

Research Paper



A comprehensive analysis of the alsen/st. irma lee community village in baton rouge, usa: history, challenges, and transformations

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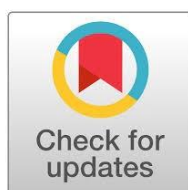
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ABSTRACT

This study examines the Alsen/St. Irma Lee Community Village in Baton Rouge, Louisiana, focuses on its historical context, primary challenges, and transformations over time. Established in 1872 by the Freedmen's Bureau, the community has undergone significant socio-economic and environmental changes. The study highlights the community's evolution from a rural, agriculture-based economy to facing industrial pollution and economic decline. Despite these challenges, the residents have demonstrated resilience through grassroots initiatives and collaborations with nonprofit organizations. The review identifies a significant gap in academic research, with most information derived from non-academic sources such as websites, newspapers, and social media. This underscores the need for scholarly attention to the community's history, challenges, and transformations. Key themes include the community's proactive efforts in environmental sustainability, public health, and social equity, emphasizing the importance of local action in achieving sustainable development. The findings suggest that a holistic understanding of Alsen/St. Irma Lee's historical and socio-economic dynamics are crucial for informed policy-making and community resilience.

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1. INTRODUCTION

Around the globe, numerous communities face vulnerabilities stemming from a combination of economic, environmental, social, and political factors. These communities often experience higher poverty levels, limited access to essential services, and greater exposure to environmental hazards [1]. One such community in the United States of America (USA) is the Alsen/St. Irma Lee in Baton Rouge, Louisiana. The Alsen/St. Irma Lee Community Village in Baton Rouge, Louisiana, represents a microcosm of historical and socio-economic transformations typical of many African American communities in the southern United States [2]. Established in the early 20th century in 1872 by a U.S. Department of War agency called the Freedmen's Bureau, it was created to assist freedmen following the American Civil War, this community has experienced significant changes over the decades, shaped by broader regional and national trends. Initially, the area was primarily rural, with agriculture being the main economic activity. The community evolved with industries such as logging and small-scale farming, contributing to the local economy. The mid-20th century saw the establishment of industrial plants nearby, providing employment but also introducing environmental challenges. Strong community ties, churches, and local schools played a crucial role in maintaining the cultural identity of the residents. With the mechanization of industries and the decline of local agriculture, many residents faced unemployment and economic hardship. Small businesses struggled to survive, leading to a reduction in local commerce. Proximity to industrial plants led to significant environmental pollution, affecting air and water quality. This has had long-term health impacts on residents [3], [4]. Efforts to address pollution have often been hampered by inadequate regulatory oversight and enforcement. Schools in the area have historically been underfunded, leading to disparities in educational outcomes [5]. Economic decline has been accompanied by increased crime rates and safety concerns. Local organizations and other efforts by the inhabitants have been pivotal in advocating for environmental justice and better living conditions in Alsen/St. Irma Lee Community Village [6]. Efforts by the inhabitants to preserve the cultural heritage of the community include festivals, historical societies, and community centers. Collaborations with nonprofit organizations have also led to initiatives focused on health, education, and economic development. On the other hand, Government-led and community-supported environmental clean-up projects have been initiated to address pollution, Programs aimed at supporting small businesses through loans, training, and infrastructure development, Introduction of sustainable agricultural practices and green energy projects to revitalize the local economy, Vocational training and education programs are designed to equip residents with skills for new job opportunities, and Various federal and state programs have provided funding for community development projects In the US [6].

2. RELATED WORK

However, significant gaps in knowledge and support for the community Influence both the development of initiatives and the achievement of objectives aimed at improving the performance of the Alsen/St. Irma Lee Community Village. In this context, statistics play a key role in designing and executing intervention projects, as well as in establishing baselines essential for informed policy decisions. This systematic literature review aims to compile and analyze existing research on the Alsen/St. Irma Lee Community Village. This review examines historical records, socio-economic data, and previous academic studies to provide a comprehensive overview of the community's development, challenges, and current status. The review addresses key questions regarding the community's historical significance, demographic and socio-economic changes over time, and the influence of environmental and policy factors. Given the community's unique history and ongoing challenges, a thorough understanding of its development can contribute to broader discussions on urban planning, social justice, and community resilience. Through a methodical and systematic approach, this review synthesizes diverse sources of information, offering a coherent narrative of the Alsen/St. Irma Lee Community Village's past, present, and future trajectories. This study pursues answers to the overarching question: What do researchers in literature talk about when

talking about vulnerable communities in the USA? Specifically, three key research questions guided this review:

1. What is the historical context of the Alsen/St. Irma Lee Community Village?
2. What are the primary challenges faced by the community?
3. What transformations have occurred within the community over time?

