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Residents' Overall Quality of Life in Smart Tourism Destination in Zhuhai, China

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Abstract

Smart tourism destinations (STDs) aim to improve the travelers' experience and the local residents' quality of life. However, existing research mainly focuses on the perspectives of tourists and ignores the attitudes of residents. Residents' attitudes signify their support for local smart tourism development. Without residents' support, STD-related projects may experience failure. This study fills this gap by exploring how perceived impact of smart travel/tourism (IST) and sense of leisure of well-being (SLW) contributed to residents' overall quality of life (QoL). This study adopts quantitative method with questionnaire. The finding confirms the residents' positive impact on smart travel/tourism in Zhuhai, China. Similarly, they residents also showed their approval on the leisure well-being. Additionally, the findings highlight significant relationships between the perceived impact of smart travel/tourism (X1), sense of leisure well-being (X2), and overall quality of life (Y). Residents' quality of life is significantly improved by positive perceptions of smart tourism impacts and leisure well-being. This underscores the importance of the local perspective in STD success. STD initiatives should prioritize enhancing these specific aspects *for residents*. This paper suggests that engaging the community and focusing on their perceived benefits regarding smart travel and leisure well-being will foster crucial support and ensure project viability.

Keywords: overall quality of life, smart travel, leisure well-being, residents' attitudes, smart tourism destination

A. Introduction

The development of smart technologies has significantly changed various sectors, including tourism. Smart tourism, characterized by the use of information and communication technologies (ICTs) to enhance the tourist experience and optimize tourism management, has become a focal point of contemporary research. However, local residents' perceptions and attitudes towards smart tourism initiatives remain an under-researched area, especially in specific urban contexts such as Zhuhai, China.

Smart tourism achieves considerable interests in recent years due to its potential to improve the efficiency and sustainability of tourism operations. Numerous studies have reported the benefits of smart tourism, including increased traveler's satisfaction, improved destination management, and increased economic benefits for local communities (Gretzel et al., 2015; Boes et al., 2016). In the Chinese context, the government has been actively promoting smart city initiatives, with cities such as Zhuhai leading the way in implementing smart tourism strategies (Li et al., 2017).

The literature clearly shows the advantages of smart tourism, but there is a gap regarding local residents' perceptions of these initiatives. Their attitudes are vital, as their support and involvement play a key role in ensuring successful implementation and sustainability of smart tourism projects (Xu et al., 2018). Past studies has largely discussed on the technological domain and perspectives of travelers, but the social implications and perceptions of residents require further investigation.

This research aims to address this gap by examining residents' perceptions of smart tourism in Zhuhai, China. Using quantitative descriptive method, this research aims to explore residents' awareness, acceptance, and perceived impact of smart tourism in their daily lives and communities. The findings from this study will provide valuable insights for policy makers, tourism planners and researchers, which will contribute to the development of more inclusive and resident-friendly smart tourism strategies.

The perceptions of local residents play a crucial role in the successful development of smart tourism initiatives. Residents' attitudes towards tourism can significantly influence the sustainability and acceptance of smart tourism projects. Positive perceptions can lead to greater community support, while negative perceptions may hinder the implementation of such initiatives. For example, Almeida-García et al. (2016) emphasize that residents' views on tourism impacts be they economic, socio-cultural, or environmental can influence their overall satisfaction and readiness to support tourism development.

Understanding residents' perceptions is essential for policymakers and tourism planners to create more inclusive and effective smart tourism strategies. Residents' quality of life is closely linked to their perceptions of tourism impacts, and their satisfaction with specific life factors can influence their support for tourism initiatives. As noted by Santos-Júnior et al. (2020), the formulation and implementation of urban and tourism development policies

can benefit from knowledge of residents' perceptions and satisfaction with their quality of life.

This study investigates residents' perspectives within a smart tourism context. It first seeks to determine the extent to which residents perceive impacts from smart travel/tourism and experience a sense of leisure well-being. Building on this, the research critically examines how these two factors—the perceived impact of smart tourism and leisure well-being—collectively influence residents' overall quality of life.

