

Artificial Intelligence as a Tool Supporting Prayer Practices

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Abstract: This article attempts to describe Poles' attitudes towards AI in the development of Christian prayer as a technology supporting prayer practices. Four research questions were formulated: 1. Do the frequency of prayer and engagement in religious practices influence the attitudes of Poles towards prayer programs/applications based on AI technology? 2. Does believers' age affect Poles' attitudes towards prayer programs/applications based on AI? 3. Does believers' place of residence affect the attitude of Poles towards AI-based prayer programs/applications? 4. Do current users of the prayer-supporting applications plan to continue using it, and are new believers considering using it in the future? Research hypotheses were adopted to verify the research problem, with the first, second, and third being positively verified. H1: The higher the level of prayer frequency and engagement in religious practices of respondents, the more conservative the attitude towards prayer programs/applications based on AI; H2: The age of respondents differentiates the attitudes of Poles towards prayer programs/applications. H3: The respondents' place of residence differentiates Poles' attitudes towards prayer programs/applications. H4: Most AI users plan to continue such usage in the future, while new practitioners will appear.

Keywords: artificial intelligence; Christian prayer; nationwide survey; CAWI



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1. Introduction

This empirical research aimed to verify the impact of programs categorized as artificial intelligence (AI) on prayer practices, primarily individual prayer. Interest in the religious sphere of social life influenced by the increasingly popular AI technology is due to the nature of the Polish society, which is recognized by the Roman Catholic Church, despite the ongoing secularization described by Janusz Mariański as “creeping secularization” (Mariański 2018, p. 225). Furthermore, the intense development of information and communication forces researchers to reflect more deeply on AI's ethical and theological aspects. As the significance of technology grows, there is a need for a more detailed focus on research related to the ethical aspects of technological progress, “especially in the context of autonomous recommendation and decision-making systems. After all, what is technologically possible is not always ethically permissible” (Modliński and Przegalińska-Skierkowska 2023, p. 16), especially in the area of empirical research on prayer practices.

To address this topical issue, the state of research is presented first, followed by an explanation of the term “artificial intelligence.” Subsequently, the article's objective, research questions, and hypotheses are formulated. The “Material and Method” section discusses the applied methodology and research material. In the following sections, we present selected results from nationwide research conducted in 2023 on a sample of 1053 individuals aged 15–65. The obtained results undergo a thorough analysis and interpretation, followed by discussion and comparison with findings available in the relevant literature. Finally, the most significant conclusions and practical implications are formulated.

Right from the outset, it should be emphasized that this article fills an existing gap in the global literature on the subject. Currently, there are no empirical studies directly

addressing peoples' attitudes toward artificial intelligence as a technology supporting prayer practices in the process of developing Christian prayer. Existing publications focus on the influence of religiosity on the general attitude toward AI or decision-making processes (social and moral) determined by faith in God (Mert C. [Yilmaz 2023](#); [Karataş and Cutright 2023](#)). They concentrate on aspects such as the following:

- Ethical and theological implications ([Aldén et al. 2019](#); [Dietvorst et al. 2015](#); [Castelo et al. 2019](#); [Goltz et al. 2020](#); [Jackson et al. 2015](#); [Chan et al. 2014](#); [Kupor et al. 2015](#));
- AI and religious practices ([Aldén et al. 2019](#); [Dietvorst et al. 2015](#); [Castelo et al. 2019](#); [Thinyane and Sassetti 2020](#));
- AI and religious texts ([Yong Sup Song 2021](#));
- AI and interfaith dialogue ([Yuli Andriansyah 2023](#));
- AI and theology of creation ([Yuli Andriansyah 2023](#); [Lockhart et al. 2020](#)).

Delving into the definitional aspect of AI, many authors emphasize that “currently, there are certain difficulties in determining what is encompassed by the general concept of artificial intelligence” (Feliks [Kurp 2023](#), p. 11). Typically, the literature, following John R. Searle, divides the field of artificial intelligence into two categories: strong and weak. The first—general AI—conceptualizes artificial intelligence as “Hypothetical, artificial intelligent systems of a complex or at least multitasking nature that function autonomously in an environment, demonstrating intelligence” (John R. [Searle 1980](#), p. 417). On the other hand, weak or narrow AI includes “programs performing specific tasks or solving specific problems that, when carried out or solved by humans, are considered to require intelligence” (John R. [Searle 1980](#), p. 417). In this context, technologies based on AI that support prayer practices should be analyzed.

