

"IMPACT OF OVERCROWDING AT A HISTORICAL TOURISM DESTINATION: A CASE STUDY ON FORT SINHAGAD."

Mrs. Manasi Sadhale (Ph.D.), (Assistant Professor, Department of Hotel Management, TMV Pune)

Miss Aditi Joshi (Ph.D.) (Assistant Professor, Department of Hotel Management, TMV Pune)

ABSTRACT :

The tourism sector is witnessing significant growth, resulting in an increasing number of destinations experiencing the challenges associated with overcrowding. Overcrowding refers to the situation where the volume of visitors exceeds the destination's capacity, negatively impacting the experience for both tourists and local residents. This phenomenon stands in stark contrast to the principles of responsible tourism and poses detrimental effects on the environmental integrity, social fabric, and economic sustainability of these locations. This paper analyzes the escalating issue of tourist overcrowding at Fort Sinhagad, which has become a prominent concern. The situation is deteriorating steadily with each passing day. Data was collected from 80 participants through a Google questionnaire, comprising 35 males and 45 females. Visitor numbers tend to peak on weekends, while the promotion of Fort Sinhagad by social media influencers exacerbates the overcrowding situation. The fort is facing adverse impacts on its environmental, historical, and cultural aspects. Urban development is also contributory to environmental degradation. While local businesses benefit from the surge in tourist numbers, many visitors remain unaware of the accommodation options available. To address this issue, government intervention is essential to implement sustainable measures aimed at mitigating overcrowding.

Keywords: overcrowding, excessive tourism, over tourism, Fort Sinhagad.

LITERATURE REVIEW:

The paper titled Residents' Perception of the Environmental Impact of Tourism: A Case Study of the Bawa Community in Butterworth, South Africa by Kimrochey Goliath-Ludic (2020) emphasizes the tourism sector's substantial contribution to national economies. However, this growth brings with it considerable environmental challenges that must be addressed. The preservation of natural environments is critical, as they not only attract tourists but also foster investment; yet, without careful management, these areas risk degradation. Increasing awareness among government bodies and environmental organizations has led to a push for improved strategies related to waste management, energy, and water usage to ensure sustainable tourism practices. Engaging local communities in responsible tourism initiatives is essential, as their involvement can mitigate some of the negative impacts associated with tourism, such as habitat disruption, pollution, and overcrowding, particularly evident in regions like Butterworth.

In the article Residents' Attitudes Towards Over Tourism From the Perspective of Tourism Impacts and Cooperation—The Case of Ljubljana by KirKuščer et al. (2019), the authors discuss the necessity of sustainable tourism development as a vital aspect of managing tourism growth. Many locations struggle to effectively handle the rapid influx of visitors, leading to adverse effects on local communities and environments, which can provoke anti-tourism sentiments. The study introduces an assessment model for over tourism risk in Ljubljana, focusing on various negative impacts associated with high tourist volumes. The authors analyze residents' attitudes toward tourism growth and its concentration, utilizing secondary data to reveal dissatisfaction stemming from tourism impacts. To tackle the over tourism issue, the paper outlines three key research questions aimed at identifying primary impact factors, understanding their interconnections, and examining potential mitigation strategies.

The research paper Over Tourism: Between the Right to Travel and Residents' Rights by Dalia Perkumiene et al. (2019) addresses the complexities of over tourism, which has arisen from the swift expansion of global travel. The interactions among tourists, local businesses, governmental entities,

and host communities create a landscape fraught with potential conflicts, particularly as tourists' behavior increasingly disrupts resident life. The need for acknowledgment of local perspectives by tourism planners has emerged as an essential aspect for achieving long-term sustainability within the industry. Traditional views have often regarded tourism as a substitute for more intensive industries, but recent insights emphasize the importance of balancing travelers' rights with those of local populations. The paper highlights the critical need for legal frameworks that address both tourist experiences and community rights, fostering a more sustainable approach to tourism development.

In *Over Tourism: A Literature Review to Assess Implications and Future Perspectives* by Alessandro Capocchi et al. (2019), the authors identify various issues stemming from the growth of tourism, including overcrowding, environmental sustainability challenges, and the social phenomenon known as the "imitation effect," where developing economies mimic the behaviors of Western tourists. The examination of governance challenges, airline relations, technological advancements, and related environmental concerns takes center stage, particularly regarding waste management and pollution. The concept of "anthropo pressure," or the human impact on natural systems, has gained traction as an essential factor in understanding tourism's consequences. Despite being a recent term in tourism literature, discussions surrounding over tourism have unfolded over several decades, underscoring its longstanding relevance. In their research titled *Is Over Tourism Overused? Understanding the Impact of Tourism in a City Context* (KoKoens et al., 2018), the authors point out that cities' unique characteristics make them better equipped to manage fluctuating tourist numbers. Historically, urban tourism was hailed as a pathway to sustainable economic growth, particularly following the 2008 financial crisis; however, rising tourist numbers have led to significant pressures on city infrastructures. The demand for authentic local experiences has intensified, prompting residents to voice concerns regarding the burgeoning tourism sector. While the term "over tourism" has gained traction in academic discourse, its vague definition complicates operationalization, raising the need for clearer frameworks and definitions. This paper aims to clarify the over tourism concept through qualitative research conducted with stakeholders across multiple European cities, revealing the phenomenon's nuances and the necessity of addressing prevalent misconceptions.

