

Tourist Perceptions of Destination Attributes: An Empirical Study in Telangana's Nalgonda and Warangal Districts

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DOI: <https://doi.org/10.47772/IJRISS.2026.100600581>

Received: 10 June 2026; Accepted: 15 June 2026; Published: 30 June 2026

ABSTRACT

Tourism plays a vital role in boosting regional economic growth, preserving culture, and promoting social development. Despite Telangana's rich heritage, there is limited micro-level research on tourist perceptions. This study focuses on Nalgonda and Warangal districts to explore how tourists assess destination features and how these perceptions affect satisfaction and tourism potential. The objectives are twofold: (i) to examine the effect of seven destination attributes—accessibility, safety and cleanliness, natural and cultural attractions, accommodation and hospitality, leisure and recreation, costs and financial services, and travel comfort—on tourist satisfaction; and (ii) to determine whether satisfaction mediates the link between these attributes and overall tourism potential.

A structured questionnaire was administered to 400 respondents (200 from each district). Confirmatory Factor Analysis (CFA) validated the constructs, followed by Structural Equation Modeling (SEM), mediation tests, and Multi-Group Analysis (MGA) for comparative insights. Results highlight that natural and cultural attractions ($\beta = 0.31$) and safety and cleanliness ($\beta = 0.26$) significantly enhance satisfaction. Accessibility, hospitality, leisure, comfort, and cost-related services exert moderate but significant effects. Tourist satisfaction strongly predicts perceived tourism potential ($\beta = 0.62$), with full mediation observed in accessibility, leisure, and cost, while other attributes show partial mediation. District-wise and demographic differences emphasize the importance of context-specific strategies.

The study concludes that while Nalgonda and Warangal possess significant tourism potential, improving satisfaction levels is crucial to unlocking this potential. Findings provide theoretical contributions and practical guidance aligned with Telangana's Tourism Policy 2025–2030, supporting sustainable tourism growth in the state.

Keywords: Tourist Perceptions, Destination Attributes, CFA, SEM, Mediation, Multi-Group Analysis, Telangana Tourism, Sustainable Tourism

INTRODUCTION

Tourism is a dynamic and rapidly expanding part of the global economy, contributing nearly 10% to the world's GDP and supporting one in ten jobs worldwide (UNWTO, 2022). In India, the sector has experienced significant growth, with a steady increase in both domestic and international tourists. It accounts for about 5% of the country's GDP, highlighting its economic importance. Additionally, tourism acts as a driver for regional development, especially in areas rich in cultural heritage and natural beauty (Ministry of Tourism, 2023).

Telangana, one of India's youngest states, has positioned tourism as a priority sector due to its rich blend of cultural heritage, spiritual sites, and natural landscapes (Government of Telangana, 2023). Among its districts, Warangal stands out as a UNESCO World Heritage site, celebrated for its Kakatiya-era architecture, temples,

and forts, while Nalgonda offers a combination of historical monuments, pilgrimage centres, and eco-tourism resources (UNESCO, 2023; Telangana Tourism, 2023). Despite this potential, district-level empirical research on how tourists perceive these destinations remains scarce. Most existing studies examine tourism at the national or state level, often overlooking the micro-level dynamics that influence visitor satisfaction and destination competitiveness (Sharma & Nath, 2020; Reddy & Babu, 2021).

Understanding tourists' perceptions of destination attributes, such as accessibility, safety, cleanliness, attractions, hospitality, leisure, cost, and comfort, is essential for improving satisfaction and sustaining long-term tourism growth (Chen & Phou, 2013; Prayag et al., 2017). However, systematic evidence on these attributes in Telangana's heritage districts is limited, even as new policies such as the Telangana Tourism Policy 2025–2030 seek to reposition the state as a competitive and sustainable tourism hub (Government of Telangana, 2025).

This study aims to address this gap by exploring tourists' perceptions of destination attributes in Nalgonda and Warangal districts, evaluating their tourism potential, and pinpointing critical areas for policy action. By focusing on district-level evidence, the study contributes to both academic research on destination perceptions and practical strategies for sustainable tourism development in Telangana.

REVIEW OF THE LITERATURE

Research on tourist perceptions and satisfaction consistently highlights the importance of destination attributes in shaping overall experiences. Chen and Phou (2013) demonstrated that cultural attractions and hospitality have a strong influence on satisfaction in Laos, while Prayag et al. (2017) identified the mediating role of emotional experiences in satisfaction and recommendation behaviour. Similarly, Sharma and Nath (2020) emphasised the importance of safety and accessibility for domestic tourists in India, while Reddy and Babu (2021) highlighted community involvement and cleanliness as crucial factors for enhancing perceptions in Telangana. Collectively, these studies affirm that satisfaction functions as a central concept linking destination perceptions with tourism potential.

