are as follows: Type 1 has a mean of 3.58 ± 0.70 and a median of 3.6. Type 2 has a mean of 3.64 ± 0.70 and a median of 3.6. Type 3 has a mean of 3.71 ± 0.81 and a median of 3.8. Type 4 has a mean of 3.54 ± 0.74 and a median of 3.6. Type 5 has a mean of 3.80 ± 0.70 and a median of 3.9. Type 6 has a mean of 3.38 ± 0.73 and a median of 3.3. Type 7 has a mean of 3.82 ± 0.71 and a median of 3.9. Type 8 has a mean of 3.77 ± 0.77 and a median of 3.9. Type 9 has a mean of 3.70 ± 0.63 and a median of 3.8. These results suggest that the scale dimensions exhibit a significant and positive relationship, supporting the reliability of the measurement tool.

Table 6.

Comparison of Observation Inventory of Preschool Children Enneagram Personality Scores-ANOVA test

	X ± SS	**Test (*p*)**	**Difference**
Type 1 [A]	3,58 ± 0,70	**F=54,964 p<0,001**	F < (A=D) < (A=B) < (B=C=I) < (C=H=I) < (E=G=H)
Type 2 [B]	3,64 ± 0,70		
Type 3 [C]	3,71 ± 0,81		
Type 4 [D]	3,54 ± 0,74		
Type 5 [E]	3,80 ± 0,70		
Type 6 [F]	3,38 ± 0,73		
Type 7 [G]	3,82 ± 0,71		
Type 8 [H]	3,77 ± 0,77		
Type 9 [I]	3,70 ± 0,63		

A detailed analysis of Table 6 indicates that participants' scores for Type 5, Type 7, and Type 8 are significantly higher compared to other types. Conversely, the Type 6 score is notably lower than the scores of the other types ($p < 0.001$).

DISCUSSION and CONCLUSION

A variety of scales have been developed for different age groups to understand and evaluate the personality and temperament structures of individuals. In Turkey, various assessment tools have been created in this direction and are widely used. These include the Enneagram Personality Scale (Subaş, 2017), the Enneagram Turkey Personality Inventory (Şirin, 2020), and the Enneagram Type and Subtype Scale (Yanartaş et al., 2022), which are employed to assess the personality and temperament characteristics of adult individuals. Additionally, the Five Factor Personality Inventory (Somer et al., 2002) and the NEO Personality Inventory (Costa & McCrae, 1994) are noteworthy as valid and reliable measurement tools frequently utilized in personality assessments among adults.

Among the scales developed for school-age and adolescent populations, the Five Factor Personality Scale for Children (Morizot & LeBlanc, 2003) and the Five Factor Personality Inventory for Adolescents (Horzum, Ayas, & Padır., 2017) are noteworthy. Some temperament scales have been developed and adapted for the preschool period in Turkey. Noteworthy in this regard are the following temperament assessment tools, which have been developed and adapted for the Turkish preschool population: the Temperament Characteristics of Children in Preschool Period Scale (Akar, 2024), and the Child Behavior List (Akın sarı et al., 2012). It is important to note that while there exist personality and temperament scales designed for different age groups, a structured instrument for systematically assessing personality during preschool is lacking.

Deficit has given rise to the necessity for a scale to facilitate the systematic observation and assessment of children's personality structures by parents and teachers. While parents can gain in-depth knowledge about their children's individual characteristics by observing their behaviors in their daily lives and within the family, teachers can evaluate children's social, emotional, and cognitive aspects by observing them in peer interaction and in structured educational settings. These different perspectives make it possible to address children's personality development in a more holistic way. However, there is an absence of a measurement tool that is specific to early childhood and that is based on the Enneagram model. This situation reveals the necessity of adapting a scientific scale in order to determine the personality structures of children and support their individual development. To address this gap, this study proposes a adaptation of the Comparison of Observation Inventory of Preschool Children Enneagram Personality scale, which was initially developed for children between the ages of 48 and 72 months. This scale comprises 82 items and nine dimensions, aiming to assess children's personality types.