When discussing artificial intelligence, two aspects must be considered: the first is the narrow or engineering aspect, where AI is treated as a branch of computer science that creates intelligent machines capable of performing tasks often requiring human reasoning. Within this aspect, AI encompasses various techniques, including those based on neural networks, such as machine learning, deep learning, reasoning computation, natural language processing, and computer visualization. The second aspect offers an interdisciplinary perspective, where artificial intelligence is perceived as a comprehensive set of elements based on the development of digital technologies, such as self-learning applications and programs. These elements impact every aspect of individual and collective life, leading to the algorithmization of society. In summary, in this article, artificial intelligence can be referred to as “systems designed by humans that, due to a complex purpose, operate in the physical or digital world by perceiving their environment, interpreting collected structured or unstructured data, drawing conclusions from the knowledge obtained from these data, and undertaking the best actions to achieve the set goal (according to previously defined parameters)” (Tomasz [Zalewski 2020](#), p. 7).

This article attempts to describe Poles' attitudes towards AI in developing Christian prayer as a technology supporting prayer practices. The significance of the issue stems from the collision of two social processes. On the one hand, there is the dynamic development of technologies supporting and facilitating prayer practices based on AI. On the other hand, we have the ongoing secularization of Polish society, declaring openness to technological innovations in areas other than prayer practices. Hence, it can be asserted that William Ogburn's “cultural lag” concept is selective ([Ogburn 1964](#)).

At the beginning of the research process, the following research questions were formulated:

1. Do the frequency of prayer and engagement in religious practices influence the attitudes of Poles towards AI-based programs/applications that support the prayer practices of respondents?
2. Does believers' age affect Poles' attitudes toward AI-based prayer programs/applications?
3. Does the believers' place of residence affect Poles' attitude towards AI-based prayer programs/applications?

4. Do current users of the prayer-supporting applications plan to continue using it, and are new believers considering using it in the future?

To verify the problem, the following research hypotheses were adopted:

H1: *The higher the frequency and engagement of respondents in religious practices, the more conservative the attitude towards AI-based prayer programs/applications supporting prayer practices.*

H2: *The respondents' ages differentiate Poles' attitudes towards prayer programs/applications. The older the respondents, the more conservative their attitude towards prayer programs/applications.*

H3: *The respondents' place of residence differentiates Poles' attitudes towards prayer programs/applications. The larger the place of residence, the more conservative the attitude towards prayer programs/applications.*

H4: *Most AI users plan to continue such usage in the future, while new practitioners will appear.*

2. Material and Method

This article presents selected results from nationwide research conducted by the Educational Research Institute in Warsaw in September 2023 on a sample of 1053 individuals aged 15–65. The study employed a quantitative method using a survey questionnaire technique. The research tool was developed by a team of researchers specifically for the issues addressed in the article. It consisted of 15 single-choice questions based on a short cafeteria (usually using the Likert scale), 2 multiple-choice questions (6-point cafeteria), and 1 question composed of 26 items rated on a scale of 1–5. A metric containing respondents' demographic and social characteristics was also used. The survey questionnaire was constructed with two thematic blocks. The first block comprised questions related to issues associated with artificial intelligence, while the second block was based on topics concerning religiosity and prayer. The distribution of research tools was carried out using the CAWI (Computer-Assisted Web Interview) panel. The sample selection used a random quota method to increase the likelihood of representing the characteristics of the entire population.

It should be emphasized that the anonymous research was conducted in accordance with the highest ethical standards, respecting the dignity of every individual. All ethical principles applied in social research were considered, following the guidelines outlined in the "International Code on Market, Opinion, and Social Research and Data Analytics" (ICC/ESOMAR 2016).

Additionally, it is important to note the current limitations of the research. These include the sensitivity of the research topic, society's reluctance to disclose religious identity preferences, and the lack of familiarity among the older research group with technologies supporting AI-based prayer practices.

In total, 52.1% of women and 47.9% of men participated in the study, with 2.6% indicating primary/junior high school education, 7.3% vocational education, and 34.3% secondary education. A total of 12.8% had post-secondary non-tertiary education, 10.7% a bachelor's degree, and 32.2% a master's degree or equivalent. Additionally, it should be noted that 17.8% indicated living in a village, 13.6% in a small town (up to 20,000 residents), 15.8% in a medium-sized town (20,000 to 99,000 residents), 43.7% in a major city (100,000 to 500,000 residents), and 9.1% in a large city (over 500,000 residents).

