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Examining text and context in the Ethiopian English classroom: A focus on second cycle grades seven and eight

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Abstract

The objective of this study was to examine the contribution of teachers and students in designing grade seven and eight English texts. The analysis of the texts focused on the power dynamics and level of freedom afforded to teachers and students in creating contextually relevant materials. A mixed-method approach was employed to gather comprehensive data for the research. Following data collection, a descriptive analysis method was utilized to identify specific contexts in which the texts were written and to evaluate the extent of influence and agency granted to teachers and students. The overarching goal of this research was to explore the role and power dynamics between teachers, students, and the context within the design of English texts for grade seven and eight learners. The findings revealed a significant disparity between the designed texts and a natural English learning environment as a foreign language. The involvement of teachers and students in the text design process was limited. Based on these findings, recommendations are provided to enhance English as a Foreign Language texts, particularly for grades seven and eight. The results of this study can offer valuable insights for educational administrators, syllabus designers, material developers, teachers, and learners alike.

Keywords: Critical Reflection, reflective practice, critical thinking, motivation

1. INTRODUCTION

In recent times, foreign language and second language researchers have been turning their attention to the interplay between classroom texts and the social or school context, exploring how these texts were contextualized to facilitate meaningful, interesting, and effective language learning (Ahmed, 2017; Lukin, 2017). The concept of “context” encompasses both the social and natural environment of learners, as well as the relationship between language and social interaction (Halliday, 1978).

In systemic functional linguistics (SFL), language is viewed as a semiotic system that reflected social functions and meanings (Liu, 2014; Fontaine, 2013). Understanding the role of context was crucial from multiple perspectives. It highlighted the link between language and social reality, emphasized the significance of the language classroom as a site for sociolinguistic research, and prompted critical inquiries into education and curriculum design (Apple, 2004).

The primary objective of this research was to investigate the interplay between context and classroom text within the Ethiopian English classroom. The term “classroom text” encompassed the use of language for academic, heuristic, skill development, and communication purposes. The study placed learners at the forefront of the investigation, recognizing the significance of contextualization in relating classroom texts to their real-life experiences.

The efficacy of language learning is strongly influenced by the context in which takes place, as learners actively participate in inquiry-based approaches to tackle practical issues within their communities (Chacoff, 1989). This contextualization aligned with the principles of critical pedagogy, as advocated by Paulo Freire, emphasizing the importance of integrating real-life experiences and societal concerns into the classroom to facilitate genuine and meaningful learning experiences.

Therefore, this study aimed to examine the relationship between classroom texts, social context, and effective language learning, drawing upon perspectives from systemic functional linguistics, sociolinguistics, and critical pedagogy.

1.1. Background

In the field of English language teaching (ELT), contextualization refers to the process of embedding language learning materials and activities within meaningful and authentic contexts. It involves linking language instruction to real-life situations, cultural elements, and learners’ experiences. The purpose of contextualization is to provide learners with opportunities to use and understand language in relevant and practical ways.

Research conducted in various countries has highlighted the importance of contextualization in language learning. Studies, such as the one conducted by Korkmaz and Korkmaz (2013) in Turkey, have found that contextualization enables students to prepare more effective lessons and utilize different techniques. By connecting language learning to meaningful contexts, students are better able to apply their knowledge and improve their proficiency.

Curricular contextualization plays a significant role in bridging the gap between theory and practice. It helps students relate educational tasks to their existing knowledge and everyday experiences (Mouraz & Leite, 2013). This approach allows learners to attribute meaning and value to what they learn in school, making the curriculum more meaningful and relevant to their lives.

The interplay between text and context is another important aspect to consider. According to Zhao et al (2015), texts are language in action within specific situations, and contexts are constructed through the range of texts produced within a community. This perspective emphasizes that ideas, knowledge, thoughts, and culture are not solely dependent on language but are waiting to be expressed within a contextualized setting.

To implement contextualization effectively, a contextualized teaching and learning strategy (CTL) is recommended. CTL, also known as contextualized instruction, focuses on connecting foundational language skills with academic or occupational content by emphasizing concrete applications within specific contexts of interest to the learners (Mazzeo, 2008; Medrich, Calderon, and Hoachlander, 2003). This approach emphasizes teaching in a hands-on, real-world context rather than relying solely on abstract instruction.

In the Ethiopian context, English is predominantly taught as a foreign language rather than being used as a native language for daily conversation. As a result, the English as a Foreign Language (EFL) classroom in Ethiopia differs significantly from natural English as a Second Language (ESL) learning environments.

Limited research on contextualization exists in the Ethiopian context. Some studies, such as Tilahun's (2016) exploration of English textbooks for grade twelve students, have shed light on teachers' and students' perceptions of the textbooks, but did not specifically address the issue of contextualization. Another study by Abraha (2008) examined Grade eleven English textbooks and highlighted the lack of quality exercises for genuine communication, skills presentation, and alignment with learners' interests and culture. These studies emphasize the need for further research on the integration of text and context.

It is important to note that implementing contextualization in the classroom may face challenges. Teachers need to develop creative and effective teaching and learning strategies, find ways to connect abstract content to concrete experiences, and navigate curricula that prioritize high-stakes testing. Additionally, teachers must help learners adjust to a different instructional approach and manage the energy levels required for a more active and engaging classroom (Predmore, 2005).

Conducting research in the Ethiopian EFL context would provide valuable insights into the effectiveness of contextualization, the impact of context on language learning outcomes, and the integration of authentic and meaningful texts in the classroom. By exploring these areas, researchers can contribute to making English language learning in Ethiopia more authentic, engaging, and motivating for learners.

1.2. Statement of the Problem

The literature on English language teaching (ELT) covers various aspects, such as literature in language teaching, discourse analysis, and communicative approaches. Previous studies have evaluated EL textbooks in different countries, but the role of teachers and students in content selection and text design has received limited attention. In Ethiopia, English is taught as a foreign language, but students often struggle to effectively use and understand the language. The selection of texts is a contributing factor. Texts play a crucial role in ELT, impacting proficiency, guiding instruction, and promoting successful teaching. This study aimed to analyze and evaluate recently developed texts for grades seven and eight in Ethiopia, focusing on content selection, syllabus design, and the context of ELT, including materials development. The study aimed to:

1. Examine the integration of the social and natural environments or context of Grade seven and eight English learners into their classroom texts.
2. Investigate the role, power, and freedom of teachers in contextualizing

Grade seven and eight texts, both in the syllabus and classroom text design processes.

1.3. Theoretical Framework that Guides this Study

Language has been studied for centuries, often through frameworks like Systemic Functional Linguistics (SFL) and critical discourse analysis. SFL explores language's social functions and context, analyzing phonetics, phonology, lexicogrammar, and semantics. Critical discourse analysis examines how texts are shaped by ideology and power dynamics. In language teaching, the text-based approach emphasizes understanding text organization and the writer's choices within specific contexts. Context is crucial for interpreting texts, considering social, situational, and cultural factors. SFL views language as functional, meaning-oriented, context-dependent, and a semiotic process. This study focuses on the text-context relationship when designing English texts for Ethiopian academic settings, taking into account the power and freedom of teachers and students.

2. RESEARCH METHODOLOGY

2.1. Research Setting

This study focused on the Oromia Region State Education Bureau (ORSEB) and the East and West Guji and Borana Zone second cycle (grades seven and eight) teachers and students. It aimed to investigate the utilization of syllabus design and materials development in English texts for Ethiopian students. The study examined whether the materials considered the learners' language learning context, linguistic theory, and the power and freedom of teachers and students in task design and materials development.

2.2. Sample and sampling techniques

This study utilized multi-stage sampling techniques. First, the Oromia Region State Education Bureau cluster division was used to form four clusters (A, B, C, and D). One cluster consisting of six zones and four towns was purposively selected. Second, three zones (East and West Guji and Borana) were purposively chosen due to their relatively marginalized status in education coverage. A total of 50 schools were selected from these three zones. Finally, 203 teachers and students were randomly selected from the sampled schools in the three zones.

2.3. Instruments of Data Collection

Data for this study were collected through Focus Group Discussions (FGDs) and questionnaires. FGDs involved qualitative discussions among seventh and eighth grade students, guided by a moderator. Questionnaires were given to English teachers and students to assess their perspectives on language teaching materials, principles, and pedagogical practices. The study included teachers from 50 schools in East and West Guji and Borana Zones, with questionnaires distributed intentionally to ensure a representative sample.

2.4. Methods of Data Analysis

In this study, both quantitative and qualitative analytical procedures were used for the analysis. Descriptive statistics, frequencies, and percentages were employed to analyze the quantitative data.

3. RESULTS AND DISCUSSION

3.1. The findings of students FGD

The research approach employed in this study was a mixed-method approach, which involved collecting data using both qualitative and quantitative methods to address the research questions (Tashakkori & Teddlie; Creswell 2007). Qualitative data were collected through Focus Group Discussions (FGDs), while quantitative data were obtained through questionnaires. The findings are presented sequentially, starting with the results from the FGDs.

The primary objective of the FGDs was to explore the incorporation of the social and natural environments or context of seventh and eighth grade English language learners into their classroom texts, as well as to understand the students' feelings about the texts they were taught and evaluated on. FGDs involve assembling a group of individuals to discuss a specific topic, aiming to draw insights from their complex personal experiences, beliefs, perceptions, and attitudes through moderated interactions.

The majority of respondents expressed that the existing English texts for grades seven and eight had engaging activities. However, there were also groups of students who considered the activities to be shallow or of moderate difficulty, and some found them still challenging. Based on these responses, it can be inferred that the texts are partially aligned with the students' proficiency levels. Notably, it was observed that students who attended private schools during lower grades perceived the texts as less difficult.

Considering the diverse perspectives expressed, it becomes evident that no language is truly easy to learn, as all languages have equal complexity. Any simple aspects of a language are always balanced by more challenging and less intuitive features. Therefore, it can be concluded from the FGD responses that learners worldwide share common characteristics. When acquiring new skills, they may naturally feel apprehensive about applying them publicly, as learners are often reluctant to make errors in front of their peers. Anxiety is a common factor in learning a new language (Landström, 2015). Wu (2010) and Zheng (2008) argue that overcoming language anxiety is essential, as it is a significant impediment to foreign language learning.

The subsequent focus of the discussion centered on the importance of incorporating students' voices in text design while addressing practical issues to foster a more transformative future. To analyze this, the framework used to explore and critique the concept of voice primarily involved deconstructing present assumptions and confronting the overlooked challenges in student voice work. Moreover, findings from the FGDs revealed that students' interests were not sufficiently reflected in the texts. Specifically, when students were asked about their preferences, their responses emphasized the need for texts to be designed with their input in mind, particularly in terms of including cultural content (such as Gadaa, Siqqee, and Irreechaa) and environmental topics (like minerals and forests).

Furthermore, the FGD teams of grade seven and eight students agreed that the content of the texts did not sufficiently emphasize the importance of cultural knowledge, linguistic knowledge

for a comprehensive understanding of the texts and the learning context. They believed that learning requires more than just comprehensibility, although comprehensibility serves as a gatekeeper. As language teachers, we share their sentiments and firmly believe that well-designed texts should consistently incorporate various elements and features to help learners locate and utilize the material effectively. Some texts may have more of these features and clearer cues than others, and previewing a course text can assist students in identifying these text features and using them efficiently.

Similarly, the FGD team expressed that the texts were not fully helpful in terms of the exercises, activities, beliefs, and ways of life that students engage within their day-to-day lives. [Freire \(1996\)](#) argued that within any teaching and learning context, progressive educators have opportunities to employ critical pedagogy as a means to counteract the effects of banking education.

Progressive educators must integrate real-life experiences into their classrooms. In doing so, they should critically examine everyday life and, collaboratively with their learners, analyze the alarming facts and inconsistencies within our democratic society. Furthermore, it is essential to expose learners to instances of discrimination based on race, class, and gender that occur in their daily lives, as well as to examples of disrespect towards public institutions, acts of violence, and arbitrary behavior. These examples, therefore, should be carefully analyzed to reveal their contradictory nature, which undermines the inherent inclination of individuals to strive for improvement—a fundamental aspect of our historical development. Moreover, these examples challenge the authenticity of democratic life. A democracy that permits discrimination and disrespect to persist without consequences still has much to learn and address in order to refine itself. While it may not be possible to achieve a perfect democracy devoid of such disrespect, continuous efforts must be made to foster a society that strives for greater respect and equality.

In the Ethiopian context, Freire's critical pedagogy holds significant importance. Specifically, it offers students the opportunity to critically examine the social constructs that shape their reality, enabling them to gain a deeper understanding of the constructed nature of Ethiopian society. By questioning these constructs, students can develop the skills and knowledge necessary to actively participate in the transformation of Ethiopian society.

To support this goal, Freire recommends that text designers, teachers, communities, and all stakeholders in Ethiopia prioritize the inclusion of existing social realities in educational materials. Consequently, it is crucial to avoid relying solely on politically biased or fictional content that does not accurately reflect the Ethiopian context. By embracing current realities, Ethiopian society can avoid being led astray and colonized by foreign cultures. Ultimately, this approach can foster a sense of cultural authenticity and empower citizens to shape a prosperous and inclusive future.

3.2. The findings of the teachers' questionnaire

As previously mentioned, the research was conducted as a survey, but the number of sample respondents was not as extensive as desired. Despite this, the findings still offer valuable insights into the topic. The development of any language syllabus or curriculum is influenced by various factors such as the environment, culture, politics, teachers, students, and the community. In addition, these factors interact in complex ways to shape the overall curriculum. Consequently, the investigation aimed to explore the power and role of teachers in the process of syllabus development, specifically to determine whether they acted as decision-makers or not. In this

regard, Al-Kathiri (2016) explained that for a curriculum to align with a nation's goals and meet the students' needs, it is logical for teachers to be involved in its creation. Thus, teacher contribution has long been associated with curriculum design.

The research questionnaire was designed to gather additional data addressing two key research questions. First, it aimed to assess the sentiments of Grade seven and eight English teachers regarding the contextualization of the classroom texts they were using. Second, it sought to investigate the role, freedom, and influence of teachers in contextualizing the Grade seven and eight texts during the syllabus and classroom text design processes. To achieve this, a total of 203 Grade seven and eight English teachers participated in the study, as they were the primary implementers of the syllabus.

Table 1: Role/power of Teachers

| No | Items | Alternatives | | | | | | | | | |
|----|--|--------------|----|------------|----|-----------|----|--------|----|-------|----|
| | | Always | | Frequently | | Sometimes | | Rarely | | Never | |
| | | F | % | F | % | F | % | F | % | F | % |
| 1 | Have a role in syllable design as a part of decision making. | 31 | 15 | 28 | 14 | 47 | 23 | 37 | 18 | 60 | 30 |
| 2 | The partners in the process of syllable design. | 23 | 11 | 26 | 13 | 45 | 22 | 50 | 25 | 59 | 29 |
| 3 | Your opinions and ideas are incorporated. | 43 | 21 | 45 | 22 | 42 | 21 | 40 | 20 | 33 | 16 |

Source: Survey Data, 2019; F-Frequency; % = Percent

Based on the data provided in the table, the responses to the first question indicate that the majority of respondents (60, or 30%) agree that they have no role or power in syllabus design and decision-making. **This finding is particularly significant because** the exclusion of teachers' voices in the syllabus design process contradicts the principles of effective syllabus design. **Specifically**, teachers are not given the freedom to participate in selecting teaching materials that enhance student understanding. **Consequently**, this lack of involvement may hinder the overall effectiveness of the syllabus and limit the potential for meaningful learning experiences.

From the data, it can be inferred that the respondents believe that teaching and learning are more effective when teachers take responsibility for their own teaching, rather than solely relying on information provided by experts from the Ministry of Education. Furthermore, the majority of respondents hold the belief that teaching and learning would improve if teachers were properly involved in the decision-making process.

As highlighted throughout this study, teachers in Ethiopia are increasingly recognized not only as educators but also as contributors to curriculum design and development. However, despite this recognition, they are often disregarded by the Ethiopian government in the decision-making process.

Regarding the second item, 59 respondents (29%) stated that they are not considered partners in the syllabus design process and are merely passive observers, indicating that their role is not considered crucial for consultation and receiving feedback before and during the syllabus design phase. Additionally, this response implies that teachers are viewed as mere recipients of a curriculum developed by specialists elsewhere; limiting their role to correctly implementing

what has been developed by these specialists. This top-down approach undermines the process of teachers taking ownership of the curriculum.

Table 2: Teachers as a Part of Society

| SN | Item | Always | | Frequently | | Sometimes | | Rarely | | Never | |
|----|---|--------|----|------------|----|-----------|----|--------|----|-------|----|
| | | F | % | F | % | F | % | F | % | F | % |
| 4 | Considered as a part of the environment that affects the curriculum. | 29 | 14 | 30 | 15 | 49 | 24 | 38 | 19 | 57 | 28 |
| 5 | Your essentiality in meeting the needs of society. | 46 | 23 | 30 | 15 | 45 | 22 | 32 | 16 | 50 | 25 |
| 6 | Act and reflect on society's needs in each stage of the development process. | 42 | 21 | 26 | 13 | 40 | 20 | 39 | 19 | 56 | 28 |
| 7 | Demand your voices to be heard to ensure the levels of success in society. | 36 | 18 | 27 | 13 | 49 | 24 | 45 | 22 | 46 | 23 |
| 8 | Independence to contribute to the development of your particular society through education. | 40 | 20 | 38 | 19 | 57 | 28 | 41 | 20 | 27 | 13 |

Source: Survey Data, 2019 F: Frequency %: Percent

As discussed in the literature review of this study, proponents of teachers' involvement in curriculum change, particularly in the Ethiopian context, argue that teachers should have the opportunity to contribute their voices before the actual implementation of the curriculum. In addition, their input should be sought during the initial curriculum development stages. The previous discussion indicates that despite Ethiopia's long standing tradition of educational freedom, government decisions regarding "what knowledge is of most worth" still dominate the curriculum development process, from its inception to student assessment.

