Araştırma Makalesi (Research Article)

INTELLIGENCE CARDS PREPARED FOR 0-12 MONTHS CHILDREN AND DESIGN PROBLEMS[1]

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ABSTRACT

During the first three years of life, the human brain records what it sees around it, just like a recording device. Therefore, during this time it is important to regularly stimulate the development of the five senses: sight, hearing, smell, touch, and taste. It is known that newborns, the first months of the 0-12 months group of babies included in the study, are somewhat weak in vision, but this sense develops over time, and they are sensitive to primary colors. Therefore, they show their sensitivity to bright and vivid colors by preferring objects in these colors. In this age range, where both mental and physical development accelerates very rapidly, it is seen that it is essential to nurture visual perception and aesthetic phenomena. As repetition and consistency are the keys to success in teaching, it is also essential that all visual materials for preschoolers with aesthetic concerns are prepared and presented by experts. In this context, the study aims to examine the intelligence cards designed and sold for the 0–12-month group in terms of design to determine the design problems and to put forward suggestions. As a result of the study, it was determined that the examples of intelligence cards designed for the 0–12-month group in the market partially fulfill the evaluation criteria defined by the researcher or have certain design deficiencies.

Keywords: *Preschool, İntelligence Cards, Graphic Design, Illustration, Design.*

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0-12 AY DÖNEM ÇOCUKLARINA YÖNELIK HAZIRLANAN ZEKÂ KARTLARI VE TASARIM SORUNLARI

ÖZ

Yaşamın ilk üç yılında insan beyni, tıpkı bir kayıt cihazı gibi çevresinde gördüklerini kaydeder. Bu nedenle, bu süre boyunca; görme, duyma, koku alma, dokunma ve tat alma gibi beş duyunun gelişimini düzenli olarak uyarmak önemlidir. Araştırmaya dahil edilen 0-12 ay grubu bebeklerin ilk ayları olan yeni doğanlar, görme konusunda biraz zayıf olduğu ama zamanla bu duyularının geliştiği ayrıca ana renklere hassasiyet gösterdikleri bilinmektedir. Bu yüzden parlak ve canlı renklere karşı duyarlılıklarını bu renklerdeki nesneleri öncelikli tercihleriyle belli ederler. Hem zihinsel hem de fiziksel gelişimin çok hızlı ivme gösterdiği bu yaş aralığında, görsel algı ve estetik olguyu beslemenin oldukça önemli olduğu görülmektedir. Tekrarlama ve tutarlılık, öğretimdeki başarının anahtarı olarak bilinmektedir. Estetik kaygıları olan okul öncesi görsel tüm materyallerin bilirkişiler tarafından hazırlanıp sunulması da bu öğretim başarısını destekleyen bir diğer önemli olgudur. Sağ lobu besleyen görsel her türlü alıştırma, daha açık bir algı durumuna ve hızlı öğrenme becerisinin gelişmesine imkân sağlamaktadır. Bu kapsamda araştırmanın amacı, 0-12 ay grubu için tasarlanan ve satışı yapılan zekâ kartlarının tasarımsal açıdan incelenmesi ve tasarım sorunlarının neler olduğunun belirleyerek öneriler ortaya koymaktır. Çalışmanın sonucunda; piyasada var olan 0-12 ay grubu için tasarlanan zekâ kartı örneklerinin araştırmacı tarafından belirlenen değerlendirme kriterlerini kısmen taşıdığı veya belirli tasarımsal eksikliklerinin olduğu tespit edilmiştir.

Anahtar Kelimeler: *Okul Öncesi, Zekâ Kartları, Grafik Tasarım, İllüstrasyon, Tasarım.*