Due to the limited text length, only an outline of basic statistical analyses of variables forming the foundation of this article has been provided. Using programs based on artificial intelligence (Practices with AI), religious practices and daily prayer practices were adopted as independent variables. It is important to emphasize that these variables were also analyzed regarding demographic characteristic variables. It should be noted that in most cases of the statistical analyses, in correlation with dependent variables, asymptotic (two-tailed) significance at the level of 0.01 or 0.05 was observed in tests based on Pearson's χ^2 .

Significant indicators that substantially impact religious practices accompanied by applications based on artificial intelligence belong to the group of social characteristics. In this case, spiritual elements include religious self-identification, religious practices, and daily prayer practices.

The data analysis allows us to draw several significant conclusions. Individuals declaring themselves religious seemed less inclined to use artificial intelligence applications. Over 82% had never used such technologies, indicating conservative attitudes toward accepting modern technological solutions. In turn, the lower the religious involvement, the higher the frequency of using artificial intelligence applications. Those who declared themselves non-believers presented the highest usage rates of this technology (daily—24.0%), suggesting greater openness to modern solutions in this group. The undecided and seekers oscillated in the middle of the scale, showing moderate levels of using artificial intelligence applications. These groups used technology several times a week (26.6% and 10.1%, respectively). In summary, most respondents used artificial intelligence applications with moderate frequency several times a week. It is worth noting, however, that the analyzed data showed some diversity depending on the religious characteristics of the respondents, suggesting that the level of religious involvement may influence the acceptance and use of modern technologies.

When analyzing religious practices and practices related to the use of artificial intelligence programs, it was observed that there was a connection between religious practice and attitudes toward artificial intelligence. Individuals showing no religious activity expressed greater interest in technology. Among those practicing religion several times a week, 3.6% used artificial intelligence once a day, 3.6% several times a week, 5.5% once a week, 9.1% once or twice a month, 34.5% less than once a month, and 43.6% had never used it. For individuals practicing once a week, the percentages of those using artificial intelligence were 12.6%, 13.8%, 5.7%, 8.9%, 13.8%, and 45.1%, respectively. In the group practicing once or twice a month, the rates of those using artificial intelligence were 11.4%, 25%, 9.1%, 10.2%, 21.6%, and 22.7%. Individuals practicing once or a few times a year used artificial intelligence according to the following percentages: 12.1%, 13.7%, 4.8%, 12.9%, 12.1%, and 44.4%. Those practicing less than once a year used artificial intelligence according to the following percentages: 12.6%, 9.2%, 7.6%, 11.8%, 21.8%, and 37%. Among respondents who did not participate in religious practices, the percentages of using artificial intelligence were 18.3%, 12%, 4.7%, 8%, 14.3%, and 42.7%. One possible explanation is that religion and digital technologies may be perceived as competing value systems. Religion often emphasizes the importance of traditional social values such as family, community, morality, and ethics. Digitization, new media, and applications may be perceived as a threat to these values. According to research from the Institute of Educational Research ([Gruchola and Zieliński 2023](#)), artificial intelligence, rated on a scale of 1–5, significantly interferes with respondents' lives (2.94), can provide valuable answers to religious and existential questions (2.74), and may become an object of cults similar to religious cult (2.74).

The data showed that individuals practicing prayer constituted a relatively high percentage of those who had never used such technological innovations (40.7%). Notably, a very high rate of individuals who had never used artificial intelligence technology was found in each category concerning the frequency of prayer practices and among individuals declaring a lack of prayer practices (44.8% of respondents). Individuals practicing prayer once a day had a diverse approach to artificial intelligence. The majority of them (44.2%) declared that they had never used this technology. In the case of individuals practicing prayer several times a week, the percentage of those not using artificial intelligence was 27.5% (a similar rate occurred among individuals practicing prayer once or twice a month), which is a relatively low result compared to other groups. Surprisingly, the variation in data is noticeable within groups who used artificial intelligence applications daily, both among individuals declaring daily prayer practices and those who did not practice at all. For instance, the difference between individuals practicing prayer once a day and those not practicing at all was 2 percentage points; for those practicing several times a day, it

was 3.5%. In this case, it can be assumed that these relatively insignificant differences arise because practicing individuals may use AI technology to support their prayer practices.

