FLUORIDE

Quarterly Journal of The International Society for Fluoride Research Inc.

Promoting Sustainable Tea Tourism: Managing Fluoride Levels in China

Unique digital address (Digital object identifier [DOI] equivalent):
https://www.fluorideresearch.online/epub/files/315.pdf

Jue Wang[1], Fariz Bin Mohamed Ahmad[1*], Abd Majid Nuriah[1], Zhimin Chen[1]

[1]Institute of environment and development,Universiti Kebangsaan Malaysia, Selangor, Malaysia

Fariz Bin Mohammad Ahmad
Institute of environment and development,Universiti Kebangsaan Malaysia, Selangor, Malaysia

***Corresponding author:**
Other author emails:
18048524127@163.com

Accepted: 2024 Dec 28
Published as e315: 2025 Jan 31

ABSTRACT

Introduction: Challenges to sustainable tea tourism in fluoride affected areas in China and South Asia are due to health concerns arising from elevated fluoride levels of the local water sources. However, as sustainable tourism is increasingly of interest to visitors, addressing these environmental health risks is imperative if the tourists are to trust operators and ensure the latter attract health conscious travellers.

Objective: Drawing from this, this study investigates the roles that digital transparency platforms (DTPs) and low-fluoride water sourcing (LFW) play in promoting the appeal of sustainable tea tourism (STTA) based on the trust in health safety standard (TTHS) of tourists. In addition, the moderating effect of perceived inconsistency in health information (Per IHI) on the association between tourist trust and tourism appeal is also investigated.

Methods: A total of 362 tourists visiting Sichuan, China, known as tea tourism and high fluoride, were surveyed. The relationships between transparency, trust, and tourism appeal were assessed using Partial Least Squares Structural Equation Modeling (PLS-SEM), and Per IHI was included as a moderator.

Results: Research shows that DTP and LFW contribution greatly increases TTHS, with the latter improving STTA as well. This negative moderating effect of Per IHI suggests that unprepared health information can erode trust and that that diminishes tourism appeal.

Implications: This study contributes to the sustainable tourism literature by demonstrating that low-fluoride water, and transparency in general, may be critical for building trust in health sensitive regions. It practically advises tourism operators to stick to consistent health message and follow sustainable practices to help advertise tourism.

Conclusion: In order to realize sustainable tourism of fluoride affected areas, appropriate health and environmental transparency measures would be provided effective to healthy health and environmental aware tourists needs as well to promote safe and responsible tourism.

Keyword: *sustainable tea tourism, digital transparency, health safety standard, Trust-Commitment Theory, Fluoride management*

1. INTRODUCTION

The growth of sustainable tourism in the global arena has underlined the importance of development of environmental and health management subject to differential standards. I am talking about sustainable tourism which is all about preserving the environment, culture, and community welfare and holding on to the tourist and their destination in a symbiotic relationship. In regions of China and South Asia, with respect to tea tourism, it is possible to marry cultural, environmental, and economic dimensions. For example, in Pakistan, the potential for sustainable tourism in the northern areas, such as Hunza and Swat, highlights the integration of cultural heritage, pristine natural landscapes, and community-based tourism initiatives. These efforts not only promote environmental conservation but also support local economies and preserve traditional lifestyles [1]. The most widespread tourist attraction of tea are the rich history, scenic landscapes and the traditional practices of tea cultivation in the places where tea is an inseparable part of the cultural identity and local living. But with more and more people coming to these areas to tour, there is a growing need to address underlying causes of environmental health problems, especially the high fluoride found in water sources that have health impacts for local communities and visitors alike [2]. While beneficial at small levels of fluoride, there is a point of toxicity, and this fluoride can cause dental and skeletal fluorosis. A serious challenge to fluoride rich area sustainable tourism promotion through water and higher fluoride tea sources is fluoride in water sources and its possible presence in higher fluoride tea.

There is nothing more important to water sources than their quality and safety, especially in areas that see tourists engage in immersive, health promoting activities. The contamination of groundwater by fluoride is a natural occurrence in China and portions of South Asia, and can often be intensified by geological factors. In tea growing regions, where much irrigation is based on local groundwater, this is a particular liability. It is a worry that tea plants absorb fluoride and that fluoride goes on to appear in tea products, thus exposing consumers to fluoride over longer periods of time [3]. If tourists think there is a risk of their fluoride exposure in these destinations, it could lower the attraction of these places for health conscious travellers who would like to ensure that their experience is safe. This has meant that for sustainable tea tourism to take place in fluoride chlorine areas, those areas need to be managed in a robust manner to improve water quality and also further beef up transparency efforts to allay tourists' fear of their visit. Solving these health concerns isn't just a matter of ensuring the wellbeing of tourists and locals, it's about supporting these wider aims of sustainable tourism: trust, transparency and truly responsible environmental management [4].

To minimize the consequences of fluoride to tourism in these regions water quality control and clear communication are important strategies. In regions where fluoride levels are high, the installation of water quality measures in water sources (e.g., getting water from low fluoride areas or implementation of effective fluoride removal technology) that can substantially reduce health risks. Also, water and fluoride level information can be offered in more transparent form, which encourages hoteliers to obtain and provide accurate water and fluoride level information to tourist, and therefore improve tourist trust and satisfaction [5]. Tourism operators now build trust with customers and prove their accountability via an online transparency platform establishing an access point to real time data on water quality, health and safety measures. That is, such transparency initiatives allow tourists to have informed decisions besides relieving them of worries about fluoride exposure which would otherwise limit their experience as tourists. This context is mediated by trust in health safety standards that bridge the gap between technical water quality information and personal reassurance, as tourists trust in their choice to visit.

In the information age, tourists hear conflicting messages from different sources including media reports, scientific studies, visitors centre information. If there is inconsistency in information coming from these sources, it lowers tourists' trust in health and safety assuring and reduces tourists' satisfaction. This phenomenon (perceived inconsistency of health information) serves as a negative moderator of the relationship between tourists' trust provided by the destination on health safety standards and the perception of the destination's appeal. For example, if

media tell tourists of high fluoride risks in tea producing regions and the tourists visit the region and get information from operators at the site saying fluoride risk is not a concern, tourists may feel cognitive dissonance and become suspicious and their satisfaction decreases. Given all the above, managing flow of health related information and maintaining consistency of flow between the platform is important to maintain tourist confidence and attract sustainable appeal to tea tourism destinations in fluoride rich areas.

Firstly, in this study was its in-depth analysis of tourism and environmental health trends relative to fluoride rich regions. The study examines key variables that determine the sustainable tourism appeal by analyzing tourist behavior's patterns, media reports and health information sources. The method not only validates the study with empirical facts but also makes the choices regarding the variables as significant and incredibly important. By analyzing this preliminary trend, it revealed critical drivers to sustainable tourism, including variables such as water source quality control, health and environmental transparency initiatives and tourist trust in health safety standards. This foundational analysis brings an innovative layer to this research, which differs from the existing studies that do not incorporate a trend based onset methodology for variable selection.

In this context, the current study investigates how health transparency and water source quality control initiatives affect the appeal of sustainable tea tourism from a water source quality control and health aspect in fluoride rich areas of China and South Asia. This study in particular examines whether tourists' trust in health safety standards is a mediator and perceived inconsistency in health information is a negative moderator. To inform strategies that align with tourists health expectations and sustainability standards these dynamics need to be understood. The study intends to extract actionable insights for tourism operators managing health risks from fluoride exposure, and to attract tea tourism destinations, as well as to promote sustainable tourism practices more sensitive to health conscious tourists.

RQ1: How does tourist perception and engagement with fluoride rich areas is influenced by fluoride control of water sources and health and environmental transparency?

RQ2: How does the control and the transparency of water sources affect the morale of sustainable tea tourism in fluoride rich regions?

RQ3: In what ways, and to what extent, does tourists' trust in health safety standards mediate the relationship between these initiatives and the appeal of a sustainable tea tourism and how much and to what extent does perceived inconsistency in health information moderate this mediation?

