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MEASURING AND EVALUATION OF ASSERTIVENESS, ANXIETY AND RETENTION LEVELS IN CHILDREN

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Abstract

In this study, I measured and evaluated the levels of assertiveness, anxiety, and retention in children. For this purpose, I recruited a total of 135 healthy children (with parental consent) aged 8-9 years, both boys and girls, studying in the third grade of a primary school. I employed "the Assertiveness Inventory for Children", "Revised Child Anxiety and Depression Scale-Child Version (RCADS-CV)", and "Benton Visual Retention Test (BVRT)" to measure and evaluate the data. I calculated frequency and percentage distributions for gender distribution, mean, standard deviation, minimum and maximum values for assertiveness, anxiety and retention levels as descriptive statistics during statistical evaluations of all data. On the other hand, as inferential statistics, Mann Whitney U-Test was performed for the differences between the means according to gender for assertiveness, anxiety and retention tests, and Spearman Rank-Order Correlation Tests were performed for the relationship between assertiveness, anxiety and retention levels. Based on the evaluations, it was determined that the assertiveness, anxiety and retention scores of the children were 31.45, 35.11, and 11.11, respectively. Similarly, the mean assertiveness, anxiety and retention scores of boys and girls were 31.81 and 31.02, 34.03 and 36.53, 10.75 and 11.56, respectively, and there was no statistically significant difference between the mean scores of boys and girls ($P>0.05$, $P>0.01$). However, the anxiety scores of children decreased significantly ($P<0.01$) as their assertiveness scores increased. The findings revealed that there was no difference between the assertiveness, anxiety and retention levels of 8-9 years old children according to gender, but the level of assertiveness may affect the level of anxiety in boys and girls.

Keywords: Children, assertiveness, anxiety and depression, retention

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1. Introduction

Assertiveness is the way in which people realize their feelings, thoughts, and beliefs directly, in appropriate and honest ways, by paying attention to the rights and laws of others in the protection of their individual rights. At the same time, it represents a high level of healthy and effective behavior in social interaction and communication. Assertive people arouse the desire to be in coordination with others by listening, evaluating, and discussing in a healthy and effective way (Arslantaş et al., 2013).

In childhood, particularly, apprehension/anxiety and depression are common psychological problems (Kessler et al., 2005). Apprehension /anxiety can also be seen in the form of discomfort where individuals can exhibit the adaptation mechanisms required to protect themselves in the event of risk and danger. Anxiety and depression that appear at an early age can also be a risk factor for various mental problems, as well as problems such as giving up on life, decreased daily functionality and low quality of life (Costello et al., 2003; Güler & Osmanağaoğlu, 2021; Kessler et al., 2005).

Attention enhances and develops basic mental and sensory potentials, such as focus and the ability to concentrate thoughts in one place. The aim is to keep children active and interested from within. The development of attention can be formed by focusing and concentrating on something, the development of tactile, visual and sensory perceptions at early ages and periods is considered very important for children, and it is necessary for the recognition and discrimination of shapes and symbols in terms of academic success and competence. Although young children can recognize shapes and symbols, it can be difficult for them to distinguish similarities and differences among the many types. Such skills should be taught at an early age and should be well established through a wide variety of exercises (Akçınlı Yurdakul et al., 2012; Güler & Osmanağaoğlu, 2021). Perception is a mental process and its main purpose is to understand the environment and the world by matching the information obtained through the senses with cognitive elements. This process of understanding can be realized through the interaction and harmony of attention, retention and all emotions. Visual (optical) perception, which forms the basis of children's mental activities, is also effective in controlling and directing their movements and behaviors (Temel et al., 2016). Retention, on the other hand, is the storage of past experiences or learned information for use in the present and retrieval when necessary. In other words, retention includes the processes of learning and recording new information, storing it in the short and long term and recalling and remembering it when necessary. Retention is categorized into three retention types in terms of storing/recording information or experiences obtained through environmental inputs. Accordingly, it is expressed as a sensory retention that can store a relatively limited amount of information for very short periods of time, a short-term retention that can store information for slightly longer periods of time and has a relatively limited capacity, and a long-term retention that has a very large capacity, multi-purpose and

can store information for long periods, perhaps even indefinitely (Sternberg & Stenberg 2012; Temel et al., 2016).