3. METHODOLOGY

Study Area

Alsen as shown in Figure 1 is an unincorporated community in East Baton Rouge Parish in Louisiana State in US Located at latitude 30.57° N, and Longitude 91.20° W. In 2000, Alsen had a population of 22,106, with a majority identifying as African-American. The community is situated at the start of Louisiana's industrial corridor, just north of the former Mount Pleasant plantation site. In 1950, the area was designated for industrial use, which attracted petrochemical plants and landfills. In 1964, Tim Alexander established Petro Processors Inc. (PPI), an industrial waste disposal site used by major companies such as Dow, Ethyl, and Exxon. PPI ceased operations in 1980 and was added to the National Priorities List of Superfund Sites in 1983. Nearby, the small community of St. Irma Lee is located adjacent to Alsen, separated by the Ronaldson Field Landfill, which received its landfill permit in 1998 [6].

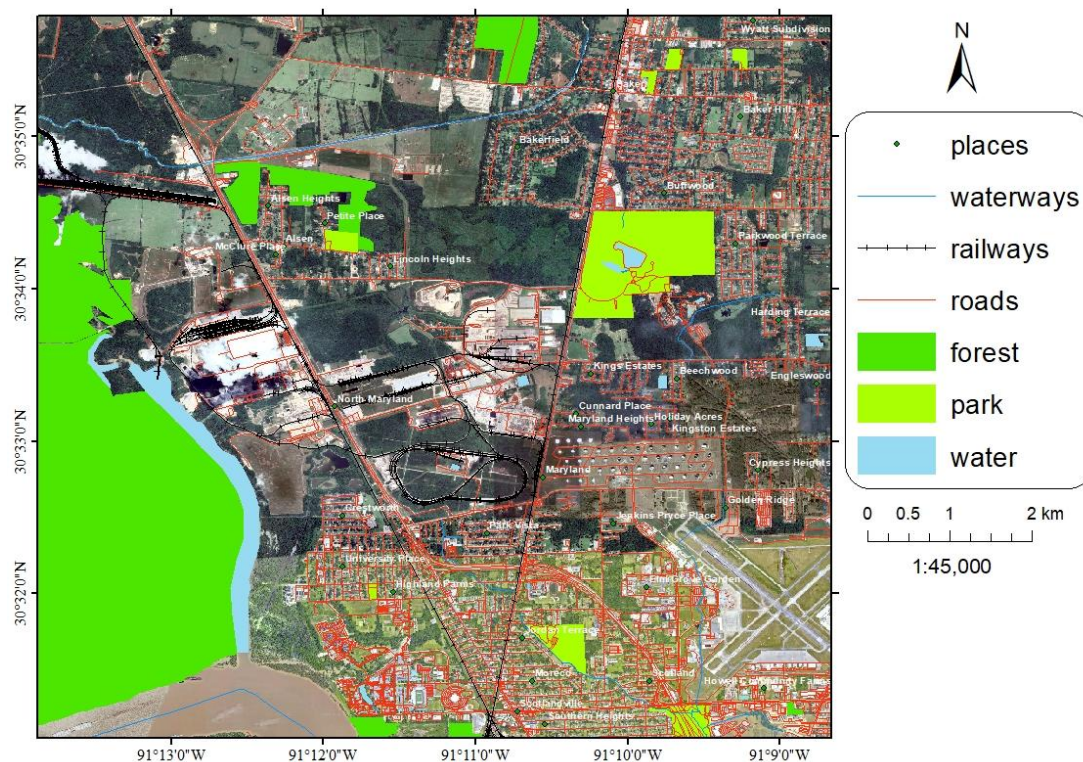


Figure 1. A Map of Alsen/St. Irma Lee Community Village in Baton Rouge, USA

This study adopts a systematic literature review (SLR) methodology to comprehensively analyze existing research on the Alsen/St. Irma Lee Community Village. The SLR approach ensures a structured and rigorous synthesis of available literature, focusing on the community's history, challenges, and transformations [6].