The paper *Are Social Media Data Pushing Over Tourism? The Case of Barcelona and Chinese Tourists* by Koens et al. (2018) explores the paradox of tourism wherein established destinations strive to draw more visitors while simultaneously grappling with local backlash. Several contributing factors to over tourism are identified, including detrimental tourist behaviors, excessive use of both public and private spaces, and the impact of low-cost transportation options. Consequences of over tourism manifest in inflated hospitality costs, degraded housing markets, increased waste generation, and a heightened sense of insecurity among residents. The study examines how tourists choose their destinations, highlighting the critical role of various information sources, particularly the influence of word-of-mouth and social media. Employing sentiment analysis, the authors investigate how Chinese travelers utilize social media, ultimately proposing recommendations for public policy that could mitigate negative tourism effects. Eva M. Buitrago's *Measuring Over Tourism: A Necessary Tool for Landscape Planning* (2021) focuses on the challenges posed by over tourism, particularly in urban areas where heightened visitor volumes lead to land-use conflicts and negatively impact both local residents and tourists. The misalignment between the rapid growth of tourism and responsible tourism principles, which advocate for the improvement of both living and visiting environments, is a recurring theme. Many past studies into over tourism have suffered from a lack of measurement frameworks, complicating the identification of symptoms associated with this phenomenon. Buitrago aims to address these gaps by proposing a structured approach for measuring over tourism, thus facilitating more effective land-use policies. Through a comprehensive mapping review, the research identifies existing measurement strategies, aiming to assist policymakers in both detecting signs of over tourism and crafting interventions that promote sustainable tourism post-COVID-19.

In *A Systematic Literature Review and Lexicometric Analysis on Over Tourism: Towards an Ambidextrous Perspective* by Damien Chaney (2023), the complex nature of over tourism, as

defined by the UNWTO, is examined. The paper discusses how mass tourism and an economic growth-oriented mindset contribute to situations where destinations exceed their carrying capacities. The comprehensive impacts of over tourism include ecological degradation, erosion of cultural sites, and adverse social and economic effects on host communities. Despite advancements in understanding over tourism, it is still framed as a challenging "wicked problem." The advent of the COVID-19 pandemic has further impacted tourism dynamics. Chaney's study employs lexico metric analysis to systematically review existing literature, highlighting the need for a dual perspective that considers both the detrimental aspects of over tourism and potential opportunities for positive outcomes.

RESEARCH METHODOLOGY:

Need of the Study:

The primary objective of this study is to investigate the effects of overcrowding at Fort Sinhagad. Overcrowding can lead to a variety of detrimental impacts, including environmental degradation, socio-cultural shifts, and alterations to historical sites. By understanding these impacts, we can develop strategies to mitigate them and promote sustainable tourism practices.

Significance of the Study: The Significance of this study lies in its potential to provide critical insights into the multifaceted impacts of overcrowding at Fort Sinhagad. Understanding these effects is vital for several reasons: Environmental Protection: The study aims to identify the specific environmental damages caused by overcrowding, such as soil erosion, degradation of natural habitats, and increased waste generation. By highlighting these issues, the study can inform conservation efforts and contribute to the development of effective environmental management strategies that protect the site's ecological integrity. Cultural Preservation: Overcrowding can lead to socio-cultural changes that affect the local communities and their heritage. This research will shed light on how excessive tourist numbers may disrupt local traditions, alter social dynamics, and impact community well-being. Insights gained can guide policymakers and tourism planners in implementing measures that respect and preserve the local culture. Historical Site Management: Alterations to historical sites due to tourist influx can compromise their authenticity and significance. The findings of this study will be instrumental in shaping preservation policies that ensure the protection of Fort Sinhagad's historical value, thereby maintaining its status as a cultural landmark for future generations. Strategic Tourism Development: By assessing the negative impacts of overcrowding, this research will contribute to the dialogue on sustainable tourism practices. The study will offer recommendations for stakeholders, including government agencies, tourism operators, and local communities, fostering a balanced approach that maximizes economic benefits while minimizing adverse effects. Policy Frameworks: This study has the potential to inform policy frameworks aimed at regulating tourism flow and promoting sustainable practices. The insights derived can serve as a foundation for future research and initiatives, ultimately leading to more responsible management of tourist destinations.

DATA COLLECTION:

Primary Data:

Primary data were obtained via a structured questionnaire distributed to survey participants. A total of 80 individuals participated in this study, contributing valuable insights for the research project titled "Investigating the Impact of Excessive Tourist Influx at Fort Sinhagad." The questionnaire included multiple-choice questions (MCQs) designed to capture respondents' perceptions regarding the consequences of high tourist numbers at the site.

Secondary Data:

Secondary data were collected from an extensive review of existing literature. This included analysis of research papers, government publications, and news articles relevant to the topic. These sources provided a contextual background and helped to enrich the study's findings.

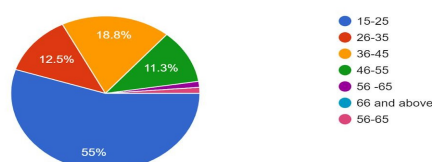
"IMPACT OF OVERCROWDING AT A HISTORICAL TOURISM DESTINATION: A CASE STUDY ON FORT SINHAGAD."

OBJECTIVES OF THE STUDY:

1. To study the environmental, socio-cultural and historical impact of overcrowding on Fort Sinhagad.
2. To identify the reasons of overcrowding at Fort Sinhagad.
3. To analyze the impact of given factors on tourism destination due to overcrowding.
4. To identify the reasons that affect the overall tourism experience at Fort Sinhagad

DATA ANALYSIS AND INTERPRETATION

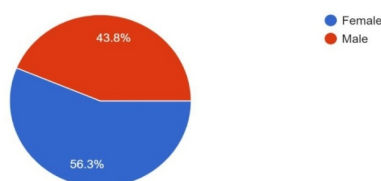
Age group of the respondent
80 responses



Pie-chart1: Age Group

The pie chart above shows the age distribution of 80 respondents. The largest group, comprising 44 respondents (55.0%), falls within the 15 to 25 age range. The next group includes 10 respondents (12.5%) aged 26 to 35. There are 15 respondents (18.8%) in the 36 to 45 age range, while 9 respondents (11.3%) are aged between 46 and 55. The smallest group consists of 2 respondents (1.3%) in the 56 to 65 age bracket.