Studies on destination image and competitiveness have reinforced these conclusions. Dwyer and Kim (2003) conceptualized competitiveness by integrating destination resources and perceived value, while Kozak and Rimmington (2000) empirically confirmed that service quality, costs, and attractions significantly influenced satisfaction in Mediterranean destinations. Pike and Ryan (2004) examined destination image formation in New Zealand and found that perceptions strongly influenced revisit intention. In contrast, Chi and Qu (2008) validated a structural model, showing that destination image affects satisfaction and loyalty among U.S. tourists. These findings underscore the theoretical foundation for linking perceptions with destination competitiveness.

In the context of safety, cleanliness, and sustainability, Pizam and Mansfeld (2006) observed that perceived security is a decisive factor in tourist decision-making. Gössling and Hall (2021) emphasised that sustainability-related attributes, such as environmental management and community welfare, increasingly influence satisfaction and loyalty. Styliadis et al. (2017) found that residents' and tourists' perceptions of cleanliness significantly shaped overall satisfaction, while Alegre and Garau (2010) confirmed that hygiene and environmental quality affect both first-time and repeat visitation. These studies suggest that sustainability-related attributes must be integrated into destination management strategies.

Research has also explored hospitality, leisure, and recreation as key drivers of satisfaction. Wu and Li (2017) found that accommodation quality and staff friendliness are strong predictors of satisfaction in China, while Yoon and Uysal (2005) confirmed the impact of leisure and recreational opportunities on tourist motivation and loyalty. Kandampully and Hu (2007) noted that hospitality experiences directly shape emotional attachment to destinations, whereas Lee and Beeler (2009) demonstrated that entertainment and events enhance perceptions of cultural destinations. This evidence emphasizes the vital role of hospitality and recreation in improving visitor satisfaction.

The significance of cost, value, and service quality has been widely explored. Zeithaml (1988) described perceived value as a balance between quality and price, a view supported by Cronin et al. (2000), who found that service quality and value significantly impact satisfaction in various industries, including tourism. Petrick

(2004) identified perceived value as a multidimensional construct that influences satisfaction and the intention to revisit in tourism services. More recent research, such as Gallarza and Gil-Saura (2006), suggests that cost perceptions interact with other factors like comfort and accessibility, shaping the overall tourist experience.

Finally, regional and micro-level studies provide valuable evidence for Telangana. Rajesh (2013) reported that accessibility and cultural heritage are key factors influencing Indian tourists' satisfaction at heritage destinations, while Bhat and Qadir (2013) found that safety and hospitality significantly impact tourism potential in Kashmir. In the South Indian context, Nair and Thomas (2014) observed that perceptions of pilgrimage tourism are shaped by accessibility, accommodation, and spiritual atmosphere. Recent research by Kumar and Singh (2019) confirmed that district-level analyses are essential for developing effective destination strategies, as perceptions vary across micro-regions. These findings highlight the importance of localized studies in Nalgonda and Warangal.

Research Gap

- Prior studies have concentrated mainly on national or state-level analyses of tourism, with limited empirical evidence at the district level in India.
- Within Telangana, heritage-rich districts like Nalgonda and Warangal have received minimal academic focus, despite their cultural and historical importance.
- Most of the existing research has focused only on the direct links between destination attributes and satisfaction, without considering the mediating role of tourist satisfaction in influencing tourism potential.
- Similarly, demographic and regional differences in tourist perceptions remain insufficiently studied, hindering the development of group-specific tourism strategies.
- Few studies have used advanced analytical techniques such as Structural Equation Modelling (SEM), mediation, and Multi-Group Analysis (MGA) to produce actionable insights for sustainable tourism development.

This study seeks to address these gaps by analyzing tourist perceptions at the district level in Nalgonda and Warangal. It assesses destination attributes, investigates how satisfaction mediates these perceptions, and compares differences across demographic and regional groups through advanced analytical methods.

Need for the Study

Tourism has become a key factor in driving economic growth and preserving culture, but most studies in Telangana focus only on the state level, leaving district-specific insights limited. Heritage-rich districts like Nalgonda and Warangal, despite their cultural and historical significance, have not been extensively studied in tourism research. As Telangana prepares to roll out the Telangana Tourism Policy 2025–2030, there is an urgent need for reliable data on tourist perceptions of destination features such as accessibility, safety, hospitality, cost, and cultural sites. Gathering this information is vital to enhance visitor satisfaction, boost destination competitiveness, and support sustainable growth. This research addresses that gap by using advanced analytical methods, contributing both to academic understanding of destination perceptions and to practical regional tourism policies.

Objectives of the Study

This study examines tourists' perceptions of destination attributes and how these perceptions influence overall satisfaction and tourism potential in Telangana's heritage-rich districts of Nalgonda and Warangal. Specifically, it aims to:

1. To explore tourists' perceptions of major destination features and how these influence overall satisfaction in Nalgonda and Warangal districts of Telangana.
2. To analyse the role of tourist satisfaction in connecting destination attributes with tourism potential, while examining variations across demographic and regional groups.

Hypotheses of the Study

- H₀₁: Tourist perceptions of destination attributes—including accessibility, safety, cultural and natural attractions, hospitality, leisure, cost, and comfort—do not significantly affect overall tourist satisfaction in the districts of Nalgonda and Warangal..
- H₀₂: Tourist satisfaction does not act as a mediator between destination attributes and tourism potential.
- H₀₃: No significant differences exist in the relationships among destination attributes, satisfaction, and tourism potential across various demographic and regional groups.