Data Sources and Search Strategy

Here are valuable sources which were used for accessing relevant literature for the study on the Alsen/St. Irma Lee Community Village. Major academic databases include PubMed, JSTOR, Google Scholar,

Scopus (subscription or institutional access required), Directory of Open Access Journals (DOAJ), and Web of Science (subscription or institutional access required). For grey literature, OpenGrey, Grey Literature Report, National Technical Reports Library (NTRL), and Conference Proceedings Citation Index (part of Web of Science) were used. For books and monographs, explore Google Books, Project MUSE, HathiTrust Digital Library, WorldCat, Library of Congress, and the Directory of Open Access Books (DOAB). The data sources are summarized in Table 1.

Table 1. Data Sources

Data Sources	Remarks
Academic Databases	Searched major academic databases such as PubMed, JSTOR, Google Scholar, Scopus, and Web of Science for relevant peer-reviewed articles, theses, and dissertations.
Grey Literature	Included grey literature sources such as government reports, policy documents, community organization reports, and conference papers to capture non-peer-reviewed but valuable information.
Law Case, Books, and Monographs	Google Law cases, Reviewed books and monographs that provide historical and sociological insights into the community
Websites, newspapers, and social media Platforms	This includes any other website and social media platforms that are not books or articles

Search Strategy

Systematic searches were conducted in each data source using predefined search terms shown in Table 2. This study applied Boolean operators (AND, OR, NOT) to refine searches and included both broad and specific terms to capture a wide range of literature. For a broad search to capture a wide range of literature related to the Alsen/St. Irma Lee Community Village, Table 2 shows the search string used.

Inclusion and Exclusion Criteria

In this systematic literature review, the study included studies published in English from peer-reviewed journals, books, theses, dissertations, and credible grey literature sources. Eligible studies that addressed the historical context, socioeconomic challenges, and community transformations in Alsen/St. Irma Lee or comparable communities, and were published within the last 50 years (1974 -2024) to ensure relevance.

This study excluded studies or websites not available in full text, those in languages other than English, research or websites that did not focus on the specified or comparable communities, and studies deemed irrelevant based on title and abstract screening for academic databases.

Table 2. Predefined Search Terms and Strings Used

Search	Search String
General Search String	"Alsen Community Village" OR "St. Irma Lee Community" OR "Baton Rouge community history" OR "urban challenges in Baton Rouge" OR "community transformation Baton Rouge" OR "socioeconomic issues in Alsen" OR "urban development in Baton Rouge"
Historical Context	("Alsen Community Village" OR "St. Irma Lee Community") AND ("history" OR "historical development" OR "origins" OR "evolution")
Socioeconomic Challenges	("Alsen Community Village" OR "St. Irma Lee Community") AND ("socioeconomic challenges" OR "poverty" OR "employment" OR "education" OR "healthcare" OR "housing conditions")
Community Transformations	("Alsen Community Village" OR "St. Irma Lee Community") AND ("community transformation" OR "economic development" OR "social change" OR "urban development")

Data Extraction and Synthesis

Data extraction involved using a standardized form to systematically record relevant information from each included study, capturing bibliographic details (author, year, title, source), study objectives and research questions, methodology and data sources, key findings related to the history, challenges, and transformations of the Alsen/St. Irma Lee Community Village, as well as conclusions and implications. Because there was no available academic research on Alsen/St. Irma Lee Community Village in Baton Rouge, USA with information on History, Challenges, and Transformations, this study focused on the available information from the law case, Websites, and social media platforms to perform data synthesis. Thematic synthesis was employed to organize the extracted data into themes aligned with the research questions: the historical context of the community, the primary challenges faced, and the transformations over time. This process identified common patterns, divergences, and gaps in the literature. Additionally, narrative synthesis provided a cohesive account of the findings, integrating both quantitative and qualitative insights to describe the historical context, current challenges, and community transformations. Quality assessment of included reports from the available information was conducted using established criteria such as the credibility and reliability of data sources, relevance to the research questions, and the clarity and coherence of findings.