INTRODUCTION

A newborn baby uses its five senses to perceive what is going on around it and tries to adapt to the outside world. A baby's brain starts to record what it sees around it, just like a recording device. This recording sometimes takes place by touching and sometimes by experiencing. Infants aged 0-12 months, defined as the early period in the literature, first try to discover objects by taking them into their mouths and then start exploring the living spaces around them using their other senses. It is known that reflexes have increased in babies from the first three months. With their developing nervous systems, their senses become more active, and they become more active thanks to the stimuli around them (MEB, 2013). Ülgen (1983) mentions three capacities that constitute the development of a human being. These are grouped as perception, feeling, and doing capacity. The development of a healthy individual occurs thanks to these capacities supported in harmony. The perception process that starts with the newborn changes over time. In the newborn period, the first days of infancy, a form of forced perception, defined as involuntary, is formed. The baby focuses on contrasting images such as black and white. In a 1979 study conducted by Mendelson and colleagues, a newborn baby's eye movement was monitored, and it was determined that he/she tried to follow especially angular objects with clear contrast. According to research, a baby's visual ability develops significantly from one and a half to three months of age. Ülgen (1983) states that schemas begin to develop in infants in these months. Kagan (a, 1970) defines the mother's face as the first schema that the infant develops. In this period, defined as a schematic image, infants begin to react to every schema they see and meet. Visual perception continues to develop rapidly.

Ensuring the use of these senses is thought to make important contributions to the child's future education at all levels. For this reason, it is seen that it is important to provide the necessary environments to keep these senses, which have a very important role in the development of creativity, active from infancy (Yılmaz, 2003). Demoulin (1999) stated that children in 0-72 months experience the most important and critical periods of their lives. It is thought that thanks to attentive parents or educators, any defects to be detected in this period can be corrected at an early age, and developmental problems, if any, can be prevented and reduced or solutions can be derived. Aamodt and Wang (2011) state that in the first year of life, brains change faster than ever before. They add that most of these changes occur to acquire information specific to the environment they were born. In addition, Güzel and Kurtulan (2017), in their study, found that children's cognitive and social skills are closely related in early childhood according to age groups.

Right brain education is an early childhood education method initiated by the Institutes for the Achievement of Human Potential (IAHP) Glenn Doman in the USA and Makoto Shichida in the Far East. Makoto Shichida, one of the leading

experts in early childhood education in Japan, has developed a method that emphasizes the education of the heart above all. Intelligence cards are visual materials that form the first layer of this home-based education method.

Every new piece of information that a person in the first years of his/her life records in his/her right lobe with pleasure and great curiosity prepares the ground for him/her to learn more quickly in the following years. This mental library, which will be prepared in a planned and conscious manner, will enable the child to create an activity area for the development of the world around him/her by endeavoring to get to know the world around him/her more. One of the most important steps to developing mental creativity is to feed the imagination and visual memory. To develop these skills, mental exercises with visual materials such as flashcards are considered alternative activity material. Intelligence cards consist of symbols or minimal images selected from any subject. These visual images create a certain familiarity with that subject in the future in the mental development of the baby and ensure that it is stored in the mind. These visual exercises, which nourish the right lobe, allow for a clearer perception and the development of fast learning skills. It is also thought to improve children's intelligence and aesthetic sensitivity.

It is known that the first months of the newborn period, the first months of the 0–12-month group babies included in the study, are a little weak in terms of vision, but these senses improve over time. It is stated that their vision is not clear, and they can only see a distance of one meter in a period of forty days (MEB, 2013). It has been observed that babies can react to light or a different movement around them and turn in that direction. In addition to such situations, they are also sensitive to primary colors. They show their sensitivity to bright and vivid colors by preferring objects in these colors. When the movements of babies are observed from the moment they are born, it is seen that although they cannot control a large part of their body, their sucking abilities are innate, and they turn their heads left and right excitedly with the urge to suck. In later times, it is seen as a developmental feature that they can turn their head and eyes to look at an object or event.

Experts at Uppsala University and Eclipse Optics University in Sweden collaborated in a study conducted by researchers at the Institute of Psychology at the University of Oslo. With this study, by combining technology, mathematics, and previous knowledge of infant visual perception, they were able to show how much of the environment a newborn baby can see. The results of the study tell us that a 2–to 3-day-old baby can perceive faces and perhaps emotional facial expressions from 30 centimeters, which corresponds to the distance between a mother and her breastfeeding baby. He found that when the distance is increased, the visual image begins to blur. The human eye sees the world in color thanks to three different forms of cells known as retinal cones.

Babies are born with these three types of retinal cones, but it takes a certain amount of time for them to mature and for the brain to recognize the signals from the retinal cones. By the age of two months, babies can perceive contrasting primary colors. However, over time, sensitivity to vivid colors has been shown to parallel the development of the baby. While the first days starting with colorless vision perceive intense contrasts, it is seen that the visual perception improves over time. Thanks to technological developments, studies on the color perception of infants are carried out with visual recording systems that capture the cornea and pupil movements of children. Thanks to these studies, it is used not only in diseases related to color perception but also in preliminary studies in the toy industry and animation fields.