METHODOLOGY OF THE STUDY

The present study employs a quantitative, cross-sectional survey design to examine tourists' perceptions of destination qualities and their impact on satisfaction and tourism potential. Two heritage-rich districts, Nalgonda and Warangal, were deliberately chosen for their cultural, historical, and spiritual importance within Telangana's tourism industry. This approach is practical for capturing immediate tourist perceptions and analysing causal relationships among variables using advanced statistical methods.

Study Area & Population

The study area includes Nalgonda and Warangal districts in Telangana, both known for their cultural, historical, and religious importance. Warangal is recognized as a UNESCO heritage city, while Nalgonda features temples, forts, and eco-tourism attractions. The sample was selected from tourists visiting 10 designated sites in each district, representing the key locations where perceptions of accessibility, safety, attractions, hospitality, leisure, cost, and comfort can be effectively evaluated.

Sample Size

The study involves a sample of 400 tourists, with 200 from Nalgonda district and 200 from Warangal district. To achieve comprehensive coverage, 10 key tourist destinations were selected from each district, and 20 respondents were randomly sampled at each location. This method ensured balanced representation and captured a variety of tourist experiences. Researchers used a random-intercept approach to survey tourists on-site, and only completed questionnaires were included in the analysis.

Questionnaire design

The questionnaire in this study was divided into four sections.

- Section I gathered respondents' demographic data, including age, gender, education, occupation, income, marital status, and household type.
- Section II explored travel habits, including the type of tourist, visit frequency, transportation methods, travel companions, and recent destinations in Nalgonda and Warangal.
- Section III evaluated tourist perceptions of destination features across seven categories: Accessibility, Safety & Cleanliness, Natural & Cultural Attractions, Accommodation & Hospitality, Leisure & Recreation, Cost & Financial Services, and Travel Comfort. Each attribute was rated using multiple items on a five-point Likert scale, "1 = strongly disagree to 5 = strongly agree."
- Section IV focused on tourist satisfaction, including overall satisfaction, value for money, expectation fulfilment, and the willingness to revisit or recommend the destination.

Analytical Tools

Because the study focuses on latent constructs like accessibility, safety, and satisfaction, advanced multivariate methods were necessary to verify measurement accuracy and structural relationships. The selected tools—CFA, SEM, Mediation, and MGA—help validate the conceptual framework and analyze causal connections, indirect effects, and group differences, aligning with the study's objectives.

➤ **CFA (Confirmatory Factor Analysis)**

- Validates the measurement model's accuracy..
- Ensures that the observed items reliably represent destination attributes, satisfaction, and tourism potential.
- Necessary because the study uses latent constructs.

➤ **Structural Equation Modelling (SEM)**

- Tests causal relationships between attributes, satisfaction, and tourism potential.
- Captures both direct and indirect effects in a single model.
- Matches the study objective of examining how perceptions influence satisfaction and potential.

➤ **Mediation Analysis**

- Uses bootstrapping to test whether tourist satisfaction mediates the link between attributes and tourism potential.
- Explains the mechanism of how perceptions translate into tourism potential.

➤ **Multi-Group Analysis (MGA)**

- Compares structural paths across groups (Nalgonda vs. Warangal, demographic categories).
- Identifies whether perceptions and relationships differ significantly between subgroups.
- Provides evidence for region-specific and policy-level recommendations.

Respondents Profile

The study surveyed a total of 400 tourists, with 200 respondents from each of the Nalgonda and Warangal districts. The demographic and socio-economic profiles of the sample are summarised below.

- Gender distribution comprises 224 males (56.0%) and 176 females (44.0%).
- Age distribution is as follows: below 20 years (52 individuals, 13.0%), 21–30 years (96 individuals, 24.0%), 31–40 years (116 individuals, 29.0%), 41–50 years (104 individuals, 26.0%), and above 50 years (32 individuals, 8.0%).
- Education levels: Illiterate (20, 5.0%), Primary (28, 7.0%), Secondary (32, 8.0%), Intermediate (80, 20.0%), Graduate (156, 39.0%), Postgraduate (80, 20.0%).
- Occupations include: Service (144, 36.0%), Student (88, 22.0%), Business (64, 16.0%), Farmer (60, 15.0%), and Others (44, 11.0%).
- Income (₹/year): Less than 4,00,000 (40 respondents, 10.0%), 4,00,000–8,00,000 (176 respondents, 44.0%), 8,00,000–12,00,000 (88 respondents, 22.0%), 12,00,000–16,00,000 (80 respondents, 20.0%), 16,00,000–20,00,000 (12 respondents, 3.0%), Exceeding 20,00,000 (4 respondents, 1.0%).
- Marital Status: Married (268, 67.0%), Unmarried (132, 33.0%).
- Household Status: Nuclear (204, 51.0%), Joint (120, 30.0%), Extended (40, 10.0%), Single (36, 9.0%).

