

Stakeholders’ Collaboration for Road Safety in Ethiopia: Key Players’ Perspectives

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Abstract

Effective collaboration among stakeholders of road safety is strongly recommended to ensure road safety system. This study aimed at identifying how road safety players collaborate to achieve the goal of reducing road traffic crashes (RTCs) and their impact in Ethiopia. The study employed qualitative research design, with FGDs and in-depth interviews as instruments of data collection. The data were collected from key road safety players working at the federal and regional levels, the academia, and the private sector, and thematically analyzed. Findings reveal that there is strong interest for road safety stakeholders to involve in and contribute their share to address the problem. Accordingly, Ethiopia has established a lead agency that exclusively coordinates the road safety works which is expected to collaboratively work with a number of multi-sector stakeholders. The country also launched National Road Safety Strategy which is designed based on the Safe Systems approach that call for collaboration among several stakeholders to prevent loss of lives, serious injuries and economic loss. In line with the Safe System approach, strong multi-disciplinary and multi-sector stakeholder engagement that stretches from the federal to regional and city administrations, and from government sectors to development partners, civic organizations, and private sectors can meaningfully reduce road traffic crashes and their devastating consequences. However, collaboration among the key stakeholders is by far less than the desired level and expected standards that implies the need of more efforts and commitment of all parties to improve it.

Key words: Road safety, Road safety strategy, Safe System Approach, Stakeholders’ collaboration, Stakeholder engagement

1. Introduction

Road traffic injuries (RTIs) are the result of complex interactions between several interdependent factors related to humans (motor vehicle drivers and other road users), the environment (road design and management, weather and light conditions), and vehicles (technical quality and protection). These layers of complexity require the efficient coordination and engagement of stakeholders, promoting all aspects of RTI prevention such as user safety, infrastructure safety, vehicle safety, post-crash response, traffic rules and enforcement, education and promotion, and data collection, analysis and sharing (Mitullah, Small & Azzouzi, 2022). Stakeholder collaboration is a process through which groups with similar or different perspectives exchange viewpoints and search for solutions that go beyond their own vision of what is possible. Collaboration goes beyond people participating (passively or actively) in a process. It also extends beyond communication, cooperation, and coordination, even though these are key elements in the process. Collaboration therefore refers to a mutually beneficial relationship between two or more parties that work toward common goals by sharing responsibility, authority, and accountability for achieving results (Scoular et al, 2020).

Collaboration is multidimensional that involves an exchange of views and ideas considering the perspectives of all the collaborators, whether or not agreement is reached in their interaction (Coeling & Cukr, 1997, cited in Lindeke & Sieckert, 2005). The term ‘collaboration’ does not imply supervision, or a simply one-way or two-way information exchange. Instead, effective professional collaborative relationships require mutual respect, trust and tenacity that are worth the effort because they result in better outcomes for the collaborators (Kramer & Schmalenberg, 2003 cited in Lindeke & Sieckert, 2005). Boswell & Cannon (2005) on their part have identified three essential elements associated with successful collaborative partnerships: networking, leadership, and vision. Networking, which enables one to draw upon multiple resources and build a team to accomplish the desired objectives, strengthens collaborative efforts. An important networking skill is the ability to identify resources that are available within the community. Putting multiple resources together requires networking skills. Leadership entails inspiring stakeholders to devote energy, time, and resources toward a positive endeavor (Buonocore, 2004 in Boswell & Cannon, 2005).

Jarmai & Vogel-Pöschl (2020) have addressed the challenges also. One of the main challenges of meaningful collaboration to them is found in the very interaction between different groups of stakeholders. To make a collaboration process meaningful, it is vital to invest time and effort into discovering rationales and contexts of the respective collaboration partners. Differences will arise in the form of diverging opinions about a particular matter. Discrepancies become more difficult to grasp, however, when collaborating parties use different vocabulary to discuss the same matter or when they place it into completely different contexts. Misunderstandings could further reinforce due to varying speeds and work modes of for-profit companies compared to individuals or other types of organizations.

Therefore, according to Jarmai & Vogel-Pöschl (2020), if organizations want to engage in collaboration that is supposed to be meaningful to all participants, they need to invest time and effort into planning, ensure expert facilitation and develop the capacity to deal with diverging rationales. Moreover, the collaboration will only become meaningful if its outcome has not been

determined beforehand by only one of the collaborating parties. The organization benefits from the collaborative effort if it is open, clear and transparent, and allows external influence on internal decision-making processes.

Overall, as Baggs (2005) emphasizes, in the context of service provision that demands engagement of various players, there is a need to look beyond one's immediate setting to the larger organization and to other organizations. Leaders need to consider how to support and reward collaborative endeavors for better outcomes and to recruit and retain service providers. If this is not the case, even if collaboration is typical feature of contemporary organizing, there still is possibility for failure of its applicability, for unsuccessful collaboration is ubiquitous in practice (Koschmann, 2016).

As it has been the case over the past decades, RTI has continued being humanitarian crisis. According to WHO's report, about 1.19 million people die each year on road globally; more than 2 deaths are occurring per minute and over 3200 die per day (2023). Following best practices elsewhere and WHO's recommendations, the Safe System Approach is being adopted as a more impactful intervention approach in many parts of the world (Parkin et al. 2022; WHO, 2011). The approach recognizes that road transport is a complex system and it places safety at its core. It also recognizes that humans, vehicles and the road infrastructure must interact in a way that ensures a high level of safety (WHO, 2021).

