

EXAMINING THE EFFECT OF BELIEF IN GOD ON CHILDREN'S COMPREHENSION OF SCIENTIFIC CONCEPTS AND RELIGIOUS CLAIMS

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Abstract

Religious instruction is not included in the mandatory curriculum in Slovenian public schools (students may study about religion and ethics in the elective course Religion and Ethics), nor are scientific subjects especially emphasized or highlighted. However, many students participate in a variety of (often extracurricular) activities where they learn about religion, are exposed to it, and are given religious statements as truth. The comparison between the scientific explanation and conception of the universe and the explanation in terms of the religious idea is not made evident to these students. Therefore, a research study was conducted to investigate if participating in religious events and activities affected students' ideas about how the world came to be. A survey was carried out involving 80 participants - 49 women and 31 men. The participants ranged in age from 7 to 17, with the majority being between the ages of 10 and 11; a total of 74 people provided valid data. A Likert scale-based online questionnaire was used to gather the data. The Mann-Whitney U test and Kruskal-Wallis test were used to examine the results. Statistically significant differences between participants based on whether they believe in God or not and how often they went to church were found for some statements. A statistically significant difference in the question of the influence of gender in agreeing with the statements was also detected.

KEYWORDS: *belief in God, education, extra-curricular activities, religion, understanding of world*

Introduction

The development of humanity and communities stretches far back into the past. It is a fact that development began with the emergence of the first humans and the

early people who had to adapt and live with nature and its resources. From the very beginning, they were constantly driven by their resourcefulness, which enabled them to constantly improve their work and tasks. Based on this, development began and has persisted until today, continues in the present, and will continue into the future. Humans will always seek new ways to evolve, simplify and enhance their existence, and strive for a better way of living (Zemljak, 2019).

Origin and Definition of Science

Science and scientific disciplines have been part of humanity since ancient times. It could even be argued that the origin of science coincides with the emergence of humans, and science develops alongside human progress. Initially, we will focus on the question of what science actually is and where it originates. Specifically, we will concentrate on the origin of modern science (which will also be the topic of further discussion and research). However, it is important to note that scientific disciplines were already practiced in ancient and medieval times. In the past, Aristotelianism (named after the philosopher Aristotle) prevailed. During this period, the first theories in physics, biology, and astronomy were developed. The origin of science as we perceive it today, known as modern science, occurred between 1500 and 1750. This period is now referred to as the »scientific revolution«, which took place primarily in Europe (Okasha, 2002).

During these periods and beyond, numerous enthusiasts worked on developing various theories and seeking explanatory frameworks for different events. One such example is the Copernican Revolution, which began with the theory that the Sun is the center of the solar system and that the planets orbit around it. However, Copernicus was not the only figure involved in these pursuits. Many others conducted research and made contributions, including individuals such as Kepler, Galileo, and later Newton and Einstein. It was with the work of the latter two that the concept of the »scientific revolution« became firmly established (Okasha, 2002). Other authors, such as Chalmers (2013), also highlight that the scientific revolution began after 1500 and that modern science emerged in the 17th century, when observable facts started to be regarded as fundamental discoveries. However, it is important to note that the understanding of science has evolved over time, and for a long time, science relied on the authority of individuals.

The key is how we define science today. Veber (2009) highlights an interesting fact that some perceive science as something that can be observed, seen, or even demonstrated to others in the literal sense of the word. Furthermore, it is mentioned that science often appears as something that can be touched or felt. This suggests that

science, in this context, could be considered as a physical phenomenon or a collection of various phenomena. Some also include means of achieving goals, thoughts and thinking, experiences, emotions and aspirations, theory, empirical and a priori work, authenticity, understanding, and even errors as part of science. Based on scientific thinking, Veber draws the conclusion that such »thinking is methodically organized autonomous conviction«, and consequently, science is a »system of methodically organized autonomous convictions« (Veber, 2009, p. 65).

Science, as a whole, is difficult to define. Coyne (2018), for example, suggests that for some, science is simply the activity of a professional scientist, with scientists being imagined as individuals in white lab coats. Others believe that science is the knowledge shaped and conveyed by scientists, encompassing facts that extend into the realm of technology as well. Coyne (2018) defines science as a method for understanding how the universe actually works, with the term »universe« encompassing matter, human bodies, behavior, cosmos, and so on (Coyne, 2018).