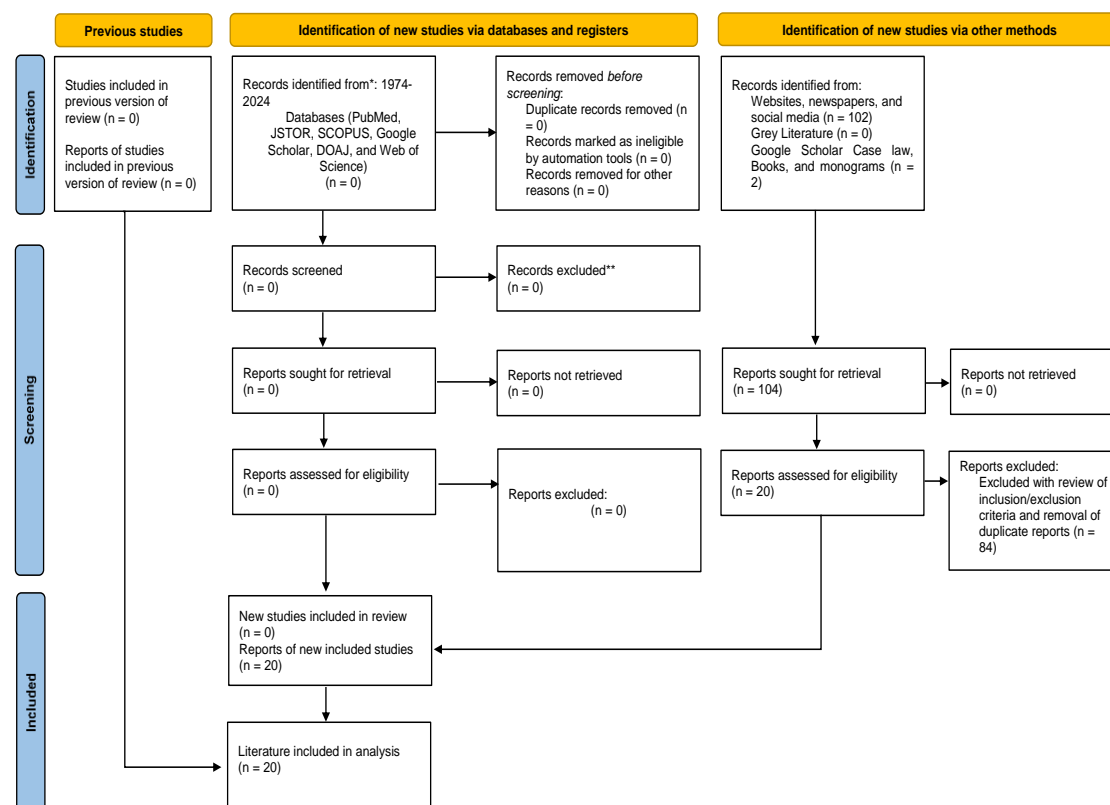


Figure 2. A Flow Chart of the Results of the Systematic Literature Search

4. RESULTS AND DISCUSSION

Results

Most relevant information was found in non-academic sources, particularly websites, newspapers, and social media, highlighting the limited academic research available on the Alsen/St. Irma Lee Community Village as shown in Figure 2. The systematic search yielded varying numbers of relevant sources across different databases and types of literature. For the general search string, no results were found in PubMed, JSTOR, Google Scholar, Scopus, Web of Science, Grey Literature, or DOAJ. However, two

relevant sources were identified in Google Scholar's case law, books, and monographs section, and 48 sources were found in websites, newspapers, and social media.