Among others, the Safe System Approach "motivates those who design and maintain the roads, manufacture vehicles and administer safety programmes to share responsibility for safety with road users, so that when a crash occurs, remedies are sought throughout the system, rather than solely blaming the driver or other road users" (WHO, 2021, p.9). Hence, there is a very strong need for the various players in the road system to coordinate and collaborate to address this complex issue so that the risk is significantly reduced to zero or minor injury even if crashes do occur. To this end, it is necessary to identify first the variety of sectors and actors working in the system in order to understand their roles and how well they are discharging them so as to curb or minimize road carnages. The sectors and actors have direct or indirect responsibilities for and interests in the prevention of RTIs.

In their organizational analysis of road traffic crash prevention to explain the difficulties of a national program in a low income country Lao PDR, Vogel et al. (2015) state that while the relationship between key stakeholders can be a crucial determinant to the effectiveness of road safety programs, the issue has rarely been addressed. Again, as evidences regarding integrations among road safety stakeholders in Africa reveal, they are not to the extent expected, and hence they do not show any significant contributions to road safety improvement. For example, Mitullah, Small & Azzouzi explain that "insufficient attention [is] given to inter-agency governance structures which bring different arms of government together, and support engagement of stakeholders outside government" (2022, p.31). Ansell & Gash (2007) have also identified factors that are crucial within the collaborative process. These factors include face-to-face dialogue, trust building, and the development of commitment and shared understanding.

In the context of Ethiopia, while a lead agency is in place and there have been claims and attempts of stakeholders' collaborative engagement to addressing this multi-layered social problem, it seems that there is gap among the key players in meaningfully mobilizing concerned stakeholders

for a collaborative approach to address the road safety problem, and on the role this stakeholders' collaboration could contribute to address the problem to the extent expected (Mekonnen *et al.*, 2023).

Objective of the study

This research has thus attempted to address the following two research objectives:

- To identify the stakeholders that are involved (or should have involved) in the road safety efforts of Ethiopia;
- To examine the practice, readiness and commitment of road safety stakeholders to collaboration.

Theoretical framework: The Safe System approach to road safety

A number of players involve in the road and transport system: the road and transport system designers and constructors, traffic management teams like flow controllers and regulators, road users, emergency experts, etc. Hence, understanding actual road safety related views and practices of these sectors and actors who are responsible for the design, construction, maintenance and management of roads and other stakeholders involved in the road traffic management and safety could improve our knowledge of the contexts of crashes and hence provide opportunities for better intervention schemes.

The Safe System to road safety recognizes involvement of many sectors and actors in the road system, and assumes that the working together and collective actions of these sectors and actors of society would result in significant reduction of the likelihood of events leading to RTCs with fatalities and severe injuries, and hence the harm caused by individual road users' mistakes is minimized (Corben, *et al.*, 2022; Parkin *et al.* 2022). The approach is based on the notion that safe road users using a combination of safe vehicles, travelling at safe speeds and on safe roads will reduce the impact and severity of injury to the human body against violent forces, and therefore reduce the number of deaths and serious injuries resulting from using the road network. Thus, the approach begins with a commitment to eliminate fatalities and serious injuries among all road users, and uses thoughtful road and vehicle design to minimize crashes that occur when people make mistakes and to reduce crash forces so that people are less likely to be injured when crashes occur (Finkel, *et al.*, 2020).

The applicability of the Safe System approach to road safety can be witnessed from its decades of implementation and outcomes that have been observed in countries like Australia, New Zealand, Spain, Sweden, and The Netherlands (Parkin *et al.* 2022; WHO, 2011). Although none of these or other best performing nations claimed to have been fully successful scoring significant reductions in the number of road crashes and the accompanied death and severe injury in their respective contexts, these nations have given evidences to the approach's effectiveness.

It was in its first Decade of Action for Road Safety that WHO (2011) listed a set of activities for national-level road-safety strategies, grouping them as five road-safety pillars upon which every road safety efforts of member countries should base. These pillars are: Road Safety Management, Safer Vehicles, Safer Road Users, Post-crash Response, and Safer Road Environments (UNDSS, 2019, p. 10). In the second Decade of Action for Road Safety, speed management is brought to

attention as critical to the effective implementation of the Safe System approach. It is cross-cutting risk factor that is addressed through actions relating to different elements of the Safe System, such as multimodal transport and land use planning, infrastructure, vehicle design and road user behavior (Global Plan, 2021, p.20). The Safe System principles, the traditional road-safety pillars, and speed management are regarded as valid theoretical structures for all practical implementation of Safe System activities to road safety.

The Safe System framework emphasizes on key objectives for a road safety effort: making the road transport system more forgiving of human error, and minimizing the level of unsafe road user behavior. The approach according to the five-road safety pillars gears all road safety efforts towards a balanced view of road safety practices on road users, the road and its environment, vehicles, post-crash responses and the overall road safety management. Finally comes speed as a crucial cross cutting factor to road safety and so is necessary to integrate it in the overall road system and its management. Hence the effective functioning of all these elements and the impact thereof is a result of meaningful collaboration among the key road safety stakeholders working on each of them and beyond.

2. Methodology

In this study, the qualitative case study design was adopted. According to Creswell (2014), the qualitative research seeks to grasp meanings individuals or teams subscribe to social or human problems. The qualitative studies examine opinions, attitudes, and perspectives of human beings, with a focus on how individuals perceive and give meaning to different social behaviors in order to explore people's social observations (Tümen-Akyıldız & Ahmed, 2021). Hence, the qualitative research doesn't involve data numeration; instead, it uses data that is expressed in words, the description of accounts, opinions and feelings of people that is collected through archival documentation, interview or focus group discussions (FGDs). However, qualitative study does not describe a knowledge for generalizations; it tries to provide a detailed information about an individual, group or any entity so that knowledge/insight that is applicable in other contexts could be gained.

