



Policy Compliance and Ritual Maintenance Dilemma: Can Chinese Folk Temples' Air Pollution Control Measures Ensure Visitor Satisfaction?

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OPEN ACCESS

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Specialty section:

This article was submitted to
Environmental Citizen Science,
a section of the journal
Frontiers in Environmental Science

Received: 30 March 2022

Accepted: 17 May 2022

Published: 01 June 2022

Citation:

Wang K-Y and Yu J (2022) Policy Compliance and Ritual Maintenance Dilemma: Can Chinese Folk Temples' Air Pollution Control Measures Ensure Visitor Satisfaction?
Front. Environ. Sci. 10:907701.
doi: 10.3389/fenvs.2022.907701

In recent years, the environmental authorities in Taiwan have begun paying attention to the management of burning incense and joss paper during the Chinese folk belief worship process due to it being a source of air pollution. However, because of the specific religious comfort function, as well as the corresponding economic and social influence of the folk temple itself, devout believers and visitors tend to be more concerned about the temple's environmental measures under the new policy implementation. Chinese folk temples are a good case study, as they strongly represent the sacrificial habits of many residents on the island. The present study was conducted with this framework in mind. The main objectives include exploring the following: 1) the attitudes of the visitors toward air pollution control in the temple, 2) their willingness to visit after the worshipped temple improves air quality, and 3) factors affecting the worshippers' visit intention and policy satisfaction. Descriptive statistics and binary logistic regression were utilized. The research shows that, first, the findings strongly suggested that the visitors' attitudes toward air pollution control in this area were positive; second, for air pollution control in the temple, the survey revealed that visitors' education level and place attachment were the main factors affecting their visit intention and policy satisfaction. What we have discovered means that people prefer better air quality measures to maintain fundamental religious worship rituals. They had clear ideas about the trade-off between spirituality and environmental protection.

Keywords: air pollution control, place attachment, environmental policy, satisfaction, policy compliance

INTRODUCTION

Incense burning is a traditional and daily practice in East and Southern Asian cultures; it shows respect for ancestors and immortals (Chinh et al., 2020; Chen et al., 2022). As a medium for communication between the worshippers and the deities in Chinese folk beliefs, the burning of incense and joss paper and setting off firecrackers are indispensable. These worship offerings have entered the cultural life of many Chinese people and are a fundamental element of worship rituals for important anniversaries and the Chinese Spring festival (Wang, 2020).

However, according to the study conducted by Liu et al. (2021), the weight of an incense stick is made up of 21% herbal and wood powder, 35% fragrance material, 11% adhesive powder, and 33% bamboo stick. Incense smoke contains particulate matter (PM), gas byproducts, and many organic compounds. On average, incense burning produces particulates at concentrations higher than 45 mg/g. However, for comparison, a cigarette produces just 10 mg/g. Burning incense produces

numerous organic compounds and metals (Li et al., 2022). Air pollutants related to incense burning are toxic and dangerous due to their smaller size. Furthermore, incense smoke particles can penetrate the lungs deeply and settle in the respiratory system. The hazards of burning incense have been observed in temple visitors and workers due to high concentrations and long exposure times, which can seriously affect the health of the respiratory system (Gupta et al., 2022; Wangchuk, 2022).

Despite some discussion in the Chinese literature, most of it falls into the debate on the purity of traditional beliefs and policy intervention. However, it still lacks results in terms of conducting empirical research. Therefore, the present study does not get involved in discussing the impact of incense sticks, joss papers, and firecrackers on air pollution, but instead, conducts an empirical analysis and provides the corresponding discussion from the perspective of the policy implementation observed from the visitor side.

This study aims to understand the Chinese folk temple visitors perspective towards the air pollution control policy measures implemented by the visited temple. This study uses a descriptive statistic and the binary logistic regression model to evaluate the satisfaction of policy implementation and the corresponding measures. It then further analyzes whether the temple's pro-environmental facility investments and management initiatives have a positive effect.