Indeed, dictionaries can provide meaningful definitions of science. According to the Cambridge Dictionary, science is defined as the careful study of the structure and behavior of the physical world, using methods such as observation, measurement, and experimentation. It also implies that science involves the development of theories that describe the acquired results (Cambridge Dictionary, n.d.). It involves a correspondence with reality and, consequently, accuracy, correctness, and validity of both statements and thoughts.

Since science is exact, it is important for scientists to adhere to specific methods. Coyne (2018) states that it is crucial for everyone involved in the world of science to consider the following:

1. »Falsifiability«: Falsifiability, in scientific research, is a necessary criterion in the pursuit of truth. It implies that a theory is valid only if there are methods available to demonstrate its falsehood, thereby indicating that the theory is incorrect.
2. »Doubt and criticality«: Every scientist must pose fundamental questions when discovering a new theory or obtaining results. It is essential to foster curiosity, exploring alternative explanations or findings that may challenge the theory. Scientists should be critical of their own work and contemplate potential errors or flaws in their research.
3. »Replication and quality control«: Through repeated replications of experiments or studies conducted by other scientists, we obtain increasingly robust confirmation of the existence of a theory or the validity of results. Replication and peer review contribute to the control and verification of scientific quality.

4. »Parsimony«: Ignoring irrelevant factors or elements in research is important. The principle of parsimony emphasizes the economy of explanations and the avoidance of unnecessary complexity in scientific inquiry.
5. »Embracing uncertainty«: Some questions lack definitive answers, resulting in inherent uncertainty. Acknowledging this uncertainty drives progress in the scientific field. Additionally, certain questions may currently remain unanswered, and it is uncertain whether humanity will ever discover suitable answers.
6. »Collectivism«: The significance of scientists working according to consistent criteria and rules worldwide is paramount. Collaboration, shared knowledge, and adherence to established standards promote the advancement of science as a collective endeavor.

Origin and Definition of Religion

Similarly to defining science, it is challenging to formulate a concise definition of religion. This difficulty arises primarily from the fact that there are numerous different religions known, making it challenging to create a definition that satisfies all of them.

Due to the multifaceted nature of religion, encompassing various aspects, some of which are considered non-religious, it becomes difficult to establish a foundational definition of religion. Religion also involves diverse motivations, such as communal gathering, shared meals, discourse on the nature of the universe, and more (Dow, 2007).

Religion can be sensibly conceived as a designation of an abstract category. This category encompasses various human behaviors, and categorical functions are associated with it. For instance, sports, art, language, economy, and others are examples of categorical functions used to classify human behavior. Similarly, the term »religion« can be employed as one of the categories of human behavior. This implies that religion is composed of recognizable human motivations. Most religions, although they possess distinct characteristics, involve concepts of supernatural agents, ritual activities, human destiny, particularly after death, morality, the order of nature and the universe, etc. In most religions, it is also important to consider how individuals should behave and think in the world they inhabit (Jensen, 2019).

Based on the presented information, we can formulate a sort of definition that serves as a foundation for understanding religion. (Cambridge Dictionary, n.d.) defines religion as behavior or conduct that indicates a belief in God, gods, or other supernatural forces. It also highlights obedience to gods or their worship and the performance of rituals.

Coyne (2018) states that from such a definition, three things can be extracted:

1. »Theism« (God intervenes in the world and implements His will through worship, obedience, and rituals. In doing so, God not only observes but also judges humans).
2. »Moral system« (human actions or behavior receive approval or disapproval from God - this is expressed by God as a supernatural entity).
3. »Moral code« (the belief that God directly influences humans and that they are in a kind of personal relationship with Him).

Religion can be a concept of culture that is generally easy to use but very difficult to precisely define. Humans are generally capable of recognizing when other people engage with religion or find it important, while scientists have greater difficulty in defining it. This is likely due to the fact that religion is often seen as a human activity that is typically accepted within its own reality, a reality that it creates for itself. Humans are capable of seeing the logic in everything that follows once they accept the existence of any myth, god, spirit, and ultimately supernatural power. The problem arises when this cannot be confirmed through direct (scientific) observation. It is important for scientists to understand religion. They can understand it as the complex functioning of the human brain, which does not directly respond to the reality of the world around us, a reality that can be observed and explained. Therefore, scientists must be aware that in understanding faith, they are primarily exploring why people do and think what they do and think in the context of religion, rather than understanding the causes of such behavior as myth (Dow, 2007).

(In)compatibility of Science and Religion

The existence of God is a fundamental belief in religion. Based on the statement above, we can conclude that it pertains to a view on reality. This view forms a crucial component of faith. Consequently, one could infer that the existence of God is a fact (Coyne, 2018). However, whether the scientific community would agree with such reasoning is a question to consider.