For this study, therefore, data was collected in two ways: through archival documentation and FGDs and semi-structured interviews. The FGDs and interviews were held with key road safety players working at the federal, regional, and zonal and district levels, in the academia and private sectors. Nine key road safety players working for federal offices, the academia and private sectors participated in the study, each interview took on average 75 minutes. Again, three FGDs were conducted with traffic police and road transport officers that worked in districts in Jimma Zone; the FGDs were composed of 8 to 11 participants, and each FGD was on average 90 minutes long. Moreover, two government road safety strategy documents that are being used currently in Ethiopia, i.e., the FDRE National Road Safety Strategy (2022) and the Addis Ababa City Road Safety Strategy Implementation Plan (2021/22-2023/24) were analyzed as case studies focusing on their contents on the role and level of engagement of stakeholders, and the necessity of collaboration among them to address the road safety problem. The later document was selected because to draw lessons from Addis Ababa given others do not have similar plan.

The qualitative thematic analysis has been adopted for this study. The qualitative thematic analysis could best be defined as “the systematic reduction of content, analyzed with special attention to the context in which it was created, to identify themes and extract meaningful interpretations of the data” (Roller & Lavrakas, 2015, p.232 cited in Roller, 2019). In thematic analysis, a theme of a coding category can refer to the *manifest* content of the data, i.e. something directly observable, or a more *latent* one, such as talk in which an issue is implicitly referred to. Thematic analyses often draw on both types of theme, manifest and latent, and even when the manifest theme is the focus, it is with an aim of understanding the latent meaning of the manifest themes observable within the data, which thus requires interpretation (Joffe & Yardley, 2004).

3. Results and Discussion

3.1. What are the stakeholders to road safety?

The road safety issue is taken by almost all participants interviewed and documents examined as an issue of interest to every sector and actor. As one participant put it, “everybody is a stakeholder.” This way of conceptualizing road safety is related with the fact that everybody is road user, be it as pedestrians, cyclists, passengers or vehicle drivers/riders. Since e all use the road and/or some means of transportation, everybody is constructed as having a stake on the safety of the road and its environment. Accordingly, everybody is construed as having some role both to the occurrence of crashes and to address them in some way, as it is stated below:

Everybody is a stakeholder. This is because everybody moves on the road. There is no one who doesn't use the road; there is no one who doesn't use transport vehicles. Therefore, everybody has a role in the occurrence of accidents and in alleviating the problem (P5).

This way of construing all road users as stakeholders might also have emanated from the discourse regarding dominant causes and victims of road crashes. While road crashes have different causes like environmental and technological, behavior related factors are recognized as the dominant ones (Kareem, 2003; Thomas, et al, 2013; Yasmeen, 2019). In the context of Ethiopia also, road users are construed as both the main causes and victims of crashes (Persson, 2008; Deme, 2019; Alemayehu et al. 2023). A participant had to say the following in connection to this:

The major causes are the parties involved in the road. According to the police report and our assessment, the major causes are drivers. Even though the number may vary as per the studies conducted, it [the problem] is more related to drinking and driving, driving at high speed, not wearing seatbelts, driving at night, and not following the rules and regulations. The second one is the condition of the road. The roads are built without proper design standards. The vehicle technical problem is directly related to the driver because the driver has to check its condition; he has to inspect and suspect problems if he hears unsettling noise coming out of the vehicle which clearly is related to the driver (P7).

On the other hand, some actors are constructed as key players to address the road safety problem, mainly due to the special role assigned to them. As one participant states, they are called as “inner circle” or the “main stakeholders”. Due to the nature of their engagement, and roles assigned to them by the government, “there are institutions which have key ownership of road safety” (P5). The groups that are constructed this way are members of the National Road Safety Council, and its similar structures organized by Regional and City Administrations. These are governmental institutions at the federal structure: ministries, commissions and agencies, and their extensions

down to regional and/or city administration levels. The main ones are: Ministry of Transport and Logistics, Ministry of Health, Ministry of Education, Ministry of Justice, Ministry of Peace, Federal Police Commission, Transport Authority, Ethiopia Roads Authority, and their extensions at the regional/city administration levels (P₅, P₇, and P₁₁). A participant elaborates on this as:

Among these, we can, for example, mention the transport sector, the Ministry of Transport, or we call it transport authority, from the federal to the regions, all the way down. We can mention the police. We can mention health [the health system]. We can mention education [the education sector]. From legal perspective, legal institutions, or justice institutions, from the Ministry of Justice down to other bodies, and other bodies who are engaged in related coordinated activities ... All these are stakeholders included in the inner circle (P₅).

In principle, almost all participants have a very firm understanding of the contribution of collaborative engagement of all stakeholders to address the road safety problem. However, the practice would usually be of some of them. According to the participants, even from among those that were labeled as inner or main stakeholders, only two or three stakeholders would dominantly engage in the collaborative work to road safety, and these are from the transport, traffic police and roads authority sectors:

The engagement of all stakeholders is crucial in order to minimize the impact of road traffic accident as soon as possible. Unless all stakeholders overtake their own responsibility, the consequences will be worsened. Very recently, the issue was taken as the duty of road transport and traffic safety only. But the accident is all about the people; it doesn't belong to a single sector. As such, as with the severity and seriousness of the problem, even though it required serious attention, it was missed. The problem needs to be on the agenda of the government and higher politicians (P₁).

Mostly in the collaborative work, the two offices, the transportation agency and the traffic controlling office are working together. On road usage, road maintenance and any road related facilities, we communicate with roads authority, and they provide the required service. So these three offices, transportation agency, traffic police office and roads authority, are the main role players on road traffic accident and are working together in collaboration. These three offices are working in alignment. But the most collaborative offices in controlling and enforcing the laws of traffic are the two offices, the transportation agency and traffic controller (P₁₀).

