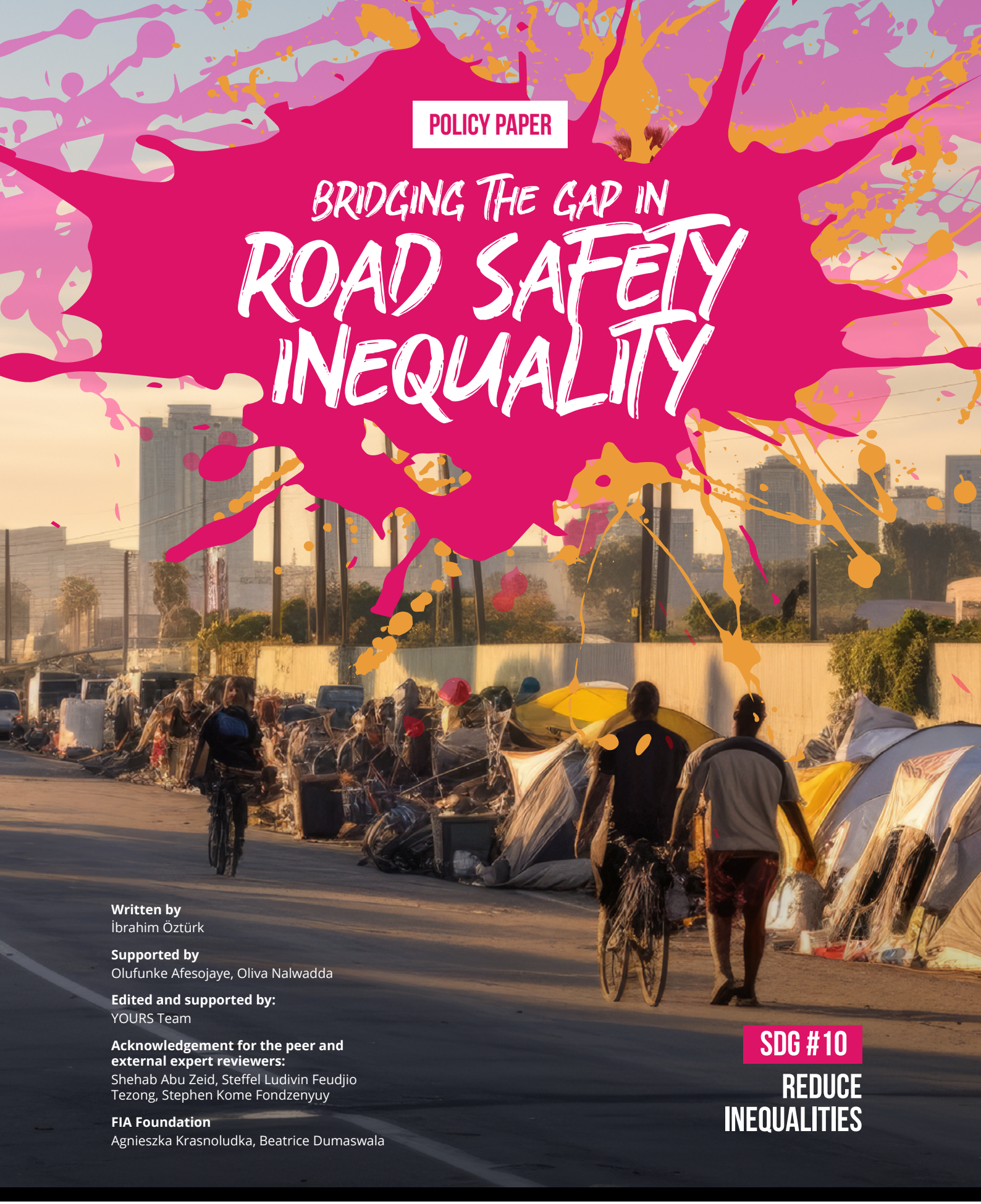
POLICY PAPER

BRIDGING THE GAP IN ROAD SAFETY INEQUALITY



Written by
İbrahim Öztürk

Supported by
Olufunke Afesojaye, Oliva Nalwadda

Edited and supported by:
YOURS Team

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Shehab Abu Zeid, Steffel Ludivin Feudjio Tezong, Stephen Kome Fondzenyuy