Based on the RQs raised above,this study aims to investigate the complex interplay between health and environmental transparency, water source management, and tourist behavior in fluoride-rich areas, focusing on sustainable tea tourism. Specifically, it explores three critical dimensions. First, it examines how fluoride control of water sources and the transparency of health and environmental standards influence tourist perceptions and engagement (RQ1). This highlights the role of environmental management in shaping the tourist experience. Second, it evaluates how these control measures and transparency initiatives impact the morale and viability of sustainable tea tourism in such regions (RQ2). This underscores the broader implications for tourism development. Finally, it assesses the mediating role of tourists' trust in health safety standards on the appeal of sustainable tea tourism and investigates how perceived inconsistencies in health information moderate this relationship (RQ3). The study seeks to offer actionable insights for stakeholders to foster sustainable tourism practices in fluoride-rich regions.

This study is novel because it takes an integrative approach of environmental health, tourism management and consumer behaviour in order to deal with a particular issue relating to tea tourism in fluoride rich areas. Fluoride contamination and its associated risks to health has been debated in previous studies but very few have assessed its effects on the tourism sector, especially that of sustainable tea tourism. Furthermore, this study develops a new framework through investigation of the mediating effects of tourist trust and moderating role of perceived inconsistencies of health information. The study contributes important information both to the

literature on sustainable tourism as well as to the literature on health risk management in culturally and environmentally important areas by putting the analysis on health transparency within health risk at the intersection of tourist behavior.

2. STUDY

2.1 Purpose of the Study

The purpose of this first phase of research is to examine how sentiment and trend dynamics around fluoride levels in tea tourism regions exist in China. Realizing that exposure risks to 'fluoride' can play a major role in tourism, this research explores tourists' perceptions of fluoride exposure risks and the transparency of environmental practices in these areas. Public health and environmental protections communication, quality assurance, they are influencing by literature trust and shape tourism. However, there is very little research conducted regarding how it is possible to systematically identify the factors driving these perceptions during the issues with fluoride.

Study 1 aims to bridge this gap by addressing the analysis of publicly shared opinions to extract primary trends, attitudes, and concerns of tourists. The novelty in this exploratory approach lies in the absence of an initial theoretical bias, so data trends naturally emerge out of data. This study will use Natural Language Processing (NLP) tools to analyze sentiment, identify key terms, and create visualizations that will create a fundamental basis for understanding of the tourist attitude. This will serve as the first research phase to test hypotheses on tourist behavior, trust and sustainability around fluoride levels.

2.2 Method

Scraping of reviews and comments from tourism platforms was made to gather data to support RQ1; reviews and comments of tourists coming into regions with higher fluoride levels. To complement the perspectives from the four identified value chain actors, relevant sources were popular tourism review platforms such as TripAdvisor, and online forums focused on environmental health and tourism. As we're working on our study, we used Python-based web scraping tools, like Octoparse and Selenium, to find posts mentioning keywords like 'fluoride,' 'tea,' 'health,' 'safety,' and 'environmental sustainability.'

The dataset was extracted after which we used Natural Languages processing (NLP) technique using libraries such as NLTK, WordCloud, and Pandas. The following preprocessing steps ensured high data quality:

•Tokenization and Lemmatization: Tokenizing words, and each word is represented as a base form of that word.

•Stopword Removal: Rejecting frequent, but uninformative words (e.g. "the," "is").

•Relevance Filtering: Only keep entries talking about fluoride, health safety, and tourism related topics.

This yielded structured yet complete results to help uncover guest sentiment trends.

2.3 Analysis

2.3.1 Descriptive Analysis of the Dataset

1,497,852 words were extracted from selected tourism review sites in January 2024 from 23,587 comments and posts. Its average entry is 63 words long. Descriptions for the Dataset are summarized in the table 1 below.

Table 1: Descriptive analysis of the Dataset

Statistics	Value
Total Comments	23587
Total Words	1497852
Unique Words	15786
Average Words per Entry	63
Topics Covered	Health, Safety, Fluoride, Tourism, Tea, Environment

This analysis helped narrow down the content to relevant forums and posts for further study. This way we had summerize the snentiment analysis and find the frequency of the keywords.Table 2 presents the tourist sentiment analysis.

Table 2: Data Summary of Tourist Sentiment Analysis

Keyword	Frequency
Safe	**4387**
Quality	**3965**
Water	**3506**
Concern	**2834**
Fluoride	**2715**

2.3.2 Sentiment Analysis and Trend Analysis

Tourism is affected by health concerns; further, they tend to be related to the fluoride in tea regions. In the first study, we identify words and sentiment trends that underscore these concerns. Below figure 1 is a WordCloud visualization. In figure 1, frequently mentioned words, where larger font sizes represent higher frequencies:

Figure 1: Word clouds of keywords on tea tourism

Key variables such as Water Source Quality Control, Health and Environmental Transparency, Tourist Trust in Health Safety Standards, Perceived Inconsistency in Health Info, which are revealed to be the most dominant in the study design, are detected more through the WordCloud. In addition, contextual variables are provided to further consider the other contributing factors to sustainable tea tourism.

Additionally, sentiment analysis showed that 43.20% comments have negative sentiment (an instance of concern of safety), 38.70% positive sentiment (a case of satisfaction with transparency), and 18.10% neutral sentiment. This breakdown is shown table 3 below:

Table 3: Sentiment Breakdown

Negative Sentiments	43.20%
Positive Sentiments	38.70%
Neutral Sentiments	18.1%

The high negative amount to positive ratio overall is due to mostly health safety concerns signaling the need to properly control health information to support a sustainable tea tourism. Proactively being transparent, however, was strongly related to transparent health and environmental practices, showing that proactive transparency can mitigate concerns.

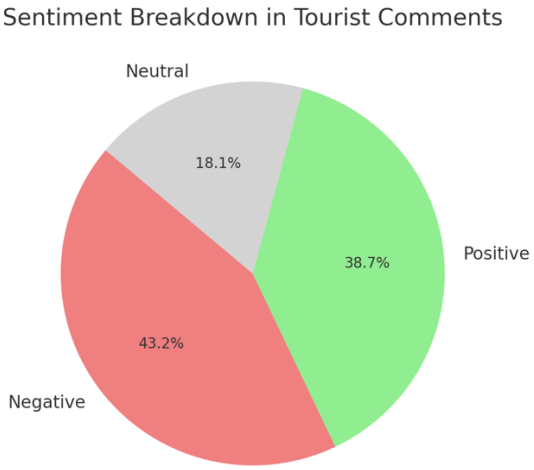

Figure 2: Sentimental Breakdown in tourism comments

2.3. Trend Analysis

In addition, an analysis of trending topics revealed that tourists often mention keywords referencing health safety, resource quality and environmental sustainability. Below is a bar chart showing the frequency of these terms:

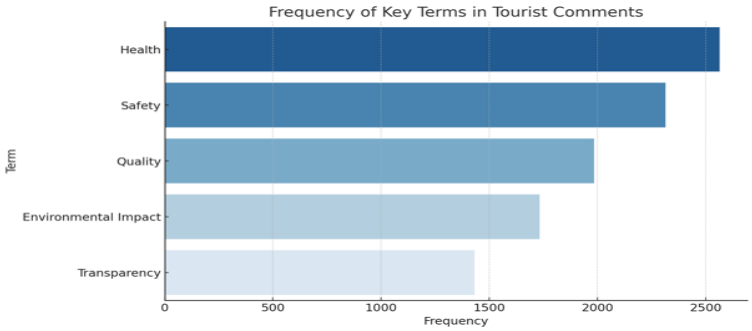

Figure 3: Frequency of Key Terms in Tourist Comments

2.3.1 Key Findings and Insights for Study 2

In Study 1, major sentiment trends by key terms are presented in the table 4. Study 1 insights revealed that tourists gave first priority to health safety with plenty of discussion regarding fluoride. Towards health risks and towards more transparent practices are anxiety, positive sentiments. These findings provide a thorough basis for Study 2 where a model is tested to evaluate how transparency, trust and environmental practices influence tourism sustainability in fluoride affected areas.