Another FGD participant, a traffic police working in a district in Jimma Zone, also admitted the fact that unlike claims, not only that the road safety work is in practice taken by two offices only – transport agency and traffic police, but even they are not working in collaboration. He said, “Two organizations are responsible for traffic accident control, transportation agency and traffic police. But they are not on the same page.” (P₂). Next to those stakeholders that are labeled as “inner circle”, there are other stakeholders whom participants labeled to have been playing visible role in the road safety work such as insurance companies which collaborate in the road safety work. The other group that have recently been giving attention to and engaged in the road safety work of Ethiopia are higher education institutions (HEIs). Even if the role of education to address road safety was recommended two decades ago (Peden, et al., 2004; WHO, 2009; WHO, 2013), HEIs in Ethiopia have not come in bold to address the road safety problem until recently despite the individual efforts of some scholars and students. A participant expressed the significant role the

academia could have in terms of addressing the road safety problem by investigating the issue locally, and bringing best practices elsewhere to minimizing the impact of crashes as follows:

We can shape human behaviors by awareness creation mechanisms. For this purpose, universities should participate in doing researches. They can reveal out black spots by researching. Exhaustive and rigorous researches should be conducted frequently. Not only this, the way forward should be sought for. When you do research, you read articles and get international experiences. Therefore, you will bring those traditions to the country (P₃).

HEIs in Ethiopia are now joining the road safety effort through the opening of programs and research centers that exclusively work on road safety, and a participant has put this as follows:

In different countries higher education institutions and research centers have a big role in advancing road safety. ... they are involved here also, we have seen quite big changes. Specifically in this field of study very little academicians have been certified. To a small level from regional and federal offices, we have recruited students to enroll in Addis Ababa University. So we have begun to work with the University ... students are enrolled in road safety engineering discipline. It is a holistic program. ... The other one is Civil Service University; it is enrolling students at a postgraduate level in transport planning and management. Even though we are not providing enough support, there are efforts; there are initiatives in this regard. ... We believe higher education and academia have to involve in such issues (P₅).

The role local and international NGOs could play in addressing the road safety problem is also implicated in documents and discourses of the key players. Organizations like World Bank (WB), World Health Organization (WHO), Bloomberg Initiative for Global Road safety (BIGRS), Global Road Safety Partnership (GRSP) and World Resources Institute (WRI) are contributing their share to improve road safety in Ethiopia in a variety of ways, like in capacity development, awareness creation, policy/strategy development and revision of road safety laws, etc. However, the reach of most of these NGOs has been limited to only Federal level sectors and the Addis Ababa City Administration.

Globally there are big organizations working on this area. For example, WHO is an international agency. Even though its work is related to health, it works on road safety. The World Bank is also another example working on road safety research and development. They both are involving themselves by giving training. African Development Bank is also involved. The others are Bloomberg and World Resource Institute. They are involved in road safety work of our country mainly on law enforcement and improvement (P₅).

We have partners like Blumberg initiative or GRSP. The other is the loan we get from World Bank. There is a project that we will be doing with World Bank and we will get a loan again for that by collaborating it with other projects. They work on road construction and when they do that they will also allocate budget for safety too (P₁₁).

Overall, participants discussed the different road safety stakeholders and their level of engagement. As explained, the structure for road safety stakeholders was in place, and a number of road safety stakeholders are listed. While most of them are in the government structures, mainly ministries at the federal structure and bureaus, agencies and authorities at regional level. The role and

engagement of academia and NGOs, particularly the international ones, although it is not to the level expected, has also been on the rise. However, there still is distinction among the stakeholders in terms of their level of engagement; hence, some are labelled as inner stakeholders implying that there are others which are not inner. The implication here is that some of the stakeholders were working being committed to the safety work, and others were not so committed.

3.2 Structure and development of stakeholders' collaboration

Participants of the study have conferred the presence of an agency that leads the road safety work (P1, P10). At present, the lead agency responsible for the road safety work of the country is the Road Safety and Insurance Fund Service (RSIFS). Earlier, however, the lead agency at the Federal level was the National Road Safety Council (NRSC), and there were similar structures at the Regional and City Administration levels. Moreover, the same participants indicated that vertical and horizontal integrations exist among the stakeholders. The Council which is composed of representatives from different departments and sectors such as the Ministry of Transport and Logistics, Ministry of Health, the Ministry of Education and Ministry of Justice, used to meet twice annually mainly to evaluate road safety reports and plans, and endorse budget. In the Addis Ababa road safety strategy document, for example, the document shows that the City's road safety is overseen by the Council, which is composed of a variety of Bureaus.

The following discussion gives an illustration of how the Addis Ababa City Administration Road Safety Council is structured. The Council is led by the Deputy Mayor of the City, with the City's Traffic Management Agency as secretary of the Council. There are 11 Heads/Managers/Commissioners of governmental offices of the City acting as members of the Council. These are the City's Traffic Management Agency (AATMA), Transport Bureau (AATB), Police Commission (AAPC), Bureau of Attorney (AABA), Health Bureau (AAHB), Peace and Security Administration (AAPSA), Education Bureau (AAEB), Roads Authority (AARA), Drivers' and Vehicles' Licensing and Monitoring Authority (DVLMA), Fire and Disaster Risk Management Commission (FDRMC), and Transport Authority (TA). From these 11 offices, four of them have the responsibility of leading technical working groups/sub-committees called: the Compliance and Enforcement Sub-committee (led by AAPC), the Road Safety Management Sub-committee (led by AATMA), the Health System Sub-committee (led by AAHB), and the Safer Roads Sub-committee (led by AACRA). However, as one of the objectives of the Council reveals, the stakeholders that are mentioned by name as having the responsibility of improving the road safety problem of the City are only five: AATB, AAHB, AAEB, AAPC, and AARA (ACA Road Safety Strategic Plan, page 45). On the other hand, other governmental organizations, civic society organizations, the private sectors, and individuals have also been included in the structure, but only as members of a Road Safety Forum, which also is led by AATMA.