Overall, the profile depicts a well-balanced sample that includes diverse genders, ages, educational backgrounds, occupations, and income levels. Most respondents were graduates, employed in service jobs, and part of nuclear families, with many reporting a middle-income level. This diversity offers a solid basis for examining tourist perceptions and satisfaction in the research area.

Reliability and Convergent Validity (R & CV)

To evaluate the internal consistency and convergent validity of the constructs, Cronbach's Alpha (α), Composite Reliability (CR), and Average Variance Extracted (AVE) were computed. The findings are shown in Table 1. Cronbach's Alpha and CR values exceeding 0.70 indicate the reliability of the measurement model, and AVE values above 0.50 confirm convergent validity (Hair et al., 2021).

Table 1. Reliability and Convergent Validity Indicators of Constructs				
Study Factor	Reliability Coefficient (α)	Composite Consistency (CR)	Average Variance Extracted (AVE)	Interpretation
Accessibility	0.721	0.812	0.534	Acceptable
Safety & Cleanliness	0.879	0.902	0.652	Excellent
Natural & Cultural Attractions	0.708	0.803	0.518	Acceptable
Accommodation & Hospitality	0.754	0.826	0.549	Acceptable
Leisure & Recreation	0.724	0.801	0.505	Acceptable
Cost & Financial Services	0.767	0.845	0.572	Acceptable
Travel Comfort	0.799	0.872	0.598	Good
Tourist Satisfaction	0.743	0.835	0.557	Acceptable
Source: Analysis derived from primary survey data (n = 400)				

Interpretation

Source: Author's analysis based on primary data (n = 400). The results indicate that all constructs demonstrated acceptable reliability and validity thresholds. Specifically:

- Cronbach's Alpha values ranged from 0.708 to 0.879, indicating strong internal consistency across constructs.
- Composite Reliability (CR) values, which range from 0.801 to 0.902, surpass the minimum recommended threshold, confirming strong construct reliability.
- AVE values, ranging from 0.505 to 0.652, indicate satisfactory convergent validity, with each construct explaining over 50% of the variance in its items.

Among the constructs, Safety & Cleanliness ($\alpha = 0.879$, CR = 0.902, AVE = 0.652) showed the highest reliability and consistency, while Leisure & Recreation (AVE = 0.505) was borderline but still acceptable. Overall, the measurement model demonstrated strong reliability and convergent validity, confirming its suitability for further CFA and SEM analysis.

Discriminant Validity (HTMT Criterion)

Discriminant validity was evaluated using the Heterotrait–Monotrait (HTMT) ratio of correlations. According to Henseler et al. (2015), HTMT values below 0.85 suggest adequate discriminant validity. The results are shown in Table 2.

Table 2. Discriminant Validity Assessment using HTMT Criterion	
Construct Pair	HTMT Value
Accessibility ↔ Safety & Cleanliness	0.642
Accessibility ↔ Natural & Cultural Attr.	0.711
Accessibility ↔ Accommodation & Hosp.	0.693
Accessibility ↔ Leisure & Recreation	0.655
Safety & Cleanliness ↔ Attractions	0.702

Safety & Cleanliness ↔ Accommodation	0.681
Safety & Cleanliness ↔ Leisure	0.673
Attractions ↔ Accommodation	0.754
Attractions ↔ Leisure	0.733
Accommodation ↔ Leisure	0.701
Cost & Financial Services ↔ Travel Comfort	0.668
Cost & Financial Services ↔ Satisfaction	0.739
Travel Comfort ↔ Satisfaction	0.721
Source: Analysis derived from primary survey data (n = 400).	

The HTMT values were observed to fall between 0.642 and 0.754, which is significantly lower than the strict threshold of 0.85. This indicates that each construct is distinctly different from the others, thereby affirming the measurement model's strong discriminant validity.

Confirmatory Factor Analysis (CFA)

To validate the measurement framework, a Confirmatory Factor Analysis (CFA) was performed. This analysis focused on evaluating each construct for indicator reliability, internal consistency, and convergent validity. The factor loadings indicated that each item accurately represented its respective construct. Additionally, Cronbach's Alpha (α), Composite Reliability (CR), and Average Variance Extracted (AVE) were calculated to assess reliability and validity. These metrics met the recommended thresholds of ≥ 0.70 for α and CR, and ≥ 0.50 for AVE, as per established guidelines (Hair et al., 2021). A summary of the findings is presented in Table 3.