For the historical context, similarly, no results were retrieved from PubMed, JSTOR, Google Scholar, Scopus, Web of Science, Grey Literature, or DOAJ. Two relevant sources were found in Google Scholar's case law, books, and monographs section, and 17 sources were identified from websites, newspapers, and social media. Regarding socioeconomic challenges, no relevant sources were found in any of the databases including PubMed, JSTOR, Google Scholar, Scopus, Web of Science, Grey Literature, DOAJ, or Google Scholar's case law, books, and monographs section. However, 27 sources were identified from websites, newspapers, and social media.

No results were found in any academic databases or literature types for community transformations, except for 10 sources identified from websites, newspapers, and social media.

Table 3. Results from the Literature Search

	PubMed	JSTOR	Google Scholar	Google Scholar Case Law, Books, and Monographs	SCOPUS	Web of Science	Grey Literature	DOAJ	Websites, News Paper, and Social Media
General Search String	0	0	0	2	0	0	0	0	48
Historical Context	0	0	0	2	0	0	0	0	17
Socioeconomic Challenges	0	0	0	0	0	0	0	0	27
Community Transformations	0	0	0	0	0	0	0	0	10

After screening the results from Table 3, 20 sources as shown in Figure 2, were included in the analysis focusing on the Alsen/St. Irma Lee Community Village is categorized under historical context, socioeconomic challenges, and community transformations. A summary of the findings based on the reviewed references is provided in Table 4. The review highlighted significant environmental movements within the community. The Alsen St. Irma Lee Community Village [2] report discussed the community's impactful environmental initiatives, driven by the belief that ordinary people can influence societal changes, touching upon historical context, community transformation, and socioeconomic challenges. Similarly, the Alsen St. Irma Lee Community Village [3] study focused on food distribution and education efforts, covering historical context, community transformation, and socioeconomic challenges. Several sources concentrated on socioeconomic challenges. [6] detailed complaints to the Louisiana Department of Environmental Quality (LDEQ) about non-compliance at Ronaldson Field, emphasizing these challenges.

The Advocate [7], [8] both discussed financial and social controversies related to an industrial waste site in Alsen. [9] covered the efforts of residents too close the Ronaldson Field Landfill, [10] discussed opposition to LNG exports to protect communities. [11] emphasized federal commitments to environmental justice and provided information on pollution sources in North Baton Rouge. Community transformations were also a significant theme. X.com [12] highlighted nutrition education and food demonstrations, and Facebook [13] discussed future community enhancement projects. Deltech [14] detailed the company's sustainable business practices and community involvement. Instagram [15] explained LSU's air monitoring program and its applications in communities. [4] Described resistance to petrochemical facility expansions, and Western Economic Services [16] aimed to improve fair housing

systems and enhance communication. US EPA [17] detailed cleanup activities in Devil's Swamp Lake, Scotlandville, LA, [18] Highlighted the development of minority leadership in environmental, social, and economic justice. [19] Discussed initiatives by Keep Louisiana Beautiful to promote environmental responsibility. City of Baton Rouge v. Louisiana Department of Environmental Quality [20] focused on issues related to landfill permits and waste management regulations.

Table 4. Overview of the Sources Included in the Analysis

Reference	Objectives/Focus	Thematic Areas from Research Questions
[2]	A powerful environmental movement driven by local residents has emerged, fueled by the belief that ordinary individuals can shape a society where everyone has the opportunity to reach their full potential.	Historical Context, Community Transformation, and Socioeconomic Challenges
[3]	Food distribution and education in the community	Historical Context, Community Transformation, and Socioeconomic Challenges
[4]	Opposing the growth of petrochemical plants through various strategies.	Community Transformations
[6]	Concerns have been raised with the Louisiana Department of Environmental Quality (LDEQ) about non-compliance issues at Ronaldson Field. The meeting will cover LDEQ's mission and vision, the role of the Office of Environmental Compliance, an overview of unresolved complaints, and identify accountability partners across local, state, and federal agencies.	Socioeconomic challenges
[7]	Tracing the funding reveals tensions surrounding the proposed industrial waste site in Alsen, where a local nonprofit and nearby residents have been in conflict even before its opening.	Socioeconomic Challenges
[8]	Financial trails highlight ongoing tensions in Alsen, where local nonprofit and community members are already at odds over an industrial waste site that has yet to begin operations.	Socioeconomic Challenges
[9]	Residents of Alsen and St. Irma Lee Aim to Close Ronaldson Field Landfill.	Socioeconomic Challenges
[10]	To protect American consumers and communities, DOE must not authorize oil and gas companies to export more LNG.	Socioeconomic Challenges
[11]	The "Revitalizing Our Nation's Commitment to Environmental Justice for All," issued on April 21, 2023, mandates that the federal government prioritize environmental justice by enforcing the nation's environmental and civil rights laws, preventing pollution, addressing climate change and its impacts, and tackling legacy pollution that threatens human health and the environment.	Socioeconomic Challenges
[12]	Nutrition Education & Food Demonstration	Community Transformations
[13]	The initial round of future community improvement projects was finalized in early 2023, resulting in 29	Community Transformations