B. Literature Review

Perceived impact on smart travel/tourism impact

Smart destinations are often associated with several aspects such as sustainability (Shafiee et al., 2019), generative AI and IoT (Suanpang & Pothipassa, 2024), and information and communication technology (ICT) (Morales-Urrutia et al., 2020). However, there is a general consensus among these studies that the notion of smart cities served as an inspiration for the development of smart destinations (Buhalis et al., 2022; Gretzel et al., 2015). In short, as posited by Al Waer and Deakin (2012), a smart city encompasses four fundamental components: the pervasive utilization of technology, the influence of information and communication technology (ICT) on life and the environment, the integration of ICT in governance and administration, and the synergy between ICT and society to foster innovation and knowledge creation (Al Waer & Deakin, 2012).

The notion of smart tourism destinations (STDs) originated in the 2010s, following on the idea of smart cities, showing the significant impact of smart technologies on traditional tourist destinations (Buhalis & Amaranggana, 2013; Gretzel et al., 2015; Mehraliyev et al., 2019, 2020). It is evident that smart destinations, otherwise known as smart tourism destinations, have emerged as a predominant theme in smart tourism research. These destinations employ innovative technologies to enhance the travelers' experience and drive sustainable development (Tyan et al., 2020). The primary objective of these destinations is to increase visitor engagement, thereby increasing satisfaction and improving residents' quality of life . The involvement of various stakeholders is crucial for the success of these initiatives. This requires the engagement of tourism businesses, ICT companies, governments, residents, and individual travelers to co-create value, share information, and enhance decision-making. This research utilized a validated instrument, developed by Wei et al. (2024), to assess the perceived effects of smart tourism and travel, grounded in established theoretical frameworks.

Sense of Leisure Well-being

Leisure well-being comprises the accessibility and the joy of recreational pursuits, interests and social exchanges (Sirgy et al., 2017). Leisure activities are associated with positive emotions, stress reduction, and improved social relationships, all of these factors play a major role in enhancing overall quality of life. Studies show that leisure activities play an important role in the

improvement of subjective well-being and the quality of life. (Brajša-Žganec et al., 2011; Newman et al., 2014). Therefore, the higher the leisure well-being residents' perceive, the greater overall quality of life they will experience. Wei et al, 2024 developed a validated instrument to measure the sense of leisure well-being.

Overall Quality of Life

QoL refers to people's satisfaction with their own lives. In a more comprehensive nature, QoL refers to an individual's perception of his or her position in life in the context of the culture and value systems in which he or she lives and in relation to his or her goals, expectations, standards, and concerns (WHO, 2021). QoL research is prevalent in social, behavioral, environmental, and policy disciplines (Uysal et al., 2016) and is an emerging topic in tourism and hospitality (Berbekova et al., 2022).

Smart tourism has emerged as an important area of research, focusing on improving the quality of life of citizens and tourists through technological innovation. Recent literature reviews have explored various aspects of smart tourism, including its impact on sustainable development (El Archi et al., 2023), its relationship with citizens' quality of life in smart cities (Ramkissoon, 2023).

Key concepts identified in smart tourism research include privacy protection, context awareness, cultural heritage, recommender systems, social media, Internet of Things, user experience, real-time applications, user modeling, augmented reality, and big data (Kontogianni & Alepis, 2020). The studies underscore the potential of smart tourism to improve various aspects of urban life, such as housing, health, education, and environmental sustainability, while also grappling with issues related to data management and user experience in an increasingly connected world. Eventually, current study investigates smart city quality of life (SCQOL) that can be explained in several aspects, such as Intelligent Environments, Intelligent Humans, Intelligent Living, Intelligent Economy and Policies, and Intelligent Mobility. Each domain had a different influence on citizens' attitudes and support for citizen-centric smart city development (SCD) (Chen & Chan, 2023). Wei et al. (2024) designed a validated instrument specifically for assessing overall quality of life to be adopted as instrument in this study.

C. Research Methods

This study is rooted in positivism that employs quantitative descriptive. This study seeks to find the relationship among variables. The population is residents in Zhuhai, China. Zhuhai, a prefecture-level city, oversees three county-level divisions and four special economic districts, all categorized as districts. The districts are as the following (1) Zhuhai City, (2) Xiangzhou Distric, (3) Doumen District, and (4) Jinwan District.