RESEARCH FOCUSES

Air Pollution Control for the Folk Temple in Taiwan

Numerous East and South Asian folk beliefs require the burning of incense as an essential part of their ritual activities. In India, Hinduism dominates the religious belief and requires the burning of many incense sticks. Silva et al. (2021) determined that India is the largest incense stick manufacturer globally, and the production is growing at a rate of 10% per year. In addition to burning incense, Chinese folk beliefs that integrate Confucianism, Buddhism, and Taoism will burn joss paper and set off firecrackers as one of the rituals to communicate with the deities and ancestors. However, studies conducted by Hung et al. (2021) and Goel et al. (2021) found that when pilgrims burn incense in the temple, the personal risk from PM 2.5 concentration was four to six times higher than that found outside the temple. It is believed that PM 2.5 poses the most serious health risk because it can go as deep as the alveoli. Exposure to PM 2.5 can aggravate chronic respiratory and cardiovascular diseases, alter host defenses, damage lung tissue, lead to premature death, and additionally, possibly contribute to cancer (Thuy et al., 2022; Shrestha, 2020). Without any shadow of a doubt, burning incense sticks and joss paper, and setting off firecrackers emits various chemical compounds that are potent etiological factors for causing air pollution, airway disease, and other health problems.

Long-term exposure seems to put the worshipper and temple staff at a greater risk of developing a serious health condition. Therefore, Taiwan's environmental authority initiated a new

policy of "Triple Reduce: incense stick, joss paper and firecracker" in 2017 to prevent this phenomenon from worsening. However, although it is classified as a non-profit enterprise in Taiwan, the religious service industry is an industrial chain with an immense output value that involves all aspects of the economy, society, and even island-wide politics (Wang, 2014). The introduction of the new air pollution control policy has also raised questions from temple administrators, folklorists, and believers.

Policy Compliance and Ritual Maintenance Dilemma

Temples located in core metropolitan areas with a better developed political economy and society have a more positive attitude in response to the new policy. Hsing Tian Kong (Xingtian Temple), a reputable temple in the downtown area of Taipei City, took the lead in implementing the "prohibition of incense and offerings" regulation before the new air pollution control policy was introduced in August 2014 (China Times, 2014). Following the measure of Hsing Tian Kong, Bangka Lungshan Temple, another famous folk temple with a rich history in the downtown of Taipei, in addition to reducing the number of incense stick burners since the beginning of the policy implementation, employed "zero incense and joss paper" in March 2020 (CTWANT, 2020). Although the policies of each temple are slightly different, temples in densely populated metropolitan areas are ultimately implementing the new policies in the same direction. After nearly 5 years of implementation, many believers also seem to accept the new air pollution control policy. In other words, they were persuaded by the saying of "hold on to your faith and things will go your way" and agreed with the temple's efforts to reduce air pollution in line with the new policy.

However, in suburban or rural areas with a strong religious atmosphere, attitudes toward implementing the new policy were less active because burning incense sticks and joss paper is viewed as a communication pattern with immortals in Chinese folklore belief. In response to the environmental protection unit's continuous advocacy for reducing the burning of incense, joss paper, or even stopping the burning rituals altogether, the management committee of the Beigang Wude Temple, a well-known shrine for the Deity of Fortune in Southern Taiwan, even established the "Defending Faith and Guarding Incense Alliance" (DFGIA) Facebook page (DFGIA, 2017). The DFGIA convened hundreds of temples demanding believers to burn joss paper. It also called on the authority to not mislead the public, or to magnify the issue, and to do nothing about the main pollution problem (Liberty Times, 2017). This has also received attention from the authorities, followed by a press release explaining the reasons for the introduction of the new air pollution control policy. In the press release, the environmental protection administration emphasized that the policy was carried out for "encouragement" rather than "enforcement" (TEPA, 2017).

Therefore, the most historical folk temples in the central and southern parts of the island have made improvements in response to the development of the new air pollution control policy, such as by using incense and joss paper made of environmentally friendly

materials that do not readily produce toxic gases, as well as by reducing the number of incense burners, joss paper incinerators, and allowed times to set off firecrackers. However, it only stops there. In addition to maintaining traditional sacrificial customs, local temples mainly consider the emotions of the older generation of believers.