A participant (P₉) explains what the purpose of the collaborative work of the different stakeholders as follows:

Why should we meet every three months? We are working with that to bring countrywide solution, when we are integrating; otherwise, if ERA alone runs here, you run lonely there, it is of no use. When we know what you work, and when you hear our work, in a collaborative manner, some tangible outcome could occur at the grassroots level (P₉).

As we learned during the interview, similar structures are also established for road safety works at zonal and district level. These district-level road safety councils have frequent contacts and discussion sessions (P₄). There are success stories reported from among the FGD participants regarding the collaborative engagement and the change they have witnessed as a result:

The collaboration we have with the traffic police in our district is very good. Since we started to work in collaboration, the number of accidents has decreased. We discuss with the traffic police and observe the flow together every week. We give feedback to each other. There is a council which is chaired by the district leader at the district level. The district leader observes our work every month. We present our reports. There are areas in which they support us. With regard to the motorcycle in particular we are doing a great job. Thus the collaboration we have this year is better than the other times' (P₄).

However, the practice (of collaboration) doesn't seem consistently practiced and it sometimes depends only on the commitment of the responsible people organizing/leading the team may have. Below is a reflection of another FGD participant from a district in Jimma Zone:

We have a discussion forum called traffic safety that meets every two week. It is chaired by the administration and security office. There is also another discussion chaired by the district administrator. This is called Board of Traffic Safety. This comprises of the community, education sector, health sector, youth and women's affairs sector, and disaster prevention sector. This gathering is conducted when the district manager has time. It is not conducted very often. Sometimes, the manager chairs the discussion. With regard to collaboration with the zone, we meet in the process of report and supervision. The zonal leaders supervise and follow up our work. We also communicate our accomplishments to the zonal administrators. When there are problems, we communicate and they support us. This is how we are working together (P₄).

3.3 Problems associated with the structure

As the study participants indicated, this structure has different problems. The first problem is related with the lead institution's capacity. Since it is of lower capacity, its efforts to bring these all stakeholders into one direction and make them work collaboratively had drawbacks. A participant, for example, had to say the following:

Now, I don't know where the Ministry takes the issue, but an institution should be established that addresses road safety; why should we work as double agent? There should be an institution that works on road safety, I mean an independent institution; that is a full-fledged institution (P₉).

Secondly, the institutions that are designated as stakeholders to road safety have their own mandates. Hence, they could mostly be busy with their particular tasks and may not give the required attention and time to road safety related activities. Moreover, the lead agency and the ministerial offices are very far from each other hierarchically, i.e., it is difficult for the lead office to oversee them with authority. As a result, the work was by far performed through negotiated consensus, explaining issues and creating shared understanding of the problem, than due to the presence of a structure that brings each stakeholder accountably engage in the expected duties and responsibilities. Below are how two participants explained this problem:

Ours is only one unit, one department working under the Ministry of Transportation. The Council, with those coming from its departments, used to meet twice annually; it evaluates plans and reports, and endorses budget. These institutions have enormous activities assigned to them by the government. Therefore, they [the ministerial offices] had weaknesses in owning this [road safety] and running activities accordingly. You can't evaluate their weaknesses and ask them why these happened...One department can't directly order a ministerial office by writing a letter; it is the understanding that works; the bureaucratic rule doesn't permit this. Anyhow, they have their own huge responsibilities, and suffer from limitations in establishing units and staffing them with sufficient professionals; it is irregular, available in some but unavailable in others. This is a problem that has limited our success. So, we believe that the strength of the leading institution will enable it to integrate these things appropriately (P5).

Those who are leading this road safety, who are they accountable for? In other countries it is either for the PM or the president, but here it is not the same. Every office is parallel; it is difficult to enforce one office due to their similar power structure. Before, there were different council members under the PM, who were working on [road safety]. Those council members had their own gaps. Since they were not working together, the intervention process was time taking and inefficient (P7).

Another significant gap with the structure is absence of meaningful public mobilization and strong relations with the private sector. Given the road safety endeavors must be done by a number of stakeholders collaboratively, the public need to be well mobilized. Although it is not to the expected extent, participants believe that different institutions are accomplishing various road safety related activities and promotions. However, it is not well planned and organized; it is fragmented and campaign based. They believe the work should have been taken as a public-private partnership project. However, due to the very nature of the work, that it is not directly and quickly profitable, it is not one to which several bodies venture into quickly. Even though regulations in the country permit the public-private partnership to work in various sectors, there are many things that remain yet for the private sector to collaborate to the level expected in the transport sector in general and in the road safety work in particular.

In order for the country to implement the road safety strategy effectively, participants argue that it needs first to establish the proper institution and structure. It is also necessary to have the required human power that could put the policy into action; at present, participants do not seem to have the confidence on the availability of trained human resource. Some of them put the case as follows:

But I have doubts regarding assigning the right person to the right position. If we say we are producing trained human resource that is able to understand and carry on the policy, one who is committed civil servant, we need to assign these people in the designed structure so that the policy could be implemented effectively. So the problem I observe is that there are gaps in the integration of different stakeholders (P12).

In reality transport agency and traffic police are working together, but all the risks go to the traffic police. There is big question on the personnel assigned from transport agency. The personnel of transport controlling office may be assigned from being a guard, may be an uneducated one; generally there is no clear criteria of selection. The one promoted from

being guards are not committed; they may work for 2 or 3 hours per day and not interested to work with traffic police since they are feeling superior. This needs emphasis from transport agency's side (P₂).