Science and religion are capable of mutual tolerance and are often able to coexist peacefully. However, it remains challenging to envision a scenario where science and religion operate on shared beliefs. The question arises as to whether they can adapt enough to reach consensus or harmony. According to Coyne (2018), this is unlikely due to their fundamentally »different methods of acquiring knowledge about reality, diverse ways of assessing the reliability of that knowledge, and arriving at contrasting conclusions about the universe and its origins« (Coyne, 2018, p. 103). The core issue arises from the fact that the knowledge conveyed by religious beliefs is not fully aligned with

the knowledge imparted by scientists through their empirical findings. Furthermore, different religions have varying beliefs and interpretations even for the same events.

The second key problem lies in the methods used. Religions employ methods for their inquiries that are incompatible and also unhelpful for understanding the reality around us (Coyne, 2018). This line of reasoning leads us to the conclusion that science and religion are fundamentally incompatible.

The example of incompatibility between science (and scientific findings) and religious beliefs arises from a simple case associated with the story of Adam and Eve. The Christian doctrine states that original sin originated from the transgression of Adam and Eve. It is considered the fundamental sin, which Jesus took upon himself. Each individual is redeemed from the stain of original sin by accepting Jesus as the savior. However, science has refuted this theory regarding the existence of the first humans, specifically Adam and Eve. Our species was not created instantaneously and through a singular act of creation; rather, humans evolved from common ancestors with chimpanzees who lived over 6 million years ago. Moreover, discoveries in the field of evolutionary genetics have revealed that the human population could not have been as small as two individuals for the development of such proportions to occur (Coyne, 2018; Wood, 1996). This example provides an interesting insight into the differences between science and religion. Science acquires information through research and facts, while religion and its belief in the creation of the world are based on the writings of apostles, which originated from their beliefs, thoughts, and convictions.

Nevertheless, there is research to show that religion and science can coexist. Fides et ratio (1998) stresses the coexistence between faith and reason. In doing so, it alludes to the fact that a child's faith in God does not preclude the understanding of scientific truths, but rather complements it and promotes a broader understanding of the world. Teaching children about the interconnectedness of science and religion thus even increases their appreciation of both fields (Walther, 1992). Similarly, Slezák (1996) and Farouki (1996) suggest that scientific inquiry and religious belief can also coexist, as children who are able to hold religious beliefs also accept scientific concepts without conflict.

Compatibility of science and religion in the school environment

The origin of scientific thinking is the result of epistemological understanding, which begins with children at around 4 years of age. At this age, the claims generated by the human mind can differ from the reality of the world the child lives in. It is important to note that children compare the results of their thinking with the reality around them. The crucial issue is that children at this age struggle with the source

of knowledge, as they combine a hypothesis that makes an event likely to have occurred with evidence that the event actually happened as their source of information. This indicates the development of mastery of epistemological understanding, which is considered by scientists as the foundation for the development of scientific thinking. Therefore, children are capable of controlled coordination of theory and evidence (Kuhn & Pearsall, 2000). The Slovenian educational system assumes the inclusion of children in the educational process at the age of 6. This means that children already have the developed ability for controlled coordination of theory and evidence. The key factor is their perspective on certain statements related to science and religion. Upon closer examination of the Slovenian school curriculum, it can be concluded that the Slovenian educational system does not directly include religious content in the school curriculum. This means that students are not exposed to subjects that are partially or fully based on religious content and beliefs. Some exceptions are certain private schools and the autonomy of teachers. Therefore, most children encounter religious content in their home environment (based on the beliefs of parents, grandparents, relatives, etc.) and through extracurricular activities (religious education, scouting, camping, various religious gatherings, etc.).

Reiss (2013) identified two areas in his research where he believes it would be meaningful to incorporate religious content into education. The first area is teaching about the nature of science, and the second area is evolution. He argues that including religious perspectives in these topics is important because it would help students better understand why certain findings are significant for scientific understanding while others are not. Similarly, some liberal religious leaders argue that it is possible to reconcile the theory of evolution with faith and religious beliefs. As a result, they do not oppose natural science education (Blancke et al., 2012).

Some scientists, religious leaders, philosophers, etc., emphasize the importance of a proper understanding of science within educational frameworks. They believe that students should be given assurance that the presented theories do not directly threaten their religious beliefs. Therefore, there are ways to understand the theory of evolution that do not conflict with an individual's faith, including students. Teachers can assist students by providing them with experiences and theoretical perspectives that motivate them to reconcile their scientific knowledge with their religious beliefs without jeopardizing either (Blancke et al., 2012).