Some temples with a more positive attitude even purchase incense burners and joss paper incinerators with added environmental protection equipment to meet the traditional worship needs of believers. From the perspective of management investment-recycling ratio, although the purpose of these temples is in line with the needs of environmental protection, this research explores the issue of whether such an investment can maintain believers' willingness to worship or increase the source of visitors to fill the gap of existing research.

RESEARCH DESIGN AND METHODS

Survey Based Study

For this study, a self-administered questionnaire was developed to explore the worshipped temple's air pollution control management measures. The questionnaire items were written to reflect a series of different variables. The response format included five-point Likert-type scales. These classifications were made based on 12 questionnaire items. This form of factor analysis first extracts mutually-independent factors and then classifies the respondents' willingness to visit based on their scores on these factors. The results obtained through factor analysis can help provide a better understanding of the phenomena and implications of interest. In doing so, one must always place a study within the context of existing theory and practical applications.

The items appearing on the questionnaire were formulated after compiling an existing policy implementation on the values of the air pollution control policy, the attitude toward the temple's update of environmental protection equipment and current pro-environmental measures, and the perception of the purity of the inherent folk belief ritual. The development of the contents of the instrument represents a synthesis of information gathered on the respondents' attitudes toward the air pollution control policy, temple-based pro-environmental measures, changes in traditional sacrificial customs, and a willingness to visit assessments.

The instrument starts with information on respondents, such as the number of times the individual visited the temple in the 4 years since the new policy implementation, personal religious beliefs, and the main purpose of worship. These questions were followed by the items for observing respondents' attitudes toward policy recognition, changes in worship customs, and shocks of belief purity affecting their willingness to visit. The responses were analyzed to make an appropriate explanation using factor analysis.

Numerous articles have applied multivariate methods to pro-environmental behavior problems. Factor analysis techniques are among the many potentially useful methods for researchers (Wullenkord and Reese, 2021; Ntanos et al., 2018). Many academics have recognized factor analysis as a simple-to-use

TABLE 1 | Profile of respondents ($n = 280$).

Category	Number	Percentage (%)
Gender		
Male	123	35.7
Female	157	64.3
Religious belief		
Yes	201	71.8
No specific	79	28.2
Age		
Below 19	6	2.1
20–35	66	23.6
36–50	70	25.0
50–65	65	23.2
Above 65	73	26.1
Marital status		
Married	157	56.1
Single	123	43.9
Education background		
Primary or middle school	72	25.7
Secondary school	93	33.2
College or university	84	30.0
Post-graduate	31	11.1
Occupation		
Enterprises	66	23.6
Self-employed	54	19.3
Academic	25	8.9
Public sector	37	13.2
Retired	52	18.6
Others	46	16.4
Yearly visit times		
4 or below	16	5.7
5–9	61	21.8
10–14	112	40.0
15 or above	91	32.5
Purpose of visit		
Travel	89	31.8
Worship	168	60.0
Work	23	8.2

survey method with a great deal of practical value, particularly for air pollution issues (Sadeghi et al., 2020; Peng et al., 2020).

For this empirical study, the authors applied factor analysis techniques to classify participants from three historical temples located in Middle and Southern Taiwan, demonstrating the temple visitors' attitudes toward the new air pollution control policy in a realistic setting. The advantages of using quantitative research are that it is suitable for larger sample sizes, has high objectivity and accuracy, saves time in information collection and processing, and is more cost-effective. Hence, the results were obtained by the research assistants hired for this study, who issued and collected questionnaires and conducted the preliminary data analysis.

Research Subjects and Data Collection

A total of five folk temples in the central and southern parts of the island with a strong religious atmosphere were surveyed in

August 2021 to understand the new air pollution control policy implementation. Considering tax issues and other economic factors, three temples refused to disclose their identity but accepted to take part in the empirical survey. Each surveyed temple has corresponding investment in pro-environmental equipment, e.g., incense burners and joss paper incinerators, so that complete combustion is achieved by thermal convection, which minimizes the emission of air pollutants. Additionally, these temples adopted new measures to cooperate with the air pollution control policy implementation, such as minimizing burning time as much as possible; actively reducing the prayer incense sticks, burners, and joss paper; and shortening daily working hours for the joss paper incinerators.