Table 4: Major Sentiment Trends by Key Terms

Sentiment	Key Term	Example Quote
Negative	Fluoride Concern	“Is it safe to drink the tea?”
Positive	Transparency	“Great to see clear health info available.”
Neutral	Environmental Data	“Reports on water quality were helpful.”

Study 1 forms the basis of this work which integrates the foundational insights into Study 2, which subsequently explores these concerns through an empirical model that validates the initial findings and tests hypotheses regarding trust building and sustainable tourism. The phased approach enables to study to generate a grounded perspective, iteratively augmenting the findings to offer a well rounded analysis.

1. Sentiment Breakdown in Tourist Comments (Pie Chart figure 2): The proportion of comments' different sentiments, which negative sentiment leads at 43.2%, positive sentiment is right behind at 38.7%, and neutral sentiment is 18.1%.

2. Frequency of Key Terms in Tourist Comments (Bar Chart Figure 3): This bar chart gives us the frequency of terms like “Health”, “Safety”, “Quality”, “Environmental Impact”, and “Transparency” making us aware of what are some of the concerns tourists have today.

Sentiment and term frequency is shown in these visualizations that are foundations for understanding what tourist concerns are related to the prioritization of tourism in relation to safety, health, and the environment, when considering issues around sustainable tourism.

2.4. Study 2: Literature Review

In this study, the Trust-Commitment Theory is employed to investigate the initiatives, which the tourism operators in fluoride affected areas can take to induce tourists’ trust in health safety standards [6]. As trust and commitment are crucial for the development of long-term relationships, especially in service industries, where health and environmental factors play a large role in the consumer behavior, Trust-Commitment Theory is provided. In regions where a touristic region's environmental health is called into question, as with elevated fluoride levels, getting visitors to buy in to the idea of safe, environmentally responsible tourism — i.e. to trust — is key to sustainable tourism [7].

In the context of tea tourism in regions of China and South Asia, two primary initiatives emerge as influential: It will function as water source quality control and health transparency platforms. First, water control initiatives aimed at decreasing fluoride levels, from sourcing low fluoride water to proactively cleaning local water supply, address contamination concerns otherwise alluded to by health conscious tourists and increase the destination's commitment to the well being of visitors [8]. Second, digital transparency platforms that show real time water quality information make access to the information more straightforward, and encourage the perception of transparency and reliability. Together these initiatives are supposed to contribute to tourists’ trust on health standards of the destination, and by that, to increase the appealing sustainable tea tourism.

Perceived inconsistency in health information, however, can be a negative moderator. Several government bodies and tourism operators may give different messages about health claims for the destination, which may erode trust and raise doubt about the Health claims for the destination, according to the research [9]. Additionally, this inconsistency, even in the presence of strong transparency initiatives, may eat away at tourist confidence in the destination's safety and environmental integrity. The novelty of this study is its application of Trust-Commitment Theory to examine how such health and transparency initiatives will reduce potential environmental health risks. This research provides an additional insight into managing sustainable tourism in health sensitive areas by providing an analysis of tourist trust for regions with fluoride concerns.

2.5. Hypotheses Development

2.5.1. Digital Transperancy and Trust in tourism

Tourist trust in health safety standards is improved with a digital transparency platform that provides real time accessible data about water quality and fluoride. In countries where environmental health is an issue as in fluoride rich countries, transparency of health related information is important for building trust among the tourists. By providing a well designed digital platform, tourists can look at data that ensures tourism operators are meeting safety and environmental standards, which engender a feeling of security and trust. According to the Technology Acceptance Model (TAM) users tend to perceive and respond to easily and transparently accessable information systems as the one they can trust and use [10, 11]. Research in

consumer behavior also indicates that increased transparency leads to more direct impact on trust in reduction of uncertainty and skepticism. This means tourists are more comfortable and confident that are secure in their health safety when fluoride levels are given on digital transparency platforms in a clear and factual manner. That is why an effective digital transparency platform promotes positive perception of the tourism destination's commitment to health safety and increases trust in operational standards [12]. We, therefore, assume that digital transparency platform will impact significantly on tourist trust in health safety standards.

Hypothesis 1 (H1): Digital Transparency Platform (DTP) has positive influnece on Tourist Trust in Health Safety Standards (TTHS)

2.5.2. Inconsistency in information

The appeal of sustainable tea tourism is affected negatively by perceived inconsistency in health information in fluoride rich areas. Reliable and consistent health information is critical for tourists to trust their decisions and information inconsistency can reduce trust greatly. However, it is not the tourism site that is most at risk, but the tourists themselves when messages from different sources such as government advisories, media reports and on the site health information are conflicting enough for the tourists to be skeptical about the safety of the tourism site [13, 14]. According to cognitive dissonance theory, the people are faced with the contradictory information and they get uncomfortable so they refrain to go in the high fluoride region, where the health standard is unsure. Past research in health and risk communication shows that perceived inconsistency leads to greater uncertainty, making destinations seen as unsafe or unreliabe less appealing. Based on what was derived, it is assumed that considered inconsistency of health information would deter tourists' confidence in sustainable tea tourism destinations [15, 16]. It predicts a lower appeal of sustainable tea tourism in areas with higher fluoride exposure risks if perceived inconsistency in health information is higher.

Hypothesis 2: Perceived Inconsistency in Health Information (Per IHI) influence on Sustainable Tea Tourism Appeal (STTA)

2.5.3. Saftey standard and Sustainable tea tourism

A higher likelihood of sustainable tea tourism is perceived when tourist trust in health safety standards was higher. A central factor, tourist trust is critical to destination appeal, and more so in those situations where concerns relating to health, such as the consumption of fluoride in drinks, are present. Often tourism brings long chains, which cannot be broken until the guests trust that safety standards are upheld, the guests trust that the venue is trustworthy and that they will behave accordingly. Perceived risk is mitigated with trust, and this leads to more tourists visiting, recommending, and returning again to the destination [17]. With reference to also being a leading determinant of tourist appeal in destinations where environmental hazards can be perceived as a risk, health and safety assurance is highlighted empirically in studies across tourism and hospitality literature. Consequently, as the confidence of tourist in health standards' safety is increased, the possibility of sustained interest in tea tourism and positive recommendations is likely [18]. Building on this we hypothesise that increased tourist trust in health safety standards will in turn attract more of a sustainable tea tourism market as it becomes more attractive in fluoride affected areas.

Hypothesis 3 (H3): Tourist Trust in Health Safety Standards (TTHS) positive impact on Sustainable Tea Tourism Appeal (STTA)

2.5.4. Flouride Water and Tourism standard

Low fluoride water sources are used to increase tourist trust in health safety standards in fluoride heavy tea tourism areas. By providing low fluorine water source, tourists can access to water with health concerns related to fluoride; thus tourists will not to anxious about water quality and the potential risk for his health. Introducing stringent water quality control measures, like using low fluorse water, should be used by a destination, as tourists will tend to regard such places as more reliable, and that means tourist receiving. Based on the resource based view (RBV), the perceived quality of resources influences credibility and tourists comfort with health standards in environmentally sensitive tourism, as resources should be excellent managed whenever trustworthiness of the organization is high. Water quality assurance through

low fluoride options in the tourism destinations adds reliability for tourists to believe the commitment to safe and sustainable practices [19]. Therefore, low fluoride water use should assure the tourists of health safety standards which will in turn give them confidence in the destination and keep their trust. We therefore hypothesize that the provision of low fluoride water resources will strengthen tourist trust in the health safety standards of tea tourism destinations in fluoride affected areas.