Research Problem

Human beings have always been part of nature. They have lived with and adapted to the gifts and challenges of nature. They have encountered various natural phe-

nomena and hazards such as earthquakes, storms, and others, which in the past were mostly attributed to the supernatural without thorough exploration or explanation. These occurrences were seen as punishment by a »higher power« for their actions. On the other hand, people believed that if they behaved in certain ways, nature would not punish them, but rather elevate them. Today, with the progress of human development, we understand both cases separately - science explaining the former and belief addressing the latter. However, we still experience both aspects. The understanding of development and belief has evolved, and we now speak of science and religion. Both disciplines are part of our daily lives and also have a place within the educational sphere. The crucial question then arises: how do students perceive science and religion, and to what extent are they exposed to both during their education?

The fact is that students are exposed to various information and perspectives on the world around them. In the school environment, they acquire information that shapes their knowledge. In the media, they encounter diverse information, some of which may be untrue. In their home environment, they are exposed to the opinions of the people they live with, and the same applies to interactions with friends. To some extent, they also receive information related to religion and belief in their daily lives, especially if they are actively involved in extracurricular activities organized by religious groups. Understanding the relationship between faith, scientific understanding, and religious claims is an important topic, particularly in younger age groups. This field raises a range of questions about the influence of religion on a child's cognitive thinking. Therefore, it is crucial to understand if and how religion affects a student's ability to comprehend and accept scientific facts. It is also important to comprehend how religion influences a child's perception of religious claims in the context of scientific inquiry. Slovenian public education does not include the study of religious subjects within the mandatory curriculum (students can become acquainted with religious topics through elective subjects like »Religion and Ethics«). Similarly, scientific topics are not emphasized or specifically highlighted. However, many students are involved in numerous (usually extracurricular) activities where they learn about religious themes and receive education on religion, and where religious claims are presented to them as facts. The issue is that these students lack a clear boundary that would compare scientific explanations and the understanding of the world from the perspective of religious interpretation. Hence, a research study was conducted to investigate whether participation in religious activities and events influences children's understanding of the origin of the world. The study involved 80 participants, and data was collected through an online questionnaire based on Likert scale questions.

Research Focus

The aim of the research was to determine how belief influences students' perception of scientific findings and religious claims in the Slovenian school environment, considering that the school curriculum does not directly include religious content and students mostly encounter it in other forms (mostly through extracurricular activities and exposure to religious content in their home environment). We believe that students can be exposed to religious content in their everyday lives, and therefore, they may understand or perceive the world in accordance with religious teachings. However, in education, they receive information and definitions that are mostly the result of scientific research and findings. To investigate the effects of religious content on the perception of scientific findings, the following hypotheses were formulated:

- Hypothesis 1: Belief in God influences the perception of scientific findings, as students who have stronger beliefs are less likely to believe in scientific findings.
- Hypothesis 2: The frequency of participation in religious activities (such as attending religious services) influences the perception of scientific findings, as students who participate more frequently in religious activities are less likely to believe in scientific findings.
- Hypothesis 3: There is a statistically significant difference in the interpretation of religious and scientific statements between genders.

Methodology

Sample and Sampling

The research was conducted in December 2022. For the purpose of the study, a questionnaire was designed. The students completed the questionnaire using an open-source survey design and data collection application called 1ka.si. The questionnaire was completely anonymous, and the students were informed about this before starting to respond. Randomly selected students from different social backgrounds and various primary schools were invited to participate in the survey. The study involved 80 individuals, of whom 49 were female (61.25 %) and 31 were male (38.75 %). The participants ranged in age from 7 to 17 years, with the majority being 10- and 11-year-olds. Valid data were obtained from 74 individuals.

Instrument and Procedures

For the purpose of the research, a custom questionnaire was developed. Cronbach's alpha is .752, which indicates an acceptable internal consistency of the scale with this specific sample. The questionnaire consisted of two sections. The first section included general statements that formed the basis for the research analysis. The first statement in the first section was »I believe in God« (students had to express their attitude on a 5-point Likert scale, with options ranging from »1 - strongly disagree«, »2 – disagree«, »3 - neither agree nor disagree«, »4 – agree«, to »5 - strongly agree«). If students did not understand the statement, they had the option to select the response »I do not understand the statement«. This was followed by questions about how often they attend religious worship (with answer choices such as »every week«, »once a month«, »several times a year«, »only on holidays«, »almost never«, and »never«) and a question about their gender (female or male).