In addition to receiving worshippers praying, each temple was accustomed to annually organizing worshipped deity-themed festivals, accompanied by a mass of volunteer followers seeking blessings, which also adds to the prosperity of the local economy (Wang et al., 2020). However, it also brings about added air pollution. More than 4 years after implementing the new air pollution control policy, pro-environmental measures practiced in every public aspect have already become a worldwide trend, especially for the enhancement of overall air quality. In this step, in addition to investigating visitor attitudes toward the temple's air pollution control measures, the present study also explores whether these measures harm the spirituality of individuals.

The survey period was conducted from October 16 to 31 October 2021, during which the health authority lifted the island-wide religious activity restriction due to the Covid-19 epidemic control alert being downgraded from level 3 to level 2. Cluster sampling was applied to randomly chosen visitors of three surveyed temples, where one researcher surveyed at each temple. A total of 350 questionnaires were issued and filled out in person. The survey ruled out respondents unwilling to answer and invalid responses, leaving 280 valid interviewees ($n = 280$, approximately 80.0%) for the present study. As illustrated in **Table 1**, 64.3% (157) of respondents were female and 35.7% (123) were male. Of the sample, 71.8% (201) pointed out they have a specific religious belief, while 28.2% replied that they have no specific religious belief. Age was evenly distributed, except that 2.1% (6) were under 19 years old. Regarding marital status, 56.1% (157) of respondents have married, while 43.9% (123) were single. Furthermore, 58.9% (165) of interviewees replied that their education background was secondary school or below, while 41.1% (115) had an education background of college or above. In terms of occupation, 23.6% (66) of enterprise employees and 19.3% (55) of self-employed represented a large proportion of respondents, while retirees made up 18.6% (52). 72.5% (203) of respondents' annual times of visit were more concentrated to nine times annually or below, while 27.5% (77) of interviewees had visited the temple more than ten times a year. As for the purpose of visit, 60% (168) came to the temple for worship, 31.8% (89) said they visited for travel, and 8.2% (23) consisted of temple staff.

RESULTS

Attitudes Toward Air Pollution Control Policy and Measures of the Temple

This section attempts to explain visitors' attitudes toward the new air pollution control and sustainable-based environmental policies to better achieve the social, economic, and environmental goals of the traditional Chinese folk belief. For this reason, the respondents were asked five-point Likert-type scales questions. Here, the respondents were asked to rate their attitudes toward the current air pollution control policies and the measures implemented in the temple targeted at dealing with reducing air pollution. There were 12 questions for respondents to rate their attitudes toward the necessity for improving air quality, views of the temples' changed worship rituals to improve air quality, the influence of traditional beliefs and spirituality, and the impact on the willingness to visit (**Table 2**). The five-point Likert-type scales included the following anchors: from "strongly agree" (5) to "strongly disagree" (1).

Most respondents had knowledge of the new air pollution control policies, and their attitudes toward the policy were positive. In the past, visitors entering the temple were accompanied by fumes and harmful substances in the air caused by the burning of numerous incense sticks and joss papers. They believed that the air pollution control policy would help improve air quality in the temple. They also agreed that the incense, paper money, and firecrackers used as worship tools should be made of eco-friendly biodegradable materials that do not cause air pollution.

Regarding respondents' attitude toward modified worship rituals of the temple to improve air quality, they supported the current measures of reducing the number of incense sticks, burners, and firecrackers. At the same time, respondents found that the air quality in the temple had improved a lot compared to previous visits. Although the use of eco-friendly biodegradable incense, gold paper, and firecrackers would increase the purchase cost, most respondents agreed with these measures. The results confirm that people may not fully understand the effects of environmental policy implementation at first, but, in practice, their attitudes and behaviors are gradually influenced by constraints and lifestyle choices, and they will then gradually accept it.

Concerning the respondents' attitude toward whether the temple's implemented air pollution control measures derogated traditional beliefs and spirituality, overall, the respondents' attitudes toward the temple's balance of traditional worship rituals and eco-friendly efforts were quite positive. They supported the temple's measures and investments concerning the air pollution control policy. As for whether spirituality has been harmed, most of the respondents said that it does not exist. This is mainly because although the ritual has been simplified, the ritual nature of worship can still be maintained without detracting from its solemnity. Therefore, worshippers can be made to accept these small changes.