Based on the data provided in the table, it is evident that 57 respondents (28%) feel that they are not considered by the syllabus designing team as part of the curriculum environment. However, curriculum implementation cannot occur without the active participation of teachers in the planning process. Teachers play a central role in curriculum development and implementation, along with other factors such as learners, resources, school environment, culture, supervision, and assessment.

In line with the curriculum design paradigm, teachers must be involved in curriculum planning and development to effectively implement and adapt the curriculum to suit the needs of their learners and the educational environment. The role and influence of teachers in this process are undeniable.

However, the table indicates that teachers are not seen as pivotal in the curriculum planning process but rather as participants in the implementation phase. To enable teachers to participate in curriculum planning, they must have a good understanding of the curriculum document or syllabus to effectively implement it within their specific contexts.

Regarding the fifth item, 50 respondents (25%) agree, whether consciously or unconsciously, that their involvement in the text design process is not essential for meeting the needs of society.

This suggests that teachers believe they are deliberately excluded by policymakers who make decisions solely based on their perception of society's needs. Moreover, teachers seem to accept this systemic segregation and lack of involvement in curriculum development.

However, a successful educational program and effective curriculum development should aim to meet the needs and expectations of the culture, society, and population being served. Therefore, curriculum development and educational reform should continuously undergo review, revision, and adaptation to meet societal needs. Furthermore, the involvement of all stakeholders, especially those directly involved in student instruction, such as teachers, is crucial for successful curriculum development and revision.

Similarly, for question six, 56 respondents (28%) expressed the same sentiment as in question five. Most teachers believe that policymakers are not allowing them to participate in the syllabus design process and contribute to addressing society's needs at each stage of development. Teachers are expected to act and reflect on society's needs during the curriculum development process; however, the process itself is sometimes unclear.

In response to question seven, 49 respondents (24%) sometimes demand that their voices be heard during syllabus development, recognizing that their active participation ensures success in society. However, 46 respondents (23%) do never demand that their voices be heard. The process of curriculum development requires teachers to act and reflect on society's needs at each stage. However, the approach to teacher participation in the process is often ill-defined and challenging, leading to difficulties for teachers in engaging with curriculum development.

On the other hand, the majority of respondents (57, or 28%) in question eight feel that they have the independence to make decisions and contribute to the development of their environment and society through education. Consequently, teachers are seen as key agents of change in achieving sustainable development through education. Furthermore, the active participation of teachers in all aspects of education is necessary, as they can foster ethics for sustainable living, social justice, democracy, peace, and ecological integrity. In addition, teachers can facilitate interdisciplinary and contextualized knowledge integration to create a more holistic understanding.

4. CONCLUSION

In conclusion, the existing English texts for grades seven and eight in Ethiopia need further refinement to better cater to the diverse proficiency levels of students. Language anxiety poses a significant obstacle to language learning and should be addressed to facilitate effective language acquisition. Moreover, involving students in the text design process and incorporating their voices and interests, along with incorporating clear cues and text features, can enhance comprehension and engagement with the texts. Additionally, embracing the realities of Ethiopian society in educational materials and ensuring teachers' active involvement in curriculum development are crucial for creating an inclusive and effective educational system.

In summary, prioritizing the inclusion of social realities in educational materials can foster cultural authenticity and empower citizens to shape a prosperous and inclusive future. Teachers' voices and contributions should be valued in the syllabus design and decision-making processes, as they play a central role in adapting the curriculum to meet the needs of learners and the local context. Policymakers should recognize the importance of teachers' involvement and create

clear processes for their active participation. By empowering teachers and embracing their role as agents of change, Ethiopia can foster ethics, social justice, democracy, peace, and ecological integrity through education.

5. RECOMMENDATIONS

To improve English education in grades seven and eight in Ethiopia, it is recommended to tailor the English texts to meet the diverse needs of learners by incorporating clear cues and text features that enhance understanding and engagement. Additionally, addressing language anxiety is crucial by creating a supportive and inclusive learning environment that encourages student practice and celebrates mistakes as learning opportunities. Involving students in the text design process, considering their voices, interests, and relevant social realities, will foster cultural authenticity and increase engagement. Active teacher participation in curriculum development should be ensured, valuing their input and expertise in selecting materials and contextualizing the curriculum to meet local needs. Finally, recognizing teachers as agents of change and empowering them to contribute to education's impact on ethics, social justice, democracy, peace, and ecological integrity is essential.

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7. CONFLICTS OF INTEREST

The authors declare that there are no conflicts of interest.

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Analysis of conflict reporting in Ethiopia broadcast Media, Focus on OMN & ASRAST TV

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Abstract

Ethiopia is grappling with internal conflicts, causing widespread killings and property destruction. The main causes include political instability, unbalanced historical narration, resource depletion, and boundary demarcation among neighboring regional states. This study aims to assess how these conflicts were reported in selected broadcast media, Oromia Media Network (OMN) and Amhara satellite radio and television (ASRASTTV), from November to December 2019. The study focuses on four research questions: the extent of focus on reporting the conflict among ethnic groups, how they frame conflict stories, the dominant sources of conflict reporting, and the challenges of conflict reporting. The results reveal that conflict reporting in these media is minimal, not using the right source of the incident, and the media grouping conflicting issues into “us-them” categories. The study also identifies that the media propagates the conflict as non-stoppable and does not clearly show cause, course, and consequences. The findings suggest that Ethiopian media practitioners need to receive repeated training on handling conflict issues.

Key Word: Conflict, internal conflict, external conflicts broadcast media

1. INTRODUCTION

Conflict is an inseparable part of human life, dating back to the beginning of human history and likely never ending. It is defined by the interests of the parties involved, such as differences, proximity, and movement. According to [Adisu \(2019\)](#) “Conflict can also occur when two or more groups have incompatible desires, attitudes, or needs and want to get their interests through actions that hurt the other group”. Interests can be found in various ways, such as over access to and distribution of resources, control of power and participation in political decision-making, identity, cultural, social, and political communities, status, or values, particularly those embodied in systems of government, religion, or ideology ([Mulatu, 2013](#)).

Jeong, (2008), states media plays a significant role in society, as it can foster peace by building confidence, facilitating negotiations, or breaking diplomatic deadlocks. However, hate speech can escalate conflicts, as seen in Rwanda and Yugoslavia. In Ethiopia, major causes of conflict include controversies over ethnic identity, disputes over border and administrative arrangements, population dynamics due to spontaneous and planned large-scale migration, religious conflicts, mineral extraction, and structural causes such as discriminatory caste-like culture (Ebenezer, 2018). Distributional issues are also additional causes of violent conflicts in the country.

Kebede (2016) states that “the current government of Ethiopia introduced ethnic federalism to address ethnic and other long-standing political and societal problems”, but it is believed that there have been several ethnic tensions and conflicts in different parts of the country, including public universities. The resurgence of ethnic violence in Ethiopian universities seems to reflect the critical political situation and ethnic tension that Ethiopia is currently experiencing Tesfa, (2017).

Ethnic-biased media, such as Oromia Media Network (OMN) and Amhara satellite radio and television, have played a great role in university student conflict reports. OMN was founded on March 1, 2014, with assistance from voluntary donations, targeted advertising, and external grants. It aims to produce original and citizen-driven reporting on Oromia, the largest and most populous state in Ethiopia (Adisu. 2019.) Amhara satellite radio and television were funded on January 1, 2019, with the assistance of volunteer donations.

As Aemere, (2015) states “Ethiopian media works in complex situations, and broad-cast conflict stories should not be seen as simple as the reporting of other issues”. Conflict reporting requires greater analytical knowledge, depth of information, and skills to avoid contributing to further violence and exacerbating tensions. The media frames the conflict, which can matter.

Recent studies on conflict reporting in Ethiopian broadcast media are limited, from those studies specifically focused on newspapers and media based in Addis Ababa. These studies have found that newspapers give less attention to internal conflicts and are considered silent media. Additionally, some ethnic conflict issues are ignored or given less attention. There is a clear gap in academic research and literature that comprehensively analyzes conflict reporting trends in Ethiopia’s broadcast media. Therefore, assessing the analysis of conflict reporting in Ethiopian broadcast media aims to fill these gaps and contribute significantly to the current discussion in the media. Studying the way conflict reporting takes place in selected broadcast media may have a fundamental and significant contribution to the current discussion on media.

The researcher selected OMN and ASRAT TV for this study because both media have the same manner of reporting news stories, which has caused confusion among politicians and public universities. The researcher believes that Ethiopian broadcast media, especially ethnic-based media, are escalating conflicts in their reports.

This research aims to improve the reporting of conflicts in Ethiopia, a country with over 100 million people with diverse religions, languages, and cultures. It will provide insights for journalists and academic staff on media ethics and social responsibilities in conflict reporting. The study will serve as feedback on press performance, fill gaps in broadcast coverage, and serve as a reference for researchers studying conflict coverage in Ethiopian media.

The objective of this study is to assessing Conflict reporting in Ethiopia broadcast media, in case of two ethnocentric media of OMN& ASRAT TV

1.1. Research Questions

- What are the extents of conflict reporting in ASRAT and OMN?
- What are the dominant sources of the two media in reporting conflict issues?
- What are the challenges of conflict reporting in ASRAT and OMN?
- How did the two media frame stories in reporting conflict?

2. MATERIALS AND METHODS

The study utilized a mixed approach, combining quantitative and qualitative methods to analyze conflict reporting in Ethiopian broadcast media. Quantitative analysis involved coding conflict reports and analyzing their sources, time duration, intent, and challenges. Qualitative analysis focused on subjective assessment of attitudes, opinions, and behavior, generating results in non-quantitative or non-quantitative forms (Kothari, 2004).

The researcher used a qualitative method to analyze data gathered through interviews with media practitioners from Oman News Network (OMN) and ASRAT TV. These practitioners were chosen due to their seniority and experience in the organization, providing in-depth information about conflict reporting news and their daily work experiences.

Primary data collection methods included interviews with journalists in Afan Oromo and Amharic languages, which allowed for intensive investigation and exploration of respondents' needs, desires, and feelings. Secondary data, published or unpublished, was assessed and evaluated by assessing thrifty broadcasted news from ASRAT TV and OMN conflict reporting videos from November–December 2012, E.C. The study was conducted in Aids Ababa, where OMN and ASRATTV are located, as both are ethics-based and private-owned media.

A total of 26 news videos were selected from both media to obtain reliable information. Thirty news stores were purposefully selected from both stations, and two senior journalists were selected from each station. This mixed-approach approach helped the researcher analyze conflict reporting in Ethiopia and provide valuable insights into the challenges faced by media practitioners in conflict reporting

3. RESULTS AND DISCUSSION

3.1. Results

3.1.1. Types of news in ASRAT and OMN TV

Table 1: types of news; Source: observation January, 2021

| ASRAT TV | Types | Videos | Present |
|----------|---------------|--------|---------|
| | Breaking news | 4 | 30.77% |
| | Soft news | 9 | 69.23% |

| | | | |
|--------|---------------|----|--------|
| OMN TV | Breaking news | 3 | 23.03% |
| | Soft news | 10 | 76.9% |

In explaining the type of news from the two media in relation to conflict reporting on ASRAT and OMN TV during the two-month period, the researcher employed a quantitative content analysis approach to collect and analyze the data.

In this respect, the quantitative result shows that in the sampled period 26 news selected stories were broadcasted 13 news from OMN and 13 news from ASRATV and all broadcasted news were checked.

ASRAT TV broadcast 4 conflict news transmitted on breaking or hard news that contain 30.77% and 69.23% of news in sampled period are soft news. OMN 23.03% conflict news types are hard news and 10(76.97%) soft news

Both media are highly concentrated on the soft news that indicates continuously broadcasting the event, which is descriptive, often to the point of capturing video for the audience. In-depth stories with background information and stories that tend to be longer and whose scope extends beyond that of a straight news story.

3.1.2. Source of Conflict News

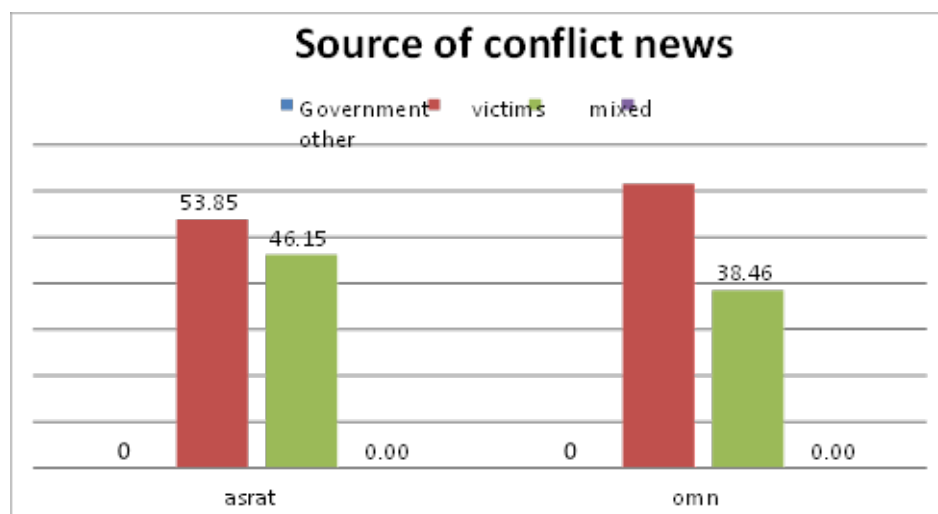
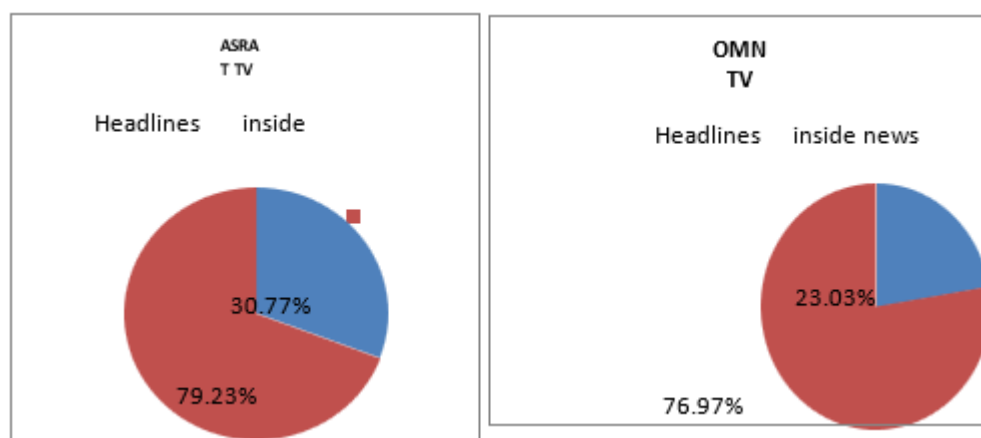


Figure 1: source of news ; Source: observation January, 2021

Figure 2 discusses the body mentioned as a source of the story in the stories produced by ASRAT TV and OMN TV. ASRAT TV produces 7 (53.85%) stories by sourcing victims, 6 (46.15%) news stories sourced mixed, and 0 (0%) stories sourced government officials. OMN produced 8 (61.54%) news stories that were sourced from victims, and 5 (38.46%) news stories were sourced from mixed 0 (0%) story sourced government, both media have their sources mostly using victims, which indicates the media has fulfilled their interest in depending on victims. That supports the media's influence on the government and grape society on the surrounding of victims.



3.1.3. Placement of Conflict News

Figure 2: placement of news; Source: observation [January, 2021](#)

The finding concerning the placement of stories by the two media ASRAT TV broadcast 4 conflict news broad casts in headline news, which accounted for 30.77% of the total news broadcast. 9 (79.23%) of the total news broadcast inside of ASRAT TV, OMN transmits 3 news broadcasts that account for 23.03% of the total news broadcast by OMN and 76.97% of the total news presented inside of the package news. In the two media, out of the total stories, 7 (21.9%) were broadcast in the headlines of the two media, while 19 (78.1%) were broadcast inside the packages of both media. In order to place both media on the cause of student conflict in university, more than 75% put on their inside package, which means there is no major emphasis on giving it.

3.1.4. Ways of Conflict News Reporting

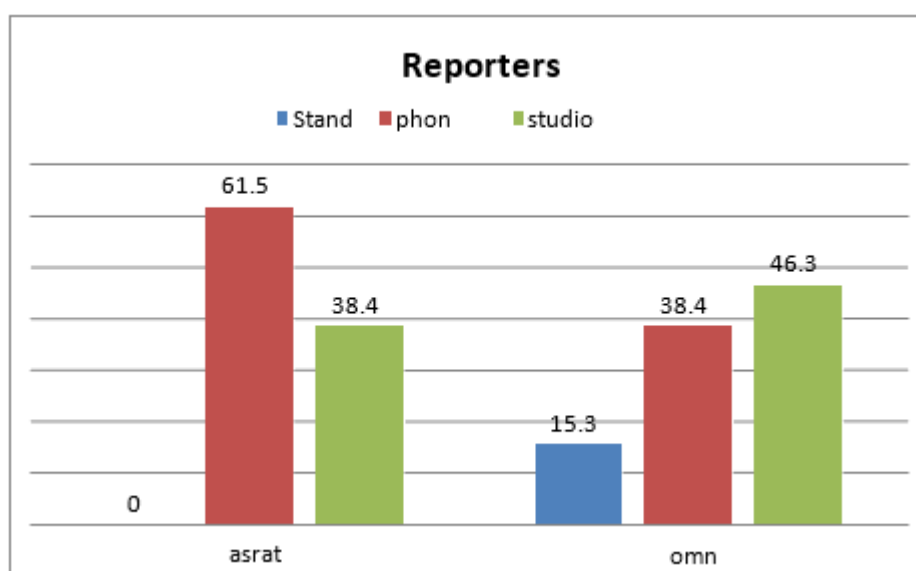


Figure 3: ways of reporting; Source: observation [January, 2021](#)

Figure 4 discusses the ways of reporting news stories produced by ASRAT TV and OMN. As data's briefly stated, ASRAT covers its 8 (61.54%) news stories attribution or news source generation by phone and 5 (38.46%) news stories were produced in studio, which means

journalists capture the event and narrate the script in studio in a normal way. ASRAT can't broadcast any conflict events on the spot or in a standup way. While OMN 6 (46.38%) news stories were produced in studio, 5 (38.46%) news stories attribution or news source broadcasted on the phone, and 15.38% news the reporters get on standup. ASRAT TV uses more than half stores attribution or news sources to get the sound but not see the event, the motion.