Most of the behaviors, habits and developmental processes necessary for life are based on childhood; children need behaviors and activities such as love, attention, having fun and playing games in order to develop properly. Children's tolerant behavior, harmony with others, cooperation and sharing, responsibility, fairness, self-confidence, ability to express and realise their abilities and the need to learn can be established through education. It is important to establish an active and dynamic lifestyle through educational activities to be carried out in a safe environment where children can feel respect and trust, express themselves comfortably and experience feelings of belonging, starting from childhood, in order to create a healthy and happy society. Multifaceted educational programmes for pre-school and primary school children are an effective tool that can make appropriate and expected contributions to their physical and physiological, mental (cognitive), emotional and motor development. The multifaceted education programmes implemented in these schools also prepare and establish the ground for the development of intellectual and academic abilities and skills by developing children's coordinative abilities such as the concept of space, reaction and rhythm, spatial orientation, and body awareness (Akçınlı Yurdakul et al, 2012; Gallahue et al, 2014; Garn & Byra, 2002; Güler & Osmanağaoğlu, 2021; Gökmen et al, 1995; Özer & Özer, 2000). The results of research with children show that multifaceted educational activities, physical exercise and activities develop positive emotional structures and mental skills in children, reduce anxiety and depression symptoms and improve their quality of life (Newman & Motta, 2007; Krauss et al., 2012). Considering that parallel evaluation of children's assertiveness, anxiety and retention levels may contribute to the literature, the aim of this study was to determine and evaluate the levels of assertiveness, anxiety and retention of children.

2. Method

I performed this research application on 3rd grade students of Amasya 75. Yıl İstanbul Menkul Kıymetler Borsası Beyazıt Primary School. Ethics committee approval was obtained (Amasya University Non-Interventional Clinical Research Ethics Committee, date and number: 19.03.2020/15386878-044). The implementation program, tests and statistical evaluations are described under separate headings in the following paragraphs:

2.1. Participants

Considering the analyses of the research planned to be carried out, necessary analyses were made by using the G Power (Power Analysis) programme to determine the sample size. In order to find a statistically significant difference between the pre-test and post-test values of the planned applications for the participants, $\alpha= 0.05$, $1-\beta= 0.80$, $d=0.5$, the number of participants required to be in the group was determined to be 85.

Since the study was a short-term longitudinal study and there was a risk of loss of participants, a total of 135 (75 boys and 60 girls) healthy volunteers aged 8-9 years were deemed appropriate for participation. The necessary permissions for the participants who participated in

the study were obtained from the Amasya Provincial Directorate of National Education and the parents or guardians of all students separately since the subjects were under the age of 18.

2.2. Data Collection

In order to determine the assertiveness, anxiety and retention development of the research group, I used the Assertiveness Inventory for Children, The Revised Child Anxiety and Depression Scale-Child Version (RCADS-CV) and The Benton Visual Retention Test (BVRT). Questionnaires and the Benton Visual Retention Test were conducted face-to-face with students in classrooms.

2.2.1. The Assertiveness Inventory for Children

The items within the scope of the sentences of the inventory developed by Topukçu (1982) were formed through interviews with primary school students and teachers in Bala district of Ankara. In the inventory, there are 45 question sentences about the behaviors that children exhibit or may exhibit at home, at school and in their environment. The participant can code one of the "yes" or "no" options for each sentence/question. The assertiveness score that a participant can get from the inventory is calculated by giving 1 point each for answering "yes" to questions 4, 9, 13, 18, 22, 27, 27, 31, 36, 40 and 45 and "no" to the other questions. According to this situation, the highest assertiveness score that each participant can get from the inventory will be 45 and the lowest score will be 14. The validity coefficient of this assertiveness inventory was 0.74 and the reliability coefficient was 0.80 (Kılınç, 2011).