	new initiatives being listed on the #MOVEBR website, where residents can track their development.	
[14]	Deltech is dedicated to fostering impactful and sustainable business practices that positively impact local communities. We exemplify this commitment through our focus on Community Engagement, Diversity, Equity & Inclusion, and Environmental Stewardship.	Community Transformations
[15]	LSU explained our air monitoring program and what the car does! Keep an eye out because we will hopefully be bringing the car into more communities in the coming weeks!	Community Transformations
[16]	A. Strengthen the capacity of the fair housing system, improve access, and enhance its responsiveness to community needs. B. Foster better communication and coordination among agencies and stakeholders working to advance fair housing. C. Increase awareness and understanding of fair housing among both consumers and service providers.	Socioeconomic Challenges, Community Transformations
[17]	Devil's Swamp Lake Scotlandville, LA Cleanup Activities	Socioeconomic Challenges, Community Transformations
[18]	Development of minority leadership in the areas of environmental, social, and economic justice along the Mississippi River Chemical Corridor and Gulf Coast Region.	Socioeconomic Challenges, Community Transformations
[19]	Keep Louisiana Beautiful, a 501c3 non-profit, brings people together to build and sustain vibrant, clean communities. Through our programs and a statewide network of Affiliates, we provide tools and resources to prevent litter, reduce waste, and increase recycling. Our mission is to promote personal, corporate, and community responsibility for a clean and beautiful Louisiana.	Community Transformations
[20]	issues related to landfill permits, public hearings, and waste management regulations in East Baton Rouge Parish	Socioeconomic Challenges, Community Transformations
[21]	Chief Jackson announced plans to recruit four additional volunteer firefighters in January and is optimistic that a four-fire rating could be achieved in the near future.	Socioeconomic Challenges, Community Transformations
[22]	North Baton Rouge Pollution Sources	Socioeconomic Challenges