3. Results

In the analysis of the data presented in Table 1 regarding the practices of using artificial intelligence and prayer-supporting applications, several significant patterns can be observed. Regarding the frequency of using prayer-supporting applications, the largest group of respondents (31.4%) declared that they had never used them. However, those who used these applications most often did so infrequently (38.4%). As for the group of people considering using the applications in the future, it was observed that various levels of interest occurred depending on different frequencies of use. Notably, the most significant share of this group declared that they would use the applications rarely (20.0%) or a few times a week (11.4%). On the other hand, a significant group of individuals (43.9%) stated that they were not interested in this type of prayer support. In summary, although some people used prayer-supporting applications, most respondents seemed to avoid using them regularly. These individuals preferred a traditional approach, such as prayers they remembered from childhood, developed through their own religious experience, or read from various printed sources and prayer books. For those considering future use, preferred usage frequencies ranged from rare to several times a week. It is also worth noting that 43.9% of the respondents were not interested in this type of prayer support. This percentage will likely change over the years. With the rapid pace of digitization and the development of artificial intelligence-based programs, the number of people who never use them will gradually decrease. The second factor contributing to this situation is, in addition to digitization, the ongoing secularization of society, especially among the youth (Miroslawa Grabowska 2023, p. 2).

Table 1. Religious characteristics and religious practices supported by AI (Data in %).

Social Features Oscillating around Religiosity		Practices of Using AI					I Have Never Used	Total
		Daily	Several Times per Week	Once a Week	Once or Twice a Month	Less than Once a Month		
Religious self-identification	Deeply religious	7.2	14.4	4.5	9.0	27.9	36.9	100.0
	Religious	11.1	12.4	6.5	9.9	14.7	45.4	100.0
	Undecided	13.7	26.6	4.8	7.3	12.1	35.5	100.0
	Seeking	15.2	10.1	8.9	8.9	12.7	44.3	100.0
	Non-religious	24.0	6.6	3.3	13.7	18.6	33.9	100.0
Religious practices	Several times per week	3.6	3.6	5.5	9.1	34.5	43.6	100.0
	Once a week	12.6	13.8	5.7	8.9	13.8	45.1	100.0
	Once or twice a month	11.4	25.0	9.1	10.2	21.6	22.7	100.0
	Once, several times a year	12.1	13.7	4.8	12.9	12.1	44.4	100.0
	Less than once a year	12.6	9.2	7.6	11.8	21.8	37.0	100.0
	I do not participate at all	18.3	12.0	4.7	8.0	14.3	42.7	100.0
Daily prayer practices	Several times a day	12.7	10.2	3.4	9.3	23.7	40.7	100.0
	Once a day	14.2	16.8	7.6	4.1	13.2	44.2	100.0
	Several times per week	12.5	20.8	5.8	10.8	22.5	27.5	100.0
	Once a week	7.5	9.4	22.6	3.8	11.3	45.3	100.0
	Once or twice a month	10.7	16.7	2.4	20.2	22.6	27.4	100.0
	Less than once a month	9.7	9.7	3.9	11.7	14.6	50.5	100.0
	I don't practice prayer	16.2	10.1	4.2	11.4	13.3	44.8	100.0

Source: Authors' compilation.

Table 2 contains data approximating the impact of demographic characteristics on the use of prayer-supporting applications. Initially, it is important to highlight that the correlation significance between the independent variable “place of residence” and the

use of prayer-supporting applications was at the 0.05 level ($\chi^2 = 25.137$, $df = 12$, $p = 0.014$), distinguishing it from the other independent variables, which maintained significance at the 0.01 level. Most women and men declared that they did not use such applications and were not interested in using them in the future (82.1%). A total of 9.9% of the respondents did not currently use them but planned to do so in the future, with only 5.5% of women considering this option. Looking at those (whose percentage was small) declaring regular use of such applications, apparent differences in using prayer applications were observed between women and men. Women were significantly more inclined to regularly use such tools (4.4% compared to 2.2% of men). The results suggest that prayer-supporting applications are more prevalent among women than men. Nevertheless, the overall attitude from both genders toward such tools is moderately cold, indicating the need to better understand the motivations and barriers associated with accepting this type of technology in the context of religious practices.

Table 2. Demographic characteristics and the use of applications supporting prayer practices (data in %).