3.1.5. By line (Reporter) of Conflict News

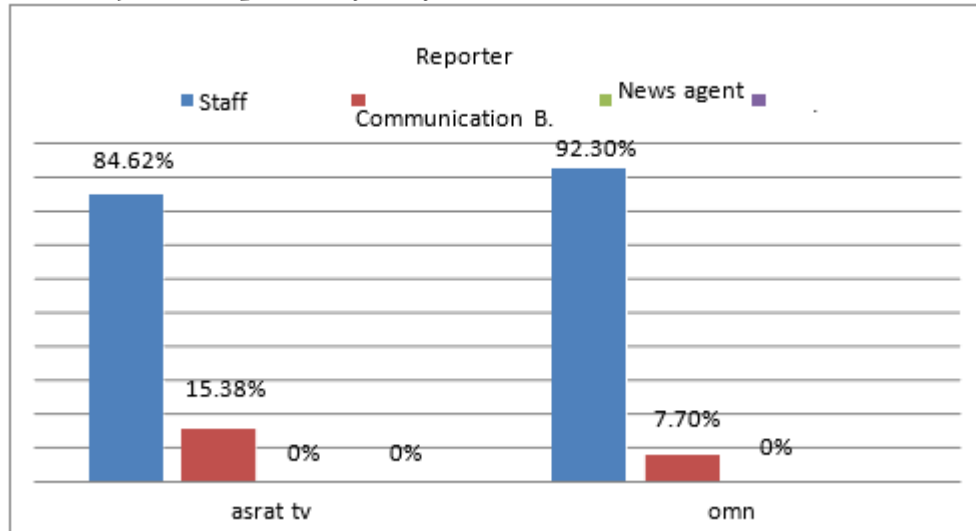


Figure 4: byline/reporter; Source: observation [January, 2021](#)

Figure 4 discusses the bylines or producers of the stories broadcast by ASRAT TV and OMN TV. As data's briefly stated, ASRAT covers 11 (84.62%) news stories by staff reporters, and 2 (15.38%) news stories were produced by communication offices that are working with the television organization in the region. ASRAT didn't receive any production from local media as well as from news agencies (local as well as international), while at OMN 12 (92.3%) stories were produced by staff reporters and 1 (7.7%) news stories were received from communication offices. Like ASRAT TV, OMN did not get any news stories from the news agency.

In differentiating or identifying who is the producer of the stories, the bylines are used by the researcher. One byline is identified as News Agency. Even though there is only one news agency in the country (the Ethiopian news agency), one can understand what is meant by a news agency. Unfortunately, the two media did not mention any international news agencies in their list of producers in the sampled period of time.

3.1.6. Duration Conflict News

Table 2: duration; Source: observation [January, 2021](#)

| | VEDIO | Number | Percentage |
|----------|------------|--------|------------|
| ASRAT TV | -2 minute | 1 | 7.7% |
| | 2-3 minute | 2 | 15.38% |
| | + 3 minute | 10 | 76.9% |

| | | | |
|--------|------------|---|--------|
| OMN TV | -2 minute | 3 | 23.03% |
| | 2-3 minute | 4 | 30.77% |
| | +3 minute | 6 | 46.38% |

Table 2 is the description of the duration of the conflict stories on ASRAT TV and OMN TV. The table shows that ASRAT TV produces 10 (76.97%) stories with a duration that stays above three minutes, 2 (15.38%) news stories with duration of two to three minutes, and 1 (7.7%) stories with duration of less than two minutes. OMN TV produces 3 (23.03%) news stories with duration of less than two minutes, 4 (30.77%) news stories with duration of two to three minutes, and 6 (46.38%) news stories with duration of more than three minutes. In relation to duration, ASRAT TV uses more than 65% of the news broadcast above three minutes. In the same manner, OMN covers almost half of all news categories less than three minutes. These ways are not advisable; they mean much more than the standard. According to PEJ's detailed studies of the medium, the median length of a story with video on local television is 41 seconds, and some critics have complained this is too short. The median length of a network TV news package was 2 minutes and 23 seconds.

3.1.7. Framing Conflict News

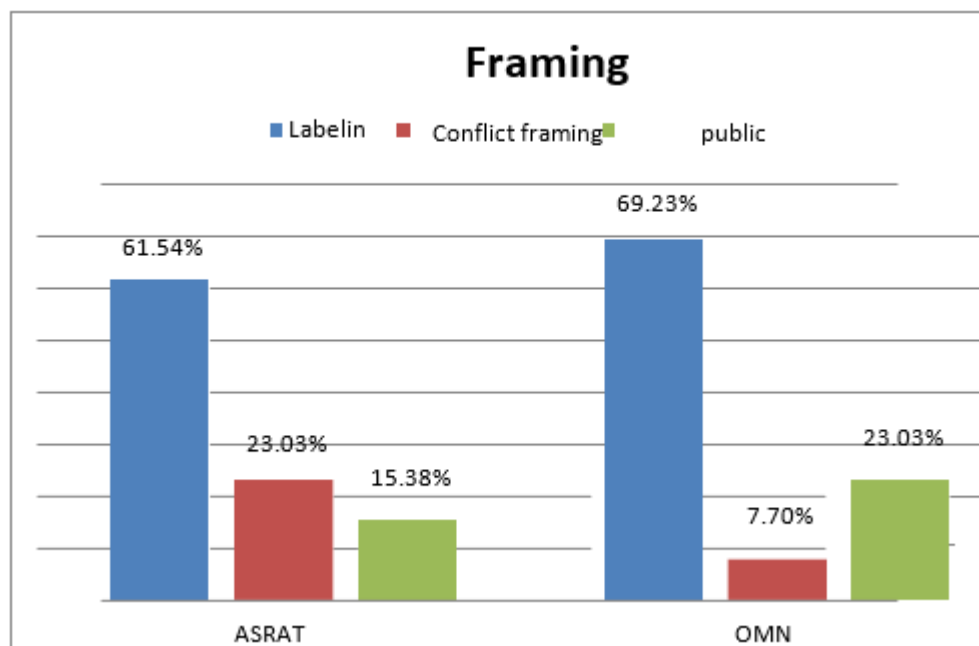


Figure 5: framing; Source: observation January, 202

The finding about the type of frame used by the two media is presented in figure 7. As the figure shows, out of the total of 13 (100%) news stories, ASRAT TV broadcast eight stories from a labeling or grouping perspective, which account for 61.54%, determined or influenced by the terms used to describe or classify them. The news by categorizing into two groups, us-them, and their attributions way of speaking totally categorized us and them. While 23.03% of news stores fall under conflict framing, which investigates the faces of conflicting people and groups' angles in coverage of the story, Only two news stories in the public affairs frame account for 15.38% of the reporting causes, courses, and consequences of the conflict briefly and also focus on the culture of building a peaceful society, resolution, and reconciliation that have been achieved by sourcing government officials.

In OMN, 69.23% of the total used labeling/grouping frames, and in sampled time, 7.7% of news is broadcast at the frame conflict framing, and labeling/grouping of frames also accounts for 23.03% of the total 13 (100%) news broadcasts in OMN.

Both media broadcasting stories place more emphasis on labeling and grouping frames. [Laura \(2010\)](#) and McAuliffe and [Weeks \(2015\)](#) define the categories of framing in terms of the theme of the media contents. Types of framing refer to the central message or the dominant theme of the stories. The findings of this study indicate that both media used labeling and grouping frames. They realize that both media are highly biased toward their own ethics.

Both give less attention to public affairs, framing that to reporting causes, courses, and consequences of the conflict briefly and also focus on the culture of building a peaceful society and resolution, as well as reconciliation that has been achieved by sourcing government officials.

3.2. Discussion

3.2.1. Source of Conflict News

Both of them gave more priority to the victims than mixed-source sources and government officials. All interviewed informants agreed that in both media, if one story is composed by an official government voice, it must be transmitted. An informant described that:

‘we were ordered from our boss that this story must be transmitted and this is not. I myself remembered that around five stories were jammed due to sourcing victims. In addition, there was a big challenge to report from the spot. The issue of protection was a major one. ‘

Sometimes the trend towards conflict reporting is going towards superficial, less-than-well-informed reporting, often based on second- or third-hand information as opposed to primary data. The growing drift towards comment and opinion journalism is also identified as an obstacle to a clear and impartial comprehension of a conflict and its root causes. In countries facing violent conflict and in post-war countries, journalists are often victims of human rights violations. Journalists therefore need to know about their rights and means of protection ([Entman, 1993](#). [Skjerdal, 2012](#))

3.2.2. By line (Reporter) of Conflict News

ASRAT covers 11 (84.62%) news stories by staff reporters, and OMN covers 12 (92.3%) stories by staff reporters; both media didn't receive any production from local media as well as from news agencies (local as well as international).

‘Sometimes when there are national issues covered by other media, and when we are losing to cover them, we will use another byline story to fill those gaps, unless we never use it’

This infers that the two media may be self-sufficient in covering stories they want to cover. But it was identified that, during the study period, there was also another national media and news agency that covered the situation, which the two media did not receive.

3.2.3. Duration Conflict News

In relation to duration, ASRAT TV uses more than 65% of the news broadcast above three minutes. In the same manner, OMN covers almost half of all news categories less than three minutes.

‘most of our news stories are very long or very short. We do not have the standard for it. If the issue seeks public attention and there is a government official saying in the story, we make it long unless it is short, ‘

Even though the story length is decided by the media house, Reuters, on its behalf, recommends that newsbreaks or urgent stories should be no more than about 100 words, or two or three paragraphs. Newsbreaks that include pre-written material may run longer. An update should be no more than about 300 words, or five or six paragraphs. A longer update may be cut by desk editors in order to move the copy quickly. Updates that include pre-written material may run longer, provided this does not prevent the editing desk from moving the story quickly (Mickey, 2013).

As discussed above, most of the stories are produced in the form of news and sourced from victims (see Table 4). Due to this fact, the media produced a large number of stories that had a length of more than three minutes (see Table 6). This may, on the one hand, be a good way to explain the situation clearly. But the problem is that they were not focused on showing the real situation; rather, they were ruled according to the sources in the story, which were victims.

3.3. Framing of the Conflict Stories

This section aims to present the framing of some stories covered during a sampled period of time in the selected media. The discussion mainly focuses on how the two media framed the stories during the study period. These include the reporting method and priority the sampled media were giving to incidents in the specified sampling period. The theme or central idea of the covered stories is also discussed in this part. This way helps the researcher explain how the selected media are paying attention to giving latent meaning to the conflict stories and to reveal how the two media are portraying the conflict. This is conducted by taking some samples from the broadcast stories during the sampled period.

3.3.1. Labeling or Grouping Frame

During the pretesting conducted in the selected media, one of the frames identified was grouping or labeling frames in some broadcast stories. Labeling or grouping frames were identified in reporting conflict stories in the selected media in the form of news. This is the major reason for the preparation of this labeling frame. As explained in the theoretical framework section, the media frame the stories to transmit the message they want, not what the audience needs. This grouping or labeling frame was identified to assess the stories by organizing and uniting the group the media called us ‘and exposing the other group they called them’ to different public pressures.

Under this category, news stories that the two media transmitted by focusing on categorizing the conflicting groups between us and them in reporting conflict incidents and supporting us and blaming them in covering the stories will be thoroughly analyzed. Some of the officials systematically presented the people (a specific ethnic group) as a group that was surrounded by enemies. They speak loudly; the other group was responsible for all of the misdeeds. Then the media also broadcast those messages as they happened. This frame is highly reflected in the

selected media because the two media consider themselves to be sole representatives of that specific ethnic group from both sides.

In this section, specifically, the investigation of the message transmitted from the two media attribution sides is conducted thoroughly. This includes textual as well as audio-visual content analysis. In giving a clear meaning for frame analysis, specific techniques will be used. These are taking responsibility and blaming others for all of the misdeeds.

3.3.2. Taking responsibility Vs blaming others

By taking responsibility, it means that the two media experts sometimes did not believe they had shares and took off their responsibility during the conflict situation. In other times, they took sole responsibility for what happened. The media systematically broadcast those news stories more than three times (see figure 4). This has been purposefully done as if there is a truth behind that news story for the specific ethnic group that the talking individual victims were representing. But this may not be true in all stories. Due to this fact, the media presents the other group, or the labeled group, as a responsible body for the resulting problems.

Oromia Media Network (OMN) broadcast some of its news stories, grouping the Oromo as “us and the other group as them”, quoting the victims from this category. The first was a story produced on November 20, 2019. It was a conflict between students at the university. The victims, according to the media, were stressed on attacking another group, whom he called an enemy for the region, and they must stop their evil doings.

The whole story was talking in OMN about unidentified groups that are ready to intrude on or attack the region (Oromia) by disuniting the Oromo. Another issue stressed in the news is that the group referred to as other “is enemy for the region and people of Oromo.” Our media is the voice of Oromia, so we can distribute the attacks on Oromo. You know the ways of Oromo students that studied in Amhara region universities.” The viewers may simply assume that the Oromo’s are encircled by enemies.

3.4. Challenge of conflict reporting

Regarding to getting source from government in conflict reporting in ASRAT TV and OMN TV has faced some common problems. The first problem is getting government official as attribution is difficult. Most often they have meeting or filled work and if the agenda collapse with the political view haven’t give any information. They do not give journalists enough time if that journalist came from media which protest government. However journalist is time bounded they usually went their plan. According to Belay Manaye reporter of ASRAT moreover the officials sometimes my hold information for a long period of time “sometime we challenge them based on our right in the constitution we tell that they have responsibility to give us the public information otherwise they make you bored” (personal interview on December 20, 2020).

And the other respondent of ASRAT TV says that the problem is not only the official but also due to the management and policy of their station. The management should have arranged many appointments with the ranking official but it is not doing that. That is filer of the media. On the other hand he expires that there is understanding of reporter in part of the officials. This

is another problem for the journalist. They do not consider them as professionals. Especially on the issue of related with to the conflict and grievance of society

Most of the informative of OMN journalism say that many politicians and government officials do not give them the information because if they are private media journalist. Some officials have fear to give them information. The most difficult thing for them is that many of the officials give them wrong and biased information. As a result they don't trust anyone. The source always tells them only a good image of their organization or parties. And also many of the officials' doors are closed to the journalist come from media that protest the government.

According to Abreham Bru "almost all government officials never see us if we produce stories that on side of protest immediately we expected warning letter from Ethiopian broadcast authority." Especially journalist come from private media have not an access to get the political type of issue the political issue and conflict related information from government officials. The other challenge is getting the official directly by the journalist. Many of journalist question about this are why not the government officials themselves contact the journalist.

4. CONCLUSION

The main objective of the study is to analyze conflict reporting in Ethiopian broadcast media, with a focus on OMN and ASRAST TV. In order to analyze conflict reporting, the researcher used content analysis and interviews as tools. The researcher also used quantitative and qualitative descriptions to analyze and discuss the findings. To sum up, the following conclusions are derived from the presented and discussed findings: The result of quantitative content analysis shows that the two media concentrated on the soft news that indicates continuously broadcasting the event, which is descriptive, often to the point of capturing video for the audience.

Regarding the placement of the stories, both media broadcast a large number of stories in the inside package. It indicates that there is no more emphasis on the issue. In relation to the duration of the story, the two media almost jointly broadcast more than 75% of their news stories that have lasted more than three minutes. This might be too long in the context of PEJ's detailed studies of the medium. The median length of a story with video on local television is 41 seconds.

In looking at the bylines of the story, the two media jointly produced (79.8%) stories by their own staff reporters. This infers that the two media may be self-sufficient in covering stories they want to cover. But other media broaden the situation to another paradigm,

OMN media sourced victims in more than half of their stories, rather than government officials, and mixed, while ASRAST used half of the victims and mixed on their story source.

The two media were covering stories by labeling or grouping conflicting groups between 'us-them' by referring their specific ethnic group. This creates the illusion that one group is in danger and the other is the one who dominates.

The two media did not cover the incidents clearly by showing the cause, course, and consequences of the overall conflict situation and reported most of the conflict as non-stoppable. This contributed to raising the tension or exaggerating the conflict rather than managing and

reconciling it. Ethiopian media have experienced different interventions from the government to the immediate leaders of the media

5. FUNDING

No fund was received.

6. CONFLICTS OF INTEREST

The authors declare that there are no conflicts of interest.