The research aims to examine the intelligence cards designed and sold for the 0–12-month group in terms of design determine what the design problems are and put forward suggestions. Visual intelligence cards, which can be described as the first activity of home education, are very important in terms of design and preparation. All kinds of visual materials prepared for children should be prepared for their purpose by carrying some aesthetic concerns. It is necessary to know the child of the determined age group and to know their needs well. In this context, the design of early-period activities that will support cognitive development should be prepared consciously and with certain design concerns. The design errors seen in the existing intelligence card designs and the deficiencies in their preparation forms constitute the main framework of this research. In addition, it is thought that this study will contribute to the field in terms of being an example since no research on the design content or design problems of intelligence cards has been found in the literature.

METHOD and FINDINGS

This research is a qualitative study, and the document analysis method was utilized. It was determined by the probability-based random sampling method. Simple random sampling is defined as a technique that shows that each item has the same probability of being selected. In this study, the intelligence cards that exist in the market and continue to be sold were analyzed in terms of design. The intelligence cards included in the evaluation were tried to be handled in terms of suitability for the purpose and design. For this purpose, certain evaluation criteria were created by the researcher. The researcher tried to examine the suitability of the physical properties of the visual intelligence cards for their purpose, their design features (color, writing, format, resolution), the type of material used (paper, fabric, etc.), their equivalence to the age group determined in terms of content (0-12 months), and finally, whether there is a good example that is printed and sold that contains all the specified criteria. In the research, the companies selling books and toys in Turkey were examined and a limited number of intelligence cards were obtained, thus the convenience sampling method was found suitable for the research. The

research was limited to intelligence cards designed for the 0–12-month group. In the market research conducted within the scope of the research, different brands of intelligence cards or visual materials produced from different materials under the name of intelligence cards were obtained. Examples of intelligence cards produced from different sizes and materials were analyzed in terms of the evaluation criteria determined by the researcher under the findings section and design problems were tried to be interpreted in this context.

The composition and publication of this information have been subject to ethical principles. The analysis, interpretation, and reporting of the data have been carried out based on transparency and honesty, and scientific ethical rules have been followed at every stage. In addition, the Recep Tayyip Erdoğan University Social and Human Sciences Ethics Board has approved the decision numbered 2024/083 in the meeting dated 28.02.2024 that it complies with ethical rules as of this date.

The first evaluation criterion of the research is the suitability of the physical characteristics of the intelligence cards for their purpose. The design dimension of books prepared for preschool children and materials containing such visual schemes is very important. It is neither too small nor too big for the child to fit in his/her lap and control with his/her hands. In the studies conducted, the suitability of the size for the age group is especially emphasized (Çiftçi, 2013; Kaptan, 2006; Koca, 2014; Şimşek, 2016). In this context, it is seen that one of the samples obtained was designed in a very small size (Figure 1).

Figure 1.
Small-size intelligence card example

(Source: My Baby's First Library, Martı Publications).

When the other intelligence cards obtained within the scope of the research were examined, it was observed that the design was generally preferred in medium sizes, a size that babies can easily hold (Figure 2). It is thought that an intelligence card designed in these sizes may be ideal.

Figure 2.
Example of a medium-sized intelligence card(Source: NillyToys Educational Baby's First

(Source: Intelligence Cards - First Illustrated Activity Intelligence Card Game Set for Babies 0-12 Months).

All kinds of visual materials prepared for children should be prepared with some aesthetic concerns. It is necessary to know the children of the determined age group and to know their needs well. The same sensitivity should be shown regarding the size of these materials, which are specified as 0-12 months and designed for this age group, and their functionality should be planned correctly. The second evaluation criterion of the study was the design features of the flashcards. With this criterion, the designed intelligence cards were tried to be evaluated with design elements such as color, writing, form, and resolution. In the first three months, which is accepted as the newborn period, it would be more appropriate for the visuals to be shown to the child to have a high level of contrast. The knowledge that newborns see contrasts strongly for the first time will play an important role in preferring the colors of the visuals at this stage. It is thought that designing at least some of the card groups by considering the black-white balance will be more suitable for the first 3 months of the baby. It is seen that contrast is used in all of the sample intelligence cards and there are cards designed in black and white colors. In this context, it is seen that all of them fulfill the criteria (Figure 3).