To investigate the factor structure of the scale, both EFA and CFA were performed. In the Turkish adaptation, the teacher and parent forms of the scale were analyzed separately. The KMO and Bartlett's Sphericity analyses conducted on the parent and teacher forms indicated that the scale, comprising 82 items, exhibited a factor structure with nine sub-dimensions (KMO=0.889; $\chi 2$=13968.549; sd=3321; $p<0.001$). The first sub-dimension, designated as Type 1 Reformer, comprised eight questions. The second sub-dimension, designated as Type 2 Helper, consisted of 11 questions. The third sub-dimension, designated as Type 3 Achiever, consisted of eight questions. The fourth sub-dimension, designated as Type 4 Individualistic, consisted of nine questions. The fifth sub-dimension, designated as Type 5 Investigator, consisted of eight questions, Type 6 Loyalist sub-dimension consisted of seven questions, Type 7 Enthusiast sub-dimension consisted of 12 questions, Type 8 Challenger sub-dimension consisted of 11 questions, and Type 9 Peacemaker sub-dimension consisted of eight questions.

The mean score for the Type 1 dimension was 3.58 ± 0.70 points, with a median of 3.6 points. Similarly, the mean score for the Type 2 dimension was 3.64 ± 0.70 points, with a median of 3.6 points. The Type 3 dimension had an average of 3.71 ± 0.81 and a median of 3.8, while

Type 4 recorded a mean of 3.54 ± 0.74 and a median of 3.6. The Type 5 dimension showed an average score of 3.80 ± 0.70, with a median of 3.9. For Type 6, the mean was 3.38 ± 0.73, with a median of 3.3. Type 7 exhibited an average of 3.82 ± 0.71 and a median of 3.9, whereas Type 8 had a mean of 3.77 ± 0.77 and a median of 3.9. Lastly, Type 9 showed an average score of 3.70 ± 0.63, with a median of 3.8. A statistically significant difference was identified in the temperament scores of participants across different types, with Type 5, Type 7, and Type 8 scoring significantly higher than the other types. Moreover, the Type 6 temperament score was statistically lower compared to the other temperament types. The findings demonstrated that both the parent and teacher forms successfully preserved the original factor structure of the scale. A comparative examination of factor loadings between the original scale and its Turkish adaptation revealed a range of 0.57 to 0.86 in the original study (Jeong, 2008; 2015), whereas in the Turkish version, factor loadings varied between 0.60 and 0.94. While the internal consistency coefficients for the original Korean scale ranged from 0.82 to 0.94, the Turkish adaptation demonstrated reliability coefficients exceeding 0.70. The fit indices derived from CFA for both the Teacher and Parent Forms were found to be RMSEA ≤ 0.05, IFI, TLI, CFI ≥ 0.90, and GFI ≥ 0.85, which were considered within an acceptable range. A comparative analysis indicated that the RMSEA value of the Korean version was 0.04, while the CFI and IFI values exceeded 0.90 (Jeong, 2008; 2015). Consistent with the reliability analyses, the Cronbach Alpha values indicated that the internal consistency of the sub-dimensions of the scale is high. Specifically, the Cronbach Alpha coefficient of the Perfectionist (Type 1) dimension was 0.891, the Helpful (Type 2) dimension was 0.903, the Successful (Type 3) dimension was 0.916, and the Individualist (Type 4) dimension was 0.90. 1, the Observant (Type 5) dimension was 0.921, the Loyal (Type 6) dimension was 0.848, the Enthusiastic (Type 7) dimension was 0.950, the Leader (Type 8) dimension was 0.943, and the Peacemaker (Type 9) dimension was 0.848. The highest Cronbach's Alpha coefficient was 0.950 for Enthusiastic (Type 7) whereas the lowest values were recorded for the Loyal (Type 6) and Peacemaker (Type 9) dimensions, both at 0.848. The internal consistency coefficients across all dimensions varied between 0.848 and 0.950, indicating strong reliability. These findings suggest that the Turkish adaptation of the scale maintains a valid and reliable structure, exhibiting comparable characteristics to the original version.

This study is subject to certain limitations. The sample group was restricted to a specific geographical region, which in turn limited the extent to which the findings could be generalized to broader populations. Subsequent research should examine how children are assessed in different social and cultural contexts. Future research may focus on testing the scale with different samples across Turkey, determining developmental changes by applying it to different age groups, and examining the relationship between Enneagram personality types and children's academic and social development. A significant limitation of Enneagram assessments is the insufficient empirical support for the hypothesis that these measures effectively distinguish between personality types with a high degree of clarity. For instance, Giordano (2008) reported that fewer than half of the participants demonstrated clear differentiation on

the RHETI, as their highest score exceeded their second-highest score by at least three points. In many studies, participants are classified into a type based solely on their highest subscale score. This approach raises concerns about the implications of individuals scoring similarly across multiple types and how such results should be interpreted.