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Causes of traffic congestion in Addis Ababa: The case of Torhayloch – Mexico Street Corridor

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Abstract

Understanding the root causes of road traffic congestion is essential for developing effective mitigation strategies. This study investigates the factors contributing to congestion along the Torhayloch-Mexico Street Corridor in Addis Ababa City Administration. The analysis draws on personal observations, mapping, and document analysis to explore how traffic congestion is generated within the corridor. The findings indicate that the usage patterns of the street corridor, the nature of surrounding land use, and the placement of parking facilities are primary contributors to congestion. Key factors include the prevalence of on-street parking, the lack of off-street parking facilities, the concentration of commercial and business activities along the corridor, and the characteristics of the surrounding road network. On-street parking, often considered beneficial, is found to reduce the corridor's capacity by occupying one lane. Given the high traffic generated by commercial land use, these factors collectively exacerbate congestion. The study concludes that Addis Ababa's Traffic Policy, Management Agency, and Transport Policy must collaborate to manage the city's traffic more effectively. Rather than expanding road capacity alone, they should prioritize strategies that optimize existing corridor usage. This study highlights the need for further research to address congestion across Addis Ababa's broader road network.

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1. INTRODUCTION

Growing transport demand and increasing road traffic have led to mounting congestion, delays, accidents, and environmental issues in many large cities, particularly since the early 1990s. Factors contributing to these issues include increased automobile access due to rising middle-class purchasing power, accessible credit, an abundant supply of used cars, rapid population growth, and a lack of structured urban transport policies (Bull & Thomson, 2002).

Full length original article

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In many regions, motor vehicle ownership rates are climbing faster than population growth, with annual increases of 15-20% (Olagunju, 2015). Ethiopia, despite being one of Africa's fastest-growing economies, had only six vehicles per 1,000 people in 2016, the lowest motorization rate worldwide. Nonetheless, Addis Ababa, Ethiopia's capital, allocated 26% of its capital investment budget to improving its transportation infrastructure.

Traffic congestion arises from various factors. Tilak and Reddy (2016) categorize congestion causes as micro-level—such as high road-user numbers and excessive vehicles within limited road space—and macro-level, including land use patterns, automobile ownership trends, and the economic locations of activity centers. Other factors include automobile dominance, driver behavior, and road design (Bull and Thomson, 2002). Poor road design and maintenance, such as unmarked lanes, sudden lane changes, and random bus stops on narrow streets, can also contribute to congestion. On a larger scale, many developing cities suffer from traffic congestion due to imbalanced housing and employment distributions (Niedzielski et al., 2015; Zhang et al., 2017).

Despite improvements in transportation demand and supply, traffic management remains inefficient in many developing countries (Olagunju, 2015). For example, Bangkok, with 54 vehicles per 1,000 people, experiences more congestion than American cities, where the average is 750 vehicles per 1,000 people (Gakenheimer, 1999). Similarly, while Ethiopia's motorization rate remains low (Gorham, 2014), Addis Ababa faces recurring congestion, highlighting deficiencies in traffic management over gaps between transportation supply and demand.

Taking the Torhayloch-Mexico Street Corridor as a case study, this research investigates why traffic congestion occurs despite the corridor operating below capacity based on volume-to-capacity ratios. Although some research has explored Addis Ababa's traffic issues, such as Yared's 2010 study on the impact of traffic congestion, findings have often relied on subjective perceptions rather than measured data. Yared's study also lacks key metrics, such as traffic volume-to-road capacity ratios. Wondwossen (2011) used travel-time data to reveal the city's congestion toll, finding 18,000 vehicle minutes or 38 vehicle days lost daily at major intersections, with an annual cost of 5-8 million Birr per intersection in vehicle and fuel expenses. Yet, few studies have focused on identifying congestion's root causes. Dursa and Tune's 2020 study employed deep learning for congestion detection but did not explore underlying causes.

This study of the Torhayloch-Mexico Street Corridor delves into spatial and thematic factors contributing to traffic congestion. Its focus on root causes is vital to developing effective strategies to reduce congestion. Identifying core issues, such as poor urban planning and inadequate parking, can enable policymakers and urban planners to implement targeted solutions to improve traffic flow. Consequently, this research serves as a valuable resource for understanding congestion's complexities and formulating effective interventions.

2. LITERATURE REVIEW

2.1. Land Use and Traffic Congestion

Many studies have highlighted the link between urban land use and road traffic congestion (Colonna et al., 2012; Kuzmyak, 2012; Mukherjee et al., 2014; Zhang et al., 2017), particularly emphasizing that poor urban planning directly contributes to congestion in cities (Shabbar et al., 2014). New urban planning theories promoting sustainability have emerged, advocating for

mixed land uses and diverse urban activities to reduce congestion (Kusumastuti & [Nicholson, 2017](#)). This approach suggests that when a range of uses are situated within close proximity, the need for travel decreases, ultimately reducing vehicle miles traveled and easing congestion (Spears & [Boarnet, 2014](#); [Cervero, 2016](#); Geyer & [Quin, 2018](#)).

From a land-use perspective, [Olagunju \(2015\)](#) discussed that rapid urbanization without adequate planning often results in spatial separation between workplaces, residential areas, and recreational zones, leading to crisscrossing movements that exacerbate traffic issues. The placement of high-traffic facilities, such as religious centers, banks, shopping malls, and petrol stations near road junctions, further intensifies congestion. In contrast, cities that have successfully managed traffic, such as Curitiba, Zurich, and Singapore, integrate transportation planning with land use to minimize congestion. Conversely, cities like Manila and Bangkok struggle with inappropriate road network structures, further complicating congestion management.

2.2. Parking System

Economic development in commercial areas often correlates with the provision of on-street parking facilities (Meyer & [McShane, 1983](#)). However, on-street parking significantly impacts traffic congestion, closely linked to urban land use. First, it reduces road capacity by constricting traffic flow, as parked vehicles limit available roadway width, causing traffic to slow and reducing total flow speed and capacity ([Biswas et al., 2017](#); [Chiguma, 2007](#); [Rudjanakanoknad, 2010](#); [Chen et al., 2017](#)). Furthermore, the safety of road users can be compromised due to narrower lanes and reduced visibility ([Box, 2004](#); [Cao, 2017](#)). Additionally, frequent parking and unparking maneuvers create challenging traffic conditions, increasing congestion on busy urban streets ([Biswas et al., 2017](#)).

Studies have shown that parked vehicles generate “side friction,” reducing traffic speed along urban streets ([Edquist et al., 2012](#); Chiguma & [Bang, 2007](#); Kladeftiras & [Antoniou, 2013](#); [Reddy et al., 2008](#), cited in [Biswas et al., 2017](#)). The challenges of on-street parking are especially prevalent in developing countries, where inadequate parking policies further exacerbate congestion ([Chiguma, 2007](#)). Issues like obstructed road views and limited visibility for approaching pedestrians are commonly associated with on-street parking. However, some studies suggest that a row of parked cars can buffer pedestrians from moving traffic, enhancing pedestrian safety ([Dumbaugh & Gattis, 2005](#); [El-Din, 2015](#)).

[Yousif \(1999\)](#) argued that increased vehicle ownership and the growth of shopping centers in central business districts (CBDs) have heightened parking demands, often resulting in on-street parking due to limited designated parking spaces. Consequently, street space intended for vehicle movement is reduced, lowering both speed and effective capacity. On-street parking, therefore, is a key contributor to congestion and traffic flow obstruction, impacting the practical capacity of urban streets and resulting in delays ([Boro et al., 2015](#)). Here's a refined version of the study area description, emphasizing conciseness and clarity.

3.3. MATERIALS AND METHODS

3.1. Description of the Study Area

Addis Ababa, Ethiopia, is geographically situated at approximately 9.03°N latitude and 38.74°E longitude. The city originated spontaneously around the Finfine hot springs and has grown to become Ethiopia's capital and the seat of the Oromia Regional Government. As the headquarters of the United Nations Economic Commission for Africa and the African Union, Addis Ababa hosts numerous international organizations, giving it a unique status within Ethiopia's ethnically structured federal system.

The city is a central hub for Ethiopia's road networks, accessible through five main entry points. Administratively, Addis Ababa operates on three government levels: citywide, Sub City at the intermediate level, and Wereda at the local level. It comprises 10 subcities, each divided into a minimum of 10 weredas, totaling 116 weredas (Hussen, 2016).

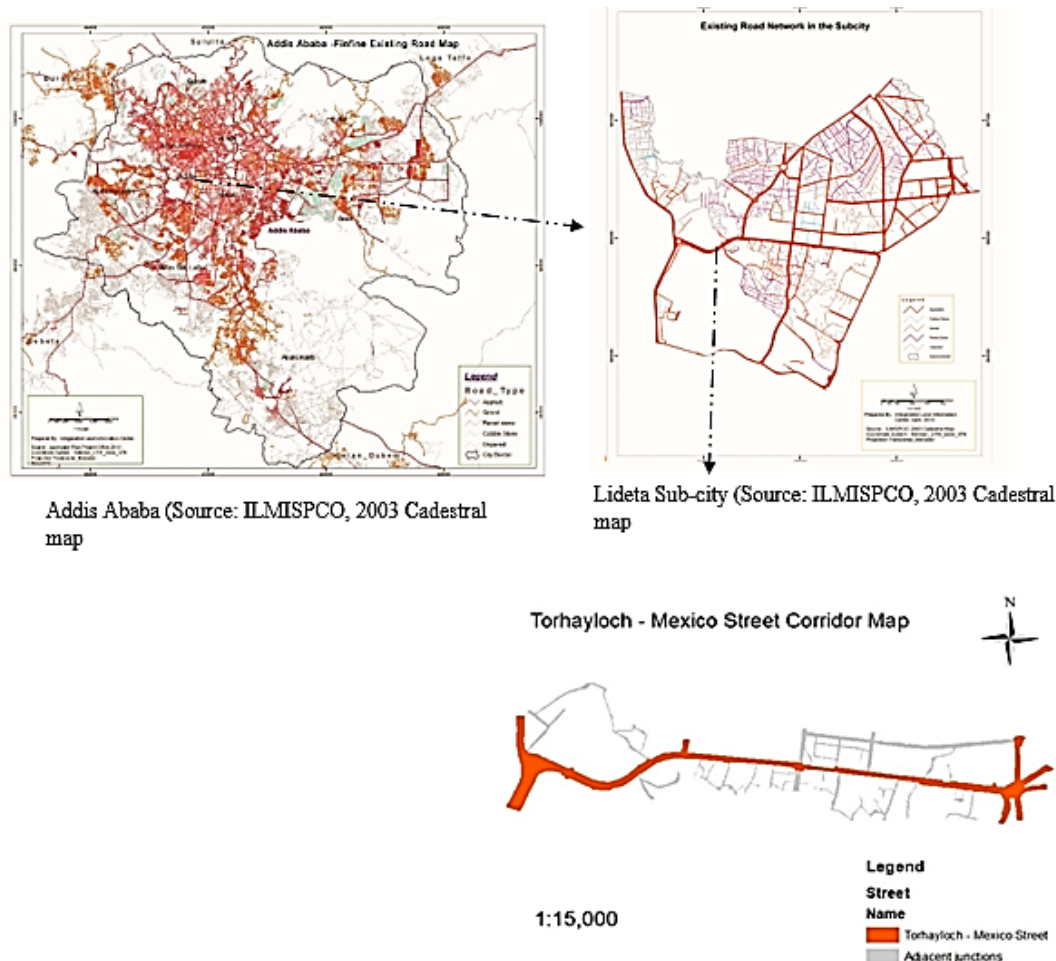


Figure 1. Location map of Torhayloch – Mexico Street Corridor
Source: ILMISPCO 2003 and Survey, 2023

Addis Ababa accounts for around 80% of Ethiopia's vehicles, with an annual growth rate of 5% (Samson et al., 2006). As of June 2019, Ethiopia had approximately 1,071,345 registered vehicles, 56% of which were in Addis Ababa (Ethiopian Federal Road Transport Authority, 2019; Kebede et al., 2022). This high vehicle concentration leads to persistent traffic congestion

across the city, with congestion intensity, measured in vehicle or person minutes, reported to be substantial (Wondwossen, 2011).

The Torhayloch-Mexico Street corridor, connecting Kolfe Keraniyo, Lideta, and Kirkos sub-cities, spans 2.5 km and is among the most congested areas in Addis Ababa. Despite being upgraded to a six-lane system alongside the introduction of light rail transit (LRT), regular observations identified it as a high-traffic zone, making it a prime location for this study.

3.2. Research Design, Data Collection, and Analysis Methods

This research utilized primary data collection through personal observation of congestion factors along the corridor—street parking, on-street stations, land use, street patterns, and roundabouts. Maps were prepared using the 2011 Nortec map (AutoCAD) of Addis Ababa, georeferenced within the city's 2004 GIS data, and updated with October 2020 Google Earth imagery to capture recent developments.

GIS technology facilitated the integration, updating, and digitization of spatial data, allowing for a detailed analysis of congestion-causing factors. Existing land use maps and thematic maps were analyzed both textually and quantitatively to assess their impacts on traffic flow. Results are presented through maps, tables, and photographs, illustrating findings on congestion along the Torhayloch-Mexico corridor.

4. RESULTS

4.1. Observed Congestion Causing Factors along Torhayloch – Mexico Street Corridor

4.1.1. On Street Parking

Based on observations made along the corridor, on-street parking locations were mapped and presented for the two midblocks (see figure 2). From the three midblocks along the two directional movements of the street corridor, on-street parking is located only on two of them, i.e., Coca-Lideta and Lideta-Mexico midblocks, also in the reverse directions.

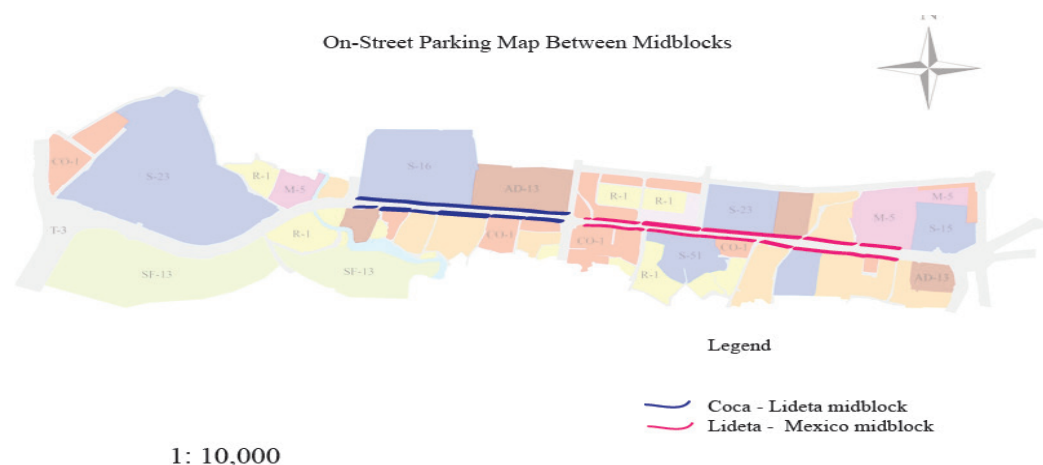


Figure 2. On-Street Parking Locations within Midblock

Source: Survey, 2023

The map reveals that the Torhayloch-Coca midblock is the only section of the corridor without on-street parking. This is mainly due to the presence of sensitive, government-owned institutions, such as the Torhayloch Military Camp and Torhayloch Hospital, which restrict parking along this segment. Conversely, on the remaining two midblocks, one lane in each direction is designated for on-street parking, largely supporting the commercial and business activities in these areas. These lanes are demarcated by white lines, separating parked vehicles from the two traffic lanes per direction (see Figure 3). On-street parking significantly impacts traffic flow by reducing the street corridor's capacity, as an entire lane is allocated for parked vehicles. Despite this reduction in traffic flow efficiency, Figure 3 illustrates that transportation agencies prioritize on-street parking, primarily focusing on its benefits rather than its limitations.



Figure 3. Dedicated Lane to On-Street Parking (Source: [Survey, 2023](#))

The challenge is exacerbated by the fact that the reserved lane remains occupied by on-street parking even during peak hours. Overall, on-street parking occupies a substantial 1.6 km—on both sides of the street—from Coca Junction to Mexico Square, out of the corridor's total 2.5 km length. This extensive use of on-street parking significantly reduces available road space, compounding congestion issues along this heavily trafficked corridor.

4.1.2. Absence of Off-Street Stations

The absence of dedicated off-street stations for taxis and buses along the Torhayloch-Mexico Street corridor significantly contributes to traffic congestion. With one lane already designated for on-street parking, the stopping of taxis and buses in the remaining lanes forces vehicles to halt in the second lane, disrupting the traffic flow. To assess the impact of this factor, researchers mapped specific locations where taxis and buses stop to load and unload passengers, as shown in Figure 4. The results indicate a high concentration of these stops between the Coca-Cola LRT station and Mexico Square, contributing to congestion in both traffic directions.

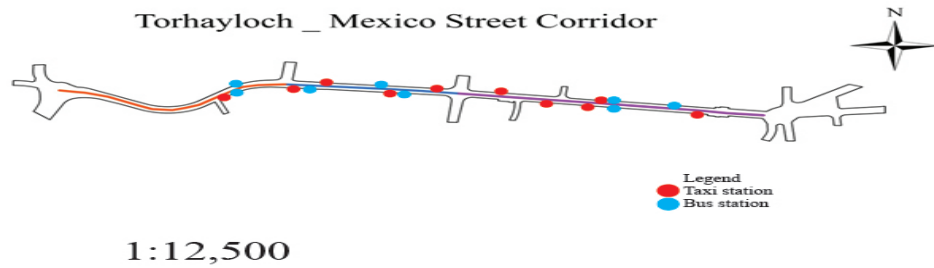


Figure 4. Taxi / Bus Stations in Two Directional Movements (Source: By the [authors, 2023](#)).

The researchers' observations and mapping of taxi and bus stops along the Torhayloch-Mexico Street corridor (refer to Figure 5) reveal significant congestion generated at these stations. Although the corridor is designed with three lanes in each direction, taxis and buses frequently stop in random locations without designated waiting areas, exacerbating congestion. This unstructured stopping behavior disrupts the traffic flow, leading to further delays and congestion. The random placement of these street stations, combined with a lack of regulated stopping zones, creates bottlenecks, particularly during peak hours, which impacts both traffic movement and overall corridor capacity.