Figure 3.
Examples of colorful designed intelligence cards

(Source: My Baby's First Intelligence Cards, Beesmart Publications).

Another element that should be considered in the design of flashcards is the frame or edge decorations. It is important to present these images, which are intended to be stored only in the right brain lobe, in high quality. Therefore, the flashcards designed to increase attention and focussing time should contain only one image. While it is predicted that the studies will be more efficient when they are prepared in this simplicity, it is seen that many of the samples provided contain both frames and more than one element (Figure 4).

Figure 4. *Examples of intelligence cards designed with more than one element*

(Source: My Baby's First Intelligence Cards, Diytoy Publications).

The visual objects chosen in the design of the flashcards are very important. The visuals should be understandable and contain a sufficient level of detail. In addition, many objects used at the same time will not be suitable visuals for the activity of intelligence cards as they will create a composition when they come together. It is seen as an important factor that images should be preferred in high resolution and quality. Clearer and less detailed images will be more suitable for 0–to 12-month-old babies in terms of design. It is seen that the intelligence cards shown in Figure 4 are prepared with 2 colors. It is known that babies show

sensitivity to certain main prefixes when they are 3 months old. One of these colors is red, which has the highest wavelength. In these card examples prepared for 4-6 months, there are certain areas highlighted with red color. Writing is not important for early childhood, but it is seen that writing is included in the intelligence cards examined within the scope of the research (Figure 1).

It is thought that the one-word texts expressing the objects were added so that the cards could be reused in the following months. Since visual images are important, it is thought that the preference for text does not fully meet the design purpose of the card for the specified age group. In addition, two languages were used in some intelligence cards. Thanks to the intelligence cards prepared with a different foreign language besides the mother tongue, the first steps of multilingual early education can be taken. Many studies in the field of foreign language education show that exposure to foreign languages at an early age makes significant contributions to our children learning more than one language in the future. However, these materials, which are designed for 0-12 months, do not need to be used with writing.

In addition to the design features and dimensions, the material used is also very important in the design of intelligence cards. It should be preferred that the material of these visual cards prepared for babies aged 0-12 months should be covered with non-bending, hard, and matt lamination. Thanks to today's developing technology, pages printed with organic paints and coated with synthetic-free materials are thought to be more suitable for this age group. Care should be taken to choose materials that will not harm children's health (Güleç & Geçgel, 2006, p.63). It would be appropriate to choose activity materials that are not easily deformed for babies who try to identify everything they take in their hands by first taking it to their mouths. Based on this information, it is seen that almost all of the intelligence cards obtained from the market use thick cardboard and cellophane coating. However, no organic printing was found in any of them. It is thought that printing houses do not prefer this printing technique because it requires an extra cost. Another intelligence book analyzed within the scope of the research is an example sold under the name “My First Intelligence Book with Pictures”, which is completely made of fabric. It is not in the form of a brain card but designed in the form of pages, and there is a plastic piece used as a teether in one corner of the book. It is seen that it is prepared as an activity material prepared from soft material for the child to play and scratch his/her teeth, which does not meet the main purpose of the intelligence cards (Figure 5).

Figure 5.
An intelligence book made of soft material

(Source: My First Illustrated Book Contrast Intelligence Book, All Unity Toy Products).

When designing the flashcards, firstly, the month group of the child should be determined from the beginning and appropriate visuals should be designed for the month. Therefore, another evaluation criterion was the equivalence of the content to the age group. The size of the cards, content, and material selection should be made correctly. In the first three months, it would be more appropriate to have high contrast levels of the images to be shown to the child. The knowledge that newborns see strong contrasts in the early stages will play an important role in choosing the colors of the images at this stage. In the following months, the child who starts to perceive colors developmentally will be happy to see bright colors in asparanin cards. It is thought that the use of colors with high frequencies in the majority will be a good example. Starting from 0 months until the 12th month, it is necessary to introduce the right materials to the baby at the right time with monthly periods and to use them for their purpose. It was determined that only a certain part of the intelligence card samples obtained from the market paid attention to this balance. It is seen that intelligence card sets that can be used at any time are prepared rather than monthly development levels. The last of the evaluation criteria was tried to be examined by the researcher whether there is a good example that contains all the criteria. Within the scope of the research, it was tried to reach the intelligence card samples that are still on sale and evaluated within the scope of the criteria determined. It was determined that the intelligence card samples designed for the 0–12-month group partially fulfill the evaluation criteria or have certain design deficiencies. In addition to the design of the Intelligence Cards, it is also important to use them by the function. Before working with the cards, you should prepare them as a presentation and show them to your baby at a visual speed of 1 per second (Figure 6).