The present study set forth findings that lend support to the reliability and validity of the Turkish version of the Enneagram Personality Types Observation Scale. Employing EFA and CFA analyses, it was ascertained that the scale maintained its original factor structure. The reliability coefficients thus confirm the scale's statistical consistency. The findings of this study indicate that this scale can serve as a practical assessment tool for evaluating children aged 48 to 72 months through reports from both parents and teachers.

Drawing on these findings, the following recommendations are proposed. First, the scale may be effectively used by educators, child development specialists, school counselors, and family consultants to identify children’s personality traits at an early stage and offer individualized support tailored to their developmental needs. Second, the combined use of teacher and parent observations provides a more comprehensive and multifaceted understanding of the child, which may contribute to more accurate and timely early intervention strategies. Finally, future research could examine the associations between Enneagram personality types and children’s academic, social, and emotional development, thereby enhancing our understanding of how personality traits emerge and influence developmental pathways in early childhood.

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APPENDIX

Table 1.

Factor loadings and total correlation coefficients for the Observation Inventory of the Preschool Children Enneagram Personality-Parent Form (N=200)

Factor	Item No	Factor Loadings	Total Correlation	Factor	Item No	Factor Loadings	Total Correlation
Type 1	1	0,703	0,339	Type 2	9	0,595	0,379
	2	0,711	0,374		10	0,624	0,436
	3	0,714	0,512		11	0,671	0,339
	4	0,592	0,548		12	0,744	0,573
	5	0,591	0,556		13	0,645	0,569
	6	0,604	0,499		14	0,597	0,560
	7	0,623	0,566		15	0,719	0,603
	8	0,618	0,652		16	0,651	0,630
Type 3	20	0,699	0,609		17	0,526	0,397
	21	0,692	0,668		18	0,548	0,575
	22	0,648	0,511		19	0,616	0,605
	23	0,615	0,673	Type 4	28	0,631	0,370
	24	0,617	0,696		29	0,523	0,611
	25	0,601	0,637		30	0,563	0,387
	26	0,603	0,654		31	0,511	0,671
	27	0,556	0,571		32	0,530	0,681
Type 5	37	0,630	0,662		33	0,700	0,478
	38	0,668	0,679		34	0,713	0,577
	39	0,572	0,705		35	0,641	0,652
	40	0,567	0,666		36	0,535	0,641
	41	0,658	0,577	Type 6	45	0,687	0,321
	42	0,618	0,727		46	0,688	0,501
	43	0,574	0,660		47	0,690	0,263
	44	0,532	0,521		48	0,729	0,206
Type 7	52	0,680	0,683		49	0,639	0,219
	53	0,698	0,614		50	0,742	0,338
	54	0,709	0,651		51	0,587	0,338
	55	0,693	0,682	Type 8	64	0,683	0,619
	56	0,722	0,457		65	0,778	0,620
	57	0,642	0,417		66	0,694	0,595
	58	0,642	0,637		67	0,669	0,541
	59	0,672	0,686		68	0,758	0,611

	60	0,719	0,661		69	0,733	0,581
	61	0,654	0,651		70	0,608	0,692
	62	0,696	0,706		71	0,702	0,628
	63	0,572	0,647		72	0,692	0,624
	75	0,611	0,474		73	0,603	0,562
	76	0,569	0,529		74	0,724	0,560
	77	0,513	0,288				
Type 9	78	0,568	0,373				
	79	0,722	0,549				
	80	0,686	0,217				
	81	0,687	0,417				
	82	0,629	0,433				

Table 2.

Observation Inventory of Preschool Children Enneagram Personality - Parent Form factor structure, explained variance ratio, and Cronbach alpha reliability coefficient values (N=200)

	Eigenvalue	**Explained Variance %**	**Cronbach's Alpha**
Type 1	4,76	5,80	0,891
Type 2	6,24	7,61	0,903
Type 3	4,75	5,79	0,916
Type 4	5,09	6,20	0,901
Type 5	6,74	8,22	0,921
Type 6	4,27	5,21	0,848
Type 7	7,73	9,43	0,950
Type 8	8,35	10,18	0,943
Type 9	4,32	5,26	0,848

Figure 1.