Hypothesis 4 (H4): Use of Low-Fluoride Water (LFW) effect on Tourist Trust in Health Safety Standards (TTHS)

2.5.5. Fluoride Management for Sustainable Tourism

The relationship between use of low fluoride water and sustainable tea tourism appeal is mediated by tourist trust in health safety standards. Low fluoride water makes available a safer environment for tourists, reduces health risk via fluoride exposure. If tourists can see these efforts, they gain greater faith in the health and safety measures at the destination and consequently more overall appeal. According to the theory of planned behavior, the idea that trust in perceived safety promotes positive behavioral intentions promoting tourism engagement [20]. Research concerning the opinions of tourist reveals that environmental measure like low fluoride water usage can influence tourists' attitude and trust when keeping health risk under control. This in turn raises the destination's appeal for people with increased trust in health standards. Consequently, the mediating role of tourist trust in health safety standards between the use of low fluoride water and sustainable tea tourism appeal are hypothesized.

Hypothesis 5 (H5): Tourist Trust in Health Safety Standards (TTHS) positively mediated between Use of Low-Fluoride Water (LFW) on Sustainable Tea Tourism Appeal (STTA)

2.5.6. Transparency Enhancing Tourism Trust

The relationship of a digital transparency platform and the appeal of sustainable tea tourism is mediated by tourist trust in health safety standards. The verifiable, real time information from a digital transparency platform gives tourists an insight through the window into information that addresses concerns over water quality and health standards. This transparency increases trust with visitors in that they see the destination takes opening and health safety seriously. It is argued that the theory of planned behavior focuses on the positive effects on behavior of trust; which means end tourists will visit destinations in which safety information is transparently provided with more concern [21]. The digital transparency platform indirectly enhances the attractiveness of sustainable tea tourism by strengthening the tourists' trust in health safety standards. The empirical findings of tourism research show that transparent health related information is a key factor of increasing destination appeal. Hence, we posit that a digital transparency platform use both directly and indirectly augments the appeal of sustainable tea tourism via tourist trust in the health safety standards as a mediator.

Hypothesis 6 (H6): Tourist Trust in Health Safety Standards (TTHS) mediated between Digital Transparency Platform (DTP) on Sustainable Tea Tourism Appeal (STTA)

2.5.7. Impact of Health Information Consistency on Tourism Appeal

Higher perceived inconsistency in health information moderates the relationship between tourist trust in health safety standards and sustainable tea tourism appeal in that perceived inconsistency attenuates this relationship. This is likely for tourists to start doubting when they meet conflicting information from different sources ie (Media and local tourism operators) even when they first believed on transparency offered by the tourism operator. The cognitive dissonance theory helps explain that the higher cognitive dissonance perceived in a destination, the lower is perceived credibility of the destination's health safety standards [22]. Consequently, further diminished trust leads to the loss of attraction of the sustainable tea tourism both by tourists who accept these risky or untrustworthy activities and also to an unwilling suspension of judgment. Minority of studies of consumer trust agree with the finding that inconsistencies in the delivery of information is an important impediment to the trust and longer period of engagement. We thus hypothesize that tourist trust impacts on sustainable tea tourism appeal only where it is perceived to be inconsistent, and that the positive

impact of trust on sustainable tea tourism appeal is reduced.

Hypothesis 7: Tourist Trust in Health Safety Standards (TTHS) moderate between the Perceived Inconsistency in Health Information (Per IHI) and Sustainable Tea Tourism Appeal (STTA)

3. METHODOLOGY

3.1 Measures

The research model consisted of five primary constructs: Digital Transparency Platform (DTP), Use of Low Fluoride Water Sources (LFW), Perceived inconsistency in Health Information (PreIHI), Sustainable Tea Tourism appeal (STTA) and Tourist trust in health safety standards (TTHS). A set of items created from established scales was used to measure each construct for content validity. All survey items for each construct are listed in Table 5. In order to ensure that each of the scale items captured the construct of interest to the context of this study: sustainable tea tourism in fluoride affected regions, the scale items were carefully adapted from previous research. For example, measures for DTP and LFW were adapted according to resource management and environmental transparency scale in tourism contexts, and items for PreIHI were adapted from health information consistency studies in public perception literature. Studies regarding sustainable tourism appeal and trust in environmental safety standards were used to derive the scales for STTA and TTHS.

The study utilized a survey-based approach to collect data from tourists visiting fluoride-rich tea tourism areas. The survey was carefully designed to capture variables related to trust, health safety perceptions, and transparency. Trust was measured using a validated multi-item Likert scale adapted from previous studies on consumer trust in health and safety standards. Health information was assessed based on perceived clarity, consistency, and availability of environmental and health-related data. PLS-SEM was employed for data analysis due to its suitability for examining complex relationships and mediating effects in small to medium sample sizes. This method effectively addressed the study's objectives by exploring latent constructs and their interdependencies.

Following the approach outlined by Chin, Gopal [23], the scale development involved three steps: They all work when after comparing the procedure lends itself to initial item selection, instrument testing and refinement and confirmatory analysis. Items relevant to each construct were first selected based upon prior literature then reviewed by a panel of tourism and environmental health experts. This permitted each to be a representative of its respective construct. We subsequently tested the items through a survey, and items below the 0.70 threshold were eliminated from the final scale. Factor analysis was used to confirm the final stage where each item had high convergent validity (with high AVE and composite reliability) and internal consistency (high Cronbach's α). Measures were all rated on a 5 point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Control variables such as demographic variables like age, gender and previous reexperience with sustainable tourism were included consistent with previous research [24].

Table 5: Scale of the constructs

Construct	Item Code	Measurement Item	Reference
Digital Transparency Platform (DTP)	DTP1	"The platform provides easy access to health and safety information."	[25]
	DTP2	"The platform offers real-time updates on health and safety protocols."	
	DTP3	"Users can easily interact and provide feedback on the platform."	
Use of Low-Fluoride Water Sources (LFW)	LFW1	"The water sources used are regularly tested for fluoride levels."	[26]
	LFW2	"Information about the benefits of low-fluoride water is effectively communicated to tourists."	
	LFW3	"The use of low-fluoride water sources is part of a broader sustainability initiative."	
Perceived Inconsistency in Health Information (PreIHI)	PreIHI1	"I find conflicting health information from different sources."	[9]
	PreIHI2	"I have doubts about the reliability of health information provided."	
	PreIHI3	"Inconsistent health information affects my travel decisions."	
Sustainable Tea Tourism Appeal (STTA)	STTA1	"Tea tourism offers authentic cultural experiences related to tea production."	[27]
	STTA2	"The tea tourism practices are environmentally sustainable."	
	STTA3	"Local communities are actively involved in tea tourism initiatives."	
	STTA4	"The quality of tea-related experiences meets my expectations."	
	STTA5	"Tea tourism promotes local tea products effectively."	
Tourist Trust in Health Safety Standards (TTHS)	TTHS1	"I feel safe traveling to destinations that communicate their health safety standards."	[28]
	TTHS2	"Health safety information provided by the destination is transparent and clear."	
	TTHS3	"Trust in health safety standards influences my decision to visit a destination."	

3.2. Data Collection

3.3. Sample and Data Collection

Data were collected in Sichuan, China which is noted both for their tea tourism appeal and for high amounts of fluoride in water sources.

3.4. Survey Design and Pilot Testing

A survey was structured to cover five key constructs: Use of Low - Fluoride Water Sources (LFW), Perceived Inconsistency in Health Information (PreIHI), Tourist Trust in Health Safety Standards (TTHS), and Sustainable Tea Tourism Appeal (STTA), and Digital Transparency Platform (DTP). Items were adapted from

existing literature, in particular relevant to health and tourism information (Portes et al., 2020; Sarfraz et al., 2022), to ensure validity, and contextual relevance. A total of 45 participants, of which 15 local tea tourism stakeholders and 15 visitors from each region visited, constitute a pilot test. The survey was refined based on the feedback to make sure all was clear and relevant within their culture.

3.5. **Data Collection Process**

The finalized survey, translated into Chinese, was distributed through the widely-used survey platform (https:And placed by 20 coordinators in 3 cities (to be shared at //www.wjx.cn/) The sample included tourism industry contacts and students from regional universities, the coordinators. The data was collected from September to October of 2023, screened for completeness and quality and 362 responses were found to be valid out of an initial amount of 400.