Demographic Characteristics		Usage of Apps Supporting Prayer Practices				Total
		Yes, Regularly	Yes, but Rarely	No, but I'm Considering Using Them in the Future	No, I Am Not Interested in This Type of Support in Prayer	
Gender	Female	4.4	8.0	5.5	82.1	100.0
	Male	2.2	5.8	9.9	82.1	100.0
Age	15–24 years	1.2	6.0	10.1	82.7	100.0
	25–34 years	3.9	3.4	11.2	81.5	100.0
	35–44 years	7.3	6.7	9.1	77	100.0
	45–54 years	1.2	8.7	5.8	84.4	100.0
	55–65 years	3.2	8.6	3.8	84.4	100.0
Education	Primary or junior high school	10.7	-	10.7	78.6	100.0
	Vocational	-	11.7	11.7	76.6	100.0
	Secondary	2.2	4.1	8.3	85.4	100.0
	Post-secondary non-tertiary	2.2	6.7	3.7	87.3	100.0
	Bachelor's degree	3.5	9.7	11.5	75.2	100.0
Place of residence	Village	2.7	7.5	9.6	80.2	100.0
	Small town (up to 20,000 residents)	9.2	7.0	4.9	78.9	100.0
	Medium-sized city (20,000 to 99,000 residents)	0.6	8.4	7.2	83.8	100.0
	Major city (from 100 to 500 thousand residents)	2.6	6.9	6.9	83.5	100.0
	Large city (over 500,000 residents)	4.1	4.1	10.3	81.4	100.0

Source: Authors' compilation.

In the data analysis, noticeable differences in the acceptance of modern tools in religious practices were evident based among age groups. Younger individuals (15–24 years) appeared to be significantly less interested in using such technology while praying, with 82.7% of respondents from this group declaring a lack of interest. Of course, it is vital to consider the lower percentage of individuals from this age group engaging in religious practices involving regular church attendance. For individuals aged 25–34, although the rate of those who regularly used applications was slightly higher (3.9%), the majority (81.5%) still showed no interest in those digital tools. Compared to other age groups declaring regular usage, the highest percentage of individuals who regularly used prayer-supporting applications during daily prayers was found among those aged 35–44 (7.3%). We can observe an

interesting increase in interest in prayer-supporting applications among older individuals, especially in the 55–65 age group, where the percentage of users was higher than that among younger respondents. It suggests the need to tailor the offerings of applications supporting prayer practices to different age groups. Organizations, not only from church environments, involved in developing such tools can focus on providing content and features that attract the attention of younger users while considering the growing interest among older individuals. Simultaneously, it is worth considering educational and evangelical campaigns that can alter the perceptions of the benefits of using prayer-supporting applications, especially among youth communities.

Generally, most respondents from all education groups showed little interest in prayer-supporting applications. The largest group of individuals with primary or junior high school education (78.6%) and vocational education (76.6%) declared that they did not use such applications. However, 10.7% with primary education and 11.7% with vocational education considered using such digital assistance in the future. For respondents with secondary education, although the majority still did not use such applications (85.4%), a noticeable small percentage was considering potential use in the future (8.3%). Individuals with post-secondary, non-tertiary education and bachelor's degrees also mostly did not use prayer-supporting applications (87.3% and 75.2%, respectively). Still, in these groups, a small percentage of individuals were open to the potential use of such technology in the future. Individuals with primary education exhibited the highest percentage of regular use (10.7%) compared to members of the other group. The results suggest that interest in prayer-supporting applications is generally low across all education groups. Nevertheless, there was some openness to the potential use of this type of technology in the future, suggesting an evolution in attitudes toward this kind of prayer support in society.

Based on the data presented in Table 3, it can be observed that in Poland, prayer-supporting applications are most popular among users in small towns (9.2%) and large cities (4.1%). In the case of villages, this indicator is even lower, standing at only 2.7%, but it is not the lowest, as 0.6% of respondents lived in medium-sized cities. Notably, the interest in using prayer applications appears to decrease as the size of the place of residence increases. Individuals residing in villages were the least inclined to use this type of support (4.9%), while residents of large cities showed the highest interest (10.3%). In each locality group, many respondents declared a lack of interest in prayer applications, especially in medium-sized and major cities (83.8% and 83.5%). This phenomenon may result from various reasons, including a traditional approach to prayer, personal preferences, or a lack of access to relevant technologies. It can be presumed that in major and large cities, these applications are more accessible, and there is a greater interest in such solutions in these environments. Here, the percentages are higher compared to small towns and settlements (Michał Feliksiak 2023, p. 4). Furthermore, individuals living in major and large cities are typically more open to new technologies and more inclined to use them in various aspects of life, including the religious sphere.