Figure 5. Bus getting passengers on / off at on street station (Source: [Survey, 2023](#))



Figure 6. Congestion induced at Taxi / Bus stops (Source: [Survey, 2023](#))

In Figure 6, Lane 1 is fully occupied by on-street parking, limiting traffic to only two lanes (Lane 2 and Lane 3) for vehicular movement. When a bus or taxi stops in Lane 2 to allow passengers

to board or alight, only one lane (Lane 3) remains open, forcing trailing vehicles (highlighted by the red rectangle) to merge into Lane 3. This situation, marked in red circles where the bus stops, severely impacts the traffic flow, as vehicles from Lane 2 must continuously adjust to the available lane, creating significant congestion.

During peak hours, this issue is amplified across multiple stops along the Torhayloch-Mexico corridor. Observations show that high volumes of taxis and buses stop frequently at major stations, such as the Lideta LRT and Balcha Hospital stops, in both traffic directions. Specifically, peak hour counts reveal 65 taxis and 23 buses stopping near the Lideta LRT station and 78 taxis with 19 buses near Balcha Hospital in the Torhayloch-Mexico direction. In the reverse Mexico-Torhayloch direction, 73 taxis and 22 buses stop at Balcha Hospital, with 76 taxis and 25 buses near Lideta Higher Court.

These frequent stops contribute to recurring traffic flow disruptions, as vehicles are forced to maneuver around buses and taxis at multiple points along the corridor. This dynamic was further analyzed by comparing the collected data with peak hour traffic figures from prior studies, providing a quantitative perspective on the severity of congestion caused by on-street stations.

4.1.3. Nature of Land Use along Torhayloch – Mexico Street Corridor

To analyze the effects of land use along the street corridor, a land use map was prepared, extending 50 meters in depth from both sides of the corridor. This mapping allows for a comprehensive assessment of how various land use types—such as residential, commercial, and institutional—interact with traffic flow and contribute to congestion. By examining the spatial distribution of different land uses within this defined area, researchers can identify patterns and correlations between land use characteristics and traffic congestion levels.

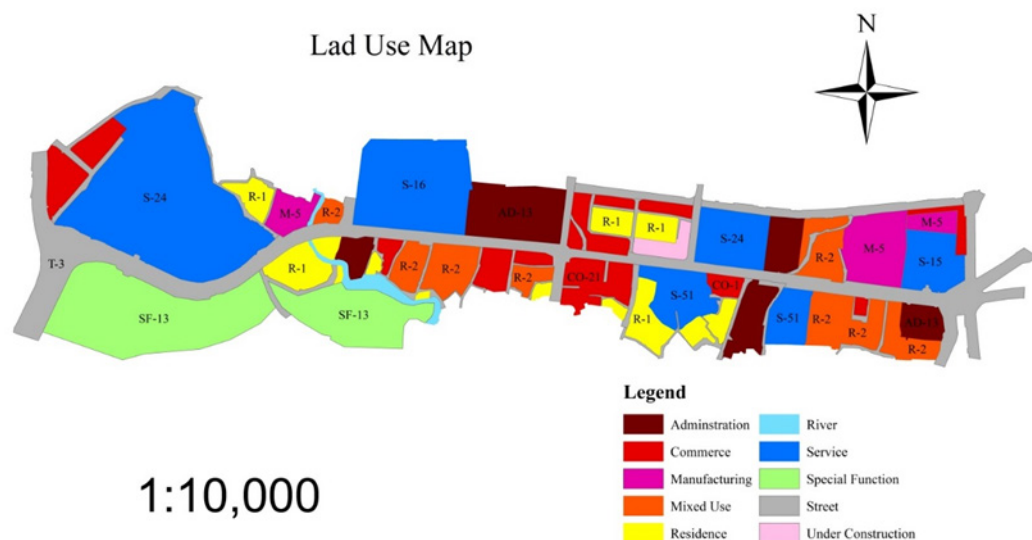


Figure 7. Land Use Map (Source: [Survey, 2023](#))

Visually, the land use map reveals a predominance of service-oriented land uses, mixed-use areas, and commercial activities, with notable differences in distribution along the corridor's directional movements. For instance, the Torhayloch-Mexico directional movement exhibits a higher concentration of commercial and mixed-use activities, indicating a bustling environment

that likely attracts significant foot and vehicular traffic. In contrast, the Mexico-Torhayloch directional movement features larger blocks dedicated to service and administrative functions, which may have different traffic dynamics. This unbalanced distribution of land use along the corridor contributes to increased demand for movement between the two sides of the street, exacerbating traffic congestion. As individuals seek to access various services and amenities, the need to traverse the corridor becomes more pronounced, leading to a higher frequency of crossings and potential delays. The summary of the prepared land use map, highlighting the specific types and their respective proportions along the corridor, is presented in Tables 1 and 2.

Table 1. Description of Major Land Use, Sub-categories and Land Use Codes

| Major Land Use Categories | Sub-categories | Land Use Code |
|--|---|---------------|
| Administration – AD | Police, Justice, Court | AD-13 |
| Business & Trade- CO - 2 | Hotels, Restaurants, | CO-21 |
| | Motels, Grocery, | |
| | Cafeteria, Kiosk, | |
| | Super Market, Barberry, | |
| | Fuel Station & Beauty Salon | |
| Business & Trade- CO -2 | Banks or Insurance | CO-31 |
| Manufacturing and storage - M | Industrial Treatment Plant | M-5 |
| Residence (Pure) - R | Residential Areas | R-1 |
| Residence (Mixed) - R | Mixed with Retail Trades and Businesses | R-2 |
| Recreational & Environmental – RE | Environmentally Fragile Areas, | RE -44 |
| | Marshes, Lakes, River, Ground | |
| | Water Potential | |
| Services, S -1 (Education) | TVET | S-15 |
| | University or College | S-16 |
| Services, S -2 (Health) | Specialized / Referral Hospital | S-24 |
| Services, S - 5 (Religious Institutions) | Orthodox Church | S-51 |
| Special Functions – SF | Military Camp, Aircraft app - roaching areas, | SF-13 |
| Transport-T | Roads | T-3 |

(Source: (Source: [Survey, 2023](#))

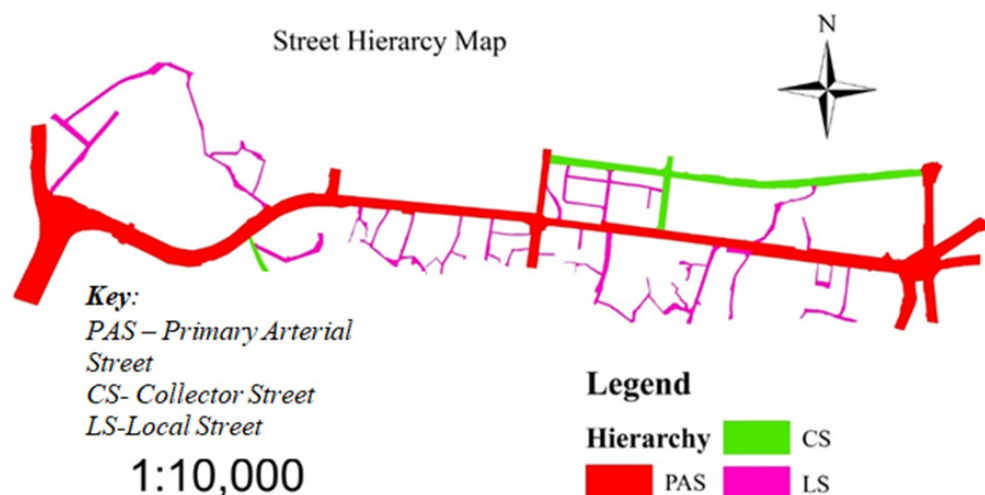
Table 2. Area coverage and total percentage of the prepared Land use

| Number | Land Use Type | Count | Total Area (in Ha) | Total Percentage (100%) |
|---|--------------------|-------|--------------------|-------------------------|
| 1 | Administration | 4 | 7.6 | 6 |
| 2 | Commerce | 13 | 10 | 8 |
| 3 | Manufacturing | 3 | 5.3 | 4 |
| 4 | Mixed Use | 11 | 11.8 | 10 |
| 5 | Residence | 13 | 7.8 | 6 |
| 6 | River | 2 | 1.3 | 1 |
| 7 | Service | 6 | 35.2 | 29 |
| 8 | Special Function | 2 | 15.9 | 13 |
| 9 | Street | 26 | 26.52 | 22 |
| 10 | Under Construction | 1 | 0.9 | 1 |
| Total | | | 122.32 Ha | 100% |
| (Source: Survey, 2023) | | | | |

All of these land use types possess significant potential for generating both pedestrian and vehicular trips, which exacerbates traffic congestion along the corridor. The strategic placement of these land uses—particularly commercial and mixed-use areas—near the road further intensifies the demand for movement. As people travel to access various services and amenities, the volume of trips increases, contributing to higher traffic density. Moreover, the proximity of these land uses encourages more frequent crossings of the street corridor, resulting in additional delays and interruptions to the flow of traffic.

4.1.4. Road Network (Street Hierarchy and Pattern)

Road network is the primary linkage between urban activities and transportation system. Urban transportation can be affected by the hierarchy of urban streets and its pattern. In this case street hierarchical connection and the layout of the street along the corridor were analyzed based on produced maps below.

Figure 8. Street hierarchy map (Source: [Survey, 2023](#)).

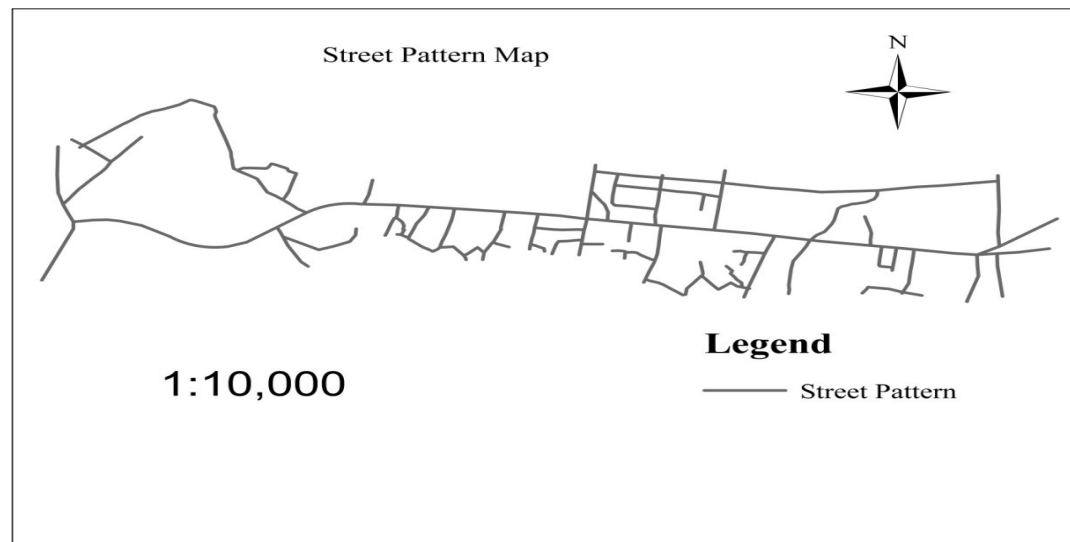


Figure 9. Irregular Street pattern map (Source: [Survey, 2023](#))

5. DISCUSSION

Occupying 1.6 km of the total length of 2.5 km, on-street parking is one of the contributing factors to congestion by reducing the road space (capacity) of the Torhayloch-Mexico street corridor. However, in Addis Ababa, by totally ignoring the negative impacts, only its positive contribution is considered. Street parking provides easily accessible and comfortable car parking while at the same time being a source of income for unemployed people and urban administrations; it also provides a buffer for pedestrians from vehicular lanes. Other studies revealed that congestion, obstruction of side views, and drivers' challenges in perceiving approaching pedestrians are the negative impacts of on-street parking.

Other studies also described the effects on street parking as (i) reducing traffic flow speed or road capacity ([Chiguma, 2007](#); [Rudjanakanoknad, 2010](#); [Chen et al., 2017](#); [Prakash et al., 2020](#)); (ii) compromising the safety of road users ([Box, 2004](#); [Cao, 2017](#)); and (iii) chaos generated during frequent parking and unparking maneuvers along metropolitan streets to cause delays ([Yousif, 1999](#); [Biswas et al., 2017](#); [Prakash et al., 2020](#)). Even if [Dumbaugh and Gattis \(2005\)](#) and [El-din \(2015\)](#) claimed that parked vehicles buffer between moving traffic and pedestrians walking along a given street, [Biswas et al. \(2017\)](#) asserted a restriction on on-street parking along major streets. Traffic congestion generated by on-street stations is second only to on-street parking. To analyze its effects, the average number of taxis or buses stopped at each station in the two-directional movements multiplied by the number of stations (taxi or bus) gives the total number of random vehicular stops that interrupt the flow stream of traffic in the street corridor, which was already hampered by on-street parking.

Table 3. Average number of Taxi /Bus stopped at stations along the two directional movements

| Directional Movements | Number of Taxis | Number of Buses | Number of Taxi Stations | Number of Bus Stations | Total number of Taxis | Total number of Buses |
|-----------------------|-----------------|-----------------|-------------------------|------------------------|-----------------------|-----------------------|
| Torhayloch - Mexico | 72 | 21 | 6 | 4 | 432 | 84 |
| Mexico - Torhayloch | 75 | 24 | 4 | 4 | 300 | 96 |

(Source: Survey, 2023)

Looking at Table 3, 432 (14.96%) taxis and 84 (16.5%) buses in the direction of Torhayloch, Mexico, and 300 taxis (10.19%) and 96 (17.71%) buses stop at different stations along Mexico-Torhayloch daily to let the passengers get on or get off the vehicles during peak hours. The congestion generated in this case, especially during peak hours, is enormous, as it leads to a breakdown of traffic stream flow in both directional movements along the street corridor. The taxi and bus stations always function in the same manner all day, but it causes more congestion during peak traffic flows. However, the negative effects were likely to be lessened given the fact that a few vehicles were on the street corridor and traffic flow was smooth.

To understand how the land use arrangement along the corridor causes traffic congestion, some selected land uses were presented to give in-depth insight. From Admiration land use type, Lideta Federal High Court is a good example in generating vehicular and pedestrian trips as well as on-street parking for longer hours that causes traffic congestion. The interesting part is the way pedestrian traffic crosses the street and prohibits continuous vehicular flow on the other side. The existence of numerous copy and printing houses on the opposite side of the Lideta Higher Court forced pedestrians to crisscross the street, and it was mapped in its simplest form, assuming a trip per pedestrian to the copy and printing houses.



Figure 10. Pedestrian movement pattern at Lideta Higher Court (Source: Survey, 2023).

Additionally, the land use type at the opposite end of the Lideta higher court, especially between the Coca-Lideta midblock, is dominated by two land use types: mixed use (R-2) and commerce (CO-21) (see figure 7). Since these two land use types contain many activities (see Table 1), they are likely to attract vehicular and pedestrian trips at these locations. Particularly, in regard to cafeterias and groceries along the street, in this midblock, there are loading and unloading of alcoholic drinks, soft drinks, and other materials from freight vehicles on the street, which is already occupied by on-street parking and on-street stations.



Figure 11. Loading and unloading at Grocery near Lideta Commercial Bank (Source: [Survey, 2023](#)).

Fuel stations are another common traffic congestion-inducing urban activity. There are two fuel stations along the Torhayloch-Mexico street corridor, one between the Lideta-Mexico midblock and the other between Coca-Mexico midblock. It is one of the main contributing factors to congestion, as there are vehicles waiting in a queue to enter gas stations, which causes the breakdown of traffic flow when these vehicles leave gas stations and join the traffic flow stream on the street. At the gas station, the Lideta-Mexico midblock effect is presented.



Figure 12. Vehicle closing street as it was leaving gas station (Source: [Survey, 2023](#)).

Olagunju (2015) claimed that rapid urbanization without appropriate land use planning, particularly in the locality of certain specialized activities such as workplaces, residential areas, and recreational facilities in some other areas that are often distant from one another, results in crisscrossing movements that compound traffic problems. These problems then lead to the emergence of new urban planning theories thought to be sustainable, which in a general sense consider a mix of uses and urban activities (Kusumastuti and [Nicholson, 2017](#)), with the concept that whenever there is a diversity of uses within a reasonable range, the need to travel will decrease, enabling fewer vehicle miles traveled by individuals (Spears and [Boarnet, 2014](#); [Cervero, 2016](#); Geyer and [Quin, 2018](#)).

With respect to the street network, there were twenty (20) local street to primary arterial street connections across the length of the street corridor. The presence of these connections particularly affects traffic flow, as the primary function of arterial streets is mobility and that of local streets is accessibility, which means the two inhibit one another. This being the case, traffic flow is greatly affected when vehicles enter a primary arterial street from a local street or vice versa.

The absence of functional classification of roads makes a disordered road network; disturbed street right of way; or overutilization of some streets or some roads may be underutilized. According to this document, maintaining the proper hierarchical connection of urban streets contributes significantly to allowing harmonious traffic flow along these urban streets. Otherwise, the intended use of the urban streets can be greatly affected, resulting in unintended output, which is road traffic congestion. The frequently observed improper connections (LS to PAS) are largely due to the spontaneous development of the urban fabric, which brings about irregular street patterns along the street corridor in particular and Addis Ababa in general.