The Relationships Between Scale Items and Type 1, Type 2, Type 3, and Type 4 Dimensions in the Parent Form

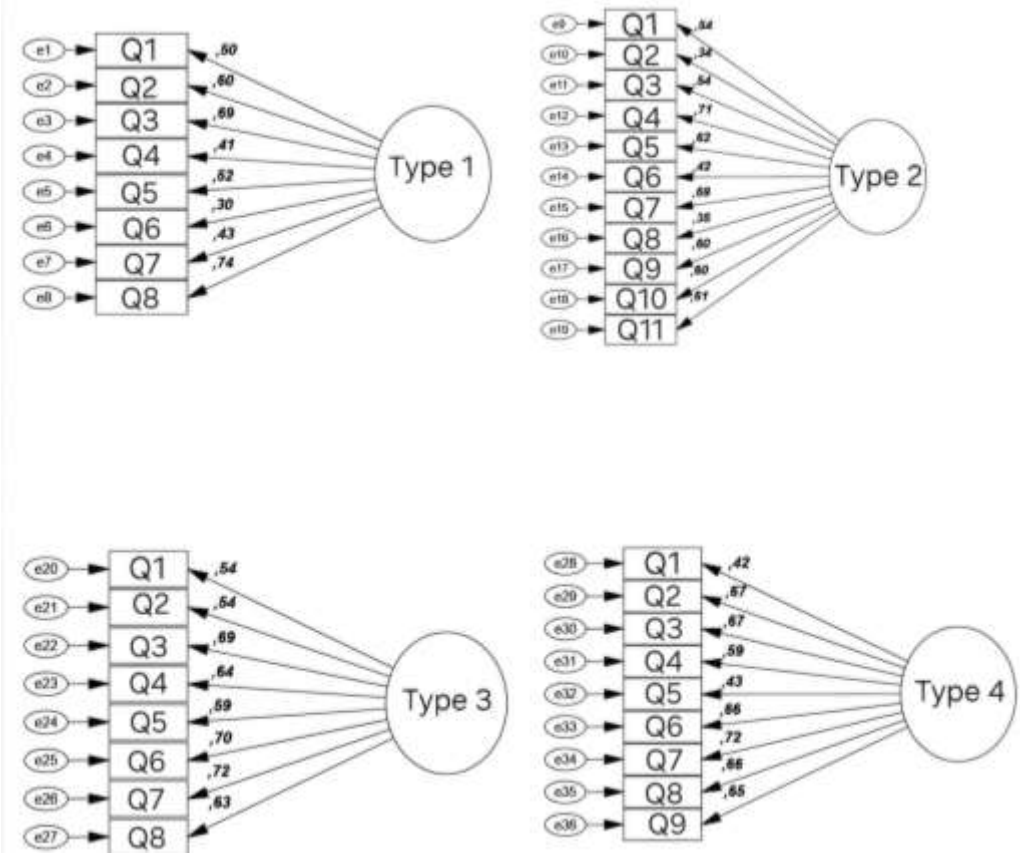

Figure 2.

The Effects Between Scale Items and Type 5, Type 6, Type 7, Type 8 and Type 9 Dimensions in the Parent Form