In fact, participants from the academia also have criticized the road safety practice for it, according to them, does not provide space and/or position for graduates in fields related with transport and road safety:

As a management professional, I believe that if the leadership is healthy, other things will also be normal. Leaders should put appropriate personnel at the right position. I am raising this issue because I know my students were denied positions in the transport office. They are still suspended because it has personal benefits. There is a mysterious personal gain in the transport office that no one can accuse you of. You will not face any problem if you do whatever you want. So, the leadership should supervise the police who are enforcing the laws. The duplication of efforts will be high if the traffic police keep silent through corruption while drivers are causing accidents (P₃).

Since January 2022, however, the responsibility of the NRSC Office has by law been transferred to a newly established structure, the Road Safety and Insurance Fund Service (RSIFS), which is an outcome of a merger of, among others, the NRSC Office and the Insurance Fund Service. It is organized independently as one wing, called Service, under Ministry of Transport and Logistics, being led by a CEO and deputy CEO. It is being structured and staffed with over 300 employees. It has become an independent institution which can deal with all road safety issues of the country. This is construed by most of the participants as one key measure taken by the federal government to strengthening its efforts of addressing the road safety problem. Hence, there are hopes that the participants foresee to come; the recently accomplished re-structuring of different offices that were working independently and have now brought together to be under one umbrella will make the road safety effort far better. However, since the office was still under establishment by the time data for this research was collected, it is at an early stage now to make any evaluation.

3.4 Problem of collaboration among stakeholders

The stakeholders recognized as key players of the road safety work of the nation should have performed different functions independently and in collaboration, as the key players stated. The Federal Police Commission and its respective structures at regional and city administration levels have, for example, the duty of collecting and compiling RTC data, crash history and statistics. This is a duty given to the commission by proclamation. Evidences regarding the transport system, like safety-oriented road transport system, the number and quality of vehicles, and the available policies and regulations pertaining to the road transport system are accessed from the Ministry of Transport and Logistics and its extensions, like the Regional Transport Bureaus or the Addis Ababa Traffic Management Agency. Other key stakeholders like Ministry of Health, Ministry of Justice, etc. do also have their own duties and responsibilities. Such a conceptualization of road safety as a shared responsibility of different stakeholders, and the necessity of cooperation and coordination among them is clearly stated in the national strategy document. In fact, the document calls for the collaboration of local, national, and international organizations to achieve the road safety effort:

Road safety is a shared responsibility that has to be based on cooperation and coordination of all the relevant stakeholders to develop effective safety initiatives and interventions. The coordination and collaborative efforts of government and nongovernmental organizations promote road safety awareness and ensure implementations. All stakeholders, partners, local organizations, and concerned bodies should develop road safety strategies, plans and programs (FDRE National Road Safety Strategy, 2022, p.36).

It further states that:

Successful delivery of the strategy requires a high level of collaboration among the relevant stakeholders and authorities involving a clear delineation of roles and an institutional framework that facilitates a collaborative approach. This strategy sets out the lead department or agency for each action and establishes a process of formal and informal consultation and review with the key stakeholders. Hence, coordination and engagement of diverse sectors and actors have an important role in road safety education (FDRE National Road Safety Strategy, 2022, p.36).

The functions these stakeholders are discharging in collaboration, however, do not seem to have been to the level expected. Unlike the development of such strategy documents, actual engagement on the part of high level decision makers to make sure its implementation seems to be limited. There are several reasons participants mentioned for the problem to occur. The first problem is related with limited capacity of the lead agency to bring all the stakeholders on board, which could mainly be attributed to the very structure of the agency:

There is what we call vertical and horizontal integration. Attempts have been made to communicate vertically and horizontally with the stakeholders whom we have to establish relationships. However, this had numerous problems. This is because, first of all, since the leading institution had a low capacity, its effort to bring these bodies into one direction and make them work [collaboratively] had drawbacks. For example, the establishment of our department, the establishment of the leading institution, and the ministerial offices that we call owners are very far hierarchically, in terms of authority (P₅).

The other reason is related with lack of proper attention that the problem demands. As one FGD participant put it, politicians do not give road safety the attention it deserves; he expected them to be devoted as they do for election:

It is better to avoid forwarding the duties to one body alone. All stakeholders have to be involved and concerned. As to me, if all work together, traffic accident can be reduced. I would like to comment on the politicians and governing bodies. They have to work on it like the time of election. During election campaigns, they all call for elections, but people can elect them only if they are alive. They have to teach the society that elects them (P₂).

The other concern participants expressed is the poor participation of the private sector. As an issue that demands the contribution of people from all sectors, a lot was expected from the private sector also, which, among others, could have a lot to contribute to safety even as part of their social responsibility engagement.

What we want is to use public partnership, since by its nature of the work does not generate profit, the private sector won't involve as expected. Even though the government's law allows to work with the public sector in this regard, the private sector is not willing to do this. But, our need is to work with them and we have some connections with them even though it is not as expected (P₅).

Furthermore, participants lamented on the non-existent or poor participation on road safety of civic society organizations. Unlike their engagements on other health related problems, the role of such organizations is so limited while the road safety problem is so worrying:

The civil societies should contribute to the minimization of the road accidents. There are no many NGOs which involve in traffic control. Imagine, we are the first in the world by traffic accident. Have you ever seen civic societies or NGOs working on the road traffic? If we assess, the numbers of deaths by traffic will be more than the number of deaths due to HIV. Is it not more than the number of deaths due to TB? It is really greater in terms of material destruction. No one works on this problem. None. NGOs should make traffic their priority. They can work on awareness and material support (P₃).

Overall, as the study participants put, the failure in institutional collaborations of the key road safety players could be improved if the issue is addressed from five aspects: legal, financial, spatial, technological and human resource.