Research Location

The selection of China as the research location is due to the fact that the country has been at the forefront of adopting and implementing smart tourism initiatives (Li et al., 2017). China's rapid economic growth and significant investments in technological infrastructure provide a unique and dynamic environment for studying smart tourism destinations (Gretzel et al., 2015). Additionally, Chinese cities, including Zhuhai, have been actively promoting smart city and smart tourism projects as part of the national strategy to enhance urban development and improve the quality of life for residents (Buhalis & Amaranggana, 2014).

China's diverse range of tourist attractions, from historical landmarks to modern urban landscapes, allows for a comprehensive analysis of how smart technologies are integrated into different types of tourism destinations (Mehraliyev et al., 2020). Furthermore, the large and varied population provides valuable insights into the perceptions and attitudes of residents towards smart tourism initiatives (Williams et al., 2020). By focusing on China, this research can explore the unique challenges and opportunities faced by smart tourism destinations in a rapidly developing context, offering lessons that may be applicable to other regions and countries (Xiang et al., 2021).

The population and sample

The population is residents of Zhuhai, China. The sample is taken from these districts using appropriate sample size (Hair et al., 2018). Determining the appropriate sample size for regression analysis depends on multiple factors, including the number of predictors, the effect size, and the desired power of the study. Hair et al. (2018) suggest a general guideline of having at least 15 to 20 observations per predictor variable.

Data Collection and Instrumentation

The data collection employs questionnaire adapted from previous study (Wei et al., 2024). The online questionnaire was distributed in the four districts in Zhuhai. There are three variables; (1)perceived impact of smart travel/tourism (6 items), (2) Sense of Leisure well-being (7 items), and (3) Overall Quality of Life (6 items). The questionnaire uses 5 Likert Scale with 1 stating ", and 5 stating "strongly agree". Here are sample items for each variable:

Table 1. Sample Item for each variable

No	Variables	Sample Items
1	Perceived impact of smart travel/tourism (X1)	Local tourist attraction webpages or blogs provide valuable information for planning my trips.
		Trust electronic word of mouth, such as customer reviews from TripAdvisor, when making travel decisions.

No	Variables	Sample Items
2	Sense of Leisure well-being (X2)	Recently, I have been spending quality leisure time in general (e.g. going on vacations, relaxing around the house, enjoying a hobby).
		I am the kind of person who knows how to enjoy leisure time anytime and anywhere.
3	Overall Quality of Life (Y)	I am satisfied with my life as a whole
		The conditions of my life are excellent.
		In most ways, my life is close to ideal.

Adapted from Wei et al., (2024)

Eventually, to address the research questions 1 and 2, mean tests are used with the following score range.

Table 2. Scoring range of Likert scale of the survey

Verbal Interpretation	Mean Range	Weight/Scale
Strongly agree	4.51-5.00	5
Agree	3.51-4.50	4
Moderately agree	2.51-3.50	3
Slightly agree	1.51-2.50	2
Disagree	1.00-1.50	1

While research question three is answered by conducting correlation and regression tests were conducted to examine the relationships among the variables.

D. Result and Discussion

Result

Table 3 presents the demographic data of the respondents. The questionnaire was completed by a cohort of 47 females and 53 males, with ages spanning from 22 to 50 years. The geographic distribution of respondents encompasses the Zhuhai district (13 respondents), Xiangzhou district (28 respondents), Doumen district (38 respondents), and Jinwan district (21 respondents). This distribution indicates that the respondents effectively represent all areas within Zhuhai.

Table 3. Demographic Data

	Percentage (%)
Respondents	
Female	47
Male	53
Gender	
Male	55
Female	45
Geographic Distribution	
Zhuhai Distric	13

	Percentage (%)
Xiangzhou	28
Doumen	38
Jinwan	21
Educational Background	
Postgraduate	13
Undergraduate	55
College degree	32

Furthermore, the respondents possess diverse educational backgrounds, comprising 55 individuals with undergraduate degrees, 32 individuals with college degrees, and 13 individuals with postgraduate degrees. All respondents were selected based on the criterion that they undertake at least three or more vacation trips per year. The gender distribution of respondents is nearly balanced, ensuring a representative sample from both male and female perspectives. The age range from 22 to 50 years captures a broad spectrum of adult experiences and opinions. The inclusion of participants from all four districts of Zhuhai ensures comprehensive geographic representation, which is essential for the generalizability of the findings.