Analogously, such as the spirituality being well-maintained and the air quality of the worship or visit environment being

TABLE 2 | Respondents' opinion of the temple new air control pollution policy implementation.

Question	Mean	Std. Dev
Attitude towards air pollution control policy	3.25	1.099
I don't like the air pollution inside the temple	3.30	1.194
I prefer using incense sticks, joss paper, and firecrackers made of eco-friendly materials	3.40	1.124
I think it is important to control air pollution		
Perspective on the temple changing worship rituals to improve air quality	3.35	1.058
I think it is necessary for temples to reduce the burning of incense sticks, burners, and firecrackers	3.40	1.090
I think the air quality inside the temple has improved a lot in recent years	3.39	1.123
I don't mind paying a little more to use eco-friendly incense and joss paper for worship		
Whether traditional beliefs and spirituality feel derogated	3.25	1.031
I don't think traditional worship rituals are restricted	3.28	1.128
I think the temple is still actively preserving the sanctity of the ritual while cooperating with the policy	3.25	1.031
I feel that my spiritual comfort is satisfied		
Impact on willingness to visit	3.26	1.134
The implementation of the new policy does not affect my willingness to visit the temple	3.24	1.106
Visiting this temple gives me a sense of peace and tranquility	3.20	1.115

TABLE 3 | Factors affecting respondents' temple air pollution policy measures satisfaction.

Variable	Coefficients	SE coef	z	p value	OR	95% CI	
						Lower	Upper
Education level	2.126	0.285	7.450	0.000	8.381	4.791	14.661
Visit times	1.925	0.269	7.159	0.000	6.855	4.047	11.611
Gender	0.171	0.396	0.432	0.666	1.186	0.546	2.575
Religious belief	0.827	0.482	1.717	0.086	2.286	0.889	5.875
Age	-0.208	0.138	-1.505	0.132	0.812	0.619	1.065
Marital status	-0.557	0.404	-1.379	0.168	0.573	0.260	1.264
Occupation	0.006	0.117	0.054	0.957	1.006	0.800	1.266
Purpose of visit	0.893	0.330	2.703	0.107	2.442	1.278	4.664
McFadden R ²	0.564						

sufficiently improved, the respondents' willingness to visit will not change and may even increase. Many interviewees expressed that they always believed the temple was the place of his/her spiritual sustenance and solace, and the sightseeing spot they must visit.

This part of the study showed that visitors supported the air pollution control policy, as well as the temple's measure of reducing prayer incense sticks, joss papers, and firecrackers. The results suggested that, from the visitors' perspective, the modified worship rituals that correspond with the policy do not affect spirituality or solemnity.

Socio-Economic Factors Affecting the Satisfaction of the Temple for the Implementation of Air Pollution Control Policy Measures

The empirical analysis that uses the same dataset first identifies the important influence variables affecting the temple's air pollution control policy implementation and then estimates their influence on the comprehensive policy effectiveness. Therefore, in the present study, a subset of the data was used to identify important explanatory variables, where the new model then runs on the remaining data. Selected based on literature

review, data availability, and detected relationships among variables of interest, the overall satisfaction with the temple's implementation of air pollution control policy measures as the dependent variable and the nine independent variables of education level, gender, religious belief, age, marital status, education background, occupation, annually visit times, and purpose of visit were investigated in this study by using the binary logistic regression method for a subset of the data.

The relationship between the overall air pollution control policy satisfaction and the independent variables is provided in **Table 3**. The binary logistic regression in **Table 3** showed the estimated coefficients, standard error (SE) of the coefficients, *z* values, *p* values, odds ratio (OR), and a 95% confidence interval (CI) for the OR.

The results showed that gender, religious belief, age, marital status, occupation, and purpose of visit were not the major factors affecting respondents' overall satisfaction with the air pollution control policy measures. Education level and annual number of visits were the main factors affecting respondents' overall satisfaction of air pollution control policy implementation in the temple (**Table 3**).

