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REVIEW OF EARLY CHILDHOOD MAGAZINES IN TERMS OF SCIENTIST IMAGES: THE CASE OF CURIOUS KIDS

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Abstract:
This study aimed to examine the curious kids' magazine prepared, published, and sold by TUBITAK, a scientific and technological research institution of Turkey, in terms of the images of scientists it reflects. The data were collected by document analysis method within the scope of qualitative research approach and a total of 80 issues published between 2015-2021 were analyzed. In this process, the data containing text and visuals about scientists were evaluated using Newton and Newton's (1992) classification. It was examined separately by the researchers, taking into account each criterion in the evaluation list, possible differences were also compared. The results revealed that the images of scientists extracted from the magazine have begun to change positively in recent years. Children who follow this magazine can structure predominantly in minds of the scientist as regardless of gender, who dresses comfortably and appropriately for the nature of his work, uses interesting tools and equipment suitable for the nature of his work, although part of it is indoors, it is a person who mostly works outside, works as a team rather than individually, and most importantly, is happy with his work.

Keywords: scientist images, early childhood, curious kids, popular science, magazine

1. Introduction

Innovations in science and technology are increasing at such a rate that not only individuals who are consumers of this field, but also experts who are producers of this field cannot easily follow. However, raising individuals who can keep up with this rapid

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change and even manage it is among the common goals of all developed and developing countries. The issue of how to achieve this continues to be discussed by policymakers, especially educators and decision-makers in the field of education. For this purpose, it is seen that science and scientist curriculum studies for the early childhood period are started to be carried out (Altun & Yildiz Demirtas, 2013). Nevertheless, it is emphasized that children's understanding of scientific enterprise correctly from an early age is the most basic prerequisite for keeping up with the said change. In this context, it is expected that children will be able to maintain their scientific thinking skills with an investigative, exploratory, and questioning spirit bestowed upon them by nature, and develop images of science and scientists as desired. In support of this argument, many researchers also believe that children's natural and intrinsic motivation characteristics from an early age lead to both excitement and desire for science (Akman et al., 2003; Aktas-Arnas, 2007; Crowther et al., 2005; Guler & Akman, 2006). Preschool children are curious like scientists (Ayvaci & Yurt, 2016). In this respect, it is well known that children between the ages of 2-6, known as early childhood, are as curious as a scientist, willing to research, discover and learn and create new things (Buyuktaskopu et al., 2012; Holt, 1991).

Based on these reasons, research on the images of children towards science and scientists on the one hand, and how possible problems can be eliminated on the other, has been going on for nearly sixty years (Beardslee & O'Dowd, 1961; Dorkins, 1977; Mead & Metraux, 1957). Setting a career goal of being a scientist, understanding the relationship between science-technology-society correctly, and valuing the products of science is undoubtedly possible by having the right images, far from stereotypes, for those who produce it. However, in the study of Dorkins (1977) with 6th-grade students in the 1970s, it is remarkable that students see scientists from a negative perspective as introverted, poorly dressed, weak, cold, and mysterious individuals. Interestingly, Buldu (2006) found that male students drew only male scientists and female students drew only female scientists in a study conducted by considering the gender, age, and socioeconomic levels of students aged 5-8. Turkmen (2008), in his study on 286 5th grade primary school students, revealed that students think of scientists as male, white, elderly, and white-coat-wearing people.

Chambers (1983) observed that children had difficulty in expressing the scientist verbally and in writing, as a result of his 11-year study between 1966 and 1977 on when and how children comprehend the characteristics of scientists. To eliminate this problem, he developed the Draw-A Science Test [DAST] for the first time. He administered this test to a total of 4807 students aged 5-11 years in the United States, Canada, and Australia. As a result of this study, he categorized the following as the standard indicators of a scientist. These; (1) Labcoat (usually white) (2) Glasses (3) Scattered hair and beard (4) Symbols of research: Scientific instruments and all kinds of laboratory materials (5) Information symbols: Mostly books, cabinets with glass doors in which files are arranged (6) Technology: Computer, microscope, telescope (7) Related topics: Formulas, gradual classifications, words used by scientists, etc.