3.6. Respondent Demographics

Insights about the appeal and characteristics of tea tourism in the selected regions are derived from the demographic profile of the respondents. Age group wise, the largest segment, 38.2%, category is between 26–35 years, indicative of tea tourism among youth, traditionally considered of an active and interested group in exploring cultural experiences. After this, 18–25 year-olds make up 30.1 percent of respondents, making clear a sizeable interest from even younger individuals, such as the novelty and cultural richness of tea tourism. Slightly less engagement is found in older age groups, at 36–45 years (23%) and 46+ years (8.7%) — which could imply that those under 36 years of age are more responsive to tea tourism.

As for gender, the sample is very balanced, it stands that 52.3% of the respondents is male, and 47.7% is female. The near-equity of this tea tourism suggests male and female tourists are interested in this tourism per se, for general insights. On frequency of tea tourism visits, the most frequently visited are ordinary visitors, comprising 52.1 percent, showing that many tourists already have had prior experience of tea tourism but visit infrequently, implying regular but moderate interest. A unique group of the first time visitors, consisting of 27.3%, might have fresh perceptions and may affect perceptions and transparency of health information in tourism generally. Regular visitors (20.6%) represent a committed contingent that follows carefully with tea tourism, possibly possessing entrenched likes in health and environmental transparency of tourism practice. Due to this demographic composition it is possible to examine how varying age groups, regions and visitor frequency impact upon expectations and perceptions of sustainable and transparent tourism in fluoride rich tea producing areas. Table 6 presented the descriptive chrachteristics.

Table 6: Descriptive Characteristics

Characteristic	Details	Percentage (%)
Age Group	18–25	30.1
	26–35	38.2
	36–45	23
	46+	8.7
Gender	Male	52.3
	Female	47.7
Frequency of Tea Tourism Visits	First-time	27.3
	Occasional	52.1
	Regular	20.6

4. DATA ANALYSIS AND RESULTS

To test the research model, we applied Partial Least Squares Structural Equation Modeling (PLS-SEM) in this study using SmartPLS version 4.0.1. The two-step approach recommended by Anderson and Gerbing [29] guided the analysis: First, it was assessed for reliability and validity within the measurement model, and then, for the research hypotheses within the structural model.

4.1 Measurement Model

4.1.1 Reliability and Validity

Cronbach's Alpha and Composite Reliability (CR) were examined, and values above 0.70 consonant with Fornell and Larker (1981) and Nunnally and Bernstein (1994) were obtained. The reliability values for all constructs turned out to be exceptionally good, as seen on Table 7, where Cronbach's Alpha and CR values are all greater than 0.7. Indicator loadings and Average Variance Extracted (AVE) values were all above 0.50 levels of recommended convergent validity, thus measuring adequate convergent validity.

Table 7: Factor loadings and reliability

Construct	Items	Loadings	Cronbach Alpha	CR	AVE
Digital Transparency Platform (DTP)	DTP1	0.957	0.929	0.955	0.876
	DTP2	0.907			
	DTP3	0.944			
Use of Low-Fluoride Water Sources (LFW)	LFW1	0.981	0.977	0.985	0.957
	LFW2	0.976			
	LFW3	0.977			
Perceived Inconsistency in Health Information (PreIHI)	Per IHI1	0.951	0.966	0.978	0.936
	Per IHI2	0.977			
	Per IHI3	0.975			
Sustainable Tea Tourism Apeal (STTA)	STTA1	0.931	0.962	0.970	0.867
	STTA2	0.941			
	STTA3	0.912			
	STTA4	0.924			
	STTA5	0.946			
Tourist Trust in Health Safety Standards (TTHS)	TTHS1	0.928	0.882	0.927	0.809
	TTHS2	0.902			
	TTHS3	0.868			

All constructs resulted high reliability and convergent validity as each indicator's loading was above 0.70 and all AVEs >= minimum threshold of 0.50.

4.1.2 Discriminant Validity

The Fornell–Larcker criterion was used to assess discriminant validity whereas examining inter construct correlations was used to test this. Discriminant validity was confirmed, since the AVE square root of each construct was above its correlation to other constructs. The correlations in Table 8 meet the requirements for acceptable discriminant validity of these relationships. The Measurement model of the study is presented below (see figure 4).

Table 8: Fornell-Larcker criterion

	DTP	Per IHI	STTA	TTHS	LFW
DTP	0.936				
PER IHI	0.224	0.967			
STTA	0.448	0.329	0.931		
TTHS	0.428	0.370	0.542	0.900	
LFW	0.471	0.264	0.451	0.550	0.978

Furthermore, the Heterotrait–Monotrait Ratio (HTMT) is a discriminant validity measure to examine how distinct constructs in a model are from each other. Good discriminant validity is HTMT values less than 0.85 (or 0.90 in more lenient cases), though values above are considered to indicate overlap in constructs. All HTMT values in the matrix provided are under 0.85, but the highest value, at 0.584, is between Tourist Trust in Health Safety Standards (TTHS) and Sustainable Tea Tourism Appeal (STTA), with next highest value being between Low Fluoride Water Sources (LFW) and Tourist Trust in Health Safety Standards (TTHS) at 0.591. The minimal cross loading among constructs means that each construct measures its own concept and these lower values are very supportive. These confirm that Digital Transparency Platform (DTP), Per IHI, STTA, TTHS, LFW are unique constructs with little redundancy in this model. In detail below is presented Table (9).

Table 9: Heterotrait-monotrait ratio (HTMT) – Matrix

	DTP	Per IHI	STTA	TTHS	LFW
DTP					
PER IHI	0.235				
STTA	0.473	0.341			
TTHS	0.471	0.400	0.584		
LFW	0.496	0.272	0.465	0.591	

4.2 Common Method Bias (CMB)

Common Method Bias (CMB) was considered, given the self reported data from a single source. CMB was evaluated using Harman's one factor test and Common Latent Factor analysis. The exploratory factor analysis resulted in 5 factors that accounted for 89.64% of the variance with the first factor explaining only 32.44% that is below the 50% threshold of the CMB presence. More specifically, our analysis using the common latent factor approach found no evidence of CMB as regression weights in the confirmatory factor analyses with and without the common latent factor were not significantly different from zero. It should be possible with these tests to interpret the study's findings with confidence, because CMB is unlikely to perturb the data very much.

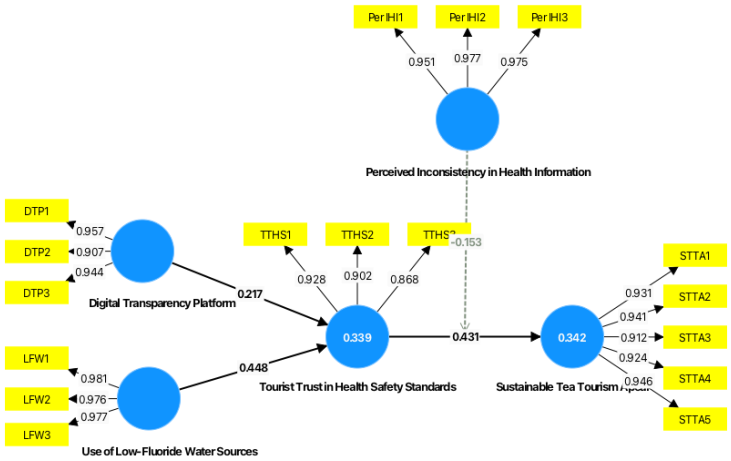

Figure 4: Measurement model

4.3. Structural Model

Maximum likelihood estimation technique was used to estimate the study's structural model. The model fit indices demonstrated a strong fit with values: By setting χ^2/df = 1.805, RMR = 0.036, GFI = 0.907, NFI = 0.929, RFI = 0.914, IFI = 0.967, TLI = 0.960, CFI = 0.967, RMSEA = 0.056, a good model fit was confirmed [30]. The path coefficients, standard errors, and values of each hypothesized relationship are presented in table 6. The participation of the Digital Transparency Platform (DTP) has a significant effect on Tourist Trust in Health Safety Standards (TTHS) (β = 0.217, p<0.001), and its role in improving tourists' trust in health safety measures is supported by it. This supports H1 because it finds that tourist trust grows when health and safety information are transparently presented. In addition, it also finds that there is a positive impact of Improved Trust (β = 0.312, p < 0.001) and Per IHI (β = 0.141, p < 0.001) on STTA, implying the influence of perceived inconsistencies on STTA and improved confidence on the STTA. This finding presents a support for H2 that discrepancies in health information may subtly negatively impact tourists' attraction towards sustainable tea tourism. H3 was validated by the substantial effect found in the relationship between TTHS and STTA (β = 0.431, p < 0.001). This relationship demonstrates that the trust in health safety standards contributes in boosting the credibility of sustainable tea tourism if the health and environmental points are pulsed. As predicted in H4, the Use of Low Fluoride Water Sources (LFW) has a substantial effect on TTHS (β = 0.448, p < 0.001), showing the critical role of keeping fluoride level in water sources low to encourage tourists to rely on health standard trust. Results overall highlight the significance of transparency, water quality, trust in health information, on the appeal of sustainable tea tourism, shedding light on the importance of continuous health messaging for drawing consumers to these fluoride sensitive regions. Table 10 presented ipath coefficient.