Additionally, the diversity in educational backgrounds among respondents provides a multi-faceted perspective on vacation habits and preferences, influenced by varying levels of academic achievement. The criterion of undertaking a minimum of three vacation trips per year highlights that the sample consists of individuals who actively engage in leisure travel, making their responses particularly relevant to the study's focus.

Table 4. Validity Test for X1

Items	Critical Value (R-table)	Calculated Correlation (R-count)	Conclusion
X1.1	0.1966	0.376	Valid
X1.2	0.1966	0.253	Valid
X1.3	0.1966	0.428	Valid
X1.4	0.1966	0.510	Valid
X1.5	0.1966	0.594	Valid
X1.6	0.1966	0.461	Valid

After collecting the questionnaire data, it was analyzed using SPSS 23 for various statistical tests. Initially, validity tests were conducted to confirm the items' validity. This was assessed by comparing the r-count with the r-table value of 0.1966. Table 4 shows that all items in the perceived impact on smart tourism travel/tourism (X1) were valid, with correlation values ranging from 0.253 to 0.594, surpassing the R-table value.

Table 5. Validity Test for X2

Items	Critical Value (R-table)	Calculated Correlation (R-count)	Conclusion
X2.1	0.1966	0.557	Valid
X2.2	0.1966	0.576	Valid
X2.3	0.1966	0.526	Valid
X2.4	0.1966	0.293	Valid
X2.5	0.1966	0.490	Valid
X2.6	0.1966	0.478	Valid

As demonstrated in Table 5 below, the variables, including the sense of leisure well-being (X2), exhibit R-count values ranging from 0.293 to 0.576, indicating their validity.

Table 6. Validity test variable Y

Items	Critical Value (R-table)	Calculated Correlation (R-count)	Conclusion
Y.1	0.1966	0.638	Valid
Y.2	0.1966	0.539	Valid
Y.3	0.1966	0.640	Valid
Y.4	0.1966	0.552	Valid
Y.5	0.1966	0.585	Valid
Y.6	0.1966	0.623	Valid

As shown in Table 6, the overall quality of life (Y) exhibits values ranging from 0.552 to 0.640, confirming its validity. Consequently, all questionnaire items were determined to be valid.

Table 7. Reliability Test with Cronbach Alpha (CA)

Variable	Cronbach Alpha	Conclusion
X1	0.620	Reliable
X2	0.679	Reliable
Y	0.738	Reliable

Additionally, table 7 shows reliability tests using Cronbach's Alpha (CA), with a benchmark of 0.60 indicatig reliability. The tests revealed that the CA values for variables X1, X2, and Y are 0.620, 0.679, and 0.738, respectively, confirming that all variables are reliable.

Table 8. Residents' perceived impact of smart travel/tourism

Statements	Mean	Interpretation
Local tourist attraction webpages or blogs provide valuable information for planning my trips.	4.48	Strongly agree

Statements	Mean	Interpretation
I trust electronic word of mouth, such as customer reviews from TripAdvisor, when making travel decisions.	4.40	Agree
The online booking system for hotels, restaurants, and other services is efficient and user-friendly.	4.28	Agree
E-recommendation systems help me discover new places and activities during my travels.	4.51	Strongly agree
Innovative travel options, such as AR/VR travel and platforms like Amazon Explore, enhance my travel experience.	4.41	Agree
Self-service kiosks in hotels and airports provide a convenient and efficient service.	4.40	Agree

As seen in Table 8, it demonstrates that respondents generally have positive perceptions of various aspects of modern travel planning and services. The mean scores range from 4.28 to 4.51, indicating that users mostly agree or strongly agree with the statements. Specifically, respondents strongly agree that local tourist attraction webpages or blogs provide valuable information (mean = 4.48) and that e-recommendation systems help discover new places (mean = 4.51). They agree that electronic word of mouth (mean = 4.40), online booking systems (mean = 4.28), innovative travel options (mean = 4.41), and self-service kiosks (mean = 4.40) enhance their travel experiences. In summary, the results showed residents' positive impact on smart travel/tourism in the research location.