This test has been used in many studies on scientist images in Turkey, as in many other countries, and very similar results have been obtained with others (Ayvaci et al., 2016; Bozdogan et al., 2018; Camci, 2008; Güler & Akman, 2006; Kaya et al., 2008, 2013; Korkmaz & Kavak, 2010; Kucuk & Bag, 2013; Thomson et al., 2019; Ocal, 2007; Ozdemir & Ayvaz, 2020). Since the focus of this study is on early-stage children, only the studies for children of the relevant period are briefly summarized. Guler and Akman (2006) used DAST in their study with 330 children aged 6 years and revealed that the prominent symbols in the children's answers to the characteristics of scientists are lab coats, glasses, beards, and messy hair, books, and laboratory equipment. Ayvaci et al., (2013) conducted a study consisting of 68 children aged 48-72 months studying in two randomly selected kindergartens and measured children's perceptions of the concept of a scientist. The data was collected using the same test and in-depth interview technique. Based on the data obtained, themes were created and analyzed according to these themes. As a result of this study, it was found that most of the preschool children still portray the scientist as male, working in the laboratory, doing research and creating mixtures, using laboratory materials and computers, wearing aprons and glasses. Rawson and McCool (2014) analyzed 1656 scientists presented in non-fiction children's books using DAST-C and found that the scientists presented in the books had stereotypical features and were especially Caucasian men working alone.

It is noteworthy that in these three studies, in which early childhood children were selected, children continued to refer to points known as stereotypical images. As a result of these studies, it is emphasized that children's perceptions of science and scientists begin to form from the pre-school period (Ayvaci et al., 2013). Cermik (2013) argued that while children are trying to recognize and make sense of their environment at a young age, they encounter the concepts of science and scientist and form certain stereotypes during this period. In this state, information and communication channels have increased so much and information sources for children are more than ever before in history, such as television, social media, and even electronic books. It should be emphasized that they are still insisting on stereotypical images at a time when they are diversified. The first thing that comes to mind for early childhood children is the storybooks prepared for them and the scientist images in children's magazines, and the scientist characters in cartoons that are matched with childhood. Magazines are published periodically with rich visual and written content on subjects that may attract children's attention (Dedeoglu et al., 2011). They improve children’s artistic and aesthetic feelings by attracting their attention and allowing them to think and make comments (Coles & Hall, 1999; Sinar Cilgin, 2007; Yildiz & Karaca, 2020). Individuals, especially children, have high visual-spatial intelligence and do not easily forget something they see, it comes to mind that these materials can be the main source in the formation of images adopted by children. The fact that the perception of scientists that children create in their minds as a result of their experiences has a strong potential in terms of how they can produce solutions to the problems they encounter in their daily lives and, more importantly, to what extent they can turn to initiatives that include scientific studies in the coming years, makes the subject

an important need to study (Ozsoy & Ahi, 2014). It is also argued that various socio-cultural factors such as individuals' families (Tenenbaum & Leaper, 2003; Scott & Mallinckrodt, 2005), teachers and peers (Turkmen, 2008), and popular culture presented by the media (Steinke, 2005) has the potential to influence children's images of scientists. For this purpose, there are many studies in which many books or journals in early childhood are examined in terms of various subjects such as values, science concepts, social skills, family, child rights (Aksut, 2021; Dirican & Daglioglu, 2014; Ergin & Ozkan, 2021; Gonen et al., 2011; Kucuk & Kucuk, 2021; Pembegul, 2019, Olgundeniz, 2011; Turan & Ulutas, 2016). However, the fact that a study has been conducted to examine the figures of scientists in the content of the journals regularly followed by children in early childhood reveals the original value of the subject. The written and visual elements in these magazines are an important opportunity for children to gain knowledge, value, belief, attitude and et al. Turkmen (2008) and Ozgelen (2012) also argued that one of the main sources of students' visual images of scientists is scientists in written materials, especially textbooks.