Table 10: Path Cofficient

Relationships	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values
DTP -> TTHS	0.217	0.217	0.026	8.493	0.000
Per IHI -> STTA	0.141	0.140	0.021	6.603	0.000
TTHS -> STTA	0.431	0.431	0.022	19.472	0.000
LFW -> TTHS	0.448	0.449	0.023	19.182	0.000

4.4. Mediation Analysis

Indirect effects of Use of Low-Fluoride Water Sources (LFW) and Digital Transparency Platform (DTP) on Sustainable Tea Tourism Appeal (STTA) were explored via Tourist Trust in Health Safety Standards (TTHS). The path coeffcient of the mediation analysis presented in the table 11. Significant mediation pathways were found, which support the hypothesized indirect relationships. In particular, the indirect effect of LFW on TTHS and STTA was substantial (β = 0.193, p < 0.001, with a high T statistic (12.919), which indicates that LFW affects tourists' STTA through its effect on TTHS by enhancing tourists' trust in health safety standards.This result reaffirms that trust, itself, is a salient enabler for growing sustainable tea tourism, through leveraging of low-fluoride water sources, a critical fact argued by previous research. As in the case of DTP, it also had a strong indirect effect on STTA though TTHS (β = 0.093, p < 0.001, T-statistic = 7.586). Digital transparency platform builds trust on health safety standards that positively influence the appeal of tea tourism. Through a strong indirect effect, it is highlighted that transparency helps to appease traveler about the

health related safety and then can be used to promote the sustainable tourism appeal. These two findings jointly indicate that trust building mechanisms including low fluoride water assurance and transparent information are important for supporting sustainable tea tourism. The structure model of the study is presented below see figure 5.

Table 11: Mediation path coefficent

	Beta	Mean	SD	T Value	P values
LFW -> TTHS -> STTA	0.193	0.193	0.015	12.919	000
DTP -> TTHS -> STTA	0.093	0.093	0.012	7.586	000

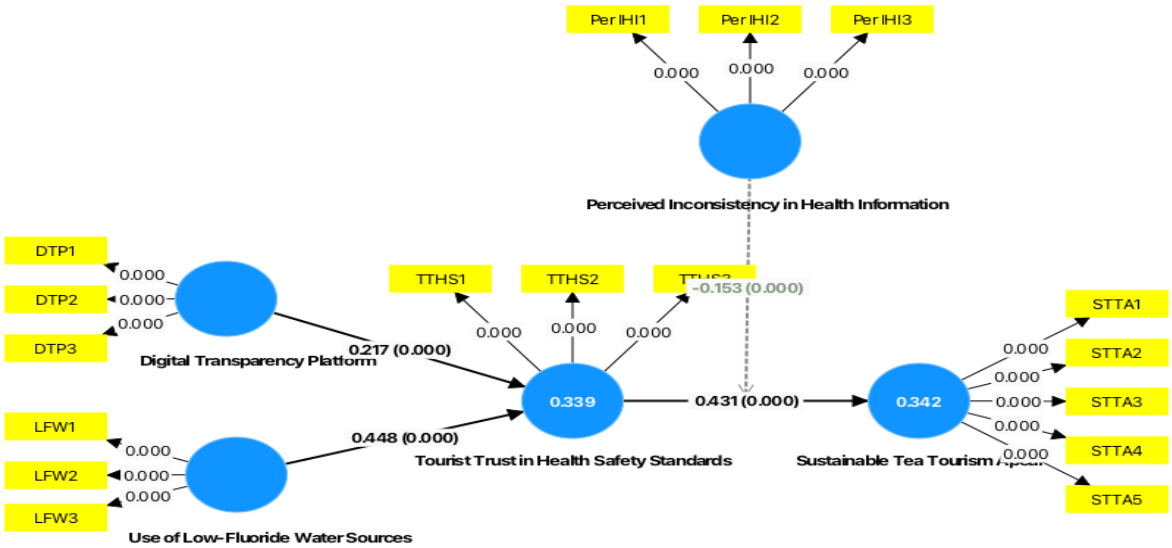

Figure 5: Structure model

4.5. Moderation Analysis

Moderation analysis is the investigation of the effect of Perceived Inconsistency in Health Information (Per IHI) on the association between Tourist Trust in Health Safety Standards (TTHS) and Sustainable Tea Tourism Appeal (STTA). Results depict a negative linear moderation on the negative beta value (β = -0.153, p < 0.001, T-statistic = 7.864), meaning that the appeal of sustainable tea tourism is undermined by low perceptions of trust in health safety standards and by inconsistencies in health information. This finding

suggests that inconsistent health messaging can undermine trust and hence reduce tourists' attraction to sustainable tea tourism, even when health safety standards are established.

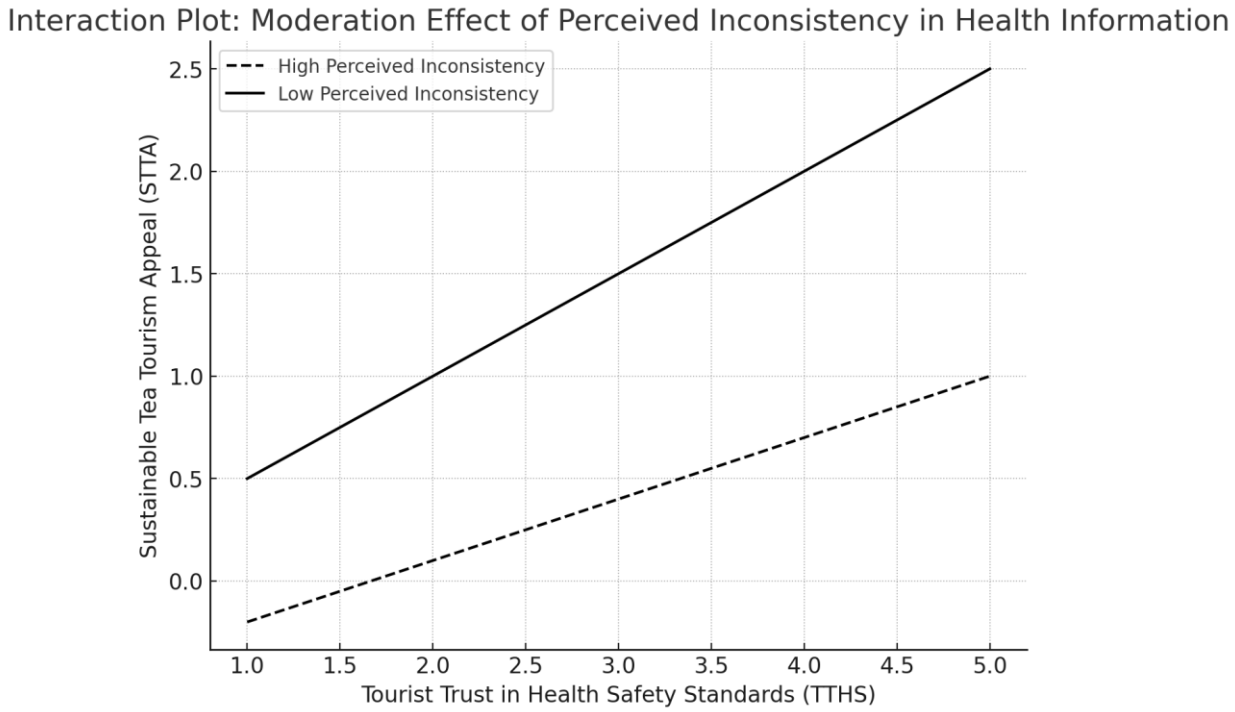

Figure 6: Interaction plot of moderation effect of perceived inconsistency in health information