In this study, eight variables, including education, number of visits, gender, belief, age, marriage, occupation, and purpose of visit, were used as independent variables. Satisfaction was used as

TABLE 4 | Summary of the binary regression prediction accuracy and the HL test results.

		Predictive value		Prediction	Prediction
		Satisfied	Unsatisfied	Accuracy	Error Rate (%)
Actual value	Satisfied	111	21	84.1%	15.9
	Unsatisfied	23	125	84.5%	15.5
Overall prediction accuracy				84.3%	15.7
χ^2				7.41	
df				8	
p value				0.49	

a dependent variable for the binary logistic regression analysis. The final analysis results are displayed as follows.

The regression coefficient value of education level was 2.126 and showed a significance level of 0.01 ($z = 7.450$, $p = 0.000 < 0.01$), which means that education will have a significant positive impact on policy satisfaction. Additionally, the OR is 8.38, which means that when education increases by one unit, the satisfaction increase is 8.38 times. There is sufficient evidence to conclude that education level and visit times impact respondents' willingness to visit and perceived improvement of air quality in the temple. The respondents who received either a university education or a postgraduate degree were willing to visit the temple that completely implemented the new air pollution control measures.

Visit times also played a significant role for the temples that implemented new air pollution control measures. The regression coefficient value of the visit times is 1.925. It is significant at the 0.01 level ($z = 7.159$, $p = 0.000 < 0.01$), denoting that the visit times variable has a positive impact on satisfaction and the OR is 6.855. Interviewees who have more visits experience more satisfaction with the temple's pro-environmental measures.

After the binary logistic regression analysis, the model accuracy quality can be verified in the following steps. First, the overall prediction accuracy and error rate are analyzed; then, the prediction accuracy or error rate is further analyzed when the dependent variable (measure satisfaction) is 0 (unsatisfied) or 1 (satisfied), respectively; and finally, the forecast rate situation is summarized. The model fitting quality is verified by the model prediction accuracy. The overall prediction accuracy of the research model is 84.3%, and the model fitting is well-acceptable.

The Hosmer-Lemeshow (HL) test can also be used to evaluate the goodness of fit of the binary logistic regression model with the following steps. A goodness of fit test reveals how well the data fits the model. Specifically, the HL test calculates if the observed event rates match the expected event rates in population subgroups. The test is only used for binary response variables, such as yes or no (Nattino et al., 2020; Shales and Narayan, 2021). First, the null hypothesis of the HL fitness test is that the fitted value of the model is consistent with the observed value. Then, if the p value is greater than 0.05, it means that the HL fitness test is passed; otherwise, it means that the model fails the HL fitness test, and the model has poor goodness of fit. **Table 4** illustrates the results of the prediction quality of the binary logistic regression model as well as the degree of agreement between the model fitting value, and the observed value is consistent. The p value here is greater

than 0.05 (Chi = 7.41, $p = 0.49 > 0.05$), signifying that the original hypothesis is accepted, which means that the model has passed the HL test and the goodness of fit of the model is better.

IMPLICATIONS

From the social perspective, this paper explores whether the changes in the worship rituals of Chinese folk temples under the implementation of air pollution control policies will affect the perceptions of visitors. This article is a rare study of Chinese folk temples that explores the satisfaction of tourists regarding the implementation of air pollution control policy measures in temples. This exploratory study constructs a basic model of understanding air pollution control policies, attitudes toward changes in worship rituals, and the norms adopted by temples to implement policy requirements, whether these changes have harmed the spirituality and solemnity of their beliefs, and their subsequent willingness to visit. The empirical findings explore to what extent the new air pollution control policy is affecting temple visitors.

The binary logistic regression test results determined that education level and the number of annual visits had a significant impact on tourists' satisfaction with temple air pollution control policies. During the distribution of the questionnaires, the study found that many of those who visited more frequently (more than ten times a year) were primarily local residents. When the interaction between the visitor and the environment produces a certain emotional connection from the compatibility of the individual and the environment, the place attachment relationship is bound to be strengthened with the increase in the degree of environmental fit. At the same time, the visitor's attachment to the place will be significantly stimulated by the pro-environmental behavior of its visitors. Furthermore, the emotional attribution of the non-local visitors to the temples often visited will also be strengthened with the increase in the number of visits, further reflecting the relationship between the visitors and the land. Therefore, the overall improvement is good for the implementation of policy measures for the temple. Not only will satisfaction with air pollution control policy measures be attained, but also regional environmental sustainability will be achieved.