2.2.2. The Revised Child Anxiety and Depression Scale-Child Version (RCADS-CV)

The RCADS-CV, which is used in children and adolescents aged 8-17 years, contains 47 items and is scored on a 4-point Likert-type scale (0 = never, 1 = sometimes, 2 = often, and 3 = always). The RCADS-CV, was developed by Chorpita et al. (2000) and adapted into Turkish by Görmez et al. (2017). The RCADS-CV, was developed by Chorpita et al. (2000) and adapted into Turkish by Görmez et al. (2017). This scale has 6 subscales including general anxiety (6 items), separation anxiety (7 items), specific phobia (9 items), obsessive-compulsive disorder (6 items), panic disorder (9 items), major depression (10 items). While the reliability coefficient of the scale adapted to Turkish was 0.95, the reliability coefficient was found between 0.75 and 0.86 as a result of the analyses performed for each subscales (Görmez et al., 2017).

2.2.3. The Benton Visual Retention Test (BVRT)

The BVRT has a wide range of cognitive components such as visual perception and visual retention , visual perception or visuospatial abilities that can be used in both clinical and field research and can be applied individually on a performance basis (Öner, 1997; Sivan, 1992). It

can be used in normal individuals as well as in clinical subjects to diagnose most brain damage (Akçınlı Yurdakul et al., 2012, Watson et al., 2003).

There are three different and equally prepared forms of the test including drawing (C, D, E) and four different application methods that can be alternatives for these forms (A, B, C, D). Forms F and G, which allow the test to be administered verbally, and three different multiple-choice, recognition-based administration methods (M, P, PR) prepared for these forms are also available. This research will be conducted by using the F form of the test and the P application method. The F form of the test contains 15 cards/designs. Each card contains geometric shape(s) and the participant is asked to identify the shape that is similar to the shape shown to him/her among four options. In the P application method, the card/design is shown with options. There is no time limitation in the application of the test since the subjects are given a warning that they are ready when they perceive the shape shown (Amieva et al., 2006).

In this study, this test was used with the aim of measuring children's attention that may develop through movements. Because, when the phenomenon is considered as perceptual-motor processes, the stimuli received from the external environment with different receptors are transformed into electrical energy in the sensory nerve pathways and are processed and organised in the relevant brain centres as sensory input. Sensory information that is subjected to organisation is defined by comparing previously processed and known patterns such as information, concepts and movements and transformed into outputs that are reflected in the form of open reactions (Akçınlı Yurdakul et al., 2012).

Tablo 1. Rating Scale of the Benton Visual Retention Test

Score	Evalution
14-15	High
12-13	Medium Level
11	Below Average
10	Threshold of Insufficiency
9	Insufficient
8	Very Insufficient

2.3. Statistical Evaluation

Firstly, I determined whether the groups shown normal distribution by performing Shapiro-Wilk test and concluded that the data set did not normally distribute. Therefore, I performed nanparametrical test measures. In statistical evaluations of all data; frequency and percentage distributions for gender distribution, mean, standard deviation, minimum and maximum values for assertiveness, anxiety and retention levels were considered. I performed Mann Whitney U Test for the differences between the means of children's assertiveness, anxiety and retention

tests according to gender, and conducted Spearman Rank-Order Correlation Tests for the relationship between assertiveness, anxiety and retention levels.

3. Findings

All findings of the research are shown in the tables listed below:

Table 2. Gender distribution of the research group

Gender	f	%
Male	75	55,6
Female	60	44,4
TOPLAM	135	100

It was determined that 55.6 % of the study group was male and 44.4 % was female (Table 2).

Table 3. Distribution of assertiveness, anxiety and retention levels of the research group

Variables	n	X±Sd	Minimum	Maximum
Assertiveness (score)	130	31,45±7,42	10	43
Anxiety (score)	127	35,11±18,33	2	89
Retention (score)	134	11,11±3,39	1	38

The mean scores of assertiveness, anxiety and retention were 31.45, 35.11 and 11.11, respectively (Table 3).