The curious kids' magazine, which was published by the Scientific and Technological Research Institution of Turkey [TUBITAK] and aimed at early childhood is popular among them. This magazine, which is prepared to introduce children to science and to increase their sense of curiosity, is a thematic magazine prepared for children aged 3 and above. As stated in the information in the Get to Know Us section of the journal's website, it is a 32-page journal published on the 1st of every month since 2007. It has been prepared with the thought that the content of the magazine will be examined and read with the help and guidance of an adult. There are four fixed corners featured in each issue of the Curious Kids magazine: I'm So Curious, Let's Go to the Kitchen, Little Hands at Work, and Book… Game… Suggestion... On the pages of the magazine, some photographs and illustrations will stimulate children's feelings of exploration, research, and curiosity, and meet their learning needs.

This research aimed to determine what the scientist images are in the issues of the "Curious Kids" magazine published between 2015-2021 for the early childhood period and to what extent these images are included. In other words, how does it fit with the stereotypes image of the scientist in the literature with the images of scientists presented in the "Curious Kids" magazine question will be also answered? It is expected that the answer to this question will guide innovative studies to be planned to change the stereotypical scientist images of children.

2. Method

2.1 Model of the research

The document analysis method was used within the scope of the qualitative research approach in this study, which was carried out to examine the "Curious Kids" magazine published by TUBITAK in terms of values. Document analysis is the analysis of written

documents about the facts and events related to the subject in line with the purpose of the research (Yildirim & Simsek, 2008).

2.2 The sample

The sample of the research consisted of 80 issues (from 97th to 176) for the early childhood period published in 2015-2021, belonging to the monthly "Curious Kids" magazine prepared by TUBITAK. The reason why "Curious Kids" magazine was selected and included in the research is that Turkey's first monthly pre-school science magazine is regularly published at the beginning of each month, is still on sale, and is easily accessible (Kucuk & Kucuk, 2021). The fact that the total circulation of the Curious Kids child magazines, prepared for children by the TUBITAK Popular Science Magazines Directorate in Turkey, is 250,000, reveals that they are followed by a large number of children (Pembegul, 2019). On the other hand, Curious Kids magazine, published for early childhood, was chosen as the data source for the current research, since it is at the top of the best-seller list, regardless of category, when compared to its counterparts (Aksut, 2021). In the journal, the data of the last seven years have been examined based on the closest years to the current time, with the thought that they will be more comprehensive in terms of reliability and validity.

2.3 Data collection and analysis

A total of 80 issues of TUBITAK curious kids magazine, which is shared also electronically, have been published in pdf format since 2015 (see https://e-dergi.tubitak.gov.tr/yillaraGoreArsiv.htm) were reached. The images and texts in these magazines, in which the scientists were introduced, were scanned by the first researcher and collected in a separate file including the numbers and page numbers. In this way, a total of 40 text or visual materials were reached. After these materials were numbered, they were analyzed independently by both researchers and using Newton and Newton's (1992) classification. In this classification, scientist images are given in two dimensions as figure features and background features. However, background features are classified under two headings: Scientific knowledge and study, and involvement in the scientific process. Based on this classification, a total of 40 materials in the Curious Kids magazine were examined in terms of gender and physical characteristics in the dimension of figure characteristics, and in terms of working style, working environment, and research symbols in the dimension of background characteristics. In addition, the researchers included facial expressions as a psychological dimension. Data analysis was given collectively as frequency and percentage values in the tables, the analysis of the sample materials that constitute the source for each analysis is explained separately. The images that both researchers could not agree on despite their long consultations were marked as uncertain (for example see facial expressions in Table 5). In this way, the reliability of the data analysis was confirmed.

3. Results

The analyzed images of the scientists were first given collectively according to each magazine's issue and then tabulated separately every year. The journal issues in the tables show the relevant months, the 1 refers to the January issue of that year.