In addition to the degree of local attachment that affects the satisfaction with air pollution control policies, education level also

has an impact. The study results found that respondents with a bachelor's degree or above generally agreed with and accepted the temple's air pollution control policy measures. They also reasoned that it had little impact on traditional worship rituals and were satisfied with the temple's air quality improvement measures. Although this trend is less pronounced among respondents with a level of educational attainment lower than high school, after more than 4 years of policy implementation, respondents have generally accepted, and are satisfied with, the air pollution control policy and the air pollution control measures adopted by the temple.

Visitor satisfaction with the implementation of the air pollution control policy in the temple provides an opportunity for policymakers to develop sound policies to encourage public participation in dealing with local environmental issues in the future. The evaluation of an individual's support for an environmental policy will be helpful at the policy level to understand the degree of acceptance that a visitor or participant is willing to withstand for pollution control measures. Policy instruments, such as temporary restrictions on certain measures, can be launched based on the satisfaction of policy stakeholders. For instance, to prevent the Coronavirus disease (Covid-19) from spreading more, Taiwan's internal affairs authority announced on 22 January 2022, that it would stop holding religious blessing gatherings during the Spring Festival until February 15, advising the masses to bring their own ritual tools and prohibited eating and drinking in temples. In addition, the examination of environmental policy will also be helpful with establishing an incentive grant, which encourages temples with a good environmental protection performance to have some room for improvement in the future.

At the same time, the study also found that the new air pollution control policy did not significantly reduce the number of visitors after more than 4 years of implementation. Especially when the Covid-19 epidemic has ravaged society and the economy, many people's livelihoods have been threatened or even become more difficult, so they may choose to gain confidence through spiritual satisfaction and comfort. Many believers are also gradually accepting that they do not need to complete the burning of incense or joss paper to complete worship ceremonies. This is beneficial to the spirituality and sanctity of folk beliefs because, while maintaining the cultural heritage, it can also smoothly promote the full implementation of environmental protection policies.

CONCLUSIONS

The results of the present study indicated that the visitors' attitudes toward improving air quality, individual support of the air pollution control policy, and the temple's measures for air pollution control were very positive. They agreed on the necessity of the environmental authority and the folk temple's efforts to improve the quality of the environment.

The survey revealed that visitors' educational background and the annual number of visits were the main factors affecting respondents' satisfaction with the air pollution control policy and air pollution control measures implemented by the temple. Furthermore, their age, gender, educational level, marital status, occupation, and visit purpose did not significantly affect the degree of their satisfaction with the policy. On average, the higher the respondents' yearly visit times and education level were, the greater their satisfaction was with the policy. Therefore, the degree of visitors' place attachment and educational level is highly correlated with satisfaction.

The survey also reveals some valuable information for policymakers. The temple visitors' positive attitude toward the air pollution control policy indicated that people prefer better air quality measures to maintain fundamental religious worship rituals. They had clear ideas about the trade-off between spirituality and environmental protection.

This work only scratches the surface of air quality control issue of incense burning in the Chinese temple. Future research should explore the environmental impact of firecrackers set off in bulk numbers during religious celebrations and gatherings in Chinese folk beliefs, as well as the resulting policy norms. These areas are also worthy of in-depth discussion.

DATA AVAILABILITY STATEMENT

The original contributions presented in the study are included in the article/supplementary material, further inquiries can be directed to the corresponding author.

ETHICS STATEMENT

The studies involving human participants were reviewed and approved by the Guangdong University of Petrochemical Technology Academic Ethics Committee. The patients/participants provided their written informed consent to participate in this study.

AUTHOR CONTRIBUTIONS

JY conceived of the presented idea. K-YW developed the theory and performed the computations. All authors discussed the results and contributed to the final manuscript.

FUNDING

This article is funded by the Talent Initiated Project of Guangdong University of Petrochemical Technology (702-72100003111).

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