Table 3. Practices of using AI and applications supporting prayer (Data in %).

Using Apps to Support Prayer Practices	Practices of Using AI						Total
	Daily	Several Times per Week	Once a Week	Once or Twice a Month	Less than Once a Month	I Have Never Used	
Yes, regularly	20.0	11.4	11.4	5.7	20.0	31.4	100.0
Yes, but rarely	8.2	16.4	11.0	11.0	15.1	38.4	100.0
No, but I'm considering using them in the future	16.7	20.5	9.0	17.9	15.4	20.5	100.0
No, I am not interested in this type of support in prayer	13.4	12.3	4.6	9.5	16.3	43.9	100.0

Source: Authors' compilation.

Table 4 presents the relationship between social characteristics related to religiosity and the use of prayer-supporting applications. The research results show a strong correlation between religious self-identification and the frequency of using prayer-supporting applications. Deeply religious individuals constitute 9.0% of the respondents who regularly use prayer-supporting applications. In turn, religious individuals comprise 3.9% of the respondents who use such applications regularly. A total of 5.1% of those who regularly use AI-based programs belong to the so-called seeking group, people looking for their religious path. Focusing on individuals who indicate a lack of interest in AI support in prayer, it is observed that over 91% of respondents identified themselves as non-religious (97.3%), seeking (91.1%), or undecided (93.5%). In contrast, individuals self-identifying as deeply religious and religious firmly declared that they did not use or intend to use AI assistance (62.2% and 71.4%, respectively).

Table 4. Indicators of religiosity and the use of applications supporting prayer practices (Data in %).

		Usage of Apps Supporting Prayer Practices				Total
		Yes, Regularly	Yes, but Rarely	No, but I'm Considering Using Them in the Future	No, I Am Not Interested in This Type of Support in Prayer	
Religious self-identification	Deeply religious	9.0	16.2	12.6	62.2	100.0
	Religious	3.9	9.5	9.1	77.4	100.0
	Undecided	-	-	6.5	93.5	100.0
	Seeking	5.1	2.5	1.3	91.1	100.0
	Non-religious	-	-	2.7	97.3	100.0
Religious practices	Several times per week	25.0	21.4	5.4	48.2	100.0
	Once a week	5.7	16.3	13.1	64.9	100.0
	Once or twice a month	-	11.6	10.5	77.9	100.0
	Once a year, several times a year	2.4	3.2	8.9	85.5	100.0
	Less than once a year	-	2.5	3.4	94.1	100.0
	Do not participate at all	0.7	0.3	3.3	95.7	100.0
Daily prayer practices	Several times a day	20.5	17.9	7.7	53.8	100.0
	Once a day	2.0	10.7	14.2	73.1	100.0
	Several times a week	1.7	11.7	10.8	75.8	100.0
	Once a week	7.5	24.5	13.2	54.7	100.0
	Once or twice a month	1.2	3.6	3.6	91.7	100.0
	Less than once a month	-	-	9.7	90.3	100.0
Do not practice prayer	-	-	2.6	97.4	100.0	

Source: Authors' compilation.

The next category of analysis involves the frequency of religious practices among respondents. Individuals participating in religious practices several times a week (25.0%) often used prayer-supporting applications, while most participating once a week (64.9%) did not use them at all. Increased frequency of participation in religious practices is strongly correlated with a greater interest in prayer applications, as 25.0% of respondents declaring participation in religious practices confirmed that they regularly used AI-based applications.

The last part of Table 4 focuses on individuals' daily prayer practices. Respondents using prayer-supporting applications daily (20.5%) are in the minority compared to those who practiced prayer once a week (54.7%). Over half of the respondents (53.8%) practicing prayer several times a day declared that they had not used and did not intend to use AI support. Based on the data analysis, it can be assumed that the growing interest in prayer-supporting applications is related to the frequency of religious practices. A significant percentage of respondents identifying themselves as "deeply religious" suggests that this

group may constitute a potential target market for new and improved prayer applications. Additionally, it should be emphasized that the pandemic also contributed to reaching for applications, browsing the internet for religious information, or participating in online worship. However, it is essential to note that after the pandemic, religiosity among Poles significantly weakened, where the pandemic “caused not only a general deintensification of religious practices among Poles but also clearly weakened their subjective sense of religiosity” (Katarzyna Czechowicz 2022). In this case, strong correlations can be found, as with the decline in religiosity and society moving away from the Church, a decrease in the use of various artificial intelligence-based programs will be visible. Generational changes should also be taken into account, as young individuals subjected to secularization processes and growing up on AI-based applications and programs reject religion and religious practices because the “website” is capable of replacing traditional religion and its doctrine with their deities created by the virtual world and, perhaps, artificial intelligence.