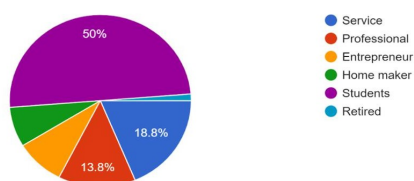
Gender of the respondent
80 responses



Pie-chart 2: Gender

The above pie chart reveals that out of 80 respondents, 35 respondents (45.0) were Male, and 45 respondents (55.0) were Female.

Profession of the respondent
80 responses

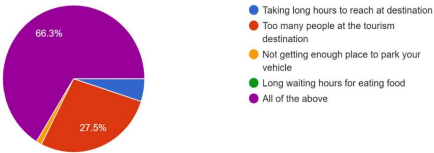


Pie-chart 3: Profession

The pie chart above illustrates the occupational distribution of 80 respondents. Among them, 40 respondents (50%) are students, while 11 respondents (13.8%) are professionals. There are 7 respondents (8.7%) identified as entrepreneurs, and 6 respondents (7.5%) are homemakers. Additionally, 15 respondents (18.8%) are employed in service roles, and 1 respondent (1.2%) is retired.

"IMPACT OF OVERCROWDING AT A HISTORICAL TOURISM DESTINATION: A CASE STUDY ON FORT SINHAGAD."

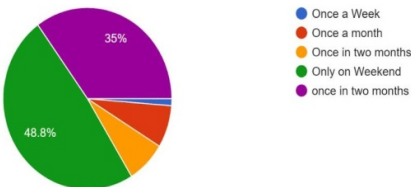
1. In your opinion do you think overcrowding at tourism destination means
80 responses



Pie chart 4: Overcrowding at tourist destination

The pie chart above shows the responses of 80 individuals regarding their interpretation of overcrowding at a tourism destination. Among the respondents, 4 (5%) believe overcrowding means long travel times to reach the destination, while 22 (27.5%) associate it with having too many people at the destination. One respondent (1.2%) considers overcrowding as not having enough parking spaces. The majority, 53 respondents (66.3%), feel that overcrowding at a tourism destination encompasses all of the above factors.

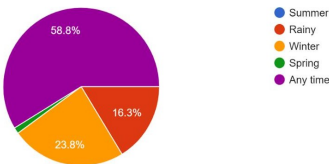
2. How frequently do you visit Fort Sinhagad?
80 responses



Pie-chart 5:

The above pie chart shows that out of 80 respondents 1(1.2%) respondent visits Fort Sinhagad once a week and 6 (7.5%) respondents visit Fort Sinhagad once a month. 34(35%) respondents visit Fort Sinhagad once in two months, and 39 (48.8%) respondents visit Fort Sinhagad only on weekends.

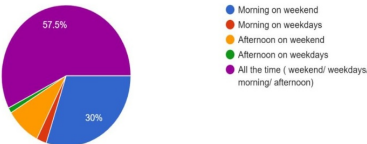
3. In which season do you prefer to visit Fort Sinhagad ?
80 responses



Pie- chart 6: preferred season to visit fort Sinhagad

Above pie chart represents that out of 80 respondents, 13(16.3%) respondents visit Fort Sinhagad in the Rainy season, 19(23.8%) respondents visit Fort Sinhagad in the Winter season, 1(1.2%) respondents visit Fort Sinhagad in the spring season and 47(58.8%) respondents visit Fort Sinhagad

4. When do you find Fort Sinhagad most overcrowded?
80 responses



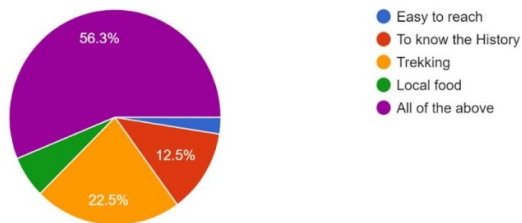
"IMPACT OF OVERCROWDING AT A HISTORICAL TOURISM DESTINATION: A CASE STUDY ON FORT SINHAGAD."

in any season.

Pie-chart7: Most overcrowded timing

In the provided pie chart, out of 80 respondents: 24 respondents (30%) reported that Fort Sinhagad is most overcrowded in the morning on weekends. 2 respondents (2.5%) indicated that Fort Sinhagad is most overcrowded in the morning on weekdays. 7 respondents (8.7%) found Fort Sinhagad most overcrowded in the afternoon on weekends. 1 respondent (1.3%) stated that Fort Sinhagad is overcrowded at all times (weekends, weekdays, mornings, and afternoons).

5. What motivates you to visit Fort Sinhagad ?
80 responses

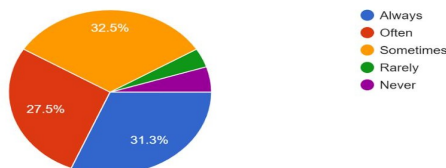


Pie-chart8: Reasons to visit Fort Sinhagad

From the pie chart of 80 respondents:

2 respondents (2.5%) were motivated to visit Fort Sinhagad because it is easy to reach. 10 respondents (12.5%) visited to learn about its history. 8 respondents (10%) visited for trekking. 6 respondents (7.5%) visited to taste local food. 45 respondents (56.3%) were motivated to visit for all of these reasons combined (ease of access, historical interest, trekking, and local food).