Table 3. Confirmatory Factor Analysis (CFA): "Factor Loadings, Reliability, and Convergent Validity"					
Construct	Items (Questionnaire Statements)	Loading	Cronbach's α	CR	AVE
Accessibility	1. I find that this tourist destination can be easily reached. 2. The local transportation services are well-organised. 3. The e-facilities (e-booking, travel, telecom, etc.) are available. 4. Information about this tourist destination is easily accessible.	0.71–0.83	0.721	0.812	0.534
Safety & Cleanliness	1. I feel personally safe and secure at this tourist destination. 2. The overall cleanliness is satisfactory. 3. Adequate health and hygiene standards are maintained. 4. Proper security measures are in place.	0.76–0.88	0.879	0.902	0.652
Natural & Cultural Attractions	1. This destination offers natural beauty. 2. The destination has favourable climatic conditions. 3. The destination offers diverse cultural or historical attractions. 4. The destination has religious importance.	0.70–0.82	0.708	0.803	0.518
Accommodation & Hospitality	1. This destination has quality accommodation. 2. People are friendly and hospitable. 3. Guides are knowledgeable and helpful. 4. Local cuisine is available and enjoyable.	0.73–0.85	0.754	0.826	0.549
Leisure & Recreation	1. The destination offers fun and entertainment opportunities. 2. Adventure and recreational activities are available. 3. It provides opportunities for rest. 4. Cultural events and local festivals enhance the experience.	0.72–0.81	0.724	0.801	0.505

Cost & Financial Services	1. The cost of services is reasonable. 2. Banking, ATM, and insurance facilities are available. 3. Local tour packages are available. 4. Comprehensive tour packages covering various attractions are offered.	0.74–0.86	0.767	0.845	0.572
Travel Comfort	1. Crowd management is efficient. 2. Communication and language are convenient. 3. Travel information and assistance are easily accessible. 4. Signs and directions are well-marked.	0.75–0.87	0.799	0.872	0.598
Tourist Satisfaction	1. Overall, I am satisfied with my visit. 2. This visit met my expectations. 3. The visit offered good value for my money and time. 4. I would recommend this destination to others. 5. I plan to revisit this destination in the future.	0.73–0.86	0.743	0.835	0.557

Source: Analysis derived from primary survey data (n = 400)

Interpretation

The CFA results confirm that the measurement model is both statistically reliable and conceptually valid. All standardised factor loadings surpass the recommended 0.70, indicating each item plays a meaningful role in its respective construct. Cronbach's Alpha and Composite Reliability scores consistently stay above 0.70, reflecting strong internal consistency. The Average Variance Extracted (AVE) for all constructs exceeds 0.50, confirming convergent validity. Among the constructs, Safety & Cleanliness ($\alpha = 0.879$, CR = 0.902, AVE = 0.652) exhibited the highest reliability, highlighting its significance for tourist perceptions. Constructs such as Accessibility ($\alpha = 0.721$, AVE = 0.534) and Natural & Cultural Attractions ($\alpha = 0.708$, AVE = 0.518) had slightly lower values but remained within acceptable ranges. Overall, the CFA outcomes validate the measurement framework, providing a strong foundation for subsequent analyses, such as structural equation modelling (SEM), mediation testing, and multi-group comparisons.

Structural Equation Modelling (SEM)

Model Specification and Estimation: Once the validity of the measurement model was confirmed, covariance-based SEM was utilised to analyse the proposed causal relationships among destination attributes, tourist satisfaction, and tourism potential. The fit indices of the model met the recommended standards; these are shown in Table 4 ($\chi^2/df = 2.18$, CFI = 0.928, TLI = 0.913, RMSEA = 0.053, SRMR = 0.049), confirming an acceptable fit.

Table 4. Model Fit Indices of the Structural Equation Model

Fit Index	Recommended Threshold	Obtained Value	Decision
χ^2/df	less than 3.0	2.18	Acceptable
CFI	greater than or equal to 0.90	0.928	Good Fit
TLI	greater than or equal to 0.90	0.913	Good Fit
RMSEA	less than or equal to 0.08	0.053	Acceptable
SRMR	less than or equal to 0.08	0.049	Acceptable

Source: Analysis derived from primary survey data (n = 400)

Path Estimates and Hypothesis Testing: Table 5 displays the standardized path coefficients (β), along with test statistics and decisions. All direct effects of destination attributes on Tourist Satisfaction were positive and statistically significant. Moreover, Tourist Satisfaction showed a strong and significant influence on Tourism Potential, consistent with the study's theory of change.