The interaction plot figure 6 showing the moderation effect of Perceived Inconsistency in Health Information (Per IHI) on the relationship between Tourist Trust in Health Safety Standards (TTHS) and Sustainable Tea Tourism Appeal (STTA) is presented here. Results show that STTA is positively biased by TTHS but that perceived inconsistency with health information diminishes the positive impact of TTHS on STTA, implying that as inconsistency in health information rises, the trust tourists have in health standards has less to do with increasing interest in visiting low carbon tea tourism.

5. DISCUSSION

5.1 Findings

The results of this study also provide several very important insights into the methods of affecting the extent to which the Sustainable Tea Tourism Appeal (STTA) will be attractive, with a specific focus on the role of the Digital Transparency Platform (DTP), Use of Low fluoride water sources (LFW), Customer Trust in Health Safety Standards (TTHS), and perceived inconsistencies in health information (Per IHI). Second, the results showed a positive relationship between the DTP and Trust in Health Safety Standards (TTHS) on the regression weight ($\beta = 0.217$, $p < 0.001$). This finding is consistent with previous research that places emphasis on the valuable role of digital platforms in supporting consumers' trust by allowing them to get reliable, real time information. This result validates that transparency initiatives help ameliorate trust in health related safety in areas where water quality concerns can impair tourist perceptions. Second, perceived inconsistencies in health information (Per IHI) negatively moderated the relationship between Tourist Trust in Health Safety Standards (TTHS) and Sustainable Tea Tourism Appeal (STTA). For instance, the adjusted interaction term (Per IHI x TTHS → STTA) showed significant negative effect ($\beta = -0.153$, $p < .001$), indicating that conflict between different health messages affects the tourists' trust in safety standards, and hence affects attractiveness of tea tourism destination. This is consistent with Mazzocchi, Orsi [31] findings whereby health information discrepancy lead to mistrust in the tourism safety protocols. The mediating role of Tourist Trust in Health Safety Standards (TTHS) between both DTP and LFW to STTA was also fully supported. The indirect effects of DTP on

STTA through TTHS and LFW on STTA through TTHS were positive and significant (β's = 0.093 and 0.193 $p < 0.001$, respectively). The findings indicated that trust plays an important role in health standards in enabling confidence and willingness by tourists for tea tourism in these regions. This mediation is consistent with previous research indicating that clear communication of health and environmental standards may illuminate tourists' perceptions in a positive fashion. For instance, in Pakistan, the lack of standardized health safety protocols and inconsistent communication in popular tourist destinations, such as Swat and Murree, has often led to skepticism among tourists. Addressing these gaps through clear and transparent health guidelines could enhance trust and encourage more sustainable tourism practices in the region [32].

5.2 Theoretical Implications

Theoretical contributions to sustainable tourism in this study are multiple, especially in areas with health and environmental concerns. Second, while some previous work has looked at trust in health safety standards (TTHS) and environmental transparency, it has not analyzed their performance in the periods that digital transparency platforms (DTP) and low fluoride water source practices, such as MCTP and SMART water, were implemented and widely available. There findings confirm that DTP and LFW positively associated with TTHS, and further impacts for the STTA. First, this study contributes to the literature on transparency and trust, while extending its theoretical scope across health sensitive tourism contexts, and second, this research widens the scope of literature by investigating perceived inconsistency in health information (Pre IHI) as a negative moderator of the TRUSTOR × Transparency relationship. Our results suggest that inconsistencies in health messaging weaken the positive relationship between TTHS and STTA, suggesting a unique area for future studies. Overall, this is in line with research in the field of detrimental impact of conflicting health information on public trust but applied 'innovatively' to the realm of tourism. At last, this study contributes to extending the Task-Technology Fit (TTF) framework by positioning these findings within the framework and, by doing so, suggests that the technological initiatives (DTP and LFW) that are well aligned to current tourism tasks particularly enhance tourism appeal by strengthening trust in safety standards. For further research in this area, this framework would be explored to see whether technology played a role in health conscious tourism.

5.3 Practical Implications

Lastly, from a practical perspective, this study offers direction to tourism operators and policymakers in fluoride affected regions. In the first place, the introduction of digital transparency platforms (DTP) enhances tourist trust by presenting easily transparent, real time information regarding health standards; and this proved to have a positive effect on tourism attractiveness. Considering the growing demand of tourists who want to know transparent health information , managers are advised to allocate DTP investments. Second, this research emphasizes the need to continue consistent health messages. To effectively communicate, tourism stakeholders must work to uniformly send information across all platforms, whether that's digital or physical, to avoid diminishing their trust and tourism appeal. Lastly, sustainable and health conscious low-fluoride water sourcing as practices for tea tourism destinations can provide good image for tea tourism destinations. Promoting these practices will allow tourism operators to access environmentally and health conscious market segments and therefore broaden their appeal, and simultaneously promote the means to sustainable tourism.In the context of tea tourism, one practical implication of this study's findings is the need for greater transparency regarding the quality of water used in tea production, especially in fluoride-affected regions. Transparency initiatives, such as the implementation of clear labeling on water sources and the use of fluoride reduction techniques in tea production, can directly benefit both consumers and operators.

For example, in Sri Lanka, a tea-producing region with high levels of fluoride contamination in local water sources, tea operators have successfully implemented a transparency initiative by adopting water filtration systems and clearly labeling the fluoride content on their product packaging. This initiative has not only improved consumer trust but also attracted a segment of health-conscious tourists who are more likely to engage in sustainable tourism practices. By providing detailed information on water quality and health safety, tea operators were able to demonstrate their

commitment to health and environmental sustainability, ultimately boosting sales and enhancing their reputation.

Such real-world applications provide a model for other tea tourism areas affected by fluoride contamination. Tourism operators can adopt similar transparency measures to ensure that health concerns are addressed, building consumer trust and supporting long-term sustainability in the tourism industry. The study emphasizes the importance of transparency initiatives in fostering sustainable tea tourism in fluoride-rich areas. To illustrate the practical implementation of these recommendations, real-world examples can be integrated into the discussion. For instance, Darjeeling, a globally renowned tea tourism region in India, has successfully adopted transparency practices. Tourism operators in Darjeeling regularly publish water quality and safety reports on their websites and organize on-site workshops and guided tours to educate visitors about sustainable tea cultivation and water management. These measures have significantly enhanced tourist trust and engagement, establishing Darjeeling as a benchmark for integrating transparency into tourism practices.

Similarly, in Nyeri, Kenya, tea estates have implemented community-focused initiatives to promote transparency. These estates collaborate with local health organizations to monitor fluoride levels in water sources and provide real-time data to visitors. Information about health safety practices is displayed through signage within the estates and disseminated via digital platforms, showcasing their commitment to environmental and health transparency. These efforts have strengthened tourist trust and improved the sustainability of tea tourism in the region.

Tourism operators in other fluoride-rich regions can draw inspiration from these examples by adopting similar measures. Publishing periodic reports on water quality, creating visitor centers to educate tourists about health and environmental practices, and using digital tools such as QR codes to provide instant access to relevant information are actionable strategies. These initiatives not only address concerns about health and environmental safety but also enhance the overall appeal and sustainability of tea tourism, demonstrating the practical value of transparency initiatives in achieving these goals.