Table 4. Assertiveness, anxiety and retention levels of the research group according to gender

Variables	Male				Female				
	n	Mean±Sd	Med	IQR	n	Mean±Sd	Med	IQR	p
Assertiveness (score)	72	31,81±6,9	32	10,5	58	31,02±8,1	34	10	0,76
Anxiety (score)	72	34,03±18,3	30,5	25	55	36,53±18,4	32,5	19,8	0,49
Retention (score)	75	10,75±2,7	11	3	59	11,56±4,1	12	3	0,27

*P<0,05; **P<0,01

When Table 4 was analyzed, it was determined that the mean assertiveness, anxiety and retention scores of boys and girls in the research group were 31.81 and 31.02, 34.03 and 36.53,

10.75 and 11.56, respectively. No statistically significant difference was observed between the mean assertiveness, anxiety and retention scores of boys and girls (P>0.05, P>0.01).

Table 5. Correlation of assertiveness, anxiety and retention levels of the research group

Variables	Assertiveness	Anxiety	Retention
Assertiveness	1	-0316**	0,122
Anxiety	-0,316**	1	0,109
Retention	0,122	0,109	1

*P<0,05; **P<0,01

When Table 5 was evaluated, it was determined that anxiety scores decreased significantly (P<0.01) as the assertiveness scores of the children increased. No significant relationship (P>0.05, P>0.01) was observed between other variables.

4. Discussion and Conclusion

Since Turkish National Education aims to develop all individuals with a healthy and balanced personality and character structure in terms of body, spirit, morality, emotion and thought, with the power and will to think freely and scientifically, in a productive and productive way (Küçükahmet, 1997); it aims to establish a society consisting of individuals who make new inventions and discoveries, who are critical, productive and who want and initiate social change. This goal can be achieved through effective and efficient education provided comprehensively in schools and by raising individuals who can develop themselves by constantly adapting themselves to innovations (Tezcan, 1997). As a result of raising individuals who are open to new inventions and discoveries, who are critical, productive and who want and initiate social change, it will be ensured that individuals with high social skills, high mental skills, high intelligence and spiritually strong and resilient individuals will be established. However, when the results of this study are analyzed, it is seen that the assertiveness, anxiety and retention scores of primary school children in general are 31.45, 35.11 and 11.11, respectively (Table 3); in terms of gender, the assertiveness, anxiety and retention scores of boys and girls are 31.81 and 31.02, 34.03 and 36.53, 10.75 and 11.56, respectively (Table 4). When the above scores are evaluated, it can be concluded that children's assertiveness traits may be above average in general and in terms of gender, their retention potential may be below average, and their anxiety and depression may be slightly high. Based on these data, the question arises whether we are not raising children at the level of education that is expected and required.

Studies investigating the relationships between reading comprehension skills and short-term retention concepts in 8-11 year-old children generally reveal that an increase in reading skills leads to an increase in short-term retention values and is an effective variable on reading comprehension and short-term and immediate retention. However, it has also been emphasized that retention cannot always mediate the relationships between reading comprehension and inference making and comprehension-monitoring (Cain et al., 2004; Ergül et al., 2016). The development and maturation of the nervous (neurological) system in children, the increase in focus and attention capacity and processing speed play an active role in the development of