3.1. Figure features of scientists

Table 1: Gender distribution of scientists represented in Curious Kids journal

Gender	Year-Issue																						f	%	Sample Figure No
	2015			2016				2017			2018			2019				2020			2021					
	2	3	7	3	5	7	8	1	2	8	6	8	9	3	5	7	12	1	2	8	1	7	8			
Female	+	+	+	+	+	+	+	+	+	+	+	+	+			+		+		+	+	+	+	19	47,50	1
Male	+	+	+	+	+	+	+		+		+	+	+	+		+		+	+	+	+	+		18	45,0	2
Uncertain								+							+		+							3	7,5	
Total	6			8				5			6			5				5			5			40	100	

Based on Table 1, it is revealed that the gender distribution of the scientists in the magazine between 2015 and 2021 is very close to each other. In addition, a minimum of three to a maximum of four images of scientists are included for each year.

Figure 1: The year 2015, issue of March

Figure 2: The year 2021, issue of January

Table 2: Distribution of scientists' physical properties represented in Curious Kids journal

Physical properties	**Year-Issue**																								**f**	**%**	**Sample Figure No**
	2015			2016				2017			2018			2019				2020			2021						
	2	3	7	3	5	7	8	1	2	8	6	8	9	3	5	7	12	1	2	8	1	7	8			
In ordinary casual clothes		+		+		+	+		+		+	+	+					+				+	+	11	17,46	3
With hat	+		+	+		+	+				+							+			+			8	12,69	4
With glasses								+	+		+							+			+		+	6	9,52	5
In diving suit										+	+	+								+		+		5	7,93	
Coat-beret					+			+			+										+			4	6,34	
Snowsuit					+			+										+			+			4	6,34	
Lab Coat		+										+	+					+						4	6,34	6
Backpacking		+		+		+	+																	4	6,34	
With shorts						+					+											+		3	4,76	
With scarf						+												+						2	3,17	
Hiking outfit-with vest	+			+																				2	3,17	
With vest			+	+																				2	3,17	
Helmet								+																1	1,58	
Life jacket													+											1	1,58	
In a suit														+										1	1,58	
With turban																			+					1	1,58	
Bearded																			+					1	1,58	
scarf-scarf																			+					1	1,58	
Rain suit			+																					1	1,58	
With Headphones			+																					1	1,58	
Total																								63	100	

Based on Table 2, it turns out that the physical appearances of the scientists represented in the Curious Kids magazine are mostly wearing glasses and only one of them is wearing a laboratory coat and a beard, in a natural attire suitable for their work area. In these, it is also particularly important that scientists are depicted in casual, unconventional clothing (17,46%).

Figure 3: The year 2016, issue of March

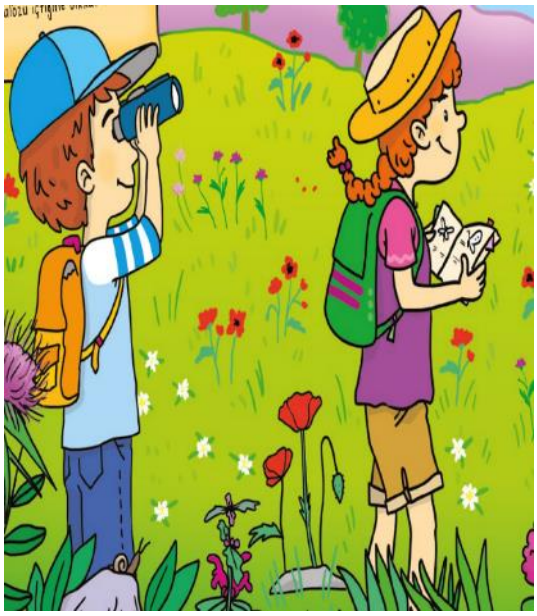

Figure 4: The year 2016, issue of July

Figure 5: The year 2020, issue of January

Figure 6: The year 2018, issue of September

3.2. Background properties

Table 3: Distribution of scientists' research symbols representing in Curious Kids journal

Research symbols	Year-Issue																							f	%	Sample Figure No
	2015			2016				2017			2018			2019				2020			2021					
	2	3	7	3	5	7	8	1	2	8	6	8	9	3	5	7	12	1	2	8	1	7	8			
Pen-paper	+	+		+		+		+		+		+						+	+	+				10	14,92	7
Camera	+	+		+		+					+	+						+		+				8	11,94	8
Magnifying glass		+		+											+			+						4	5,97	9
Microscope		+										+	+											3	4,47	10
Meter											+									+		+		3	4,47	