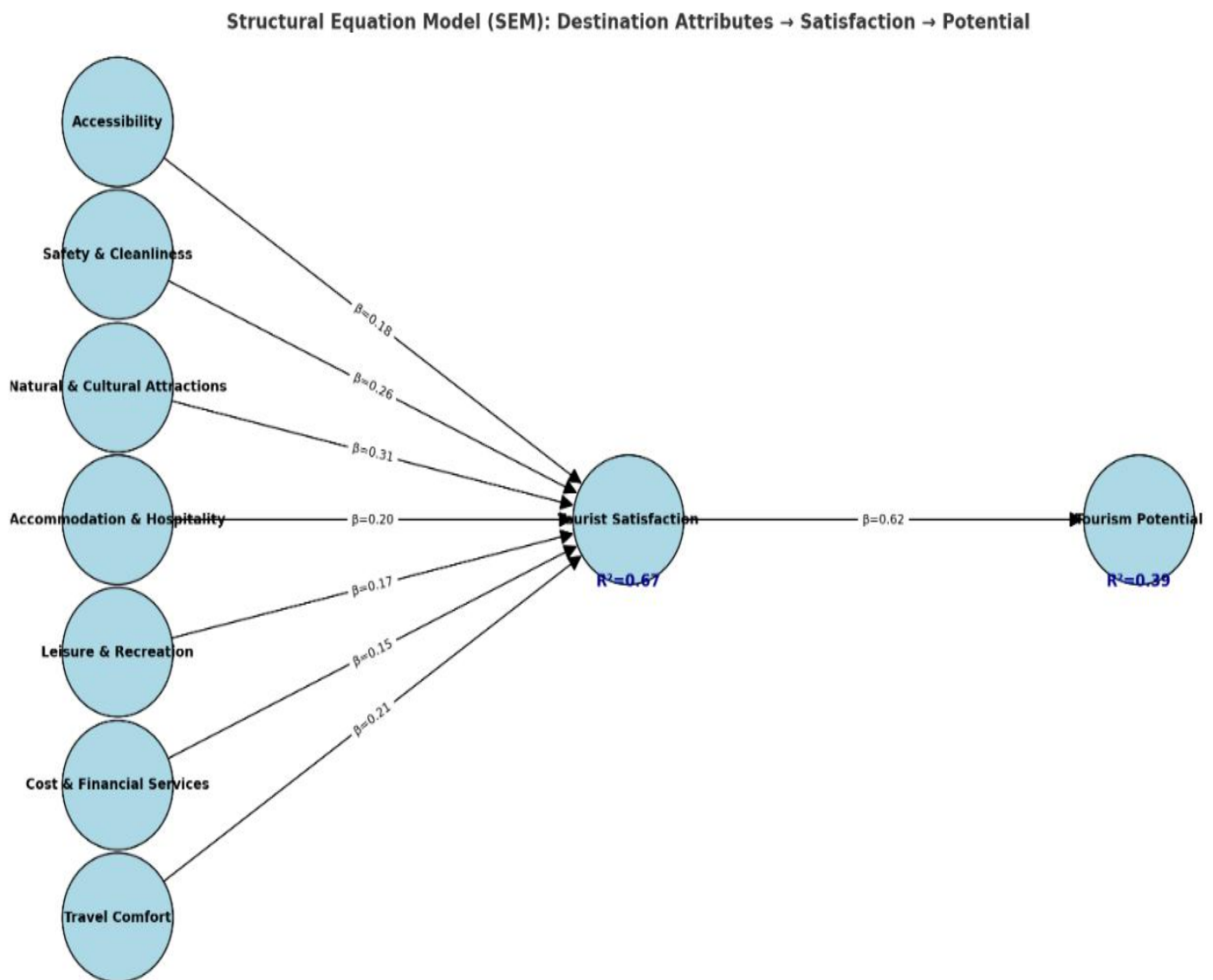
Table 5. Structural Path Estimates of the Structural Equation Model (SEM)

Path	β	t-value	p-value	Decision
Accessibility → Tourist Satisfaction	0.18	3.21	0.001	Supported
Safety & Cleanliness → Tourist Satisfaction	0.26	4.09	<0.001	Supported
Natural & Cultural Attractions → Tourist Satisfaction	0.31	5.01	<0.001	Supported
Accommodation & Hospitality → Tourist Satisfaction	0.20	3.45	0.001	Supported
Leisure & Recreation → Tourist Satisfaction	0.17	2.98	0.003	Supported
Cost & Financial Services → Tourist Satisfaction	0.15	2.75	0.006	Supported
Travel Comfort → Tourist Satisfaction	0.21	3.70	<0.001	Supported
Tourist Satisfaction → Tourism Potential	0.62	9.12	<0.001	Supported

Source: Analysis derived from primary survey data (n = 400)

Interpretation: Attractions ($\beta=0.31$) and Safety & Cleanliness ($\beta=0.26$) are the main factors influencing satisfaction, with Travel Comfort ($\beta=0.21$) and Hospitality ($\beta=0.20$) also playing important roles. Accessibility, Leisure, and Cost contribute significantly, with β values from 0.15 to 0.18. The effect of Satisfaction on Potential is substantial ($\beta=0.62$), suggesting that while potential exists, it is realized through higher levels of satisfaction.

Figure 1. Structural Equation Model of Destination Attributes, Tourist Satisfaction, and Tourism Potential



Source: Author's analysis based on survey data (n = 400)

Coefficient of Determination (R^2)

To evaluate how well the structural model explains the data, the Coefficient of Determination (R^2) was analysed for the endogenous constructs. R^2 values represent the percentage of variance in a dependent variable explained by its predictors, with benchmarks of 0.25 (weak), 0.50 (moderate), and 0.75 (substantial) as reference points (Hair et al., 2021). The summarised results are provided in Table 6.