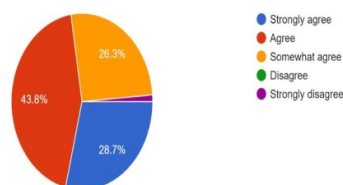
6. Do you come across parking problem at Fort Sinhagad on weekend?
80 responses



Pie-chart9: Parking problems at Fort Sinhagad

In the above pie chart out of 80 respondents 25(31.3%) respondents always come across parking problems, 22(27.5%) often come across parking problems, 26(32.5%) respondents sometimes come across parking problems, 3(3.7%) respondents rarely come across parking problem, and 4(5%) respondents never come across parking problem.

7. Do you think that environment is getting affected due to urban development at Fort Sinhagad ?
80 responses



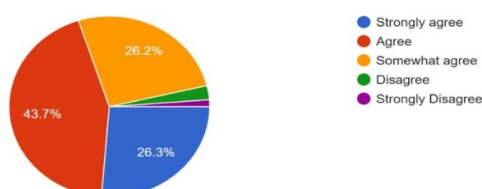
Pie-chart10: Environment is getting affected by urban development at Fort Sinhagad

In the above pie chart out of 80 respondents, 23(28.7%) respondents strongly agree that the

"IMPACT OF OVERCROWDING AT A HISTORICAL TOURISM DESTINATION: A CASE STUDY ON FORT SINHAGAD."

environment is getting affected due to urban development at Fort Sinhagad, 35 (43.8%) respondents agree that environment is getting affected due to urban development at Fort Sinhagad, 21(26.3%)respondents somewhat agree that environment is getting affected due to Urban development at Fort Sinhagad, and 1(1.2%) respondent strongly disagree that environment is getting affected due to urban development at Fort Sinhagad.

8. Do you think that social media is the main reason for overcrowding at Fort Sinhagad ?
80 responses

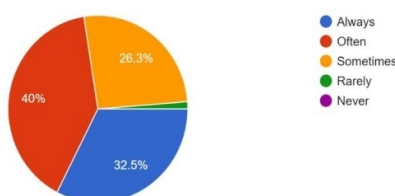


Pie-chart11: Social media is main reason for overcrowding at Fort Sinhagad

According to the pie chart of 80 respondents:

21 respondents (26.3%) strongly agree that social media is the primary cause of overcrowding at Fort Sinhagad.35 respondents (43.7%) agree that social media is the main reason for overcrowding.21 respondents (26.2%) somewhat agree that social media contributes to the overcrowding at the fort.2 respondents (2.5%) disagree that social media is a major factor in overcrowding.1 respondent (1.2%) strongly disagrees that social media is responsible for the overcrowding at Fort Sinhagad

9. Do you think that local people are getting business by the influx of tourists at Sinhagad?
80 responses



Pie-chart12: Local people are getting business by the influx of tourist at Sinhagad

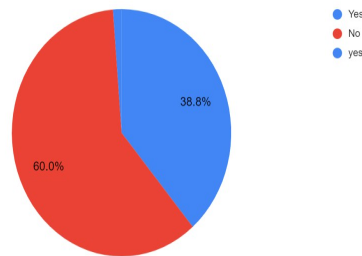
Based on the pie chart of 80 respondents: 26 respondents (32.5%) always believe that local people benefit economically from the influx of tourists at Fort Sinhagad.32 respondents (40%) often think that local people are gaining business from the tourist flow.21 respondents (26.2%) sometimes think that local people benefit from the tourist presence.1 respondent (1.2%) rarely thinks that local people are gaining business from tourists at Fort Sinhagad.

Pie- chart 13: Preference to eat Local cuisine eat Fort Sinhagad

In the above pie chart out of 80 respondents, 34(42.5%) respondents always prefer to eat the local cuisine at Fort Sinhagad, 30(37.5%) respondents often prefer to eat the local cuisine at Fort Sinhagad, 14(17.5%) responded sometimes prefer to eat the local cuisine at Fort Sinhagad, and 2(2.5%) responds rarely prefer to eat the local cuisine at Fort Sinhagad.

"IMPACT OF OVERCROWDING AT A HISTORICAL TOURISM DESTINATION: A CASE STUDY ON FORT SINHAGAD."

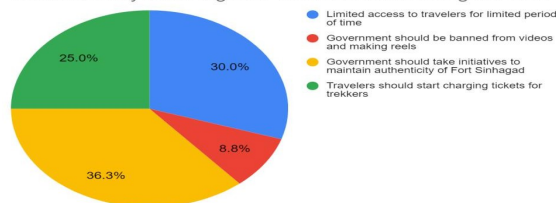
Count of 11. Are you aware about accommodation options available at Fort Sinhgad?



Pie-chart14: Awareness about accommodation options available at Fort Sinhgad

In the above pie chart out of 80 respondents, 48(60.8%) respondents are aware that accommodation options are available at Fort Sinhgad, and 32 (39.2%) respondents are not aware that accommodation options are available at Fort Sinhgad.

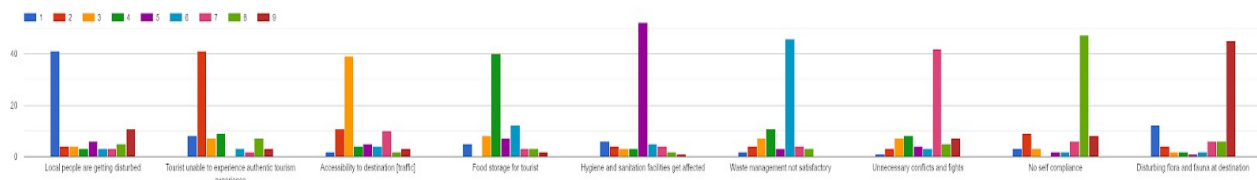
Count of 12. Social organization/ Government / Local vendors should actively come together to avoid overcrowding at Fort...