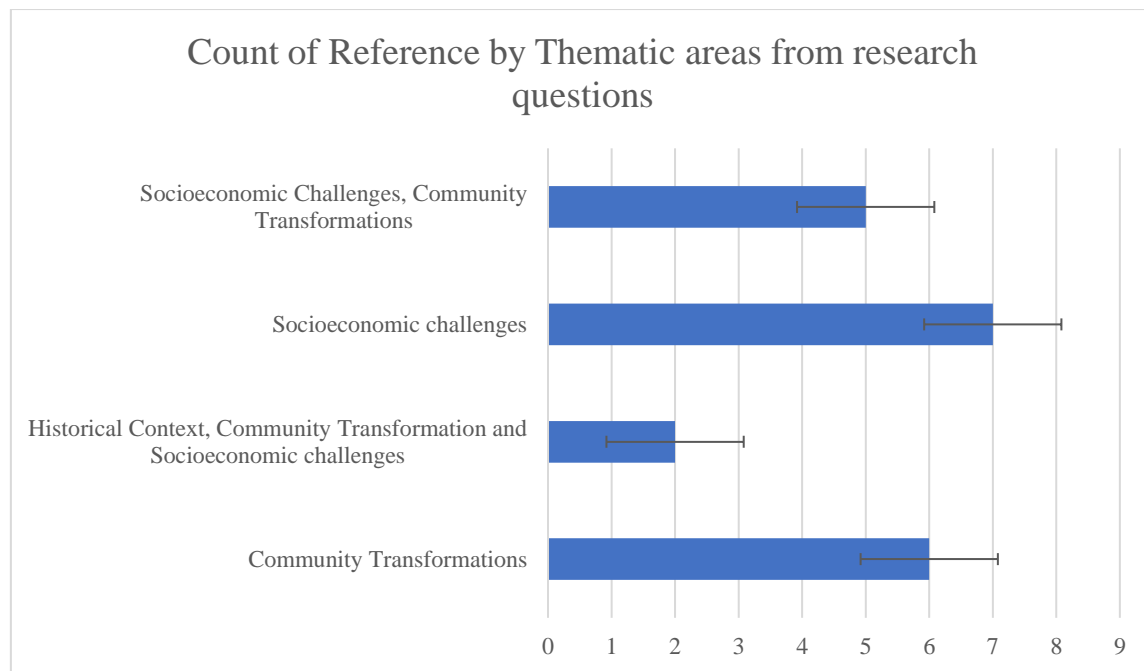


Figure 3. Results of the Sources Included in the Analysis

Discussion

The systematic literature review highlighted several key insights into the historical context, socioeconomic challenges, and community transformations in the Alsen/St. Irma Lee Community Village. The findings suggest a significant gap in academic research, with most relevant information derived from non-academic sources such as websites, newspapers, and social media [23]. This indicates a rich pool of grassroots knowledge and community-driven documentation that academic databases have yet to fully capture. The historical context of Alsen/St. Irma Lee is well-documented in community-led initiatives and local media, emphasizing the community's efforts to shape its environment and society. These sources illustrate a legacy of activism and resilience, highlighting the importance of community movements in historical narratives. The socioeconomic challenges faced by the community were primarily documented through local news articles, social media, and community reports [2], [7], [12], [13], [15], [17]. These challenges include environmental justice issues, economic disparities, and infrastructural deficiencies. The consistent theme across these sources is the community's ongoing struggle against external pressures and systemic neglect [2].

Community transformations documented in the review reflect significant efforts in environmental sustainability, public health, and social equity. Local initiatives, such as nutrition education, fair housing improvements, and environmental cleanup activities, demonstrate the community's proactive approach to fostering positive change [6], [8], [16]. However, the limited presence of these topics in academic literature points to a need for more scholarly attention to grassroots transformations.

Furthermore, the thematic analysis of the reviewed references as shown in Figure 3 reveals a distribution of focus areas that highlight the primary concerns and areas of activity within the Alsen/St. Irma Lee Community Village. The findings, categorized into four main themes: Community Transformations, Historical Context along with Community Transformation and Socioeconomic Challenges, Socioeconomic Challenges, and a combination of Socioeconomic Challenges and Community Transformations, provide a comprehensive overview of the community's dynamics and priorities.

Community Transformations

The theme of community transformations, with six (6) references, underscores the significant efforts and initiatives aimed at improving various aspects of community life in Alsen/St. Irma Lee [4], [12], [13], [14], [15], [19]. These transformations are often driven by local organizations and community members who seek to address environmental issues, improve public health, and enhance social equity. For

instance, projects like nutrition education and food demonstrations, community enhancement initiatives, sustainable business practices, and environmental monitoring programs illustrate the community's proactive stance in fostering positive change [3]. The relatively high number of references in this category suggests a strong community focus on self-improvement and resilience, emphasizing the importance of local action in achieving sustainable development.

Historical Context, Community Transformation, and Socioeconomic Challenges

Only two (2) references addressed the historical context, community transformation, and socioeconomic challenges simultaneously, indicating a gap in comprehensive academic research that integrates these three critical aspects [2]. This limited focus suggests that while individual elements of the community's history, transformations, and socioeconomic challenges are documented, there is a need for more holistic studies that capture the interconnectedness of these elements. Understanding the historical context is essential for appreciating the current challenges and transformations, as it provides the backdrop against which contemporary issues and initiatives unfold. Future research should aim to fill this gap by exploring how historical events and trends have shaped the community's current socioeconomic conditions and transformation efforts.