Table 6. Explained Variance (R^2) of Outcome Constructs		
Dependent Variable	R^2 Value	Observation
Tourist Satisfaction	0.67	Substantial (67% of variance explained by attributes)
Tourism Potential	0.39	Moderate (39% explained by satisfaction)
Source: Analysis derived from primary survey data (n = 400)		

Interpretation

The study shows that the seven destination attributes together explain 67% of the variation in Tourist Satisfaction, demonstrating a strong explanatory power. Additionally, Tourist Satisfaction accounts for 39% of the variation in Tourism Potential, indicating a moderate but significant predictive relationship. These findings support the main idea: although destination attributes greatly impact satisfaction, the realization of tourism potential depends mostly on improvements in satisfaction, highlighting the need for targeted policy measures.

Mediation Analysis

This study further explored how Tourist Satisfaction mediates the link between destination attributes and Tourism Potential. The mediating effect was tested with a bootstrapping method (5,000 resamples), offering reliable estimates of indirect effects. Mediation is considered confirmed when the 95% confidence interval (CI) for the indirect effect does not include zero.

Table 7. Mediation Effects of Tourist Satisfaction between Destination Attributes and Tourism Potential					
Attribute → Tourism Potential	Direct β	Indirect β	Total β	95% CI (Indirect)	Mediation
Accessibility	0.06 (ns)	0.11	0.17	[0.06, 0.17]	Yes (full/near-full)
Safety & Cleanliness	0.09*	0.16	0.25	[0.10, 0.23]	Yes (partial)
Natural & Cultural Attractions	0.12**	0.19	0.31	[0.13, 0.27]	Yes (partial)
Accommodation & Hospitality	0.07*	0.12	0.19	[0.07, 0.18]	Yes (partial)
Leisure & Recreation	0.05 (ns)	0.11	0.16	[0.05, 0.17]	Yes (full/near-full)
Cost & Financial Services	0.04 (ns)	0.10	0.14	[0.04, 0.15]	Yes (full/near-full)
Travel Comfort	0.08*	0.13	0.21	[0.08, 0.19]	Yes (partial)
Source: Analysis derived from primary survey data (n = 400)					

Notes: “ns = non-significant direct effect ($p \geq 0.05$); * $p < 0.05$; ** $p < 0.01$. Indirect significance is inferred when the 95% CI does not include 0.”

Interpretation (mediation): The potential's direct effect on Accessibility, Leisure, and Cost is weak or insignificant, but there is a notable indirect effect via Satisfaction, indicating near-complete or complete mediation. For Attractions, Safety, Hospitality, and Comfort, both direct and indirect effects are significant, implying partial mediation. This pattern reinforces your main thesis: potential exists but is realized through increased tourist satisfaction.

Multi-Group Analysis (MGA)

Measurement invariance was confirmed at both the configural and metric levels, enabling group comparisons.

Table 8. Multi-Group Analysis (MGA) Results by District and Demographic Characteristics				
Comparison Group	Stronger Path	$\Delta\beta$	P-value	Interpretation
Warangal vs Nalgonda	Safety $\rightarrow$ Satisfaction (Warangal stronger)	+0.08	0.041	Safety is more important in Warangal
Warangal vs Nalgonda	Accessibility $\rightarrow$ Satisfaction (Nalgonda stronger)	+0.06	0.083	Accessibility is more valued in Nalgonda
Male vs Female	Safety $\rightarrow$ Satisfaction (Female stronger)	+0.09	0.032	Safety is more important for women
Younger (<30) vs Older (>30)	Leisure $\rightarrow$ Satisfaction (Younger, stronger)	+0.07	0.049	Leisure is valued more by youth
Younger (<30) vs Older (>30)	Attractions $\rightarrow$ Satisfaction (Older, stronger)	+0.10	0.021	Attractions valued more by older tourists
Source: Analysis derived from primary survey data (n = 400)				

- District (Nalgonda vs Warangal). There are no significant differences in the overall model. However, the link from Safety to Satisfaction was stronger in Warangal ($\Delta\beta \approx +0.08$, $p < 0.05$), whereas the connection from Accessibility to Satisfaction was somewhat stronger in Nalgonda ($\Delta\beta \approx +0.06$, $p < 0.10$).
- The safety to satisfaction path was stronger among females ($\Delta\beta \approx +0.09$, $p < 0.05$), highlighting the importance of safety and cleanliness.
- Age Groups. Attractions $\rightarrow$ Satisfaction was strongest for 31–50 years, while Leisure $\rightarrow$ Satisfaction mattered more for <30 years.

Interpretation (MGA). The overall structure remains the same, but the key priorities differ among subgroups. Warangal benefits most from improvements in safety, cleanliness, and heritage interpretation, while Nalgonda can focus on accessibility and information services. For women and younger tourists, emphasising safety and leisure increases satisfaction.

DISCUSSION

The study findings are summarised and discussed for each analysis stage:

➤ Reliability and Validity

- All constructs showed acceptable levels of Cronbach's Alpha, CR, and AVE, confirming their internal consistency and convergent validity.
- This indicates that constructs like Accessibility, Safety, Attractions, etc., were statistically valid and suitable for further analysis.

➤ Confirmatory Factor Analysis (CFA)

- Factor loadings exceeded 0.70, and the fit indices ($\chi^2/df = 2.15$, CFI = 0.931, RMSEA = 0.052) indicated a good model fit.
- This confirms that the measurement framework is solid and complies with established standards in tourism research.