6. CONCLUSION

Addis Ababa, as a spontaneously developed metropolitan area, faces significant challenges related to improper hierarchical connections and organically developed street layouts. These issues highlight the critical need for integrating land use and transportation planning to effectively manage urban traffic. The analysis of the study corridor reveals that much of the traffic congestion results from how the corridor is utilized, stemming more from mismanagement than from inherent capacity limitations. On-street parking emerges as a prominent factor contributing to this congestion, primarily due to the lack of available off-street parking. The allocation of one lane for on-street parking directly reduces road capacity and creates roadside friction, further complicating the traffic situation. With one lane occupied by on-street parking, the impact of on-street stations is magnified, causing interruptions in vehicle movement at random locations and leading to a breakdown in traffic flow along the corridor. Land use patterns, particularly in commercial and business areas, generate both vehicular and pedestrian traffic, exacerbating congestion and correlating closely with the prevalence of on-street parking.

The underlying issues of improper hierarchical connections and the organic layout of the street corridor significantly contribute to traffic congestion along the Torhayloch-Mexico street corridor. Therefore, addressing these congestion-causing factors will be more effective in mitigating traffic issues than simply increasing road capacity. To this end, it is essential for the Addis Ababa Traffic Policy, Management Agency, and Transport Policy to collaborate and prioritize the management of traffic conditions over mere capacity expansion. By focusing on effective traffic management strategies, the full capacity of the street corridor can be utilized, leading to improved traffic flow and overall urban mobility in Addis Ababa.

7. FUNDING

No fund was received.

8. CONFLICTS OF INTEREST

The authors declare that there are no conflicts of interest.

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World-Wide Sanitation Workers' Occupational Health and Safety Outcomes and Their Contributing Factors: A Systematic Review

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Review Article

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Abstract

This study identifies various factors contributing to occupational health and safety injuries and musculoskeletal disorders (MSDs) among sanitary workers, largely due to challenging working conditions. A systematic review of PubMed, Medline, Embase, and Lilacs databases from 2000 to April 2022 identified 78 studies, with 13 meeting inclusion criteria. Among 4,564 workers, 84% were solid waste collectors, 10% street sweepers, and 6% cleaners. Occupational injury risks were linked to socio-demographic factors, including age (OR: 22.57; 95% CI: 7.29-69.88), education (OR: 2.22; 95% CI: 1.22-4.00), and work experience (OR: 1.92; 95% CI: 1.11-3.31). Behavioral risks included cigarette smoking (OR: 2.6; 95% CI: 1.55-4.34), sleep disturbances (OR: 2.57; 95% CI: 1.48-4.47), and eating or drinking at the workplace (OR: 3.85; 95% CI: 1.34-11.06), with lack of personal protective equipment (PPE) as a significant safety factor (OR: 2.62; 95% CI: 1.48-4.63). MSD risks were similarly affected by education (OR: 6.73; 95% CI: 1.92-23.51), age (OR: 7.56; 95% CI: 2.18-26.18), work experience (OR: 10.79; 95% CI: 3.49-33.38), and behaviors like smoking (OR: 0.14; 95% CI: 0.03-0.64) and job satisfaction (OR: 11.43; 95% CI: 2.04-64.08). Occupational safety factors included time pressure (OR: 3.25; 95% CI: 1.08-9.77), working over eight hours (OR: 3.5; 95% CI: 1.543-8.204), extended periods in strained positions (OR: 8.0; 95% CI: 2.25-28.85), and awkward posture (OR: 15.7; 95% CI: 6.47-38.18). Sanitation workers face increased occupational risks due to socio-demographic, safety, work pattern, and behavioral factors, underscoring the need to address these areas to reduce injuries and MSDs in this workforce.

Keywords: Associated Factors; Musculoskeletal Disorders; Occupational Injuries; Sanitary workers

1. INTRODUCTION

Sanitation workers encompass a wide range of services, making it difficult to estimate their global numbers, as they often hold multiple jobs or are grouped with other sectors such as solid waste and healthcare facility management (WHO, 2019a). Despite this essential work, they face numerous health and safety challenges, including musculoskeletal disorders, injuries, respiratory and gastrointestinal problems, infectious diseases, dermatitis, hepatitis B and C, parasitic diseases, eating and sleep disorders, depression, and allergic and toxic reactions, along with acute and chronic infections like HIV (Arruda, 2010; Souza, 2016). This exposes millions of sanitation workers globally, especially in low- and middle-income countries, to dangerous working conditions that risk their health, dignity, and human rights (Gomathi & Kamala, 2020; WHO, 2019). Studies have found factors contributing to occupational health and safety (OHS) outcomes, such as lack of institutional support, education, adequate experience, supervision, and occupational health measures (Comaru & Werna, 2013). In many cases, sanitation workers, particularly in low-income areas, are informally employed, making them challenging to locate (WHO, 2019b). Furthermore, societal perceptions regard professional cleaning as unskilled work, which diminishes job satisfaction and contributes to stress, negatively impacting both mental and physical health (Woods & Buckle, 2006; Krüger et al., 1997; Bering, 2000).

This review focuses on the factors associated with occupational injuries and musculoskeletal disorders. Studies indicate that occupational injuries may be influenced by gender, marital status, family size, work experience, education level, income, and behaviors such as smoking and Khat chewing (Alamgir & Shicheng, 2014; Eskezia et al., 2016; Wahab & Ogunlola, 2014). Institutional factors, including lack of supervision, heavy workloads, and insufficient occupational health measures, further contribute to OHS risks (Amissah et al., 2019; Leitão, 2008; Souza, 2016). Musculoskeletal disorders are associated with factors like age, job satisfaction, time pressure, and work hours, with older and more experienced workers more prone to MSDs, especially in high-slum areas or those working in sustained awkward postures (Salve & Chokhandre, 2016; Singh & Chokhandre, 2015). This review aims to identify contributing elements to OHS issues among sanitation workers to raise awareness, address these challenges, and ultimately advocate for sanitation workers' health and safety protections.

2. METHOD AND MATERIALS

The review methods adhered to the updated Preferred Reporting Items for Systematic Reviews (PRISMA) guidelines, as outlined by Page et al. (2021).

2.1. Population Group

The study population consisted of sanitary workers aged 18 and above. This group included a range of sanitation professionals, such as street sweepers, sewage workers, wastewater treatment employees, as well as solid waste collectors, pickers, and emptiers.

2.2. Study Eligibility Criteria

Inclusion Criteria

Studies were included if they were published in English, used a cross-sectional study design, and focused on either Occupational Related Injuries (ORI) or Musculoskeletal Disorders (MSDs) as outcomes among the specified sanitary worker groups.

Exclusion Criteria

Studies were excluded if they were published in languages other than English, specifically French or Spanish. Additionally, studies were not included if they focused on office cleaners, hotel and restaurant cleaners, or if they used quasi-experimental, case-control, or cohort study designs.

2.3. Study Design and Setting

The review searched across multiple databases, including MEDLINE, PubMed, Embase, and LILACS, as well as Google Scholar. The search covered studies and reported data spanning from 2010 to April 2022.

2.4. Searching Strategies

The search strategy incorporated a combination of terms related to occupation, injuries, and health factors. For instance, terms like “Occupational,” “Job,” and “Work” were combined with “Occupational Injuries” or “Musculoskeletal Disorder” and keywords for related factors such as socio-demographic characteristics, behavioral variables, institutional factors, and work patterns. Additionally, terms for “Sanitary Workers” (including “Waste Collectors,” “Street Sweepers,” and “Sewage Workers”) were used along with geographical descriptors (e.g., “developed” or “developing”) and “cross-sectional studies.”

2.5. Data Screening

The initial data screening was conducted using Microsoft Excel to manage titles and abstracts from the search results. Relevant full-text articles were then collected, and duplicates were removed through the Zotero reference management tool.

2.6. Data Extraction

A predefined extraction form in Microsoft Excel was used to systematically capture and organize data from the included studies.

2.7. Data Synthesis

The synthesis of studies focusing on occupational outcomes was structured according to the type of outcome. Additional outcomes that were relevant but outside the primary scope were described narratively and presented in tabular format.

2.8. Outcomes Operational Definitions

Occupational Related Injuries (ORI):

Occupational Related Injuries were defined as self-reported injuries linked to occupational exposure, including any physical harm resulting from accidents or diseases. This included injuries such as punctures, abrasions, lacerations, cuts, or trauma caused by blunt-force impact (Oza et al., 2022).

Musculoskeletal Disorders (MSDs):

Musculoskeletal Disorders in this study referred to self-reported MSDs assessed across nine body regions among sanitary workers: neck, shoulder, upper back, elbow, lower back, wrist/hand, hips/thighs, knee, and ankle/feet trauma (Oza et al., 2022).

Occupational Health and Safety Outcomes:

In this review, occupational health and safety outcomes were limited to self-reported ORIs and MSDs, focusing specifically on injuries and musculoskeletal issues related to the occupational settings of the sanitary workers.

3. RESULT

3.1. Selection studies

A total of 78 studies were identified using various databases, recovered data, and relevant publications. Of these, three studies were from earlier evaluations, while 59 studies were newly identified from databases and registers. An additional 15 studies were retrieved through alternative methods. For the specific analysis on the prevalence of work-related injuries and musculoskeletal disorders, thirteen studies were selected (see Figure 1)

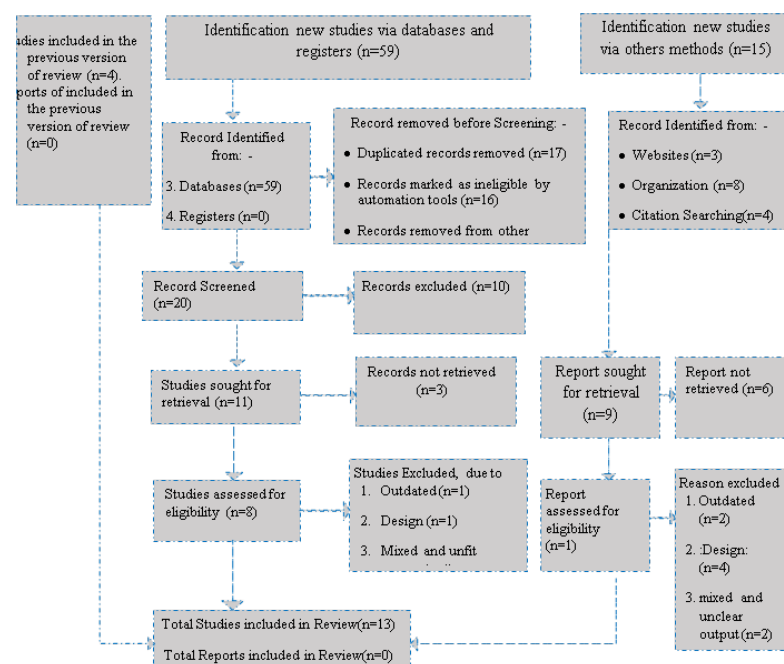


Figure 1. Flow diagram for systematic reviews adopted from PRISMA 2020

3.2. Countries Reviewed

Among the thirteen studies reviewed, ten originated from developing countries, with the remaining studies from developed countries. This distribution means that over three-quarters of the data came from articles published by developing nations.

3.3. Studied Population

The total population of sanitary workers covered in these studies was 4,564 individuals. Of this group, the majority, 3,844 workers (84%), were solid waste collectors. Street sweepers accounted for 450 individuals (10%), and cleaners comprised 270 individuals (6%) (see Figure 2).

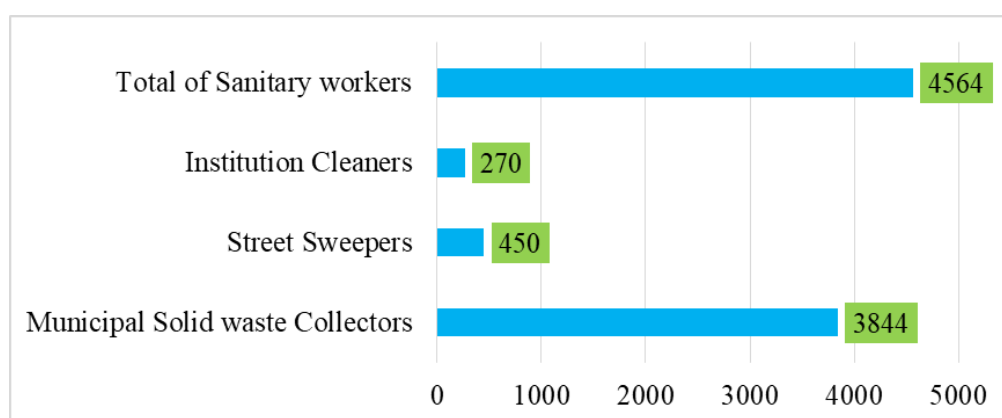


Figure 2. Workers

3.4. Techniques of statistical

More than half of the authors employed logistic regression techniques to analyze the factors associated with occupational-related injuries and musculoskeletal disorders (see Figure 3). This statistical method allowed them to assess the relationships and risks associated with these health outcomes among the studied populations.

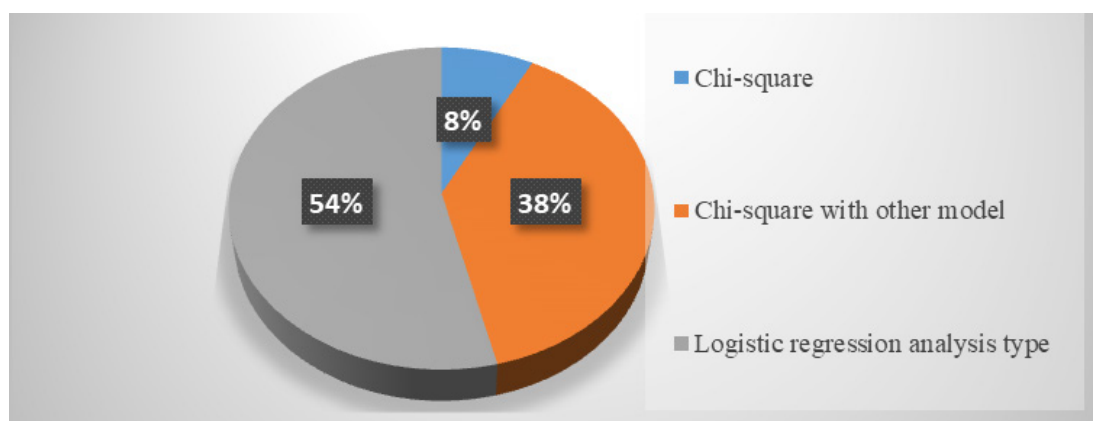


Figure 3. Statistical used in Reviewed studies on Occupational health and safety outcomes, 2022

3.5. Associated Factors of Occupational injuries

The main factors associated with the occurrence of occupational injuries were identified across several domains. Socio-demographic factors included age, with an odds ratio (OR) of 22.57 (95% confidence interval [CI]: 7.29–69.88; $p < 0.001$), indicating a significant correlation between older age and the likelihood of injuries. Education also emerged as a relevant factor, with an OR of 2.22 (CI: 1.22–4.00; $p < 0.05$), suggesting that lower educational attainment may increase risk. Additionally, work experience was associated with occupational injuries, presenting an OR of 1.92 (CI: 1.11–3.31; $p < 0.05$), indicating that less experienced workers might be at higher risk.

Behavioral factors contributing to occupational injuries included cigarette smoking, with an OR of 2.6 (CI: 1.55–4.34; $p < 0.05$), and sleeping disturbances, which had an OR of 2.57 (CI: 1.48–4.47; $p < 0.05$). Engaging in eating, smoking, or drinking at work was also associated with an increased risk, presenting an OR of 3.85 (CI: 1.34–11.06; $p < 0.001$).

In terms of safety factors, the lack of personal protective equipment (PPE) was significant, with an OR of 2.62 (CI: 1.48–4.63; $p < 0.05$), highlighting the importance of proper safety measures in preventing occupational injuries (see Table 1).