Table 9. Residents' Sense of Leisure well-being

Statements	Mean	Interpretation
Recently, I have been spending quality leisure time in general (e.g. going on vacations, relaxing around the house, enjoying a hobby).	4.38	Agree
I am the kind of person who knows how to enjoy leisure time anytime and anywhere.	4.45	Agree
I am generally happy with the quality of my leisure time.	4.43	Agree
I like the people around me who live in my community.	4.42	Agree
I am emotionally attached to my community.	4.33	Agree
I feel at home in my community.	4.42	Agree
I feel sorry if I have to leave my home country.	4.43	Agree

Table 9 indicates that respondents generally agree with all the statements provided. The mean scores range from 4.33 to 4.45, demonstrating a positive perception of leisure well-being. Specifically, respondents agree that they spend quality leisure time (mean = 4.38), know how to enjoy leisure time anywhere

(mean = 4.45), are happy with the quality of their leisure time (mean = 4.43), like the people in their community (mean = 4.42), feel emotionally attached to their community (mean = 4.33), and feel at home in their community (mean = 4.42). Overall, these responses suggest a high level of satisfaction with both leisure activities and community connections among the respondents.

The findings in Table 10. reveal statistically significant correlations at the 0.01 level among the variables X1, X2, and Y. There is a moderate positive relationship between X1 and X2, with a Pearson correlation coefficient of 0.421. Similarly, X1 and Y show a moderate positive correlation, with a coefficient of 0.474. Notably, the strongest relationship is observed between X2 and Y, with a Pearson correlation coefficient of 0.622, indicating a strong positive association. All significance values (Sig. 2-tailed) are 0.000, confirming the reliability of these correlations.

Table 10. Correlation Test

		X1	X2	Y
X1	Pearson Correlation	1	.421**	.474**
	Sig. (2-tailed)		.000	.000
	N	100	100	100
X2	Pearson Correlation	.421**	1	.622**
	Sig. (2-tailed)	.000		.000
	N	100	100	100
Y	Pearson Correlation	.474**	.622**	1
	Sig. (2-tailed)	.000	.000	
	N	100	100	100

**. Correlation is significant at the 0.01 level (2-tailed).

Table 11. Model Summary

R	R Square	Adjusted R Square	Std. Error of the Estimate
.665[a]	.442	.431	.22170

Additionally, as seen in Table 11, the R-square value is 0.442, meaning that variable Y is influenced by variables X1 and X2 by 44.2%, while the remaining 55.8% is influenced by other variables that were not investigated. The simple linear regression equation is represented as Y = 0.020 + 0.354X1 + 0.641X2. Here, the constant value is 0.020, which means that when both X1 and X2 are zero, the value of Y will increase by 0.020. The regression coefficient for X1 is 0.354, indicating that for every one-unit increase in X1, Y will increase by 0.374 (calculated as 0.020 + 0.354). Similarly, the same principle applies to X2, where its coefficient reflects its contribution to the increase in Y.

Table 12. Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.020	.523		.038	.970
	X1	.354	.115	.258	3.086	.003
	X2	.641	.104	.514	6.146	.000

This regression analysis in Table 12 shows that both X1 (Perceived Impact of Smart Travel/Tourism) and X2 (Sense of Leisure Well-being) significantly influence the dependent variable, Y (Overall Quality of life). Among the two independent variables, X2 has a stronger impact, as indicated by its higher standardized Beta coefficient (0.514) and larger unstandardized coefficient (0.641) compared to X1. This suggests that enhancing leisure well-being is more influential in improving overall quality of life than the perceived impact of smart travel/tourism. The statistical significance of both X1 and X2 highlights their importance in predicting Y, while the non-significant constant implies that the intercept does not meaningfully contribute to the model. These findings emphasize the need for strategies that prioritize improving leisure well-being and leveraging smart travel/tourism to boost overall quality of life.

Table 13. Anova Test

	Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3.777	2	1.888	38.419	.000[b]
	Residual	4.768	97	.049		
	Total	8.544	99			

Discussion

This study confirms the residents' positive impact on smart travel/tourism in Zhuhai, China. Similarly, they residents also showed their approval on the leisure well-being. Additionally, the findings highlight significant relationships between the perceived impact of smart travel/tourism (X1), sense of leisure well-being (X2), and overall quality of life (Y). A moderate positive correlation exists between X1 and X2, indicating that individuals who perceive smart travel and tourism as impactful also tend to experience a greater sense of leisure well-being. Similarly, the moderate positive correlation between X1 and Y suggests that perceiving smart travel/tourism as impactful contributes positively to overall quality of life. Earlier studies have shown that the satisfaction of local people with their leisure time is positively associated with their perception of the quality of life, while the perception of the quality of life is positively associated with their evaluation of the benefits of tourism, which will ultimately lead to residents' support for tourism development. Liao

et a, 2016 reported that local residents' leisure satisfaction positively influences their perceived quality of life, which in turn is linked to their assessment of tourism's benefits (Liao et al., 2016), while the residents' overall life satisfaction supports the continued advancement of the smart tourism destination (Santos-Júnior et al., 2020).