Socioeconomic Challenges

With seven (7) references focusing solely on socioeconomic challenges, this theme appears to be a primary area of concern for the Alsen/St. Irma Lee Community Village. The community faces numerous socioeconomic issues, including environmental justice problems, economic disparities, and infrastructural deficiencies. References to the Louisiana Department of Environmental Quality (LDEQ) complaints, controversies surrounding industrial waste sites, and opposition to LNG exports highlight ongoing struggles against environmental hazards and economic inequities [6], [10], [22]. These challenges are compounded by systemic neglect and inadequate support from local and federal authorities [20]. The prominence of this theme in the literature indicates that addressing socioeconomic challenges is crucial for the community's well-being and future development.

Socioeconomic Challenges and Community Transformations

Five (5) references addressed both socioeconomic challenges and community transformations, reflecting the intertwined nature of these themes. Efforts to overcome socioeconomic challenges often lead to or require community transformations. For example, initiatives to improve fair housing, resist the expansion of petrochemical facilities, and clean up polluted areas are both responses to socioeconomic issues and catalysts for broader community transformations [4], [7], [16]. This dual focus suggests that the community is not only reactive but also proactive in seeking solutions that drive positive change. The synergy between addressing challenges and fostering transformations highlights the community's resilience and capacity for self-improvement.

Implications for the Community

The thematic analysis indicates several implications for the Alsen/St. Irma Lee Community Village. Firstly, the community's proactive engagement in transformation initiatives demonstrates a strong capacity for self-advocacy and resilience. These efforts are crucial for driving sustainable development and improving the quality of life for residents. Secondly, the limited focus on the historical context within the reviewed references suggests a need for more comprehensive studies that integrate historical, socioeconomic, and transformational aspects. Such studies would provide a deeper understanding of the community's evolution and inform more effective strategies for future development. The prominence of socioeconomic challenges in the literature underscores the urgent need for targeted interventions to address environmental justice issues, economic disparities, and infrastructural deficiencies. Collaborative efforts between community members, local organizations, and governmental agencies are essential for tackling these challenges effectively. Finally, the interconnectedness of socioeconomic challenges and community transformations highlights the importance of a holistic approach to community development.

By simultaneously addressing immediate challenges and fostering long-term transformations, the Alsen/St. Irma Lee Community Village can achieve sustainable progress and resilience.

5. CONCLUSION

The Alsen/St. Irma Lee Community Village's history and evolution exemplify the complex interplay between socio-economic, environmental, and political factors impacting vulnerable communities. Despite significant challenges, including industrial pollution, economic hardships, and systemic neglect, the community has shown remarkable resilience and agency. Grassroots initiatives and collaborations with nonprofit organizations have been pivotal in addressing environmental justice issues, improving public health, and fostering social equity. The review reveals a substantial gap in academic research, highlighting the reliance on non-academic sources for comprehensive information.

This gap underscores the need for more scholarly studies that integrate historical, socio-economic, and transformational aspects of the community. The interconnectedness of socioeconomic challenges and community transformations emphasizes the importance of a holistic approach to community development. By addressing immediate issues and fostering long-term positive change, the Alsen/St. Irma Lee Community Village can serve as a model for sustainable progress and resilience. Future research should focus on providing a more integrated understanding of the community's past and present to inform more effective and equitable policy decisions.

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Author Contributions Statement

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Quisha Reed-Jones		✓				✓	✓	✓	✓	✓	✓	✓	✓	✓
Yaw A. Twumasi	✓	✓	✓	✓		✓	✓		✓	✓	✓	✓	✓	✓
Zhu H. Ninhg	✓						✓			✓		✓		✓

C : Conceptualization

M : Methodology

So : Software

Va : Validation

Fo : Formal analysis

I : Investigation

R : Resources

D : Data Curation

O : Writing - Original Draft

E : Writing - Review & Editing

Vi : Visualization

Su : Supervision

P : Project administration

Fu : Funding acquisition

Conflict of Interest Statement

The authors declare that they have no known conflict of interest.

Informed Consent

There was no informed consent needed for this study.

Ethical Approval

There was no ethical approval needed for this study.

Data Availability

Data is available upon reasonable request.

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