Piechart15: Social organizations/Government/ Local vendors should actively come together to avoid overcrowding

In the above pie chart out of 80, 24(30.0 %) respondents think that Social organizations/ Government / Local vendors should actively come together to avoid overcrowding at Fort Sinhgad by giving limited access to travelers for a limited period, 20 (25.0 %) respondent think that Social organization/ Government / Local vendors should actively come together to avoid overcrowding at Fort Sinhgad by travellers should start charging tickets for trekkers, 29 (36.3%) respondent think that Government should take initiatives to maintain the authenticity of fort Sinhgad, 7(8.8%) respondents thinks that government should be banned from making videos and reels.

13. Rank in your opinion following factors which impacts tourism destinations due to overcrowding (1 being highest and 9 being lowest)



Graph16: Rank the following factors which impacts tourism destination due to overcrowding

In the above graph out of 80 respondents, 41 (51.25%) respondents gave 1st rank to local people getting disturbed, 4(5%) respondents gave 2nd rank to local people getting disturbed, 4(5%) respondents gave 3rd rank to local people are getting disturbed, 3(3.75%) respondents have given 4th rank to local people are getting business, 6(7.5%) respondents have given 5th rank to local people are getting business, 3(3.75%) respondents have given 6th rank to local people are getting business, 3 (3.75%) respondents have given 7th rank to local people are getting business, 5(6.25%) respondents have given 8th rank to local people are getting business, and 11(13.75%) respondents have given 9th

rank to local people are getting business.

In the above graph out of 80 respondents, 8 (10%) respondents given 1st rank to Tourists able to experience authentic tourism experience, 41(51.25%) respondents given 2nd rank to Tourist able to experience authentic tourism experience, 7(8.75%) respondents have given 3rd rank to Tourist enable to experience authentic tourism experience, 9(11.25%) respondents have given 4th rank to Tourist enable to experience authentic tourism experience, 3(3.75%) respondents have given 6th rank to Tourist enable to experience authentic tourism experience, 2(2.5%) respondents have given 7th rank to Tourist enable to experience authentic tourism experience, 7(8.75%) respondents have given 8th rank to Tourist enable to experience authentic tourism experience, 3(3.37%) respondents have given 9th rank to Tourist enable to experience authentic tourism experience.

In the above graph out of 80 respondents, 2(2.5%) respondents have given 1st rank to accessibility to destination [traffic], 11(13.75%) respondents have given 2nd rank to accessibility to destination [traffic], 39(48.75%) respondents have given 3rd rank to accessibility to destination [traffic], 4(5%) respondents have given 4th rank to accessibility to destination [traffic], 5(6.25%) respondents have given 5th rank to accessibility to destination [traffic], 4(5%) respondents have given 6th rank to accessibility to destination [traffic], 10(12.5%) respondents have given 7th rank to accessibility to destination [traffic], 2(2.5%)

Respondents have given 8th rank to accessibility to destination [traffic], and 3(3.75%) respondents have given 9th rank to accessibility to destination [traffic].

In the above graph out of 80 respondents, 5(6.25%) respondents have given 1st rank to Food storage for tourists, 8(10%) respondents have given 3rd rank to Food storage for tourists, 40(50%) respondents have given 4th rank to Food storage for tourists, 7(8.75%) respondents have given 5th rank to Food storage for tourists, 12(15%) respondents have given 6th rank to Food storage for tourists, 3(3.75%) respondents have given 7th rank to Food storage for tourists, 3(3.75%) respondents have given 8th rank to Food storage for tourists, and 2(2.5%) respondents have given 9th rank to Food storage for tourists.

In the above graph out of 80 respondents, 6(7.5%) respondents gave 1st rank to Hygiene and sanitation facilities getting affected, 4(5%) respondents have given 2nd rank to Hygiene and sanitation facilities get affected, 3(3.75%) respondents have given 3rd rank to Hygiene and sanitation facilities get affected, 3(3.75%) respondents have given 4th rank to Hygiene and sanitation facilities get affected, 52(65%) respondents have given 5th rank to Hygiene and sanitation facilities get affected, 5(6.25%) respondents have given 6th rank to Hygiene and sanitation facilities get affected, 4(5%) respondents have given 7th rank to Hygiene and sanitation facilities get affected, 2(2.5%) respondents have given 8th rank to Hygiene and sanitation facilities get affected, and 1(1.25%) respondents have given 9th rank to Hygiene and sanitation facilities get affected.

In the above graph out of 80 respondents, 2(2.5%) respondents have given 1st rank to waste management not satisfactory, 4(5%) respondents have given 2nd rank to waste management as not satisfactory, 7(8.75%) respondents have given 3rd rank to waste management not satisfactory, 11(13.75%) respondents have given 4th rank to waste management not satisfactory, 3(3.75%) respondents have given 5th rank to waste management not satisfactory, 46(57.5%) respondents have given 6th rank to waste management not satisfactory, 4(5%) respondents have given 7th rank to waste management not satisfactory, and 3(3.75%) respondents have given 8th rank to waste management not satisfactory.

In the above graph out of 80 respondents, 1(1.25) respondents have gave 1st rank to unnecessary conflicts and fights, 3(3.75%) respondents have gave 2nd rank to unnecessary conflicts and fights, 7(8.75%) respondents have gave 3rd rank to unnecessary conflicts and fights, 8(9%) respondents have gave 4th rank to unnecessary conflicts and fights, 4(5%) respondents have given 5th rank to unnecessary conflicts and fights, 3(3.75%) respondents have gave 6th rank to unnecessary conflicts and fights, 42(52.5%) respondents have gave 7th rank to unnecessary conflicts and fights, 5(6.25%) respondents have gave 8th rank to unnecessary conflicts and