5.4 Limitations and Future Research

Several limitations are observed in this study. To limit generalizability of results to all fluoride affected areas, data collection was conducted only in Sichuan. The model presented here could be replicated in other regions where similar environmental health concerns exist and its findings verified. Second, the study looks at one of the potential moderators, Per IHI, while ignoring other possible moderators such as tourist demography or socioeconomic variables. Further exploration of additional moderators may help us to better understand contributions to sustainable tourism appeal.

A second limitation is that it only looks at digital transparency and low fluorized sourcing; other health and safety initiatives may still be important to tourist perceptions. Broader health and environmental interventions, which create a more holistic model, could become future research. To conclude, this study uses cross sectional data, and longitudinal research would give us an idea of how transparency platforms and water sourcing practices affect tourism appeal over the long term in fluoride rich areas.

6. CONCLUSION

In this study, it examines how digital transparency platforms, low fluoride water sources and tourist's trust of health safety standards help draw sustainable tea tourism in fluoride affected regions. Results show, LFW and DTP initiatives positively affect TTHS, thus improving sustainable tourism appeal. Results also indicate that perceived inconsistency serves to moderate trust and appeal of health information such that the messaging needs to be consistent. This research overall, establishes the importance of transparency, consistency, and sustainable health practices in encouraging tourism development on health sensitive regions to inform tourism stakeholders.

7. REFERENCES

[1]. Mondal, S. and K. Samaddar, Exploring the current issues, challenges and opportunities in tea tourism: a morphological analysis. International Journal of Culture, Tourism and Hospitality Research, 2021. 15(3): p. 312-327.

[2]. Tiwari, S., et al., Bridging tea with tourism: empirical evidence from India and Sri Lanka. Tourism Review, 2023. 78(1): p. 177-202.

[3]. Su, X. and H. Zhang, Tea drinking and the tastescapes of wellbeing in tourism. Tourism Geographies, 2022. 24(6-7): p. 1061-1081.

[4]. Serenari, C., et al., Private protected areas, ecotourism development and impacts on local people's well-being: a review from case studies in Southern Chile, in Protected Areas, Sustainable Tourism and Neo-liberal Governance Policies. 2020, Routledge. p. 96-114.

[5]. Robak, A., Perceived vs measured water supply service: evidence from New Zealand. International Journal of Water Resources Development, 2022. 38(6): p. 938-963.

[6]. Wang, X., et al., Towards an ethical and trustworthy social commerce community for brand value co-creation: A trust-commitment perspective. Journal of Business Ethics, 2020. 167: p. 137-152.

[7]. Mukherjee, A. and P. Nath, Role of electronic trust in online retailing: A re-examination of the commitment-trust theory. European journal of marketing, 2007. 41(9/10): p. 1173-1202.

[8]. Hashim, K.F. and F.B. Tan, The mediating role of trust and commitment on members' continuous knowledge sharing intention: A commitment-trust theory perspective. International journal of information management, 2015. 35(2): p. 145-151.

[9]. Goh, A.C., et al., Perception of cancer and inconsistency in medical information are associated with decisional conflict: a pilot study of men with prostate cancer who undergo active surveillance. BJU international, 2012. 110(2b): p. E50-E56.

[10]. Marangunić, N. and A. Granić, Technology acceptance model: a literature review from 1986 to 2013. Universal access in the information society, 2015. 14: p. 81-95.

[11]. Qiao, G., et al., Role of Body in Travel: Wheelchair Users' Experience From a Multi-Sensory Perspective. Journal of Travel Research, 2024: p. 00472875241249391.

[12]. Soliman, M., et al., Robot-delivered tourism and hospitality services: how to evaluate the impact of health and safety considerations on visitors' satisfaction and loyalty? Tourism and Hospitality Research, 2024. 24(3): p. 393-409.

[13]. Noy, C. and A. Kohn, Mediating touristic dangerscapes: The semiotics of state travel warnings issued to Israeli tourists. Journal of Tourism and Cultural Change, 2010. 8(3): p. 206-222.

[14]. Qiao, G., et al., Inclusive tourism: applying critical approach to a Web of Science bibliometric review. Tourism Review, 2024.

[15]. Li, Q. and M. Wu, Tourists' pro-environmental behaviour in travel destinations: Benchmarking the power of social interaction and individual attitude. Journal of Sustainable Tourism, 2020. 28(9): p. 1371-1389.

[16]. Wang, Q., et al., The burden of travel for care and its influencing factors in China: an inpatient-based study of travel time. Journal of Transport & Health, 2022. 25: p. 101353.

[17]. Fuchs, G. and A. Reichel, An exploratory inquiry into destination risk perceptions and risk reduction strategies of first time vs. repeat visitors to a highly volatile destination. Tourism management, 2011. 32(2): p. 266-276.

[18]. Zheng, D., Q. Luo, and B.W. Ritchie, The role of trust in mitigating perceived threat, fear, and travel avoidance after a pandemic outbreak: A multigroup analysis. Journal of Travel Research, 2022. 61(3): p. 581-596.

[19]. Milanović Pešić, A., et al., Sustainable Tourism Development and Ramsar Sites in Serbia: Exploring Residents' Attitudes and Water Quality Assessment in the Vlasina Protected Area. Sustainability, 2023. 15(21): p. 15391.

[20]. Liu, Q., et al., Psychological driving mechanism of safety citizenship behaviors of construction workers: Application of the theory of planned behavior and norm activation model. Journal of construction engineering and management, 2020. 146(4): p. 04020027.

[21]. Amoako, G.K., R.K. Dzogbenuku, and A. Abubakari, Do green knowledge and attitude influence the youth's green purchasing? Theory of planned behavior. International Journal of Productivity and Performance Management, 2020. 69(8): p. 1609-1626.

[22]. Majeed, S., W.G. Kim, and K. Ryu, Medical tourism and cognitive dissonance: exploring tourist choice behavior, post-choice pre-outcome regret, and visit intention. Journal of Quality Assurance in Hospitality & Tourism, 2024. 25(3): p. 514-544.

[23]. Chin, W.W., A. Gopal, and W.D. Salisbury, Advancing the theory of adaptive structuration: The development of a scale to measure faithfulness of appropriation. Information systems research, 1997. 8(4): p. 342-367.

[24]. Cao, X., et al., Political promotion, CEO incentives, and the relationship between pay and

performance. Management Science, 2019. 65(7): p. 2947-2965.
[25]. Portes, A., G. N'goala, and A.-S. Cases, Digital transparency: Dimensions, antecedents and consequences on the quality of customer relationships. Recherche et Applications en Marketing (English Edition), 2020. 35(4): p. 72-98.
[26]. Wang, T., et al., Occurrence, Main Source and Health Risks of Fluorine in Mine Water. Exposure and Health, 2024: p. 1-14.
[27]. Liu, Y. and A. Jongwiriyajaroenchai, The Management of Enhancing the Modern Tea Tourism Experience in Chinese Characteristic Towns: A Case Study in Gianxin town. Journal of Roi Kaensarn Academi, 2024. 9(7): p. 428-444.
[28]. Sarfraz, M., et al., Coronavirus disease 2019 safety measures for sustainable tourism: the mediating effect of tourist trust. Frontiers in Psychology, 2022. 13: p. 784773.
[29]. Anderson, J.C. and D.W. Gerbing, Structural equation modeling in practice: A review and recommended two-step approach. Psychological bulletin, 1988. 103(3): p. 411.
[30]. Bagozzi, R.P., Y. Yi, and L.W. Phillips, Assessing construct validity in organizational research. Administrative science quarterly, 1991: p. 421-458.
[31]. Mazzocchi, C., et al., Consumer awareness of sustainable supply chains: A choice experiment on Parma ham PDO. Science of the Total Environment, 2022. 836: p. 155602.
[32]. Kamel, N., Examining the mediating role of celebrity endorsement in green advertisements to improve the intention of Egyptian Millennials towards environmental behaviours in tourist destinations. Tourism & Management Studies, 2020. 16(4): p. 7-21.