The second part of the questionnaire consisted of 12 statements, with each pair of statements being diametrically opposed. This means that both statements referred to the same topic (e.g., human evolution), but one was formulated based on scientific findings while the other was based on religious interpretations. The statements were as follows (presented in diametrical pairs):

- »The biblical account of creation best explains the development of humans on Earth« vs. »Science best explains the development of humans on Earth«.
- »Humans evolved from simple organisms« vs. »We are all descendants of one man and one woman - biblical Adam and Eve«.
- »Diseases occur due to viruses, bacteria, and other microbes, unhealthy food, and laziness« vs. »Diseases occur due to not obeying God's commandments and disrespecting God«.
- »Natural disasters occur because of our sins and bad behavior« vs. »Natural disasters are a result of natural processes«.
- »God created humans in His image« vs. »The human image has evolved through evolutionary processes«.
- »Life ends after death« vs. »After death, humans live in heaven or hell«.

Students were required to express their attitude towards each statement on a 5-point Likert scale, with the following options: »1 - strongly disagree«, »2 – disagree«, »3 - neither agree nor disagree«, »4 – agree«, and »5 - strongly agree«. Additionally, there was an option »I do not understand the statement« for each item.

Analyses

The data were analyzed using the statistical software SPSS. An analysis was conducted using the Kruskal-Wallis test, comparing the ranges of observed values among different groups. The Kruskal-Wallis test was used to analyze students' attitudes towards statements regarding the perception of scientific findings and religious claims, comparing them based on their belief in God and the frequency of religious worship attendance. In the second part, a nonparametric Mann-Whitney U test was performed to compare two independent samples, examining students' attitudes towards statements about the perception of scientific findings based on gender. These tests were used to determine whether there were statistically significant differences between the groups.

Results

The results are systematically presented regarding the comparison of individual statements. Table 1 displays the results of agreement with the given statements, based on whether students believe in God or not.

TABLE 1. The level of agreement with the statements based on whether students believe in God

Statement	Kruskal-Wallis test
The biblical account of creation best explains the development of humans on Earth.	H(4) = 15.565, p = .004
Humans evolved from simple organisms.	H(4) = 5.045, p = .283
Diseases occur due to viruses, bacteria, and other microorganisms, unhealthy food, and laziness.	H(4) = 5.636, p = .228
Natural disasters occur due to our sins and bad behavior.	H(4) = 22.548, p = .000
God created humans in His image.	H(4) = 29.323, p = .000
We are all descendants of one man and one woman - biblical Adam and Eve.	H(4) = 21.950, p = .000
Science best explains how human beings have evolved on Earth.	H(4) = 7.954, p = .093
Life ends after death.	H(4) = 13.842, p = .008
Diseases occur due to not obeying God's commandments and disrespecting God.	H(4) = 20.725, p = .000
After death, humans live in heaven or hell.	H(4) = 31.554, p = .000
The human image has evolved through evolutionary processes.	H(4) = 4.351, p = .361
Natural disasters are a result of natural processes.	H(4) = 5.261, p = .262

Statistically significant differences among students based on whether they believe in God or not were not observed for the statements »Humans evolved from simple organisms«, »Diseases occur due to viruses, bacteria, and other microorganisms, unhealthy food, and laziness«, »Science best explains how human beings have evolved on Earth«, »The human image has evolved through evolutionary processes«, and »Natural disasters are a result of natural processes«. For the remaining statements, with some minor variations, it is evident that the more students believe in God, the more they agree with the statements that the biblical account of creation best explains the development of humans on Earth, that natural disasters occur due to our sins and misconduct, that God created humans in His image, that we are all descendants of one man and one woman - biblical Adam and Eve, that illness arises from the lack of respect for God's commandments and disrespecting God, and that after death, humans live in heaven or hell. Conversely, regarding the statement that life ends after death, it is predominantly agreed upon by those participants who believe in God to a lesser extent. The results are presented in Table 2.