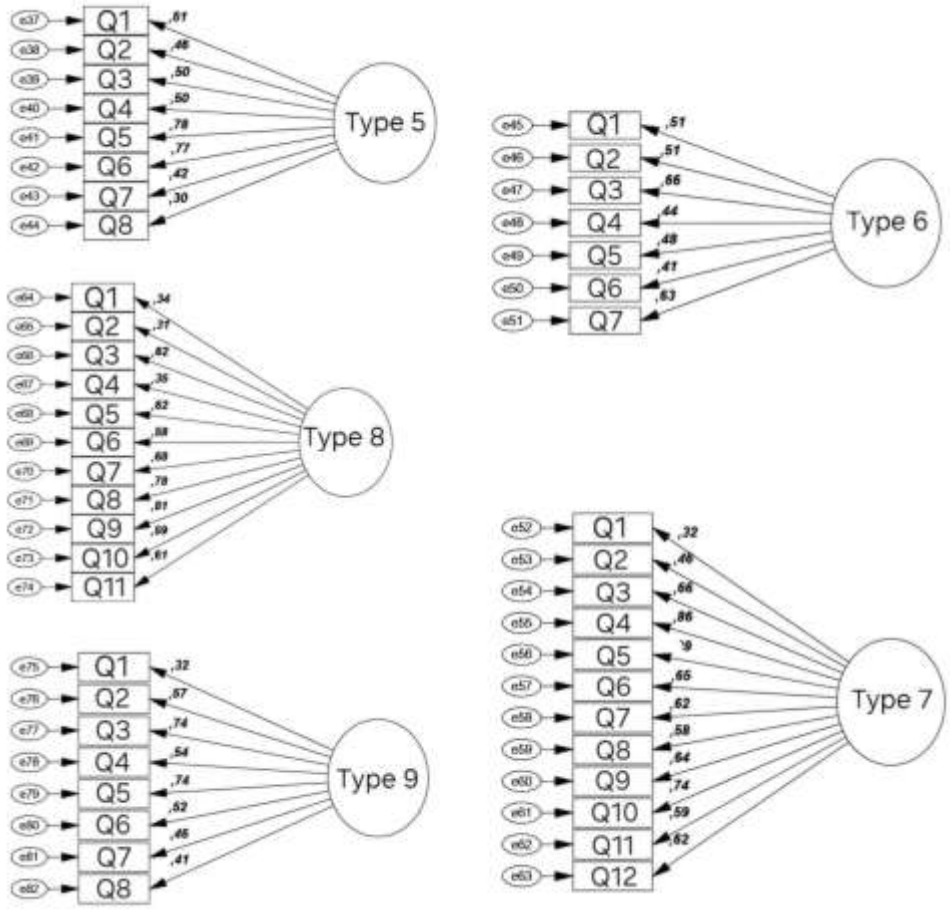

Figure 3.

The Relationships Between Scale Items and Type 1, Type 2, Type 3, and Type 4 Dimensions in the Teacher Form

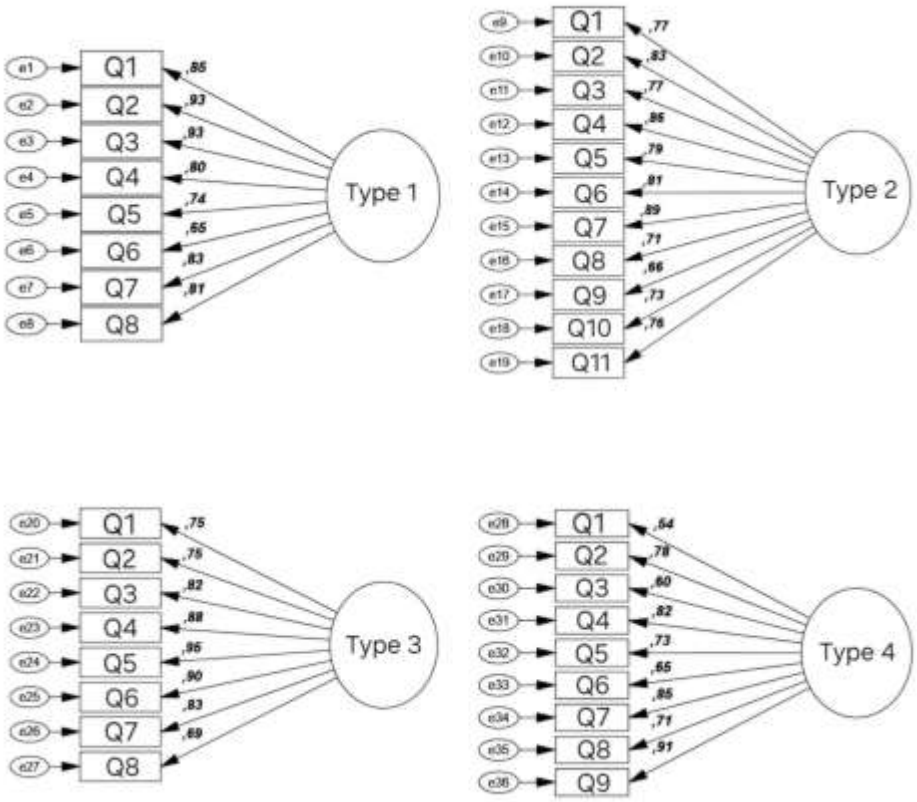

Figure: 4.