visual short-term retention. It is emphasized that information retrieval and processing competence has an important role in the development and increase of short and long-term retention efficiency in children (Bayliss et al., 2005; Pickering, 2001). In a study examining the effect of the level of physical activity on the level of quality of life in those who were in the home quarantine process during the pandemic period, it was reported that the perception, coding, categorization, accumulation or storage of information, storage or storage by accumulation and reuse when necessary, and the systematic creation of these in a complete and systematic manner perform learning. In addition, it was also reported that possible disruptions or problems that may arise somewhere in the process of learning information may cause learning difficulties in the individual (Tural, 2020). In a study investigating anxiety and depression in children with learning disabilities, a significant positive relationship was found between the anxiety and depression scores of children with learning disabilities. Based on this result, it was emphasized that high levels of anxiety in children affect their anxiety and depression levels and they may experience difficulties in learning (Deniz et al., 2009). In a study on children's working retention and social status, it was concluded that children with low verbal retention performance had limited social behavior and language skills, which resulted in more limited relationships with their peers (McQuade et al., 2013). Again, in a study examining the peer relations and school performances of attention deficit and hyperactivity disorder symptoms, it was reported that the weaker the cognitive abilities of children with high levels of attention deficit and hyperactivity/impulsivity symptoms, the higher the level of physical aggression, and therefore, it was emphasized that children with low cognitive skill efficiency have limited social skills compared to those without and cannot interact with their peers at an adequate level (Diamantopoulou et al., 2007). In a study of developmental constraints on retention performance, it was found that developmental improvements in processing efficiency, storage capacity, rehearsal speed and basic processing speed were age-related, but were driven by 2 factors: overall processing speed and storage ability (Bayliss et al, 2005). In another study comparing the working retention efficiency of children with low and high social acceptance levels and children with normal development level, it was found that children with low social acceptance levels had significantly lower efficiency in all areas of working retention compared to their more popular and prominent peers, and children with low social acceptance levels scored much lower in verbal retention, verbal working retention , verbal short-term retention, visual retention, visual working retention and visual short-term retention than their more popular and prominent peers (Okşak, 2019). In a study on the development of visual-spatial thinking skills or retention, it was reported that children's visual-spatial thinking skill performance increases with age, but not much is known about what causes this. This process appears to be in use from about 8 years of age and has been reported to make an important contribution to tasks in which stimuli can be labelled verbally. However, it has also been emphasized that the study results indicate that age-related changes in performance on visuospatial working retention tasks cannot account for all changes (Pickering, 2001).

In another study conducted on anxiety and depression symptoms in children, it was stated that the realization and achievement of the objectives of educational activities can also prevent children's anxiety and depression-like disorders and improve their assertiveness behaviors (Chorpita et al., 2000). It is also stated that regular educational activities and physical activities

can contribute to the transformation of routine into behavior and can be considered as a way of interacting with family members and friends. However, it is also reported to be beneficial for mental health and serenity in terms of improving emotions in general, reducing the risk of anxiety and depression, and eliminating or delaying cognitive decline and dementia (WHO, 2021). When the results of our study are examined, it is seen that the assertiveness scores of primary school children in general are 31,45, anxiety scores are 35,11 and retention scores are 11,11 (Table 3); in terms of gender, the assertiveness, anxiety and retention scores of boys and girls are, in the aforementioned order, 31,81 and 31,02, 34,03 and 36,53, 10,75 and 11,56; 34,03 and 36,53; 10,75 and 11,56; and there was no statistically significant difference between the assertiveness, anxiety and retention scores of boys and girls in terms of gender (Table 4). In addition, when Table 5 is analyzed, it is obvious that as the assertiveness scores of the children increased, their anxiety scores decreased significantly ($P<0.01$). However, this significant relationship ($P>0.05$, $P>0.01$) was not observed between assertiveness and retention, anxiety and retention scores. Based on these results, the results of this study are supported by some of the literature (Chorpita et al., 2000; Deniz et al, 2009; Diamantopoulou et al, 2007; McQuade et al, 2013; Okşak, 2019; Tural, 2020; WHO, 2021) in the sense that assertiveness scores have a strong negative effect on anxiety scores, and weakly in the sense that there is no relationship between assertiveness and retention , anxiety and retention scores. In fact, the fact that there is no relationship between anxiety and retention scores is not supported by the results of some literature (Cain et al, 2004; Chorpita et al, 2000; Deniz et al, 2009; Ergül et al, 2016; Tural, 2020). These similarities and uniqueness may suggest that multifaceted and purposeful education and physical activity programs for raising children who have sufficient level of assertiveness, who do not have mental limitations and retention weakness and who are free from anxiety and depression are not fulfilled at the expected level. However, mplementation of multifaceted education and physical activity programs at the desired and expected level can help children to become emotionally and spiritually healthier as well as eliminate learning problems.

In conclusion, in this study, I concluded that there was no difference between assertiveness, anxiety and retention levels of 8-9 years old children according to gender, but assertiveness levels may positively affect anxiety levels in boys and girls.

Declaration of Conflicting Interests and Ethics

"The authors declare no conflict of interest."

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