TABLE 2. Analysis of responses to statements revealing statistically significant differences among students (N = 74)

Statement		Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
	N	18	11	5	24	16
The biblical account of creation best explains the development of humans on Earth.	Mean Rank	31.42	18.77	46.20	45.85	41.97
Natural disasters occur due to our sins and bad behavior.	Mean Rank	19.42	33.64	38.00	44.10	50.44
God created humans in His image.	Mean Rank	17.47	29.64	44.20	45.15	51.88
We are all descendants of one man and one woman - biblical Adam and Eve.	Mean Rank	23.11	23.68	46.70	45.23	48.72

Statement		Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
Life ends after death.	Mean Rank	43.31	48.09	56.60	29.19	30.19
Diseases occur due to not obeying God's commandments and disrespecting God.	Mean Rank	27.81	20.27	54.10	43.00	46.81
After death, humans live in heaven or hell.	Mean Rank	16.44	30.00	40.80	46.17	52.31

Table 3 shows the results of agreement with the given statements based on the frequency of students' attendance at religious worship.

TABLE 3. Agreement levels with the statements based on the frequency of attendance at religious worship are shown in the following table

Statement	Kruskal-Wallis test
The biblical account of creation best explains the development of humans on Earth.	H(5) = 3.548, p = .616
Humans evolved from simple organisms.	H(5) = 6.159, p = .291
Diseases occur due to viruses, bacteria, and other microorganisms, unhealthy food, and laziness.	H(5) = 5.570, p = .350
Natural disasters occur due to our sins and bad behavior.	H(5) = 12.198, p = .032
God created humans in His image.	H(5) = 11.872, p = .037
We are all descendants of one man and one woman - biblical Adam and Eve.	H(5) = 14.968, p = .011
Science best explains how human beings have evolved on Earth.	H(5) = 5.466, p = .362
Life ends after death.	H(5) = 13.959, p = .016
Diseases occur due to not obeying God's commandments and disrespecting God.	H(5) = 25.581, p = .000
After death, humans live in heaven or hell.	H(5) = 14.585, p = .012
The human image has evolved through evolutionary processes.	H(5) = 5.848, p = .321
Natural disasters are a result of natural processes.	H(5) = 13.873, p = .016

Statistically significant differences among students based on the frequency of attendance at religious worship are not observed for the statements »The biblical account of

creation best explains the development of humans on Earth«, »Humans evolved from simple organisms«, »Diseases occur due to viruses, bacteria, and other microorganisms, unhealthy food, and laziness«, »Science best explains how human beings have evolved on Earth«, and »The human image has evolved through evolutionary processes«. There are some minor variations observed among the remaining statements, indicating that students who attend religious worship more frequently tend to agree more with the statements that natural disasters occur due to our sins and bad behavior, that God created humans in His image, that we are all descendants of one man and one woman, that illness arises from disregarding God's commandments and disrespecting Him, and that after death, humans live in heaven or hell. Conversely, students who attend religious worship less frequently tend to agree more with the statements that life ends after death and that natural disasters are a result of natural processes. The results are presented in Table 4.

TABLE 4. The analysis of responses reveals statistically significant differences among students in relation to the following statements (N = 74)

Statement		Every week	Once a month	Several times a year	Only on holidays	almost never	Never
	N	5	9	9	8	15	28
Natural disasters occur due to our sins and bad behavior.	Mean Rank	46.20	41.39	41.67	46.81	44.63	26.88
God created humans in His image.	Mean Rank	50.00	44.89	39.67	49.13	39.80	27.64
We are all descendants of one man and one woman - biblical Adam and Eve.	Mean Rank	43.50	46.78	43.61	51.69	39.93	6.13
Life ends after death.	Mean Rank	36.20	28.50	22.61	29.94	36.87	47.91
Diseases occur due to not obeying God's commandments and disrespecting God.	Mean Rank	40.80	44.22	60.61	41.81	0.77	24.34
After death, humans live in heaven or hell.	Mean Rank	39.90	49.61	49.22	47.56	36.50	27.08

Statement		Every week	Once a month	Several times a year	Only on holidays	almost never	Never
Natural disasters are a result of natural processes.	Mean Rank	54.60	33.83	34.56	16.63	36.70	42.96

The analysis was also conducted based on the gender of the students. Table 5 shows the results of agreement with the provided statements, categorized by participants' gender.