Computer				+							+							+						3	4,47	
Books											+												+	2	2,98	
Brush											+							+						2	2,98	
Telescope												+											+	2	2,98	
Binoculars	+					+																		2	2,98	
Flashlight											+									+				2	2,98	
Spade																		+			+			2	2,98	
Wheelbarrow											+													1	1,49	
Pencil-drawing board											+													1	1,49	
Spatula											+													1	1,49	
Ruler											+													1	1,49	
Trowel											+													1	1,49	
Photo measuring paper											+													1	1,49	
Underwater microscope												+												1	1,49	
Fishing Net-line													+											1	1,49	
Jar													+											1	1,49	
Dropper													+											1	1,49	
First radio														+										1	1,49	
Caliper																		+						1	1,49	
Hammer etc																		+						1	1,49	
stick-bag																				+				1	1,49	
A robot that examines the ice bottom																					+			1	1,49	
fishing net			+																					1	1,49	
plastic bag				+																				1	1,49	
Tweezers				+																				1	1,49	
icebreaker ship					+																			1	1,49	
Radar					+																			1	1,49	
submarine					+																			1	1,49	
Katalog						+																		1	1,49	
Watchtower							+																	1	1,49	
Total																								67	100	

Based on Table 3, the research symbols used by scientists reflected in the Curious Kids magazine are mostly pen-paper, camera, magnifying glass, microscope, meter, and computer. However, other symbols were represented only once or twice, although they were very diverse by the nature of the scientific study.

Figure 7: The year 2017, issue of August

Figure 8: The year 2015, issue of March

Figure 9: The year 2019, issue of May

Figure 10: The year 2015, issue of March

3.3. Getting involved in the science process

Table 4: Way of working distribution of scientists represented in Curious Kids journal

Way of working	Year-Issue																							f	%	Sample Figure No
	2015			2016				2017			2018			2019				2020			2021						
	2	3	7	3	5	7	8	1	2	8	6	8	9	3	5	7	12	1	2	8	1	7	8			
Group	+	+	+	+	+	+	+	+	+		+	+	+		+	+	+	+		+	+	+		19	47,50	11
Individual		+	+	+		+		+		+	+	+		+				+	+	+	+	+	+	15	37,50	12
Unknown																								6	15,00	
Total																								40	100	

Based on Table 4, 37.50% of the scientists represented in the Curious Kids magazine were mostly working with a group (47.50%), while 37.50% were working on their own,

whereas a group of 15% had no visuals. It turned out that there was no information about whether it was done with a group or with a group.

Figure 11: The year 2018, issue of June

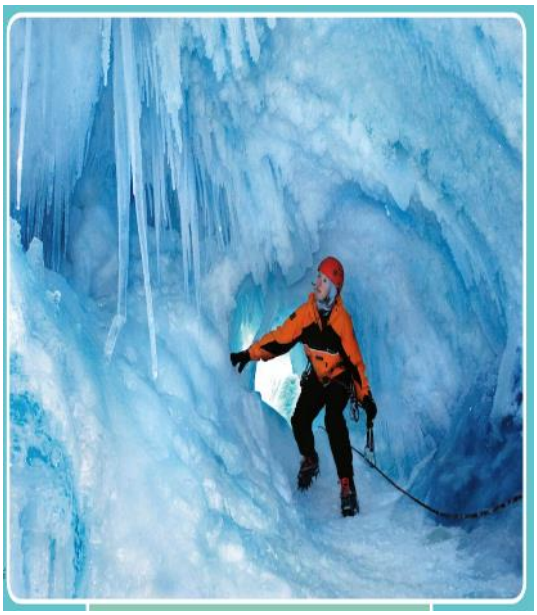

Figure 12: The year 2017, issue of January

Table 5: Work environment distribution of scientists represented in Curious Kids journal