The Relationships Between Scale Items and Type 5, Type 6, Type 7, Type 8 and Type 9 Dimensions in the Teacher Form

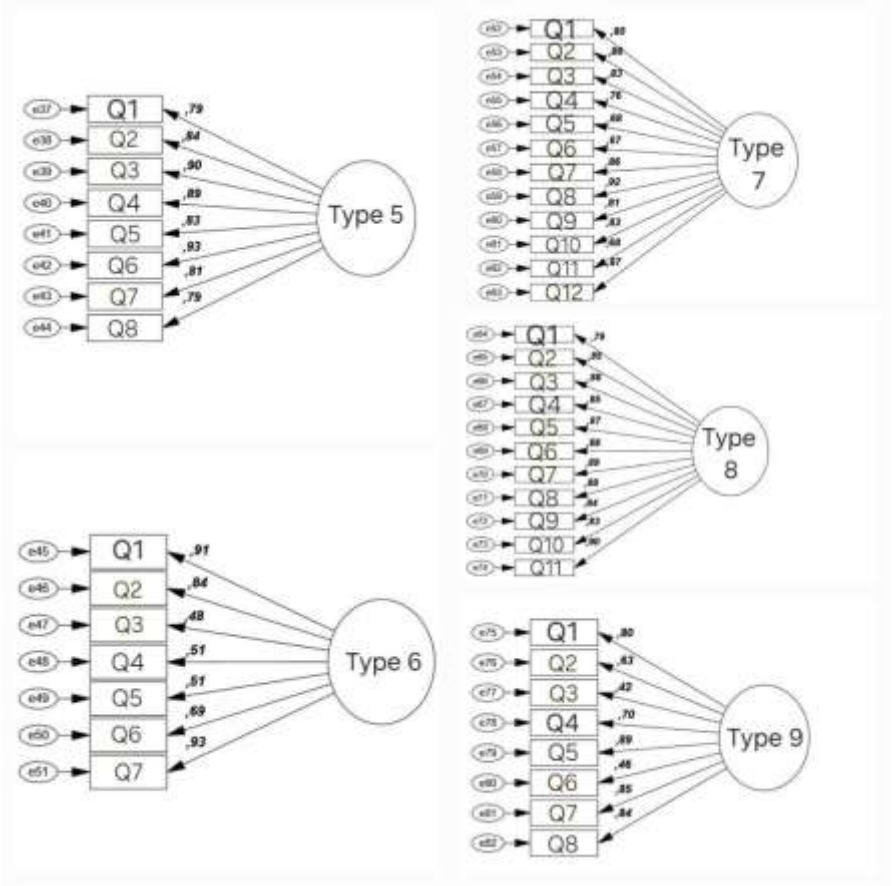

Table 5.

Observation Inventory of Preschool Children Enneagram Personality Descriptive Statistics

	X ± *SS*	*M*	Type 1	Type 2	Type 3	Type 4	Type 5	Type 6	Type 7	Type 8
Type 1	3,58 ± 0,70	3,6	1							
Type 2	3,64 ± 0,70	3,6	r=0,655	1						
Type 3	3,71 ± 0,81	3,8	r=0,687	r=0,669	1					
Type 4	3,54 ± 0,74	3,6	r=0,657	r=0,637	r=0,790	1				
Type 5	3,80 ± 0,70	3,9	r=0,617	r=0,618	r=0,687	r=0,723	1			
Type 6	3,38 ± 0,73	3,3	r=0,556	r=0,628	r=0,634	r=0,636	r=0,510	1		

Type 7	3,82 ± 0,71	3,9	r=0,541	r=0,668	r=0,706	r=0,715	r=0,756	r=0,479	1	
Type 8	3,77 ± 0,77	3,9	r=0,538	r=0,513	r=0,677	r=0,693	r=0,668	r=0,352	r=0,770	1
Type 9	3,70 ± 0,63	3,8	r=0,503	r=0,656	r=0,500	r=0,532	r=0,597	r=0,588	r=0,615	r=0,472