TABLE 5. Expression of agreement with the statements based on the gender

Statement	Mann-Whitney U-test
The biblical account of creation best explains the development of humans on Earth.	U = 561, p = .265
Humans evolved from simple organisms.	U = 606.5, p = .540
Diseases occur due to viruses, bacteria, and other microorganisms, unhealthy food, and laziness.	U = 635, p = .773
Natural disasters occur due to our sins and bad behavior.	U = 600.5, p = .499
God created humans in His image.	U = 509.5, p = .089
We are all descendants of one man and one woman - biblical Adam and Eve.	U = 533, p = .153
Science best explains how human beings have evolved on Earth.	U = 596, p = .459
Life ends after death.	U = 475, p = .038
Diseases occur due to not obeying God's commandments and disrespecting God.	U = 535, p = .143
After death, humans live in heaven or hell.	U = 611.5, p = .585
The human image has evolved through evolutionary processes.	U = 608, p = .555
Natural disasters are a result of natural processes.	U = 629.5, p = .728

Statistically significant differences among participants based on gender were not observed for any of the statements, except for the statement »Life ends after death«. Participants of male gender showed a higher level of agreement with this statement (Mean Rank = 43.67), while participants of female gender showed a slightly lower level of agreement (Mean Rank = 33.30).

Discussion

The results have shown that there are differences in the perceptions of religious and scientific statements based on whether children identify themselves as believers in God. This means that belief in God or lack thereof influences opinions on these matters. However, statistically significant differences were not observed for the statements »Humans evolved from simple organisms«, »Diseases occur due to viruses, bacteria, and other microorganisms, unhealthy food, and laziness«, »Science best explains how human beings have evolved on Earth«, »The human image has evolved through evolutionary processes«, and »Natural disasters are a result of natural processes«.

On the other hand, statistically significant differences were observed for certain statements »The biblical account of creation best explains the development of humans on Earth«, »Natural disasters occur due to our sins and bad behavior«, »God created humans in His image«, »We are all descendants of one man and one woman - biblical Adam and Eve«, »Life ends after death«, »Diseases occur due to not obeying God's commandments and disrespecting God«, and »After death, humans live in heaven or hell«. The results indicate that belief in God has a strong influence on opinions regarding these issues, with those who believe in God tending to have stronger beliefs in religious explanations and beliefs. This is particularly evident in questions related to evolution, human development, natural processes, and the development of diseases. Conversely, among those who believe in God, higher levels of agreement with statements related to faith were predominantly expressed. We find that belief in God influences the expression of agreement with these statements. However, it should be noted that religious content is not part of the Slovenian school curriculum by default, and the decision to include such content lies with the teachers. We believe that the results would be different and more favorable towards religious content if the teachers were more religiously inclined. In relation to this study's findings on the impact of religious belief on perceptions of scientific explanations, Stahi-Hitin and Yarden (2022) provide complementary insights by demonstrating that teachers with personal religious beliefs are more inclined to positively perceive and integrate religious content into their teaching. This suggests that the educational context, including the personal beliefs of educators, can play a significant role in shaping students' perception of science and religion.

Previous research, such as the study by Downie and Barron (2000), suggests a correlation between higher levels of religious belief and a reduced acceptance of certain scientific explanations, particularly in the context of evolutionary theory. It's important to note, however, that this relationship may vary based on cultural,

educational, and individual factors, and does not necessarily imply a universal trend among all religious individuals. Those who have accepted the theory of evolution have primarily done so because they have not been exposed to alternative explanations that would convince them otherwise. Recent studies offer a more nuanced view of the relationship between religiosity and the acceptance of scientific explanation. For instance, Ecklund and Scheitle (2017) reveal that religious individuals often appreciate science, except where it seems to challenge divine roles or human sanctity. This nuanced perspective resonates with our findings, where students' beliefs in God significantly influenced their perceptions of scientific statements concerning human origins and natural phenomena. Similarly, Hill (2014) highlights the National Study of Religion and Human Origins, emphasizing how social context, including family, friends, church, and education, significantly shape individuals' beliefs. This aligns with our observation that students embedded in more religious environments show a higher degree of agreement with religious explanations over those that belong to science. This study confirms the hypothesis that belief in God influences the perception of scientific findings, with students holding stronger religious beliefs being less inclined to accept scientific explanations. This is particularly evident in attitudes towards natural phenomena and human origins. Furthermore, this frequency of attending religious worship similarly impacts the acceptance of scientific findings, underscoring the role of religious activities in shaping perceptions towards science. Our findings align with Ecklund and Scheitle (2017) and Hill (2014), demonstrating that political views and the social context, including the influence of religious networks, critically affect attitudes towards science and religion. While creationists and atheistic evolutionists often perceive science and religion as incompatible, our research, akin to Hill's findings, suggest that theistic evolutionists are more likely to reject this conflict model.