Work environment	Year-Issue																							f	%	Sample Figure No
	2015			2016				2017			2018			2019				2020			2021						
	2	3	7	3	5	7	8	1	2	8	6	8	9	3	5	7	12	1	2	8	1	7	8			
Outdoor	+	+	+	+	+	+	+	+	+	+	+	+	+		+	+	+	+		+	+	+	+	21	52,50	13
Interior		+									+	+	+	+				+	+					7	17,50	14
Unknown																								12	30	
Total																								40	100	

Figure 13: The year 2017, issue of February

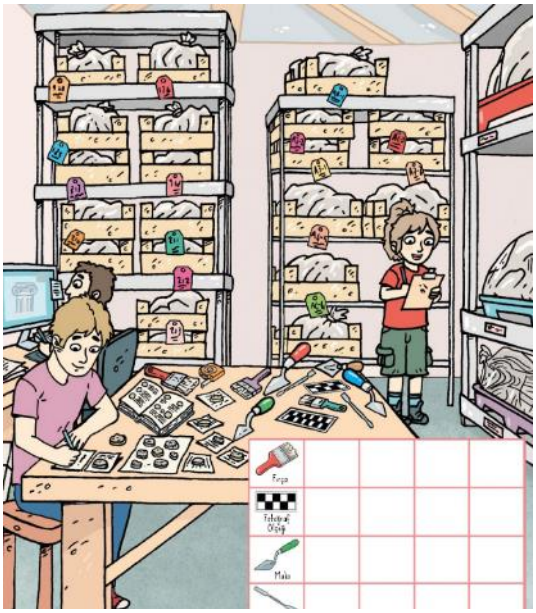

Figure 14: The year 2018, issue of June

Based on Table 5, it was revealed that most of the scientists represented in the Curious Kids magazine were working outdoors (52.30%), whereas 17.50% were reflected while working in the indoor environment. However, in 30% of the text materials examined, it is not possible to distinguish whether the working environment is internal or external.

3.4. Face expressions

Table 5: Face expression distribution of scientists represented in Curious Kids journal

Face expressions	Year-Issue																								Sample Figure No
	2015			2016				2017			2018			2019				2020			2021			f	%	
	2	3	7	3	5	7	8	1	2	8	6	8	9	3	5	7	12	1	2	8	1	7	8			
Happy	+	+	+	+	+	+	+	+	+		+	+	+			+	+	+			+	+	+	18	45,00	15
Careful	+	+		+							+	+	+							+		+		8	20,00	16
Pleasant					+									+					+		+			4	10,00	17
Proud					+									+							+			3	7,50	18
Uncertain										+	+				+									3	7,50	19
Surprised												+						+						2	5,00	
Admired								+																1	2,50	
Normal	+										+													1	2,50	
Total																								40	100	

Figure 15: The year 2020, issue of January

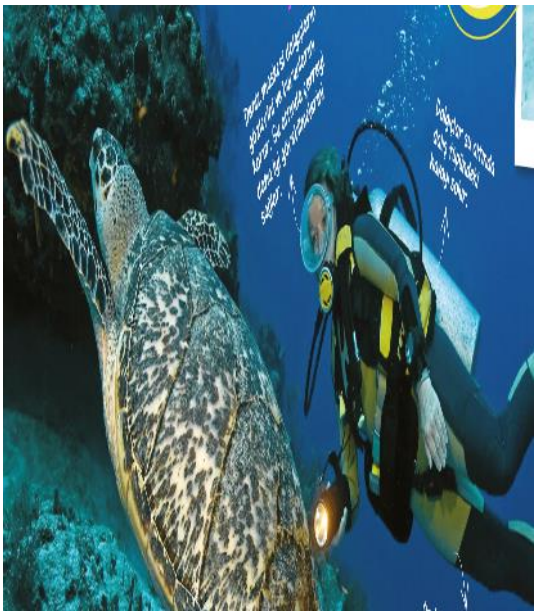

Figure 16: The year 2020, issue of August

Figure 17: The year 2020, issue of February

Figure 18: The year 2019, issue of March

Figure 19: The year 2018, issue of June

Based on Table 5, the facial expressions of most of the scientists represented in the Curious Kids magazine were happy (45.00%), distracted (20.00%), joyful and proud (7.50%). However, researchers could not reach a consensus on the facial expression of the scientist from the three materials and these are classified as uncertain as explained in the method section.