Figure 6.
A mother-infant activity as an example of the correct use of flashcards

Intelligence cards should be worked within an environment where there are no different stimuli. The aim should be to focus the child's attention on the cards. It is predicted that shuffling the intelligence cards and presenting them by differentiating the order of visual follow-up in each presentation will also be beneficial in terms of disrupting rote learning by surprising the brain.

CONCLUSION

When designing intelligence cards, the month group of the child should be determined at the beginning and appropriate visuals and content should be designed for the month. The size of the cards, content, and material selection should be made correctly. In the first three months, it will be more appropriate for the visuals to be shown to the child to have a high level of contrast. It is seen that they are mostly interested in patterned materials. The knowledge that newborns see contrasts strongly for the first time plays an important role in choosing the colors of the visuals at this stage. Therefore, it is seen that toys designed for the young age group are enriched with patterned motifs as well as interesting black-and-white contrast (Aamodt & Wang, 2014, p.75). Contrast sensitivity and spatial resolution are more effective in cards designed for the first three months. It is thought that the child, who starts to perceive colors developmentally in the following months, will be happy to see bright colors in the designed cards. It is thought that the preference for colors with high frequencies will increase the affective effect between the child and the material. Some reaction differences can be seen in each baby. While these reflexes can be diversified according to the level of perception, in some cases, they can be instrumental in detecting a negative mental state in the child. The reflex levels of 0–12-month-old children

can be carefully observed and whether there is a problem can be determined with these intelligence cards. With these cards designed with contrasting colors, the underlying reasons for not making eye contact or not showing interest should be examined and whether there is a problem or not should be detected early in this way.

Displayed from a 30 cm angle, the size of the flashcards is as important as the color. Neither too small nor too large sizes should be preferred. Sizes that they can see and hold comfortably should be preferred. It should be preferred that the material of the designed cards should be covered with hard and matt lamination that is not easily deformed. Considering the new technological developments and printing alternatives, it is thought that organic printing should be preferred especially in early childhood. With visual intelligence cards designed for right brain training, short-term presentations and sharing that can be done regularly every day can help your baby to develop his/her intelligence and speaking skills and to concentrate his/her attention. Attention deficit is a common condition in school-age children today. This condition, which usually begins to show symptoms around the age of 3 and continues to increase in later ages, shows its effect in many areas, especially in education life. It is known to trigger negative situations such as not paying attention to details, avoiding reading long texts, and focusing problems (Kayaalp, 2008; Selçuk, 2006; Taylor, Taylor, Rutter, 1995; Weiss, 1996). Intelligence cards will provide very useful exercises to improve the ability to focus. The right brain dominance of very young children provides a unique learning opportunity. Therefore, children should be encouraged and supported by their five senses (Yörükoğlu, 1978).

As a result, the researcher tried to examine whether the evaluation criteria are a good example that includes all the criteria. When the intelligence cards available in the market were analyzed, it was determined that their number was quite low. In today's world where the importance of home education, which constitutes the first stage of education, is emphasized, it has been determined that the examples of intelligence cards designed for the 0–12-month group do not carry all the evaluation criteria or have certain design deficiencies. As repetition and consistency are the keys to success in teaching, it is also very important that all visual materials with aesthetic concerns are prepared and presented by experts. While preparing the flashcards, the objects selected for drawing should be preferred to be remarkable in a way to contribute to learning. Visuals should be designed in an easily perceivable size and should be prepared based on the cognitive characteristics of the determined month group. These visual exercises that nourish the right lobe allow for a clearer perception and the development of fast learning skills. It is thought that intelligence cards, which are thought to improve children's intelligence and aesthetic sensitivity, will be more useful to be prepared by experts trained in this field.

REFERENCES

Aamodt, S., Wang, S. (2011). Çocuğunuzun Beynine Hoş Geldiniz. NTV Yayınları.