The exploration of our study confirms the nuanced interplay between religious beliefs and the acceptance of scientific explanations, particularly in the realms of human origins and natural phenomena. Echoing the insights of Ecklund and Scheitle (2017) and Hill (2014), our findings illustrate that while religious individuals often exhibit a selective skepticism towards certain scientific claims—especially those perceived to challenge divine roles or human sanctity—they do not universally reject scientific explanations. This selective acceptance is further influenced by the social context, including the impact of educational and familial environments, underscoring the complexity of navigating scientific and religious narratives within these communities. Moreover, our research highlights that beyond religious belief, factors such as gender also play a significant role in shaping attitudes towards scientific and religious statements, suggesting a multifaceted approach is essential in understanding the dy-

namics at play. Ultimately, this study sheds light on the intricate relationship between faith and science, calling for a more integrated approach in educational settings that respects and considers the diverse belief systems students bring to the classroom.

Conclusion

The study has illuminated the significant influence of religious beliefs on individuals' understanding of scientific disciplines, especially concerning human origins, natural phenomena, and life after death. This highlights the indispensable role of educators in bridging the gap between diverse beliefs and scientific understanding within the school environment. To enhance the educational process, it is imperative that teachers act as facilitators to open dialogue and critical thinking, promoting an educational setting that respects and explores the intersection of faith and science. This approach not only acknowledges the diversity of student beliefs but also encourages the development of a comprehensive worldview. Specific to our findings, teachers should be encouraged to incorporate discussions that relate scientific explanations to religious beliefs in areas such as human origins and natural phenomena, reflecting the nuances observed in student perspectives.

The research also encourages us to reflect on the future. The results of this and similar studies can have significant implications for educational practices and education policies in the future. It may be worthwhile to consider the development of a specialized curriculum that focuses on the intersection of faith and science. Such a curriculum could incorporate more content that encourages students to reflect on how scientific knowledge and religious beliefs can intertwine. This would also be beneficial for teachers who could be appropriately trained to meaningfully integrate these topics into the existing curriculum. Additionally, it is important to consider strategies that address potential conflicts or misunderstandings that may arise when discussing matters of faith and science. We believe it is essential to develop inclusive policies and comprehensive education that respond to religious beliefs and the understanding of scientific disciplines within the school environment.

In the discussion on the relationship between faith and science, it is crucial to emphasize the need for collaboration among teachers and students, as well as among different groups of people who hold diverse perspectives. This includes considering both scientific and religious viewpoints. Raising awareness and providing education for teachers about scientific and religious worldviews could contribute to a more successful engagement with the limitations and challenges that

may arise from the conflict between scientific and religious understandings of the world. However, it is essential to respect different viewpoints, beliefs, and understandings. This will enable us to enrich mutual tolerance and embrace diverse perspectives, strengthening us as a community capable of bridging different views.

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ISPITIVANJE UTJECAJA VJEROVANJA U BOGA NA RAZUMIJEVANJE ZNANSTVENIH POJMOVA I RELIGIJSKIH TVRDNJI KOD DJECE

Sažetak

Religijska nastava nije uključena u obavezni kurikulum u slovenskim javnim školama (učenici mogu učiti o religiji i etici na izbornom predmetu Religija i etika), niti su znanstveni predmeti posebno naglašeni ili istaknuti. Međutim, mnogi učenici sudjeluju u raznim (često izvanškolskim) aktivnostima gdje uče o religiji, izlažu se religiji i prihvaćaju religijske izjave kao istinu. Usporedba znanstvenog objašnjenja i koncepcije svemira s objašnjenjem u okviru religijske ideje nije jasna tim učenicima. Stoga je istraživanje provjerilo utječe li sudjelovanje na religijskim događajima i aktivnostima na ideje učenika o nastanku svijeta. Anketa je provedena s 80 sudionika, od kojih je 49 bilo žena i 31 muškarac. Sudionici su bili u dobi od 7 do 17 godina, pri čemu je većina bila između 10 i 11 godina; Ukupno su 74 osobe pružile valjane podatke. Za prikupljanje podataka korišten je *online* upitnik na bazi Likertove skale. Testovi Mann-Whitneyjev U i Kruskal-Wallisov korišteni su za analizu rezultata. Statistički značajne razlike među sudionicima utvrđene su na temelju vjerovanja u Boga i učestalosti odlaska u crkvu za neke izjave. Također je utvrđena statistički značajna razlika u pitanju utjecaja spola na slaženje s izjavama.

KLJUČNE RIJEČI: *vjerovanje u Boga, obrazovanje, izvanškolske aktivnosti, religija, razumijevanje svijeta*