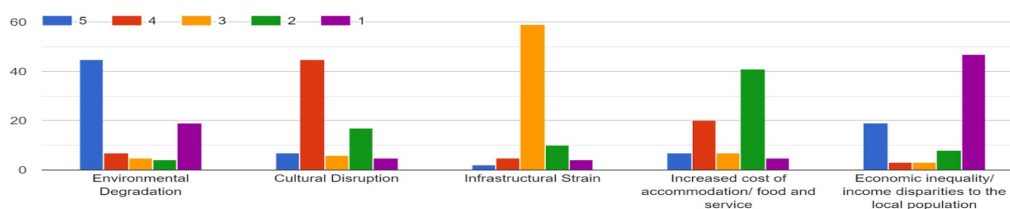
"IMPACT OF OVERCROWDING AT A HISTORICAL TOURISM DESTINATION: A CASE STUDY ON FORT SINHAGAD."

fights, 7(8.75%) respondents have gave 9th rank to unnecessary conflicts and fights,

In the above graph out 80 respondents, 3(3.75%) respondents have given 1st rank to no self-compliance, 9(11.25%) respondents have given 2nd rank to no self-compliance, 3(3.75%) respondents have given 3rd rank to no self-compliance, 2(2.5%) respondents have given 5th rank to no self-compliance, 2(2.5%) respondents have given 6th rank to no self-compliance, 6(7.5%) respondents have given 7th rank to no self-compliance, 47(58.75%) respondents have given 8th rank to no self-compliance, and 8(10%) respondents have given 9th rank to no self-compliance.

In the above graph out of 80 respondents, 12(15%) respondents gave 1st rank to disturbing flora and fauna, 4(5%) respondents gave 2nd rank to disturbing flora and fauna, 2(2.5%) respondents gave 3rd rank to disturbing flora and fauna, 2(2.5%) respondents have given 4th rank to disturbing flora and fauna, 1(1.25%) respondents have given 5th rank to disturbing flora and fauna, 2(2.5%) respondents have given 6th rank to disturbing flora and fauna, 6(7.5%) respondents have given 7th rank to disturbing flora and fauna, 6(7.5%) respondents have given 8th rank to disturbing flora and fauna,

14. Rate the following impacts of overcrowding at Fort Sinhagad (5 being highest 1 being lowest)



and 45(56.25%) respondents have gave 9th rank to disturbing flora and fauna.

Graph17: Rate the following impacts of overcrowding at Fort Sinhagad

In the above graph out of 80 respondents, 45(56.25%) respondents have given 5th rank to environmental degradation, 7(8.75%) respondents have given 4th rank to environmental degradation, 5(6.25%) respondents have given 3rd rank to environmental degradation, 4(5%) respondents have given 2nd rank to environmental degradation, and 19(23.75%) respondents have given 1st rank to environmental degradation.

In the above graph out of 80 respondents, 7(8.75%) respondents have given 5th rank to cultural disruption, 45(56.25%) respondents have given 4th rank to cultural disruption, 6(7.5%) respondents have given 3rd rank to cultural disruption, 17(21.25%) respondents have given 2nd rank to cultural disruption, and 6(7.5%) respondents have given 1st rank to a cultural disruption.

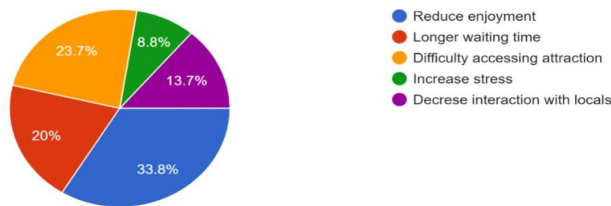
In the above graph out of 80 respondents, 2(2.5%) respondents have given 5th rank to infrastructural strain, 5(6.25%) respondents have given 4th rank to infrastructural strain, 59(73.75%) respondents have given 3rd rank to infrastructural strain, 10(12.5%) respondents have given 2nd rank to infrastructural strain, and 4(5%) respondents have given 1st rank to infrastructural strain.

In the above graph out of 80 respondents, 7(8.75%) respondents have given 5th rank to increased cost of accommodation/ food and service, 20(25%) respondents have given 4th rank to increased cost of accommodation/ food and service, 9(9.75%) respondents have given 3rd rank to increased cost of accommodation/ food and service, 41(51.25%) respondents have given 2nd rank to increased cost of accommodation/ food and service, and 5(6.25%) respondents have given 1st rank to increased cost of accommodation/ food and service.

In the above graph out of 80 respondents, 19(23.75%) respondents have given 5th rank to economic inequality/income disparities to local population, 3(3.75%) respondents have given 5th rank to economic inequality/income disparities to local population, 3(3.75%) respondents have given 5th rank to economic inequality/income disparities to local population, 8(10%) respondents have given 5th rank to economic inequality/income disparities to local population, and 47(58.75%) respondents have given 5th rank to economic inequality/income disparities to local population.

"IMPACT OF OVERCROWDING AT A HISTORICAL TOURISM DESTINATION: A CASE STUDY ON FORT SINHAGAD."

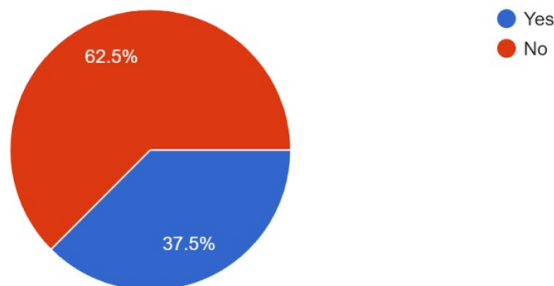
15. Does overcrowding affect your overall experience at Fort Sinhagad in the following
80 responses



Piechart18: Overcrowding affects overall experience in terms of

In the above pie chart out of 80, 27(33.8%) respondents think that overcrowding affects overall experience in terms of Reduced enjoyment, 16(20%) respondents think that overcrowding affects overall experience in terms of longer waiting time, 19(23.7%) respondents thinks that overcrowding affect overall experience in terms of difficulty accessing attraction, 7(8.8%) respondents thinks that overcrowding affect overall experience in terms of increase stress, 11(13.7%)respondents thinks that overcrowding affect overall experience in terms of decrease interaction with locals.