The legal integration is meant to address issues related with establishing proper legal frameworks that could help make the road and its environment safe for road users. This includes, among others, addressing safety-oriented road design, timely completion of road renovation and construction projects, and prevention of illegal practices being exercised on pedestrians' pavements that includes street trading, parking and car repair, or observation of right of way rapidly. Thus an efficient transport system is a product of putting in place the proper legal framework and making sure its enforcement. However, since there is lack of integration among the different players in Ethiopia, like the road constructors and trade regulators, for example, the road is being used for different services at the same time, jeopardizing the safety of its users. A participant from the academia puts the problem associated with legal integration as follows:

We have problems in this regard. For example, is the trade office really integrated with the regulatory offices? Is Road Transport or AACRA working in an integration with the trade office? You may find a car repair service by the side of a square. It is okay to have car repair service provision, but is the ministry that provides permit for trade in agreement with [the ministry for] road construction and administration when they permit people to work there? Or is the regulatory office working with them? So there is a real problem of integration from the legal perspective (P₁₂).

The driver licensing practice is the other concern mentioned by participants in relation to legal integration among stakeholders. A case mentioned is the driving license that teenagers could easily get while they may not have the required skill and experience, and the physical and emotional maturity and readiness to ride motorcycles and to drive heavy trucks.

It is not only transportation agency or office which has to give awareness on traffic accident causes. Rules have to be enacted about riding motorbikes since the accident by

motorbike has by now take the greatest share. This is the first. The second is about driving license provision. Very young kids do have the license. They are too young in age and when we ask them, their response is, "I do have the license", so what can we do? Their age is not enough even to ride bicycle, but the owner is only checking their license. They don't know how to drive and so cause accidents. Mostly teenagers do have the license, so we have to check our licensing organizations quite seriously because very young kids are being licensed (P₂).

Secondly, institutions need to have collaborated financially so that they could have the strength to really cause the required change, which, according to participants, is a missing link in the Ethiopian road safety context. The need to pull the required resources, be the resource is financial, personnel or time, to address the road safety problem is implicated by the key players as a problem that may have hampered the overall effectiveness of road safety efforts of the nation.

I do not believe safety is an issue of Ministry of Transport only. Ministry of Finance and other collaborative stakeholders are also required. But I don't see such kinds of financial integration. There was a council called National Road Safety Council which used to have five staff members; its annual budget is the same as the budget of just one high school while it is a national institution. In a country of nine or now ten regions and two city administrations, managing the [road safety] job with five personnel and the least amount of budget indicates a financial integration problem (P₁₂).

A third most significant issue in relation to stakeholders' collaboration is a problem of spatial integration. Roads by their very nature are cross-boundary, and the safe mobility of people and resources requires spatial integration among the neighboring regions and towns. For the safe mobility of citizens and resources, therefore, federal institutions, regional governments and even neighboring towns need to collaborate to have spatial integration that will make sure mobility across boundaries is safe and efficient.

If we take Addis Ababa, there should be a spatial integration with special zones of Oromia. For example, if we see the public transport provision, as it is known, we have Anbessa bus, which is a city bus of Addis Ababa, but it is also serving the public in the surrounding special zones of Ormoia. The problem is, however, if we see if these institutions have spatially integrated to work both on mobility and safety, there is gap, a missing link. There are five doors, and vehicles moving in Addis do also go to these five doors. Vehicles from different parts of the country also enter the city via these five doors. So these institutions need to integrate both legally and spatially (P₁₂).

The integration of stakeholders technologically is the other theme that emerged from the key stakeholders' discussions. Road safety effort is understood as a practice that demands the efficient design, construction, use and management of vehicles, roads and road signs all of which demand technological devices and appliances. On the other hand, not all of these resources, skills and knowledge are located at a place. Technological skills that may be found in one institution, ministry, region or town may not be available in the other. Hence, stakeholders need to collaborate to achieve the common goal they have, road safety, by maximizing the benefits and minimizing the impact of technology to road safety. However, as a participant put, "technological integration also is a missing link ... there is gap in this regard, and as a result of which the expected change

has not yet come” (P₁₂). Another participant explained the need for using technology to ensure road safety using Sweden as an example as follows:

If we take the experience from Sweden they initially worked on infrastructure and technology and after that it was easy to control the rest. So, everything must be technologically interconnected. And the road safety [awareness] should be started from early education and the people must be educated to think as responsible citizens (P₇).

The other gap mentioned in relation to stakeholders’ integration is that of human resources, which mainly is related with the collaboration of expertise required to address the road safety problem holistically. Road safety is an outcome of trans- and interdisciplinary efforts; thus, experts from diverse areas should collaborate; they could be in areas like road and vehicle design and engineering, enforcement, management, education and communication, and emergency treatment among others. Since human and material resources located in one institution may not be available in the other, it is necessary for stakeholders working to road safety to collaborate their diversified disciplinary knowledge and skills across different fields of studies. As P₁₂ emphasized, “We need to integrate one institution with the other in terms of human resources” also.

Some of the participants from the academia, however, expressed their worry that if there were any experts working to road safety in Ethiopia, they were dominated by those coming from the field of civil engineering while professionals in other fields like mechanical engineering, safety engineering, social sciences, law, health sciences, management and education. should have been incorporated. Moreover, some who were actively involved in the road safety work, as participants admitted, did not work in collaboration and trusting one another. On the other hand, a participant emphasized “to avoid this traffic problem, it needs devotion, and let’s trust each other and work together as much as possible; then, we can minimize it” (P₂).

A final issue the participants suggested is monitoring and evaluation of the collaborative efforts of the road safety stakeholders. This, among others, entails the enactment of road safety policy, implementation and follow-up of the implementation, auditing, adjustment and/or revision of the same as per the gaps that need improvement.