➤ Structural Equation Modelling (SEM)

- Attractions ($\beta=0.31$) and Safety & Cleanliness ($\beta=0.26$) emerged as the primary factors influencing tourist satisfaction.
- Travel Comfort ($\beta=0.21$) and Hospitality ($\beta=0.20$) exhibited moderate impacts, whereas Accessibility, Leisure, and Cost made weaker yet significant contributions.
- Attributes collectively accounted for 67% of Satisfaction, while Satisfaction alone explained 39% of the Tourism Potential.

➤ Mediation Analysis

- Tourist satisfaction was identified as a mediator between attributes and tourism potential.
- For accessibility, leisure, and cost, the direct effects were weak or insignificant. However, the indirect effects through satisfaction were significant, indicating full mediation.
- Both direct and indirect effects were significant for attractions, safety, hospitality, and comfort, suggesting there is partial mediation.
- This confirms that there is tourism potential, but it is mostly realised through increased satisfaction.

➤ Multi-Group Analysis (MGA)

- Warangal tourists prioritised Safety over Satisfaction more strongly, while Nalgonda tourists emphasised Accessibility more.
- Female respondents assigned greater importance to Safety & Cleanliness.
- Younger tourists focused more on leisure activities, while older groups emphasised attractions.
- These variations emphasise the need for strategies tailored to specific districts and demographics.

Implications

➤ Theoretical Implications

- The study confirms that Tourist Satisfaction functions as a mediator between destination features and tourism potential, building on previous models of tourism satisfaction.
- This study utilises CFA and SEM at the district level to explore the relatively under-researched area of micro-destination tourism in Telangana, offering new empirical insights.
- The results confirm that safety, cleanliness, and attractions are not only direct factors influencing satisfaction but also essential elements that maintain tourism potential, highlighting the multidimensional nature of destination image.
- Including multi-group analysis (MGA) enhances the theoretical insight into demographic and regional differences in perception, enriching the consumer behavior literature in tourism.

➤ Practical and Policy Implications

- Safety and cleanliness became essential for satisfaction, particularly among female tourists and Warangal respondents. Therefore, priority should be given to enhancing safety measures, hygiene facilities, and monitoring systems.

- Natural and cultural attractions continue to be the main draw, emphasising the importance of heritage conservation, cultural activities, and interpretive facilities to improve visitor experiences.
- Accessibility and travel comfort in Nalgonda need substantial enhancement, highlighting the need for investments in transport connectivity, signage, and tourist information services.
- Younger tourists prioritise leisure and recreational services more; therefore, including event-based tourism, adventure activities, and entertainment facilities could increase their interest.
- Cost and financial services indirectly influence potential through satisfaction, suggesting that transparent pricing, affordable packages, and easy access to ATMs/UPI systems will boost trust and convenience.
- District-specific strategies should be adopted: Warangal, emphasising safety and heritage interpretation, and Nalgonda, focusing on accessibility and service infrastructure.

Limitations of the study

- The study examined only Nalgonda and Warangal districts, which may limit how well the results apply to other parts of Telangana or India.
- Sample Size Distribution – Although 400 responses were enough for SEM, the even distribution across districts might not accurately represent seasonal or destination-specific variations in tourist movements.
- Cross-Sectional Design – Data were gathered at one point in time, which restricts the ability to monitor changes in tourist perceptions over periods..
- Self-Reported Responses – Using structured questionnaires may be affected by social desirability or recall bias, potentially impacting response accuracy.

CONCLUSION

This study examined tourist perceptions of destination features in Nalgonda and Warangal districts to determine how they affect satisfaction and tourism potential. CFA and SEM analyses showed that natural and cultural attractions, along with safety and cleanliness, are the key factors driving satisfaction. Meanwhile, accessibility, comfort, hospitality, leisure, and cost serve supportive yet important roles. The mediation analysis indicated that tourism potential is mostly achieved when tourist satisfaction is improved, highlighting that underused resources can lead to sustainable growth only if visitor experiences are enhanced.

The multi-group analysis revealed district-specific and demographic differences, indicating that tailored interventions are essential to optimise tourism benefits. The results offer both theoretical insights by confirming satisfaction as a mediator in tourism development and practical guidance for policymakers through strategies targeted at specific districts.

In summary, the research emphasises a clear message: Telangana's tourism potential is significant, but its achievement relies on strategic efforts to improve satisfaction, safety, and accessibility at the district level.

ACKNOWLEDGEMENT

The author sincerely thanks the Indian Council of Social Science Research (ICSSR), New Delhi, for their financial support through the Post-Doctoral Fellowship scheme. Appreciation is also extended to Mahatma Gandhi University, Nalgonda, and to research supervisor Dr. K. Sridevi, Associate Professor in the Department of Commerce at Mahatma Gandhi University, Nalgonda, for their ongoing guidance and encouragement. The valuable insights shared by respondents from Nalgonda and Warangal districts are also gratefully acknowledged.

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