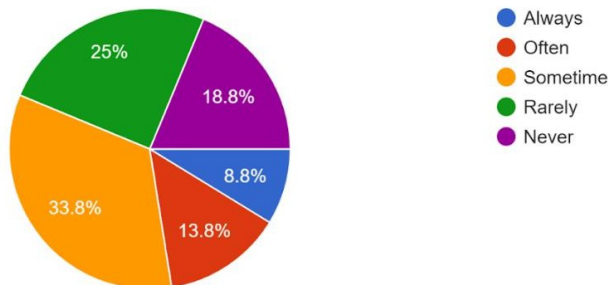
16. Are you aware of any sustainability measures implemented at Fort Sinhagad to address overcrowding?
80 responses



Piechart19: Awareness about sustainability measures implemented at Fort Sinhagad to address overcrowding

In the above pie chart out of 80, 30(37.5%) respondents are aware of sustainability measures implemented at Fort Sinhagad to address overcrowding and 50(62.5%) respondents are not aware of sustainability measures implemented at Fort Sinhagad.

17. Do you plan to visit overcrowded tourist destinations in future?
80 responses



Piechart20: Plan to visit overcrowded tourist destination in future

According to the pie chart of 80 respondents:2 respondents (2.5%) were motivated to visit Fort Sinhagad due to its easy accessibility.10 respondents (12.5%) visited to explore its historical significance.8 respondents (10%) were drawn by the trekking experience.6 respondents (7.5%) visited to enjoy the local cuisine.45 respondents (56.3%) were motivated by a combination of these factors: accessibility, history, trekking, and local food.

TESTING OF HYPOTHESIS :

H_0 "Overcrowding does not have a significant impact on the tourism destination experience at Fort Sinhagad."

H_1 "Overcrowding significantly impacts the tourism destination experience at Fort Sinhagad."

One Sample T-Test

One Sample T-Test

	t	df	p
15. Does overcrowding affect your overall experience at Fort Sinhagad in the following	24.904	79	< .001

Note. For the Student t-test, the alternative hypothesis specifies that the mean is different from 0.

Note. Student's t-test.

Descriptive

Descriptive

	N	Mean	SD	SE	Coefficient of variation
15. Does overcrowding affect your overall experience at Fort Sinhagad in the following	80	3.612	1.297	0.145	0.359

The results of the one-sample t-test reveal a statistically significant impact of overcrowding on the overall visitor experience at Fort Sinhagad. The average rating of 3.612 indicates that many respondents found overcrowding to be detrimental to their overall visitation experience. The analysis also highlights some variability in the ratings, suggesting different perceptions among visitors. These findings are crucial for decision-makers in managing visitor traffic and improving overall experiences at Fort Sinhagad.

The analysis included 80 respondents who assessed their experiences.

The average rating for the effect of overcrowding on the overall experience is approximately 3.612. This implies that, on average, respondents perceive overcrowding as having a considerable negative impact.

The standard deviation is 1.297, indicating there is a moderate level of spread in the ratings. This suggests that while most respondents rated their experience similarly, there is a noticeable range in the perceptions. The standard error of the mean is 0.145, which clarifies the precision of the mean rating estimate. A smaller SE relative to the mean indicates a relatively stable estimate. The coefficient of variation is 0.359, suggesting that there is moderate variability in the ratings compared to the mean rating. This further emphasizes the diversity of experiences among the respondents. Because the p-value is less than 0.001, we reject the null hypothesis. This provides convincing evidence that overcrowding does indeed have a statistically significant effect on visitors' overall experiences at Fort Sinhagad.

H_0 "There is no significant impact of overcrowding on the environmental aspects of Fort Sinhagad."

H_2 "There is a significant impact of overcrowding on the environmental aspects of Fort Sinhagad."

One Sample T-Test

One Sample T-Test

	t	df	p
14. Rate the following impacts of overcrowding at Fort Sinhagad (5 being highest 1 being lowest) [Environmental Degradation]	19.875	79	< .001

Note. For the Student t-test, the alternative hypothesis specifies that the mean is different from 0.

Note. Student's t-test.

Descriptive

Descriptive

	N	Mean	SD	SE	Coefficient of variation
14. Rate the following impacts of overcrowding at Fort Sinhagad (5 being highest 1 being lowest) [Environmental Degradation]	80	3.737	1.682	0.188	0.450

The results of the one-sample t-test demonstrate a statistically significant perception of environmental degradation attributed to overcrowding at Fort Sinhagad. The high mean rating of 3.737 suggests that respondents strongly sense the impacts of overcrowding, with a notable degree of variability in responses as indicated by the standard deviation and coefficient of variation. These findings warrant further evaluation and potentially the implementation of measures to mitigate the identified environmental impacts. The sample consisted of 80 participants who provided ratings. The average rating for environmental degradation is approximately 3.737. This value indicates that respondents perceive environmental degradation as notably impactful (closer to 4 than to 1). The standard deviation is 1.682, suggesting variability in respondents' ratings. This indicates that while many respondents rated the impact of overcrowding high, some rated it lower. The standard error of the mean is 0.188, which provides an estimate of how much the sample mean is expected to fluctuate if different samples were taken. The coefficient of variation is 0.450, which reflects the relative variability of the ratings in relation to the mean. A coefficient greater than 0.4 indicates considerable variability in the perceptions of environmental degradation. Since the p-value of < .001 suggests that we reject the null hypothesis, we conclude that the mean rating of the environmental degradation from overcrowding is statistically significant.