4. Discussion

The contemporary world, marked by dynamic technological development, globalization, and numerous social changes, poses a unique challenge for traditional institutions, including the Catholic Church. Human actions in the digital era, ongoing processes of secularization, and socio-cultural evolution seem to shape a new reality that engages in dialogue with religious doctrine. As a significant religious, moral, and spiritual institution, the Church must adapt to modern realities to remain relevant and effective in reaching modern society (Monika Przybysz 2023). With technological progress, interpersonal communication has undergone revolutionary changes, influencing how individuals identify with religious values and engage in the life of the Church community. On the one hand, new media and online communities open up new possibilities for evangelization and dialogue. On the other hand, they pose challenges in shaping authentic spiritual experiences in the digital environment. These challenges align with both the substantive and functional understanding of religion. They may lead to attributing divine characteristics to AI-based devices that fulfill many functions assigned to religion (Gruchola and Zieliński 2023). “Cyberspace is another gift from God and at the same time an expression of human wisdom. Like any tool in the hands of humans, it can be used for good or bad purposes” (Arkadiusz Domasz 2013, p. 77). The Pope Francis (2020) believes that the observed exponential progress in robotics and AI can make the world a better place if it is connected to the common good. He also stated that “artificial intelligence is at the heart of the epochal change we are experiencing. Robotics can make a better world possible if it is joined to the common good. Indeed, if technological progress increases inequalities, it is not true progress” (Franciszek 2020).

The topic that combines artificial intelligence with prayer can be fascinating, as it brings together two spheres—technological and spiritual. However, before developing this concept, it is worth considering whether, in the spiritual sphere, touching the sacred, it is truly necessary. Additionally, one should contemplate whether the profane, undoubtedly represented by artificial intelligence-based applications, will not violate the exosphere of the sacred. In 2020, in the exhibition halls of the Pompidou Center in Paris, artificial intelligence used robotic silicone lips to say mechanical prayers (Anna Zagórna 2020). This is possible due to the development of an algorithm that collects prayers worldwide and creates a universal one. The next stage could be starting a new religion and, consequently, a messiah or even God.

In recent years, there has been a significant increase in publications on AI and religion in scientific journals indexed in the Scopus database (Yuli Andriansyah 2023). Economically advanced countries such as the USA and the United Kingdom are at the forefront of these studies. This is an encouraging sign to conduct similar studies in other countries, particularly those with a strong religious presence (Yuli Andriansyah 2023). There is no doubt that Poland, despite the so-called “creeping secularization,” belongs to countries

with a strong religious character. The country still ranks at the forefront of Europe, with 84% of its population being Catholics (Grabowska 2020).

Our study falls within the research area of AI and religious practices, focusing on how artificial intelligence supports religious practices in the context of rituals, religious ceremonies, and spiritual guidance. Researchers explore the impact of AI on religious experiences, the role of artificial intelligence in religious education, and the potential benefits and challenges associated with artificial intelligence in supporting spiritual practices. However, it should be noted that at this stage of scientific knowledge development, survey research, if conducted, generally focuses on the impact of religiosity on the overall attitude towards AI or decision-making processes (social and moral) conditioned by faith in God (Mert C. Yilmaz 2023; Karataş and Cutright 2023). There are no publications directly addressing this topical research problem.