Experts should give input to the leaders or practitioners. Policy making, following up the implementation, and conducting frequent audit are crucial to improve the situation. Making follow ups to know how many laws have been translated into practice is also important. Analyzing those who have observed the law and those who are violating it is necessary, just cross checking the law and the practice. Starting from the traffic police to the transport agency, strict audit should be done and they should take corrective measures for the incidence that already happened (P₃).

3.5. Discussion

The need for collaborative effort of stakeholders to address the road safety problem has been called for since the past two decades by international actors like WHO and other road safety practitioners and researchers who are worried about the intensity of the problem. For instance, WHO and GRSP recommended the collaboration of national and international organizations, civil societies, NGO’s, businesses and individuals for road safety (Peden, 2004; Bekefi, 2006; WHO, 2013). Findings of this study also confirm the same; all interviewed key players and examined documents in Ethiopia

claimed the need for road safety stakeholders' collaborative engagement, and this is in agreement with findings of similar studies conducted elsewhere, like in Indonesia (Ma'ruf et al, 2020), and in Sweden (Hysing, 2022). In fact, it was early in 2011 that the Ethiopian first 10-years' national road safety strategic document was prepared and implemented in the same decade. In both the first (2011) and second (2022) national road safety strategic plans, the necessity of collaborative engagement of both governmental and non-governmental organizations to address the worrying concern of road unsafety in the country has clearly been underscored. The same is true in the context of Addis Ababa City Administration. In the City's Transport Policy, the need for establishing a council for road safety collaborative endeavor was stated as follows, "Traffic safety council shall be established at different levels involving stakeholders and city residents to coordinate and enhance participation in minimizing traffic accident" (2011, p.28). The issue has also been stated in the recent three years' (2021-2023) road safety strategic plan of the City.

However, against the claims, the collaborative engagement of road safety stakeholders has not been to the level required; it is so insignificant according to evaluations of the practice made by the interviewed key players and FGD discussants. While stakeholders' engagements are well recognized and stated in documents also, the practice is so limited; moreover, if there were any practice, it is only among the few stakeholders located in the front line. As it is also found in studies conducted by Ma'ruf et al (2020), if the involvement of the private sectors and the larger society is considered, it is so limited; moreover, relationships between stakeholders and functions of the leadership is weak (Vogel et al., 2015). This may be due to ineffective road safety leadership (Mekonnen et al, 2023) and weak commitment and trust in the collaborative engagement on the part of the key stakeholders in Ethiopia; this is against findings of Dorisman et al (2021) which shows that commitment of stakeholders for collaboration to provide the best service for addressing the road safety problem, and trust building in the collaboration of stakeholders in carrying out their roles in Tanjungpinang City, Indonesia.

While it is true that "collaboration is a hallmark of contemporary organizing" (Koschmann, 2016), the desired goals would be achieved only when it is exercised effectively. The findings confirmed that the structure put in place in Ethiopia for the collaborative engagement of the stakeholders did not found to have been supportive for the purpose. First, the ministries expected to engage in the collaborative effort had their own independent concerns and priorities that competed the attention they should have given to road safety. Secondly, it was impossible for the lead agency to directly oversee, control and take accountable the different ministries which are structurally not under its jurisdictions. Moreover, the annual budget being allocated for the lead office to finance its different road safety related activities was so limited to the extent the scarcity hampered it from discharging its responsibility and planned activities effectively. Hence, the coordination role of the lead agency to the collaborative engagement of the stakeholders is poor which is evident particularly in the area of collective action and is reinforced by a lack of interest from several different stakeholders (Vogel et al., 2015).

Unlike Keyton's (2017) positioning of collaboration as an interactive process, even if representatives from different ministries and/or institutions come together for discussion (they claimed to have it at least twice a year), and design some kind of shared goal or activity (like reducing the road traffic crashes by 50% by the end of the decade), their individual goals would

compete with the mutual goal they already agreed work on to the extent they forget the mutual and focus on only the individual.

Roles of politicians and decision makers have been well recognized as they are found in council level engagement to road safety, but it should have been well supported by professionals and researchers in the area in order for the council to have the required impact. For example, in line with systems theory thinking in the context of road safety, researchers and professionals treat the road safety problem as one consisting of complex relations between its components. Hence, they insist on a comprehensive way of addressing the problem – addressing the problem from different perspectives and engaging all stakeholders on board, including researchers in the area and beyond, road users, civic organizations, and the public at large. On the other hand, politicians prefer to find solutions mostly all by themselves mainly enacting rules and regulations and taking individuals accountable for the rules they might have violated when using the road. Hence, this could be among the reasons for the lack of mutual understanding and consensus between the key road safety players working under the lead agency and other professionals and researchers. As findings show, academicians also express their grievances on the absence of space for road safety graduates and researches that should have been conducted locally. They called for a far better space and engagement in research and innovative ideas targeting road safety risk factors and intervention schemes.

4. Conclusion and Recommendation

A key aspect of the Safe Systems approach is shared responsibility for safer road traffic system dependable among road users, the public authorities, lawmakers, policymakers at the federal government, regional states, city administrations and local authority levels. To achieve the goal of reducing the impact of RTCs and ensure safety, apart from the legally responsible bodies in the government, stakeholders from NGOs, the academia, civic societies, and the private sector should also involve meaningfully in road safety initiatives and activities. Shared responsibility also means ensuring compatibility of all forms of mobility and means of transport in a spatially confined road environment. It is therefore important to take road safety activities as cross-cutting tasks. This could happen only if road safety is taken as a common goal of all players and actors, and if the existing cooperation of stakeholders at various levels is revised and well strengthened to further collaboration. However, not only that the stakeholders' collaboration must be coordinated to a greater degree, it should also be made sure that accountability is put in place. Finally, it is essential that further interdisciplinary researches are conducted on collaboration, involving adequately all stakeholders – industry, academia, civic societies, the private sector and NGOs.

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