FINDINGS:

1. Among the respondents, the majority (37.5%) was female and associated overcrowding with insufficient parking space, long travel times to the destination, and excessive crowds at Fort Sinhagad.
2. The largest age group of respondents (28.75%) was 15-25-year-olds who visit Fort Sinhagad primarily on weekends.
3. Professional students made up the largest category of respondents (32.5%) and indicated that they visit Fort Sinhagad in all seasons (summer, winter, spring, and rainy).
4. The smallest group of respondents (1.25%) were female, who reported experiencing the most overcrowding at Fort Sinhagad in the afternoon on weekends.
5. The largest portion (31.25%) of respondents, aged 15-25, cited ease of access, local food, historical interest, and trekking opportunities as primary motivations for visiting Fort Sinhagad.
6. A significant percentage (21.5%) of female respondents reported always facing parking issues at Fort Sinhagad.
7. The smallest group of respondents (1.25%) was male; who strongly disagreed that urban development is impacting the environment at Fort Sinhagad.

8. The majority (26.25%) of respondents, aged 15-25, believed that social media is a key contributor to overcrowding at Fort Sinhagad.
9. The smallest group (1.25%) of female respondents rarely believed that local businesses benefit from the influx of tourists at Fort Sinhagad.
10. The largest group of respondents (21.25%) was professional students who expressed a preference for local cuisine at Fort Sinhagad.
11. A majority (27.5%) of student respondents were aware of accommodation options available at Fort Sinhagad.
12. The largest portion of respondents (23.75%) was female and believed the government should take steps to preserve Fort Sinhagad's authenticity.
13. More than half of respondents (58.75%) felt that overcrowding leads to a lack of self-compliance.
14. A significant majority (73%) of respondents viewed infrastructure strain as a major impact of overcrowding.
15. Among respondents aged 15-25, a majority (17.5%) felt that overcrowding detracts from their enjoyment of Fort Sinhagad.
16. The largest group of respondents (32.5%) from the 15-25 age range reported awareness of sustainability measures at Fort Sinhagad.
17. A small portion (3.75%) of female respondents indicated that they would always plan to visit overcrowded tourist destinations in the future.

SUGGESTIONS:

- Tourists are encouraged to visit Fort Sinhagad on weekdays to reduce overcrowding, enhancing their overall experience.
- The government should consider restricting photography, video-graphs, and reel-making at Fort Sinhagad.
- Unnecessary development at Fort Sinhagad should be minimized to preserve its natural and historical integrity.
- Parking areas should be expanded to accommodate the growing number of visitors.
- Licenses for businesses at Fort Sinhagad should be granted exclusively to locals to ensure that they benefit economically from tourism.
- Local residents should promote their traditional food to attract more visitors to their offerings.
- The government should raise awareness about the available accommodation options at Fort Sinhagad.
- Awareness programs should be initiated to educate the public on the impacts of overcrowding at Fort Sinhagad.

LIMITATIONS AND FUTURE SCOPE:

- The research was conducted within the geographical boundaries of PuneCity.
- This study is only about Fort Sinhagad.

CONCLUSION :

Fort Sinhagad is a prominent tourist destination in Pune, and this study highlights the impact of rising tourist numbers on its authenticity and environment. Overcrowding has become a pressing issue, threatening the fort's historical and cultural value. To draw meaningful insights, both quantitative and qualitative research methods were employed to assess the effects of excessive tourism.

The findings show that visitors, particularly on weekends, significantly increase the foot traffic at Fort Sinhagad, which is perceived as a peak period for overcrowding. Respondents indicated that social media influencers frequently promote the fort, further contributing to overcrowding and diminishing visitors' ability to experience its authenticity.

"IMPACT OF OVERCROWDING AT A HISTORICAL TOURISM DESTINATION: A CASE STUDY ON FORT SINHAGAD."

The study also highlights concerns about the environmental impact of ongoing urban development at Fort Sinhagad, which many respondents believe is damaging local flora and fauna. Although local residents benefit economically from tourism, many tourists remain unaware of available accommodation options, underscoring the need for better awareness efforts.

The government should take proactive steps toward implementing sustainability measures to manage overcrowding, preserve the fort's environment, and promote responsible tourism. These initiatives are crucial to balancing tourism benefits with the preservation of Fort Sinhagad's unique heritage and natural surroundings.

REFERENCES:

- Alonso-Almeida, M. D. M., Borrajo-Millán, F., & Yi, L. (2019). Are social media data pushing over tourism? The case of Barcelona and Chinese tourists. *Sustainability*, 11(12), 3356.
- Buitrago, E. M., & Yñiguez, R. (2021). Measuring over tourism: A necessary tool for landscape planning. *Land*, 10(9), 889.
- Capocchi, A., Vallone, C., Pierotti, M., & Amaduzzi, A. (2019). Over tourism: A literature review to assess implications and future perspectives. *Sustainability*, 11(12), 3303.
- Chaney, D., & Séraphin, H. (2023). A systematic literature review and lexicometric analysis on over tourism: Towards an ambidextrous perspective. *Journal of Environmental Management*, 347, 119123.
- Goliath-Ludic, K., & Yekela, S. (2020). Resident's perception of the environmental impact of tourism: A case study of the bawaka community in Butterworth, South Africa. *Geo Journal of Tourism and Geosites*, 33, 1527-1531.
- Koens, K., Postma, A., & Papp, B. (2018). Is over tourism overused? Understanding the impact of tourism in a city context. *Sustainability*, 10(12), 4384.
- Kuščer, K., & Mihalič, T. (2019). Residents' attitudes towards over tourism from the perspective of tourism impacts and cooperation—The case of Ljubljana. *Sustainability*, 11(6), 1823.
- Perkumienė, D., & Pranskūnienė, R. (2019). Over tourism: Between the right to travel and residents' rights. *Sustainability*, 11(7), 2138.