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Agnieszka Krasnoludka, Beatrice Dumaswala

SDG #10
REDUCE INEQUALITIES

Initiated by:

YOURS YOUTH FOR ROAD SAFETY

GLOBAL YOUTH COALITION FOR ROAD SAFETY
#CLAIMINGOURSPACE

THE GLOBAL GOALS For Sustainable Development

10 REDUCED INEQUALITIES

MEET THE WRITERS

İBRAHİM ÖZTÜRK
UNITED KINGDOM

"Every year, road traffic crashes claim the lives of hundreds of thousands of people and cause countless injuries and material losses. Within this system, we see that certain road users, social groups, and countries are disproportionately affected by road traffic crashes and are more vulnerable to these negative consequences than others due to many factors. I hope that this policy brief will address this issue; contribute to a better understanding of road safety; and promote an accessible, safe and secure transport system for all that will lead towards a safer transport system, leaving no one behind!"

NALWADDA OLIVA
UGANDA

"Understanding the existing stark inequalities in road traffic injuries and fatalities is crucial to the design of effective and tailored road safety interventions. To date, young people, women, and persons from lower economic backgrounds continue to pay the highest price for mobility. As such, intervention to reduce road safety inequalities can help fast-track the achievement of several low-hanging fruits, such as youth and women's access to economic opportunities. This will help promote education for all, especially for vulnerable groups such as practitioners with disabilities, reducing the burden of road trauma on the health system, among others. I therefore encourage stakeholders to use this policy brief to gain insight into existing road safety inequalities and how to advocate for, and design, a more inclusive transportation system."

OLUFUNKE AFESOJAYE
NIGERIA

"Road safety issues are public health issues that should be prioritised, and road safety design is also crucial to fast-tracking the attainment of sustainable development goals. I recommend this policy paper and YOURS policy toolkit be adopted by all countries and serve as a clarion call to immediate action."

CONTENT

EXECUTIVE SUMMARY

Road safety is a critical issue that affects all members of society, across all age and demographic groups. However, different evidence has shown that certain groups are disproportionately affected by road crashes and injuries, referred to as road safety inequalities. In recent decades, and worsened by the COVID-19 pandemic, inequalities have escalated, exacerbating and further revealing the extent of discrimination. This policy paper aims to address the existing road safety inequalities and propose solutions that will make our roads safer. This is central to achieving the SDG10, including vulnerable groups such as children and youth, pedestrians, bicyclists, and low-income communities.

Unequal access to safe, secure, and sustainable transport and limited prioritisation of vulnerable road users hampers access to education, health care and employment opportunities, particularly for marginalised communities. Policies that improve road safety, accessibility and affordability of transport can, therefore, help to promote equality.

The key findings of this paper are:

- Low-income and marginalised communities are more likely to be affected by road crashes and injuries.
- There is a need for data on the specific risks different populations face (age group, economic status, gender etc.) to develop targeted interventions.
- Solutions are needed to address the underlying inequalities contributing to the problem and to design safe and accessible transport systems for all users, including pedestrians, cyclists, and drivers of all ages and abilities.
- It is important to prioritise road safety improvements in low-income and marginalised communities in transportation planning and investment decisions by partnering with community organisations and leaders to engage and involve local residents in designing, implementing, and evaluating road safety initiatives.

Overall, there is an urgent need for an integrated policy to reduce inequalities concerning safety on roads and transport. Governmental and non-governmental actions for a more equitable, accessible, and sustainable transportation can greatly impact achieving many of the Sustainable Development Goals of the 2030 Agenda. With this policy paper, it is argued that by taking a targeted and data-driven approach to road safety, we can reduce the number of crashes and fatalities among disadvantaged groups and create safer and more equitable streets for all by achieving a positive traffic safety culture.