Çiftçi, F. (2013). Çocuk edebiyatında yaş gruplarına göre kitaplar ve özellikleri. Muş: Alparslan Üniversitesi, *Sosyal Bilimler Dergisi*, Anemon. 1 (1), 125-137. Erişim adresi: http://dergipark.ulakbim.gov.tr/anemon/article/view/5000106986/5000100020

Demoulin, D. F. (1999). A Personalized Development of Self-Concept for Beginning Readers. *Journal of Education*, 120 (1), 14-18.

Güleç, H. Ç. ve Geçgel, H. (2006). Çocuk edebyatı. Kök Yayıncılık.

Güzel, B. ve Kurtulan, B. (2017). Eken çocukluk dönemi (4-7 yaş) bilişsel beceriler ile sosyal beceriler arasındaki ilişkinin incelenmesi. *Electronic Turkish Studies*. Fall2017, (12) 28: 381-408.

Jones-Molfese, V. J. (1972). Individual Differences in Neonatal Preferences for Planometric and Stereometric Visual Patterns. *Child Development*, Vol. 43, No. 4, pp. 1289-1296.

Kagan, J. (1970a) Attention and psychological change in the young child. Science 170, pp. 826–832

Kagan, J. (1970b). The distribution of attention in infancy. In: D.H. Hamburg (ed.), Perception and its disorders. Res. pub. ARNMD (Vol.48), 214–237. Williams & Wilkins.

Kaptan, S. (2006). Ders kitaplarında görsel düzen. Ö, Demirel ve K. Kıroğlu (Ed.) Konu alanı ders kitabı incelemesi (s. 153-154) içinde. Öğreti Yayınları.

Kayaalp, L., (2008). Dikkat Eksikliği ve Hiperaktivte Bozukluğu, İ.Ü. *Cerrahpaşa Tıp Fakültesi Tıp Eğitimi Etkinlikleri*, 62:147-152.

Koca, E. (2014). Okul öncesi dönemde kitap ve çocuk kitapları. Çamlıca Yayınları.

Mendelson, M. J., Haith, M. M., Gibson, J. J. (1976). The Relation between Audition and Vision in the Human Newborn. Monographs of the Society for Research in Child Development, Vol. 41, No. 4:1-72.

MEB. 0-36 Ay çocuklarda sağlık, bakım ve beslenme. (https://tegm.meb.gov.tr/dosya/okuloncesi/0-36ayliksaglikbakimeslenme.pdf) (Erişim tarihi 05.10.2023)

MEB. (2013). 0-36 Ay çocukları için eğitim programı. (https://tegm.meb.gov.tr/dosya/okuloncesi/0-36program.pdf) (Erişim tarihi 12.02.2024)

O. Von Hofsten, C. Von Hofsten, U. Sulutvedt, B. Laeng, T. Brennen, S. Magnussen. Simulating newborn face perception. *Journal of Vision*, 2014; 14 (13): 16 DOI: 10.1167/14.13.16

ShichiDakh (2023). https://www.shichidakh.com/about-us/professor-makoto-shichida/ (Erişim tarihi 05.10.2023)

Selçuk, Z. (2000). Dikkat Eksikliği ve Hiperaktif Çocuklar, Pegem Yayınevi.

Şimşek, T. (2016). Okul öncesinde çocuk edebiyatı ve medya. Grafiker Yayınları.

Taylor, E., Rutter, M., Taylor, L. (1995). Syndromes of Attention Deficit and Overactivity, child and adolescent psychiatry; modern approaches. *Blackwell Science*, Oxford, 3:285-307.

Ülgen, Gülten. Algılama ve Eğitim. *Eğitim ve Bilim*, [S.l.], v. 8, n. 46, nov. 1983. ISSN 1300-1337. S.27-35. Erişim Adresi: https://egitimvebilim.ted.org.tr/index.php/EB/article/view/5775>. Erişim Tarihi: 12.02.2024

Yılmaz, N. (2003), Türkiye' de Okul Öncesi Eğitimi. Erken Çocuklukta Gelişim ve Eğitimde Yeni Yaklaşımlar. Morpa Kültür Yayınları.

Yörükoğlu, A. (1978). Çocuk Ruh Sağlığı. Türkiye İş Bankası Kültür Yayınları.

Weiss, G., (1996). Attention Deficit Hyperactivity Disorder, child and adolescent psychiatry, *Williams and Wilkins*, 2:544-563.