Table 1. Studies on associated Factors of occupational related injuries/ORI among sanitary workers

| Associated Factors of ORI | | Confidence Interval (CI=95%) | | | |
|-------------------------------|---------------------------------------|------------------------------|-------------|-------------|-------------|
| Authors | Socio-demographic | OR | Lower Limit | Upper Limit | P-value |
| (Rachiotis et al., 2012a) | Age years >42* vs <42 years | 22.57 | 7.29 | 69.88 | $p < 0.001$ |
| (Rachiotis et al., 2012b) | Age years >42* vs <42 years | 5.22 | 1.35 | 20.10 | $p < 0.001$ |
| (Bogale et al., 2014) | Experience < 1* vs 1 year | 1.73 | 1.06 | 2.84 | $p < 0.001$ |
| (Rachiotis et al., 2012b) | Educated vs illiterate* | 2.19 | 1.01 | 4.78 | $p < 0.05$ |
| (Eskezia et al., 2016) | Educated vs illiterate* | 2.22 | 1.22 | 4.00 | $p < 0.05$ |
| (Melaku & Tiruneh, 2020) | Experience <5 years* vs >5 year | 1.86 | 1.01 | 2.18 | $p < 0.05$ |
| (Eskezia et al., 2016) | Experience <3 years* vs >5 year | 1.92 | 1.11 | 3.31 | $p < 0.05$ |
| (Melaku & Tiruneh, 2020) | Family size >4* vs < 4 families | 1.76 | 1.15 | 2.71 | $p < 0.05$ |
| (Bogale et al., 2014) | Family size >5* vs < 5 families | 0.21 | 0.1 | 0.44 | $p < 0.05$ |
| (Bogale et al., 2014) | Family >4 size * vs < 2-4 families | 0.52 | 0.3 | 0.93 | $p < 0.05$ |
| (Bogale et al., 2014) | Married families* vs Single | 1.89 | 1.09 | 3.28 | $p < 0.05$ |
| Behavioral variables | | | | | |
| (Bogale et al., 2014) | Drinkers* vs Non drinkers | 1.85 | 1.14 | 3.00 | $p < 0.01$ |
| (Mamuya & Badi, 2019) | Smoker* vs non smoker | 2.6 | 1.55 | 4.34 | $p < 0.05$ |
| (Eskezia et al., 2016) | Had job stress* vs hadn't | 1.94 | 1.11 | 3.40 | $p < 0.05$ |
| (Eskezia et al., 2016) | Sleeping disturbance* vs hadn't | 2.57 | 1.48 | 4.47 | $p < 0.05$ |
| (Bogale et al., 2014) | Sleeping disturbance* vs hadn't | 1.64 | 0.77 | 3.46 | $p < 0.01$ |
| (Rachiotis et al., 2012a) | Eating/smoking/ drinking* vs hadn't | 3.85 | 1.34 | 11.06 | $p < 0.001$ |
| Occupational Safety variables | | | | | |
| (Melaku & Tiruneh, 2020) | Transport and collection* vs sweeping | 8.5 | 0.34 | 48.81 | $p < 0.05$ |

| Associated Factors of ORI | | Confidence Interval (CI=95%) | | | |
|---------------------------|----------------------------------|------------------------------|-------------|-------------|----------|
| Authors | Socio-demographic | OR | Lower Limit | Upper Limit | P-value |
| (Bogale et al., 2014) | Lack of PPE* vs fully suited ad | 2.62 | 1.48 | 4.63 | p <0.05 |
| (Melaku & Tiruneh, 2020) | More than 8hours * vs <8 hours | 1.76 | 1.22 | 2.68 | p <0.05 |
| (Melaku & Tiruneh, 2020) | Only use mask* vs fully suit PPE | 2.31 | 1.32 | 4.04 | p <0.05 |
| (Ephraim et al., 2021) | lack of PPE* vs fully suited | 2.24 | 1.21 | 4.17 | p <0.001 |

Asterisk (*) Shows that those were more likely had occupational related injured

3.6. Associated Factors of Musculoskeletal Disorders

Among the thirteen eligible studies, six were specifically selected to analyze the associated factors of musculoskeletal disorders (MSDs) among sanitary workers. The findings indicated several socio-demographic factors contributing to the development of MSDs. Education was a significant factor, with an odds ratio (OR) of 6.73 (95% confidence interval [CI]: 1.92–3.51; $p = 0.006$), suggesting that lower educational levels may increase the risk of developing MSDs. Age also played a crucial role, presenting an OR of 7.56 (CI: 2.18–26.18; $p = 0.006$), indicating that older workers are more susceptible to these disorders. Furthermore, work experience was identified as a significant factor, with an OR of 10.79 (CI: 3.49–33.38; $p = 0.010$), highlighting that those with less experience may be at higher risk.

Behavioral factors were also examined, revealing a notable association with cigarette smoking, which showed an OR of 0.14 (CI: 0.03–0.64; $p = 0.04$), suggesting that smoking may be inversely related to MSD risk in this population. Job satisfaction emerged as a critical factor, with an OR of 11.43 (CI: 2.04–64.08; $p = 0.010$), indicating that lower job satisfaction is linked to a higher likelihood of developing MSDs.

Occupational safety variables further highlighted the risks associated with specific work conditions. Time pressure was found to significantly increase the risk of MSDs, with an OR of 3.25 (CI: 1.08–9.77; $p = 0.035$). Working more than eight hours a day was also associated with an increased risk, presenting an OR of 3.5 (CI: 1.543–8.204; $p = 0.003$). Additionally, working in positions for more than two hours showed a strong correlation, with an OR of 8 (CI: 2.25–28.85; $p = 0.001$). Awkward posture during work was notably significant as well, with an OR of 15.7 (CI: 6.47–38.18; $p < 0.001$), underscoring the importance of ergonomics in preventing musculoskeletal disorders (see Table 2).

Table 2. Associated Factors of Musculoskeletal Disorders among Sanitary workers

| Authors | Associated Factors | Odd Ratio | Lower Limit | Upper Limit | P-value |
|--------------------------|----------------------------------|-----------|-------------|-------------|---------|
| (Reddy & Yasobant, 2015) | Socio-demographic | | | | |
| (Reddy & Yasobant, 2015) | Primary/Secondary | 6.73 | 1.92 | 23.51 | p=0.006 |
| (Reddy & Yasobant, 2015) | Age (<45* vs >45 yr) | 7.56 | 2.18 | 26.18 | p=0.006 |
| (Salve et al, 2017) | Age (>35* vs <35yr vs) with high | 3.04 | 1.28 | 7.23 | p<0.001 |
| (Salve et al, 2017) | Experience >10* vs 10 years | 5.78 | 1.57 | 21.3 | p<0.001 |

| Authors | Associated Factors | Odd Ratio | Lower Limit | Upper Limit | P-value |
|-------------------------------|---|-----------|-------------|-------------|---------|
| (Melese et al., 2020] | Experience(>6* vs <60 month) | 2.5 | 1.127 | 5.522 | p=0.024 |
| (Salve & Chokhandre, 2016) | Experience (>10* vs <10) on Elbow | 10.79 | 3.49 | 33.38 | p=0.010 |
| (Pintakham & Siri Wong, 2015) | Experience (<13* vs >13 years) | 1.12 | 1.1 | 12.4 | p=0.024 |
| (Singh & Chokhandre, 2015) | Work experience (>10 vs <10 years) | 2.15 | 1.12 | 4.14 | p=0.010 |
| (Pintakham & Siri Wong, 2015) | Age (>40* vs < 40year) | 1.11 | 1.03 | 1.19 | p=0.006 |
| Behavioral Factors | | | | | |
| (Pintakham & Siri Wong, 2015) | Cigarette smokers* vs Non smokers | 0.14 | 0.03 | 0.64 | p=0.04 |
| (Pintakham & Siri Wong, 2015) | Alcohol drinker* vs Non drinkers | 0.18 | 0.04 | 0.83 | p=0.028 |
| (Salve, 2016) | Job dissatisfaction* vs satisfaction | 11.43 | 2.04 | 64.08 | p=0.010 |
| (Salve et al, 2017) | Substance use (>2* vs <2) | 3.07 | 1.17 | 8.02 | P<0.05 |
| (Salve et al, 2017) | Mental Health * vs good status | 6.35 | 1.63 | 24.68 | p<0.001 |
| (Melese et al., 2020] | Feeling exhausted* vs not feeling | 2.7 | 1.161 | 6.203 | p=0.021 |
| (Melese et al., 2020] | Occupational safety variables | | | | |
| (Melese et al., 2020] | Existence of time pressure* vs Not | 3.25 | 1.084 | 9.777 | p=0.035 |
| (Melese et al., 2020] | Working hours/day* vs Not | 3.5 | 1.543 | 8.204 | p=0.003 |
| (Melese et al., 2020] | Working (vs >2hr)* vs not | 8 | 2.25 | 28.85 | p=0.001 |
| Posture, BMI and others | | | | | |
| (Melese et al., 2020] | Awkward posture* vs hadn't | 15.7 | 6.47 | 38.18 | p<0.001 |
| (Pintakham & Siri Wong, 2015) | BMI (<23 vs >23*) | 1.18 | 1.03 | 1.35 | p=0.013 |
| (Pintakham & Siri Wong, 2015) | Distance (km/day) (<2 vs 2<*) | 25.91 | 2.87 | 23.36 | p=0.004 |
| (Pintakham & Siri Wong, 2015) | Weight of the broom (g)(<800 vs 800<*) | 4.64 | 1.02 | 21.08 | p=0.047 |
| (Pintakham & Siri Wong, 2015) | Length of the broom (cm)(<160 vs 160<*) | 10.01 | 1.72 | 58.37 | p=0.010 |
| (Pintakham & Siri Wong, 2015) | Weight of dustpan (g)(<1700 vs 1700<*) | 2.64 | 1.073 | 6.48 | p=0.035 |
| (Singh & Chokhandre, 2015) | Waste pickers* vs gardens | 3.52 | 1.69 | 7.36 | p=0.047 |
| Salve and Chokhandre 2016) | Location of work: Slum* vs not | 10.64 | 3.48 | 32.5 | p=0.010 |

Asterisk [*] Shows that those were more likely to developed Musculoskeletal Disorders

4. DISCUSSION

4.1. Reviewed Data

The review process yielded a total of 78 studies from various databases and other sources. Out of these, 59 studies were identified based on their titles. Seventeen studies were eliminated due to duplication prior to screening, and sixteen were flagged as ineligible by automation tools. An additional six studies were excluded for unspecified reasons. Abstracts of the remaining twenty studies were screened, leading to the exclusion of ten. Eleven studies were sought for retrieval, but only eight were ultimately included. Furthermore, searches on the internet, organizations, and citations yielded fifteen additional studies, of which only one was included. Four studies from the previous version of the review were also incorporated (Melaku & Tiruneh, 2020).

Inclusion criteria restricted certain studies due to unmatched designs, outdated information, mixed populations, unclear outputs, and unspecified methods. Consequently, thirteen (13) studies were included for the associated factors of occupational-related injuries and

musculoskeletal disorders (MSDs) (Figure 1). The study population comprised all sanitary workers, including street sweepers, wastewater treatment workers, hospital cleaners, general sanitary workers, garbage collectors, and sewage workers, with the majority being street sweepers, followed by solid waste collectors (Figure 2).

Regarding study design, over three-quarters of the included studies utilized cross-sectional designs with observational checklists. A smaller number incorporated control groups and focus groups. Statistical analyses predominantly employed binary and multiple regression methods, including chi-square tests, Fisher's exact test, and logistic regression (Figure 3).

4.2. Factors for Occupational-Related Injuries

The factors influencing the occurrence of work-related accidents can be categorized into socio-demographic characteristics, occupational safety variables, and behavioral variables (Table 1). Each category is discussed in detail below.

Socio-Demographic Variables:

Age: The age of sanitary workers is a significant factor in the occurrence of occupational injuries. [Rachiotis et al.](#) reported that individuals over 42 years old were 22.57 times more likely to be exposed to hepatitis A virus compared to those under 42 (OR = 22.57; 95% CI = 7.29–69.88) ([Rachiotis et al.](#), 2012a). In other studies, waste collectors over 42 years were found to be 5.22 times more likely to be positively associated with anti-hepatitis B virus infection ([Rachiotis et al.](#), 2012b).

Gender: According to [Bogale et al.](#), male workers reported more injuries than female workers, with males being 2.2 times more likely to sustain injuries (OR = 2.2, 95% CI = 1.39–3.56) ([Bogale et al.](#), 2014). This disparity may be attributed to males typically engaging in heavier tasks, such as lifting and loading, while females often perform less strenuous roles, like transferring waste.

Marital Status: Married solid waste collectors were found to be 1.89 times more likely to suffer injuries than their single counterparts (OR = 1.89, 95% CI = 1.09–3.28) ([Bogale et al.](#), 2014). Furthermore, the risk of injury decreased significantly for those with fewer children; those with two or fewer children had a 79% reduced risk compared to those with five or more (AOR = 0.21, 95% CI: 0.10–0.44).

Work Experience: A significant association exists between work experience and the prevalence of occupational injuries. Solid waste collectors with more than one year of experience were more likely to report injuries (OR = 1.73, 95% CI = 1.06–1.84) ([Bogale et al.](#), 2014). [Rachiotis et al.](#) also reported that longer duration of employment was associated with a higher risk of hepatitis A virus infection ([Rachiotis et al.](#), 2012a).

Monthly Income: Those earning less than 600 Eth Birr were found to be 4.09 times more likely to sustain injuries compared to those earning more (AOR = 4.09 95% CI: 2.15, 7.76) ([Eskezia et al.](#), 2016).

Education: Illiterate waste collectors were 2.22 times more likely to sustain injuries than their literate counterparts (AOR = 2.22, 95% CI: 1.22, 4.04) ([Eskezia et al.](#), 2016).

Occupational Safety Variables:

Several studies highlighted a significant association between the lack of personal protective equipment (PPE) and occupational injuries among solid waste collectors. [Ephraim et al.](#) found that those involved in collection and transportation were 8.5 times more likely to sustain injuries compared to those in other roles (AOR = 8.5; 95% CI: 0.34, 48.81). Additionally, respondents lacking PPE were 2.24 times more likely to experience injuries (AOR = 2.24; 95% CI: 1.21, 4.17) ([Ephraim et al., 2021](#)).

Behavioral Variables:

Alcohol consumption was found to be statistically associated with occupational injuries, with waste collectors consuming alcohol being 1.85 times more likely to sustain injuries than non-drinkers (OR = 1.85, 95% CI = 1.14–3.00) ([Bogale et al., 2014](#)). Cigarette smoking also showed a significant correlation with injuries, as smokers were 2.60 times more likely to sustain injuries than non-smokers (OR = 2.60, 95% CI = 1.55–4.34) (Mamuya & [Badi, 2019](#)). Job-related stress and disturbances also contributed significantly to injury risk ([Eskezia et al., 2016](#)).

4.3. Associated Factors of MSDs

The primary factors identified as associated with the development of MSDs among sanitary workers include socio-demographic variables, occupational safety variables, behavioral variables, work design and patterns, materials used, location of work, distance traveled by workers, and body mass index (Table 2).

Socio-Demographic Variables:

Sanitary workers with ten or more years of experience were significantly more likely to experience elbow MSDs (OR = 10.79; $p < 0.01$) compared to those with less than ten years ([Salve, 2016](#)). Those with six months or more of work experience were three times more likely to develop MSDs than those with less experience (AOR = 2.5, 95% CI = 1.12–5.52) ([Melese et al., 2020](#)). Additionally, workers over 40 years were 5.41 times more likely to suffer knee MSDs compared to younger workers (Singh & [Chokhandre, 2015](#)).

Behavioral Variables:

Job satisfaction was significantly correlated with MSDs, as unsatisfied sweepers were more likely to report wrist and hand MSDs (OR = 11.43; $p < 0.01$) (Salve & [Chokhandre, 2016](#)). Time pressure also emerged as a significant factor, with workers under time constraints being 3.2 times more likely to develop MSDs (AOR = 3.25, 95% CI = 1.08–9.77) ([Melese et al., 2020](#)). Furthermore, feelings of exhaustion post-work were linked to a higher likelihood of MSDs (AOR=2.7, 95% CI=1.16–6.20; $p=0.02$) ([Melese et al., 2020](#)).

Posture, Work Design, and Patterns:

Workers in awkward positions were found to be 15 times more likely to develop MSDs (AOR=15.7, 95% CI=6.47–38.17, $p < 0.001$) ([Melese et al., 2020](#)). Additionally, those working over eight hours a day were 3.55 times more likely to develop MSDs (AOR = 3.55, 95% CI = 1.54–8.20, $p = 0.003$) ([Melese et al., 2020](#)).

4.4. Limitations

A significant limitation of this systematic review is that nearly all included studies utilized cross-sectional designs, which may introduce selection bias and information bias during the sampling process. Moreover, potential confounders could weaken the findings, leading to erroneous interpretations. Despite employing a comprehensive search strategy, some relevant studies may have been overlooked due to variations in terminology used to describe sanitation employees across different geographic regions, nations, languages, and cultures.

5. CONCLUSION

Despite the limitations of this review, the overall consistency of the evidence indicates an increased risk of occupational problems, including injuries and musculoskeletal disorders (MSDs), among sanitation workers. These risks are significantly influenced by socio-demographic factors, occupational safety related to work patterns, and behavioral factors. Given the substantial harm arising from these interconnected causes, it is imperative for governmental and institutional bodies to implement guidelines, regulations, and interventions aimed at minimizing risks for sanitary employees. The findings underscore the urgent need for comprehensive strategies to address the total probabilities of occupational-related injuries and MSDs in this vulnerable workforce.

6. FUNDING

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7. CONFLICTS OF INTEREST

The authors declare that there are no conflicts of interest.

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Critical reflection in the English Classroom: The experience of Bule Hora University, Ethiopia

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Abstract

In the presented reflective paper, an experiential approach to critical reflection in the classroom was described, with a focus on problem-solving and motivation enhancement in teaching practice. The study addressed the topical and significant issue of motivation in foreign language learning, specifically highlighting the lack of effective techniques in the language classroom. Using a qualitative method, the study conducted a literature review and classroom observations at BuleHora University. The results demonstrated a notable increase in students' learning motivation. The findings highlighted the benefits of student-centered learning, such as improved learning outcomes, increased self-confidence, and enhanced motivation. The research emphasized the importance for language teachers and researchers to recognize and prioritize their students' individuality, as student motivation played a crucial role in fulfilling teaching responsibilities effectively.

Keywords: Critical Reflection, reflective practice, critical thinking, motivation

1. INTRODUCTION

The area of critical reflection is widely acknowledged as a complex and challenging field, despite its apparent appeal in theory (Lucas, 2012; Fook et al., 2006). Educators emphasize the importance of developing critical reflection skills in students, as it contributes to a deeper understanding and enhanced learning (Lay & McGuire, 2010; Moon, 2006; Wolf, 2010). However, the diverse range of approaches to critical reflection often places greater emphasis on techniques at the expense of the broader purpose and outcomes of reflection. To address this issue, it is essential to provide guidelines that enable students to develop their own reflective style (Moon, 2006).

The term “critical reflection” is frequently used without much thought and encompasses various meanings (Lucas, 2012; Fook et al., 2006). It is frequently used interchangeably with terms like reflection, reflective practice, reflexivity, and critical thinking. However, critical reflection involves contemplating our practices, processes, and identities as well as considering external factors, policies, and people that influence our choices and actions (Wenger, 2010). Although critical reflection is regarded as a pervasive activity in professional settings and is generally viewed positively, teaching and assessing socially responsible critical reflections in educational institutions can be challenging, especially when learning takes place outside of broader social or practice-based contexts (McNaughton, 2016; Ryan, 2013; Sutherland, 2013; Liou, 2001).