4. Discussion

From early childhood to higher education, stereotypical images have been found in many studies conducted on different age groups and since the 1950s on the determination of

scientist images in the world (Barman, 1999; Bowtell, 1996; Farland, 2003; Jackson, 1992; Koren & Bar, 2009; Milford & Tippett, 2013; Rodari, 2007; Scherz & Oren, 2006; Song & Kim, 1999; Song et al., 2011) and from the early 2000s in Turkey (Akcay, 2011; Ayvaci et al., 2016; Buldu, 2006; Camci-Erdogan, 2013; Demirbas, 2009; Guler & Akman, 2006; Harman & Seker, 2017; Kara & Akarsu, 2013; Kaya et al., 2008; Kucuk & Bag, 2012; Nuhoglu, H., & Afacan, 2011; Ocal, 2007; Oguz-Unver, 2010; Togrol, 2000; Turkmen, 2008; Ucar, 2012; Yontar-Togrol, 2013). Very few of these studies have been conducted with preschool children (Ayvaci et al., 2016; Buldu, 2006; Guler & Akman, 2006). On the one hand, with a thorough examination of the sources of these images, on the other hand, some attempts to change these stereotypical images have started (Altun & Yildiz Demirtas, 2013). In this process, many variables can be considered as the source of the images in question (Aggul-Yalcin, 2012; Farland-Smith et al., 2014; Erten et al., 2013; Scott & Mallinckrodt, 2005; Ozgelen, 2012; Tenenbaum & Leaper, 2003; Turkmen, 2008). Among these, families, teachers and peers, televisions, stories and textbooks, popular science magazines, and cartoons take the lead. However, a limited study has been conducted so far, examining the written and visual materials representing science and scientists in the textbooks for the source of the problem (Karacam et al, 2014; Lacin-Simsek, 2011). On the other hand, there is still a gap in the content analysis of popular science journals, which are among the most used materials in early childhood. For this purpose, in the present study, the curious kids' magazine published and distributed by TUBITAK in Turkey was examined. In this way, texts and images that refer to science and scientists in their content were examined in terms of potential scientist images that children can create in their minds.

For this purpose, by examining the materials in question, it was tried to identify the scientist that the children who regularly follow this magazine can construct (when other conditions are kept constant). Based on the data produced for this purpose, it has been revealed that being a woman or a man does not reveal a privileged situation about being a scientist, that is, a scientist can be a woman or a man (see Table 1). This result is quite different from research based on book reviews with other age groups in the subject area (Karacam et al., 2014) and measurement results in the field (Bowtell, 1996; Farland, 2003; Jackson, 1992). Similarly, children cannot remove stereotypical physical appearance images from the magazine examined in this study, which is often mentioned in other studies. The fact that the scientists examined in this research wear clothes suitable for the nature of their work and the subject of study, and even that the majority of them are depicted with normal clothes, is important for children to form an accurate image that they are not a privileged group until they come to their clothes, as society thinks, but on the contrary, they live like normal people (see Table 2).

In terms of background features, many studies in the literature contain research symbols that only remind science and refer to science studies (Kaya et al., 2008; Ucar, 2012; Yontar-Togrol, 2000, 2013). However, to attract children's interest in science and focus on a scientific career goal in early childhood, they need to see how the tools and materials that interest them in their normal lives and accordance with the nature of their

age are used in scientific studies (Kucuk & Bag, 2012). In this context, the use of information and research symbols in the current research, which differs significantly from the others and is suitable for the nature of the scientific study, was found positive (see Table 3). From this point of view, it is possible for a child to look at the issues of the magazine examined, to get to know different scientific fields from natural sciences to social sciences and health sciences and to engage in a scientific effort at an early age to use a tool that interests them. Similarly, children are naturally inclined to act in groups rather than individually (Over, 2016). In this respect, they tend to place more value on collective initiative rather than individual initiative. At this point, it should not be forgotten that science is a team job and that good product are produced by good working teams, and a suitable scientist teamwork image should be included in the journals. The image of scientists working with groups mostly emerged from the data produced to support this situation (see Table 4).