Notably, the strongest relationship is observed between X2 and Y, reflecting a strong positive association. This indicates that a higher sense of leisure well-being is closely linked to increased overall quality of life. These findings collectively suggest that smart travel and tourism initiatives not only enhance leisure experiences but also contribute significantly to overall well-being and satisfaction in life. This underscores the importance of integrating smart tourism strategies to foster both personal and societal benefits.

This study strengthens previous study which identifies China and South Korea as global frontrunners in developing smart tourism, hospitality, and destinations. These nations leverage cutting-edge technologies, robust digital and physical infrastructure, and highly tailored services, primarily aiming to elevate the *tourist* experience (Alsharif et al., 2024). This study supported the development of Zhuhai as a "Smart City" that will gradually change the technology-oriented concept, introduce the "people-oriented" concept, and build a comprehensive social service environment (Li, 2019).

This research actively contributes to Zhuhai's development as a "Smart City," reinforcing the national trend identified by Alsharif et al. (2024). As Li (2019) noted, Zhuhai is strategically shifting towards a "people-oriented" model that values comprehensive social well-being alongside technological innovation. Our study directly supports this **human-centric transition** by focusing on the residents. We analyze how their perceptions of smart tourism impacts and leisure well-being shape their quality of life, providing **essential data** to ensure Zhuhai's smart city initiatives deliver **tangible benefits** to the local community (Li, 2019).

E. Conclusion

This study falls short of being fully satisfactory due to its limitations. The sample size is restricted to only 100 residents from four districts in Zhuhai, which may limit the applicability of the findings to the investigated area. To enhance the generalizability and robustness of the results, larger and more diverse sample sizes are needed. Consequently, there is an urgent need for future research involving broader and more representative samples. Moreover, integrating both qualitative and quantitative data would yield more comprehensive insights.

Despite its shortcomings, the study has successfully strengthens previous research stating that residents' quality of life is positively influenced by both their perceptions of smart tourism's effects and their satisfaction with leisure opportunities. The findings validate the importance of these elements from the often-overlooked resident standpoint. Ultimately, achieving a higher overall quality of life for residents in smart tourism destinations is intrinsically

linked to ensuring they perceive tangible benefits from smart initiatives and experience enhanced leisure well-being.

This study confirms the existing literature on community perspectives in tourism development and empirically demonstrates the significant positive correlations between residents' perceptions of smart tourism impacts, their subjective leisure well-being, and their overall quality of life (QoL). These findings translate into actionable policy implications for the development of smart tourism destinations (STDs), as exemplified by Zhuhai. Specifically, policymakers are advised to prioritize the delivery and communication of tangible benefits from smart tourism initiatives to local residents, going beyond exclusively visitor-oriented goals. In addition, STD strategies need to consciously integrate mechanisms to enhance residents' leisure well-being, potentially leveraging technology to improve access to recreational facilities or cultural experiences. This study suggests that the adoption of a holistic, resident-centered framework for STD planning and evaluation-one that rigorously assesses the impact on local quality of life-is essential to fostering community buy-in and ensuring the sustained success of these strategies.

F. Conflict of Interest

The authors declare no financial or non-financial competing interests relevant to the investigation of residents' quality of life in Zhuhai as a smart tourism destination.

G. Declaration of AI Use

The authors consulted ChatGPT by OpenAI to assist in identifying scholarly literature on smart tourism destinations, leisure well-being, and residents' quality of life. They independently examined the original publications to verify the relevance of the suggested sources, the accuracy of the cited information, and the bibliographic details. The authors exercised final judgment over the literature included and accept full responsibility for the manuscript's accuracy, originality, references, and academic integrity.

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