Moreover, reflection is not merely a technique or a curriculum element but rather a state of mind and an integral part of practice (Ryan, 2011). Reflective practice empowers practitioners to learn from their experiences, gain insights into themselves and their work, and understand their relationships with their personal and professional lives, significant others, and society as a whole. It provides strategies for bringing hidden aspects to the surface, posing new and meaningful questions, and creating safe spaces to explore and express otherwise challenging experiences. Additionally, it challenges assumptions, ideological biases, social inequalities, and personal behaviors that may silence or marginalize others (Bolton, 2010).

Although reflective practice has become a dominant paradigm in language teacher education research and programs worldwide, there is a limited documentation of its application in EFL (English as a Foreign Language) teacher education, including the case of Ethiopia (Farrell, 2016). Critical reflection enhances teachers’ awareness of English language teaching, or EFL teaching, deepens their understanding of various teaching variables, and leads to positive changes in their practice. In this paper, the author intends to present a reflective account based on personal experience in motivating or de-motivating students in the classroom.

Reflection and development through reflective practice occur most effectively in learning organizations that provide supportive mechanisms such as coaching, mentoring, or facilitation, rather than through top-down imposition of organizational visions that result in compliance. Well-facilitated reflective and reflexive professional development yields valuable returns, enabling practitioners to make more accurate and informed decisions by drawing on reliable intuition. Reflexive professional development refers to the process in which practitioners critically examine their own beliefs, practices, and assumptions to continuously improve their professional growth and decision-making (Gould, 2004; Redmond, 2004; Gray, 2007). Furthermore, organizations benefit from reflective practitioners who exhibit increased morale, commitment to clients, openness to multiple perspectives, creativity, innovative problem-solving and clearer boundaries (Fook, 2002). Critical reflection by professional evaluators is also crucial, given the inherently political and value-based nature of evaluation, necessitating critical monitoring of biases (Jewiss & Clark-Keefe, 2007).

This method of inquiry is based on action science, reflective practice, and critical philosophy. It views teaching practice as a source of new knowledge, as practitioners continuously create and modify knowledge to respond to specific teaching contexts. However, practitioners may engage in their practice without fully recognizing students’ interests or addressing existing shortcomings. This inquiry method, consisting of descriptive, reflective, and critical phases, aims to provide practitioners with a deeper understanding of the nature and meaning of their practice, improve practice through self-reflection and critique, generate models of exemplary practice and theories of application, and uncover the processes of practice in classroom

situations. Descriptive: Focuses on objectively documenting what happens during teaching without judgement. Reflective: Involves thinking about and analysing teaching practices to understand them better. Critical: Examines the broader implications, including power dynamics and assumptions, to challenge and improve practices. Teachers, and pre-service teachers, can collaborate with researchers or mentors to utilize this inquiry method to develop their teaching knowledge, enhance their individual practice, and engage in shared learning.

In various domains of life, particularly in teaching and learning, the achievement of any task depends not only on the goal but also on the individuals' motivation and desire to succeed. This psychological concept is commonly referred to as motivation in second language acquisition (Kondal, 2015). Motivation serves as a driving force to stimulate action, and a learner's motivation is a crucial factor for success in language learning environments (Oroujlou & Vahedi, 2011). Motivation is often defined as the effort that an individual is willing to exert to reach his/her specific goal.

Prominent scholars such as Black and Plowright (2010), Pew (2007), McManus (2011), and Nukpe (2012) describe motivation as the forces that arouse, select, direct, and sustain behavior in order to achieve a goal. In the context of education, motivating students in the classroom is an essential aspect of effective teaching. Motivated students are more engaged, enthusiastic, and willing to put in effort, to learn. On the other hand, de-motivated students may exhibit disinterest, lack of effort, and reduced achievement due to some factors like lack of relevance, poor teacher-student interaction.

Motivation can be categorized into two broad types: intrinsic motivation and extrinsic motivation. Intrinsic motivation refers to the internal desire and personal enjoyment that individuals experience when engaging in an activity. It is driven by factors such as curiosity, interest, and a sense of accomplishment. Intrinsic motivation is often associated with deep and meaningful learning. For example, a student who studies out of genuine interest in the subject demonstrates intrinsic motivation. On the other hand, extrinsic motivation is based on external factors such as rewards, grades, or praise. While extrinsic motivation can be effective in the short term, such as when a student studies to earn a reward, it may not sustain long-term engagement and learning.

To motivate students in the classroom, teachers can employ various strategies:

- Create a positive and supportive learning environment: Foster a classroom atmosphere where students feel safe, respected, and valued. Encourage collaboration, active participation, and open communication. Celebrate student achievements and provide constructive feedback.
- Make learning relevant and meaningful: Connect the content and activities to real-life situations, students' interests, and their prior knowledge. Help students understand the practical applications and significance of what they are learning.
- Provide autonomy and choice: Offer students opportunities to make decisions and have control over their learning. Allow them to choose topics, projects, or learning activities based on their preferences and strengths. This promotes a sense of ownership and intrinsic motivation.
- Set clear goals and expectations: Clearly communicate the learning objectives, expectations, and criteria for success. Break down complex tasks into manageable

steps and provide regular feedback on students' progress. This helps students understand what is expected of them and gives them a sense of direction.

- Use varied and engaging instructional strategies: Employ a mix of instructional methods that cater to different learning styles and preferences. Incorporate active learning techniques, hands-on activities, discussions, multimedia, and technology to enhance student engagement.
- Foster a growth mindset: Encourage students to embrace challenges, view mistakes as learning opportunities, and believe in their ability to improve. Cultivate a classroom culture that values effort, perseverance, and a positive attitude towards learning.
- Establish connections and relevance beyond the classroom: Help students see the connections between what they are learning and the world outside the classroom. Invite guest speakers, arrange field trips, or engage in community projects to broaden students' perspectives and show them the real-world applications of their knowledge.

It is important to note that different students may be motivated by different factors, so it is beneficial to employ a combination of strategies and adapt them to individual student needs. Regularly assess students' motivation levels, and adjust instructional approaches accordingly. By fostering a motivating learning environment, teachers can inspire students to become active and lifelong students.

1.1. Problem Justification

There is a wealth of literature on critical reflective practice, with many studies focusing on personal perspectives and the use of Fook and Gardner's model of critical reflection as a framework for reflection and learning ([Hickson, 2011](#)). The Fook and Gardner approach encourages the deconstruction and analysis of personal or professional experiences to understand the underlying assumptions, relationships, and influences, and how they impact practice. Other studies have explored reflective practices as a professional development approach for leadership in transformative education ([Qutoshi, 2018](#)), the qualifications and challenges faced by teachers and teacher educators in engaging in reflective practices ([Saric and Steh, 2017](#)), the effectiveness of reflective practices in the development of student teachers ([Mathew et al., 2017](#); [Benade, 2015](#)), and experiences of teachers and leaders in the digital reflective intersection (based on New Zealand case studies) ([Benade, 2015](#)).

In Ethiopia, research has focused on various aspects of reflective learning practices. [Birbirso \(2012\)](#) examined the challenges faced by prospective teachers during their practicum, including the lack of effective reflection and a tendency to remain silent, which hindered their ability to plan and present lessons effectively. [Tessema \(2008\)](#) explored reflective school-based activities and their impact on the researcher and practicum advisees, through a dialogical relationship. [Seifu \(2016\)](#) investigated student teachers' reflective learning practices, considering different levels and forms of reflection, and examined the extent to which the curriculum implementation process facilitated reflective learning. [Kano et al. \(2017\)](#) studied the practices and challenges of reflective teaching in helping EFL teachers become more effective practitioners in selected primary schools. [Danbi and Tadesse \(2019\)](#) assessed the role of institutional context in the preparation of critically reflective TEFL teachers in three universities, examining the use of structured opportunities for reflection.

These studies collectively highlight the challenges and opportunities of reflective learning practices in Ethiopia, offering insights into how future improvements can be made in teacher education and reflective practices.

While critical reflective practice has been extensively studied, motivation, despite its significant influence on the educational process, has received less attention. Cook (2000a, 2000b) highlighted motivation as one of the three major factors influencing knowledge acquisition, emphasizing its importance. In Ethiopia, English language (EL) is taught as a subject from elementary schools to higher learning institutions and is also used as a medium of instruction; however, many students struggle to use the language effectively in both spoken and written communication. Motivation has been identified as a contributing factor to this deficiency.

1.2. Purpose of the study

Numerous works of literature support the idea that teachers' awareness of students' attitudes and their relationship to the learning process can guide language instructors in utilizing more effective teaching methods. Within the realm of language learning, the significance of motivation, both in terms of its range and type, cannot be overlooked as it plays a pivotal role in the learning process. Consequently, language teachers hold a crucial responsibility in motivating individual students within the classroom setting. The aim of this study, therefore, is to identify and comprehend the social, cultural, economic, and emotional characteristics and backgrounds of language students in order to provide them with appropriate support. This support enables students to develop a clear understanding of their own roles and fosters respect for their learning journey. Specifically, this study seeks to investigate the role of teachers in enhancing students' learning motivation and determine the conditions under which its implementation can be most effective at BuleHora University in Ethiopia.

2. MATERIALS AND METHODS

A qualitative research method was employed for the study. The reflection took place in a class of 48 second-year students majoring in English at BuleHora University. In other words, the participants were 48 students who were studying English as a foreign language as their major at Bule Hora University. The class comprised 31 male students and 17 female students. Due to the country's diverse nationalities, the students involved in the study represented various socio-cultural, economic, ethnic, and political backgrounds. This study aimed to examine how these diverse backgrounds influence students' motivation and acquisition of a foreign language. Therefore, the study included the teacher (the researcher) as a hypothetical important variable in relation to student motivation. The teacher played a dual role in teaching these students and conducting a reflective analysis of their motivation.

3. RESULTS AND DISCUSSION

This study employed a qualitative method, specifically action research, through classroom observation, as described in the purpose and methodology sections. The motivation behind this inquiry stemmed from the researcher's observation that the students frequently remained silent and non-participatory, leading to a teacher-centered classroom environment. This lack of engagement hampered the students' learning. Additionally, it hindered their personal development. The researcher noticed various indicators of this issue, such as mistakes in

written work, nervousness in speaking, lack of confidence in answering questions, and poor performance in examinations.

Recognizing the significance of addressing these shortcomings, the researcher felt responsibility to improve both the students' current academic achievements and their future career prospects. The researcher was concerned that if these issues persisted at the university level, they would carry over into the students' future teaching practices after graduation. The researcher reflected on their teaching methods and realized that adherence to a traditional teacher-centered model had hindered the development of students' independent learning abilities.

Furthermore, the researcher identified a lack of confidence among students due to their inadequate general and professional knowledge. This lack of confidence stemmed from teachers not playing a central role in motivating and instilling confidence in students. The researcher noted that this problem was prevalent among teachers who lacked sufficient educational and professional training to effectively motivate students. An insufficient understanding of the complexities of professional practice among teachers and policy makers has also hindered the improvement of teaching practices, sometimes resulting in decreased student achievement.

Another issue observed by the researcher was the students' lack of foresight and understanding of the purpose behind their learning, which led to a deficiency in motivation. This lack of motivation was seen as a crisis, given the changing needs of the future workforce and the rapid advancement of educational technology. The researcher emphasized the importance of incorporating technology and teaching essential skills, such as problem-solving, creative thinking, digital literacy, and collaboration, into the curriculum.

To address these challenges, the researcher proposed adopting a student-centered teaching model, considered a significant and contemporary approach to teaching and learning. The researcher described specific actions taken to implement this model, including collaborative learning, experiential learning, problem-based learning, and other pedagogical methods. The researcher highlighted the positive impacts of these methods on student engagement, learning, and success.

The researcher also recognized the importance of teacher quality in improving student outcomes. Factors such as class size, certification, qualifications, and experience have traditionally been associated with teacher quality. However, the researcher emphasized the significance of pedagogical knowledge in creating effective learning environments. Pedagogical knowledge includes the specialized knowledge teachers possess to facilitate learning effectively.

The researcher acknowledged their own influence as a product of the traditional education system and previous teachers, which led to a teacher-centered approach in the classroom. The researcher realized that this approach limited students' creativity, initiative, and independent thinking. Recognizing the diversity among students in terms of backgrounds, intelligence, and interests, the researcher emphasized the need for teaching methods that catered to individual differences and enhanced students' understanding.

The researcher further described specific teaching strategies employed, such as encouraging student participation, correcting language errors, implementing explicit/student-centered reading comprehension instruction, and involving students in vocabulary teaching. These

strategies aimed to actively engage students, foster critical thinking, and enhance language skills.

The researcher concluded that these new teaching methods had positively transformed the classroom atmosphere and student engagement. The students' active participation and collaboration indicated their enthusiasm for the novelty of these approaches. Encouraged by these outcomes, the researcher felt a renewed determination to continue the inquiry and further develop the students' potential.

3.1. Implications

The study revealed several important implications for the teaching and learning process. Firstly, the traditional teacher-centered approach hindered students' independent learning abilities and led to passive knowledge absorption. This resulted in students lacking confidence, having poor general and professional knowledge, and low motivation. Secondly, the lack of student-centered pedagogy limited students' creativity, initiative, and individuality. It also neglected the development of critical thinking skills. Thirdly, the study highlighted the importance of teacher quality and pedagogical knowledge in improving student outcomes. Lastly, the research emphasized the need to align teaching practices with the changing demands of the future workforce, including the integration of technology and the development of problem-solving, creative thinking, digital skills, and collaboration.

4. CONCLUSIONS

Based on the findings, it can be concluded that adopting a student-centered approach is the most effective method for addressing the current circumstances. By implementing student-centered pedagogy, which includes collaborative learning, experiential learning, problem-based learning, and other methods, students are actively engaged and encouraged to participate creatively in the classroom. The researcher took specific actions based on these principles, recognizing the importance of improving student outcomes and the quality of the teaching workforce, which has become a challenge in Ethiopia.

In addition to these methods, student-centered pedagogy also focuses on individualized instruction, where teachers recognize and accommodate students' unique learning styles, interests, and abilities. This approach promotes personalized learning experiences tailored to each student's needs, helping them reach their full potential.

The researcher recognized the importance of improving student outcomes and the quality of the teaching workforce. In many education systems, including Ethiopia, challenges exist in ensuring high-quality teaching practices. By adopting a student-centered approach, teachers can create more engaging and effective learning environments that address these challenges.

5. RECOMMENDATIONS

Based on the findings, the study suggests several recommendations for future action. Firstly, adopting a student-centered teaching approach is crucial for enhancing students' participation, creativity, and motivation. Teachers should explore and implement collaborative, experiential, and problem-based learning methods. Secondly, comprehensive teacher training programs focusing on pedagogical knowledge and effective teaching strategies are needed. Policymakers

should invest in professional development models that enhance teachers' skills and understanding of complex practices. Thirdly, curriculum redesign is necessary to incorporate skills relevant to the changing workforce, such as problem-solving, creative thinking, digital skills, and collaboration. Additionally, efforts should improve the recruitment and retention of quality teachers, as teacher quality significantly impacts student achievement. Embracing these recommendations will enable Ethiopian universities to effectively prepare students for the evolving demands of the workforce and promote their overall growth and success.

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7. CONFLICTS OF INTEREST

The authors declare that there are no conflicts of interest.

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Author Guideline

Submission Preparation Checklist

As part of the submission process, authors are required to check off their submission's compliance with all of the following items, and submissions may be returned to authors that do not adhere to these guidelines.

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2. The submission file is in OpenOffice, Microsoft Word, or RTF document file format.
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4. The text is single-spaced; uses a 12-point font; employs italics, rather than underlining (except with URL addresses); and all illustrations, figures, and tables are placed within the text at the appropriate points, rather than at the end.
5. The text adheres to the stylistic and bibliographic requirements outlined in the Author Guidelines.

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You are required to provide a concise and factual abstract which does not exceed 250 words. The abstract should briefly state the purpose of your research, principal results and major conclusions. Some guidelines:

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Results should be clear and concise. We advise you to read the sections in this guide on supplying tables, figures, supplementary material and sharing research data.

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The discussion section should explore the significance of your results but not repeat them. You may combine your results and discussion sections into one section, if appropriate. We recommend that you avoid the use of extensive citations and discussion of published literature in the discussion section.

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Powertech Systems. (2022). Lithium-ion vs lead-acid cost analysis. Retrieved from <http://www.powertechsystems.eu/home/tech-corner/lithium-ion-vs-lead-acid-cost-analysis/>. Accessed January 6, 2022.

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Oguro, M., Imahiro, S., Saito, S., & Nakashizuka, T. (2015). Mortality data for Japanese oak wilt disease and surrounding forest compositions [dataset]. Mendeley Data, v1. <https://doi.org/10.17632/xwj98nb39r.1>.

Reference to a conference paper or poster presentation:

Engle, E.K., Cash, T.F., & Jarry, J.L. (2019, November). The Body Image Behaviours Inventory-3: Development and validation of the Body Image Compulsive Actions and Body Image Avoidance Scales. Poster session presentation at the meeting of the Association for Behavioural and Cognitive Therapies, New York, NY.

Reference to software:

Coon, E., Berndt, M., Jan, A., Svyatsky, D., Atchley, A., Kikinzon, E., Harp, D., Manzini, G., Shelef, E., Lipnikov, K., Garimella, R., Xu, C., Moulton, D., Karra, S., Painter, S., Jafarov, E., & Molins, S. (2020). Advanced Terrestrial Simulator (ATS) (Version 0.88) [Computer software]. Zenodo. <https://doi.org/10.5281/zenodo.3727209>.

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