Again, children are more motivated towards the external environment rather than the internal environment and they enjoy doing activities outside of the school rather than inside (Kucuk & Yildirim, 2020). In this respect, while the images of scientific enterprises and scientists are constructed by children, external environments should be depicted as data collection places, although it is suitable for the nature of the work. The data produced in the present study must describe that scientists work largely in the external environment (see Table 5). In this respect, too, the present study is quite different from others in which it is reflected that scientists work intensely indoors (Karacam et al., 2014). Finally, children are focusing on people's faces and trying to understand emotions, thanks to their good cognition and hearing (Over, 2016). From this point of view, they can easily understand whether a person is satisfied with his work or not. At this point, it is important for children who will turn to science to recognize scientists as people who are happy and take pleasure in their work. For these reasons, the images of scientists examined in the present study are predominantly happy and enjoying their work (see Table 6). This situation is important in terms of enabling children to turn to science as a job that makes them happy in their career choices. This critical dimension has just begun to be included in the studies of scientist images, and in the study conducted by Harman and Seker (2017), it was revealed that the majority of 5th-8th grade students drew scientists with a happy facial expression.

5. Conclusion

In the children's magazine examined in this research, the written and visual materials representing the science and the scientist in the curious kids will be structured predominantly in the minds of the scientist, regardless of gender, who dresses comfortably and appropriately for the nature of his work, uses interesting tools and equipment suitable for the nature of his work, although part of it is indoors, it is a person who mostly works outside, works as a team rather than individually, and most importantly, is happy with his work. The fact that this result differs significantly from

other studies in the field is probably a result of the journal's editorial board giving particular value to this work. In this context, it is necessary to examine the images of scientists in this direction in other publications that are widely used in early childhood, based on the knowledge that images of scientists begin to form from an early age (Ayvaci et al., 2016; Kucuk & Bag, 2012). In a final word, in future studies, it is important to measure the images of scientists of children who regularly follow the curious kids' magazines and compare them with the current research results.

Conflict of Interest Statement

The authors declare no conflicts of interests.

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Appendix: Source of Sample Figures

Figure 1. Meraklı Minik Dergisi [Curious Little Magazine] (2015). 99, p.19
Figure 2. Meraklı Minik Dergisi [Curious Little Magazine] (2021). 169, p.8
Figure 3. Meraklı Minik Dergisi [Curious Little Magazine] (2016). 111, p.24
Figure 4. Meraklı Minik Dergisi [Curious Little Magazine] (2016). 115, p.24
Figure 5. Meraklı Minik Dergisi [Curious Little Magazine] (2020). 157, p.5
Figure 6. Meraklı Minik Dergisi [Curious Little Magazine] (2018). 141, p.20
Figure 7. Meraklı Minik Dergisi [Curious Little Magazine] (2017). 128, p.23
Figure 8. Meraklı Minik Dergisi [Curious Little Magazine] (2015). 99, p.18
Figure 9. Meraklı Minik Dergisi [Curious Little Magazine] (2019). 149, p.13
Figure 10. Meraklı Minik Dergisi [Curious Little Magazine] (2015). 99, p.19
Figure 11. Meraklı Minik Dergisi [Curious Little Magazine] (2018). 138, p.9
Figure 12. Meraklı Minik Dergisi [Curious Little Magazine] (2017). 121, p.17
Figure 13. Meraklı Minik Dergisi [Curious Little Magazine] (2017). 122, p.24
Figure 14. Meraklı Minik Dergisi [Curious Little Magazine] (2018). 138, p.10
Figure 15. Meraklı Minik Dergisi [Curious Little Magazine] (2020). 157, p.4
Figure 16. Meraklı Minik Dergisi [Curious Little Magazine] (2020). 164, p.18
Figure 17. Meraklı Minik Dergisi [Curious Little Magazine] (2020). 158, p.5
Figure 18. Meraklı Minik Dergisi [Curious Little Magazine] (2019). 147, p.26
Figure 19. Meraklı Minik Dergisi [Curious Little Magazine] (2018). 138, p.8

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