In this context, our results align with considerations regarding technology and AI's utility and inevitable presence in religious life (Aldén et al. 2019). On the other hand, they serve as an important contribution to the development of scientific knowledge regarding believers' use of prayer applications. Our research indicates that Polish believers, guided by the principles of religious institutions with significant expertise in addressing the concerns of believers (Aldén et al. 2019), tend to approach AI technology in religious practices with caution. And in this field, it confirms the findings of the Global Consumer Survey (Karataş and Cutright 2023) regarding the significant impact of religious affiliation on algorithmic aversion, especially when it comes to institutionalized religiosity. In this field, our results also extend the work on aversion to artificial intelligence (Dietvorst et al. 2015; Castelo et al. 2019). As Song (Yong Sup Song 2021) rightly points out, adopting AI tools by religious institutions is often a cautious and thoughtful process based on theological reflection and societal discussions. This is particularly significant because the technologies discussed can significantly impact worship practices, doctrine interpretations, and the wider community's involvement, raising questions about the authenticity of religious experiences mediated by artificial intelligence (Umbrello 2023). For example, if artificial intelligence offers a religious interpretation or facilitates a religious experience, it does not present an "objective" religious truth. Instead, it provides a mediated understanding influenced by its programming, datasets, and inherent biases (Thinlyane and Sassetti 2020). With its extensive data processing and pattern recognition capabilities, AI can offer a new perspective on age-old doctrines and religious practices, reinforcing traditional interpretations, challenging them, or proposing entirely new ways of understanding them (Goltz et al. 2020). In this situation, educating believers and reinforcing the authority of church leaders as guides in the evolving landscape of religious life become crucial. This education should be rooted in the foundational principles of the Creed, which draws from the Old and New Testaments, the Gospels of the New Testament, church doctrines, and canon law (Tatala and Wojtasiński 2021). Notably, while religious identification is positively correlated with conservatism, spiritual identification may not be (Lockhart et al. 2020). Furthermore, research suggests that there is no conclusive evidence that thoughts about God make people more restrained (Jackson et al. 2015). Finally, divine significance often leads to greater risk-taking unless moral issues are at stake (Chan et al. 2014; Kupor et al. 2015). Thoughts about God make people feel smaller, making them more inclined to acknowledge human fallibility. Consequently, they consider relying on humans in decision-making as unreliable and are more likely to accept recommendations based on artificial intelligence (Karataş and Cutright 2023). Of course, it is essential to refer to social innovation theories and consider cultural lag (William Ogburn 1964; Karpińska 2020), or, rather, time lag (Karpińska 2020) differences between countries leading the way in spreading AI knowledge like the US and the UK and Poland.

5. Conclusions

At the beginning of this research process, four research hypotheses were adopted, three of which were positively verified.

The first hypothesis assumed an inverse relationship between the respondents' prayer frequency and engagement in religious practices and their attitude toward AI-based prayer programs/applications. The data obtained indicate that the higher the level of religious practices (frequency and engagement), the more conservative the attitude towards AI programs/applications supporting prayer. The analyzed hypothesis was positively confirmed.

The second and third hypotheses postulated that the respondents' age and place of residence differentiate Poles' attitudes towards prayer-supporting programs/applications. H2: The older the respondents, the more conservative their attitude toward prayer programs/applications. H3: The larger the place of residence, the more conservative the attitude toward prayer programs/applications. These hypotheses were positively verified. The analysis of the collected data showed that the groups that were most favorable to AI-based prayer applications were respondents/Poles aged 35–65, professionally active individuals, residents of large cities with access to AI technology, and those who frequently used it in their professional work. Notably, there was an increasing interest in prayer-supporting applications among older individuals (55–65 years), where the observed level of users was higher than that of younger respondents.

The last hypothesis assumed that most AI users plan to continue such usage in the future, while new practitioners will appear. The obtained data did not allow for the positive verification of the fourth hypothesis. Although a group of people used prayer-supporting applications, most respondents preferred a traditional approach, i.e., prayer that is understood as a personal, individual conversation with God, enriched by reading printed publications. It is worth emphasizing that almost half (43.9%) of the respondents were not interested in this type of support in prayer. At the same time, the conducted research indicated that artificial intelligence, rated on a scale of 1–5, could become an object of cult similar to religious worship (2.74); it could replace religious practices (2.39); respondents believed more in the capabilities of AI than in the abilities of God (2.30); and respondents considered AI as something significant in their lives (2.23). Artificial intelligence provided psychological support to many respondents (5.7%); it positively influenced their well-being (41.0%). According to the respondents, AI can offer valuable answers to religious and existential questions: 2.74. It also exercises social control over people (3.50) and serves an integrative function: building and/or maintaining relationships with the virtual, invisible, and inexperienced world (9.4%). This vision seems realistic according to Homer Barnett's (1953) theory of innovation, expounded in the untranslated and rarely cited work in Poland titled "*Innovation: The Basis of Cultural Change*", where he explains how the substitution of the old with the new occurs through successive stages: configuration, recombination, identification, and substitution. The conservative attitude of the respondents can be explained by William Ogburn's concept of "cultural lag" (Ogburn 1964), which suggests that cultural changes do not keep pace with technological changes.

For now, religious practices based on artificial intelligence technology may become a "substitute" for the prayer practices of modern humans. But only a substitute.

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