OVERVIEW

SDG10, an integral part of the United Nations' agenda[1], focuses on reducing inequality within and among countries. In recent years, inequalities within a country or between countries have been exacerbated due to factors such as pandemics and wars, leading to widening disparities within countries and on a global scale. While inequalities permeate various aspects of society, unfortunately, transportation is no exception to this.

From the perspective of SDG10, inequalities in road safety indicate the unequal distribution of risk and negative consequences on the road among different road user groups due to various factors such as age, gender, socio-economic status, or geographic location. In other words, many factors contribute to, or are evidence of, inequalities in transport. For example, Mackett[2] has shed light on factors such as income, gender, ethnicity, rurality, and disability as some of the factors involved in transport-related inequalities. Furthermore, in another study, Iqbal et al.[3] identified transport-related inequalities in mobility, accessibility, affordability, unsafe conditions, travel time and length, and gender disparities in Karachi, Pakistan.

Road traffic injuries leave more than 1.35 million deaths on the world's roads annually, and over 50 million people are injured. Whilst road traffic injuries are the 8th leading cause of death for all ages, statistics show inequalities among age groups, road user groups, and countries. Specifically, road traffic injuries are the leading cause of death for road users between the ages of 5 and 29. Among road traffic deaths, 93% of the deaths happened in low- and middle-income countries without any reduction in low-income countries since 2013. The figures especially highlighted that Africa and South-East Asia Regions have the highest rate of death, with a trend showing an increase in the numbers from 2013 to 2016.[4]

1 United Nations (n.d.). Goal 10: Reduce inequality within and among countries. Retrieved from: https://www.un.org/sustainabledevelopment/inequality/

2 Mackett, R. L. (2014). The health implications of inequalities in travel. Journal of Transport & Health, 1(3), 202–209. https://doi.org/10.1016/j.jth.2014.07.002

3 Iqbal, S., Woodcock, A., & Osmond, J. (2020). The effects of gender transport poverty in Karachi. Journal of Transport Geography, 84, 102677. https://doi.org/10.1016/j.jtrangeo.2020.102677

4 World Health Organization (2018). Global Status Report on Road Safety 2018. https://www.who.int/violence_injury_prevention/road_safety_status/2018/en/

Inequalities in the transport context extend beyond the country-level differences; they also manifest in the impact on different road user groups, such as drivers/passengers of four-wheeled vehicles or pedestrians. For example, the leading group of road users in road traffic deaths was drivers/passengers of four-wheeled vehicles in regions like Europe and Africa and motorised 2-3 wheelers in South-East Asia and Western Pacific.[5]

Regional disparities further emphasise the importance of considering the local transport systems and their specific characteristics. Whilst this might indicate the nature of the traffic system in that area, some road user groups, such as cyclists or pedestrians, may be more vulnerable to road traffic crashes than others. Interestingly, statistics from the World Health Organization (WHO) show that only 12% of all pedestrian journeys take place on safe roads.[6] This influences road users' transport choices and preferences, highlighting the role of income in shaping transport patterns.

For example, while buses are used more by low-income families than by high-income families, trains are used more by high-income families than by low-income families in the UK.[7] Young road users living in more deprived areas are more likely to be injured than their peers in less deprived areas in the UK.[8,9,10]

According to the general traffic culture system model of Özkan and Lajunen[11], traffic safety involves many agents and aspects from the individual-micro level to the national-magna level. This model recognises the complex interplay between different stakeholders, including individuals, transport authorities, educational institutions, and policy-makers, in shaping road safety outcomes. In addition, other organisations, such as the United Nations or World Health Organization, operate outside the general framework but receive feedback and can promote targeted interventions or initiatives to help achieve specific outcomes.

While it is difficult to establish causal relationships, these aforementioned issues in road traffic inequalities are intertwined with broader cultural and political factors. In the studies of Gaygısız[12.13], even though the Gross Domestic Product (GDP) per capita was found to be the strongest predictor of road traffic fatalities, the indicators of governance, cultural and individual values were also related to road traffic crashes. In another study conducted in five countries (Bangladesh, China, Kenya, UK, and Vietnam), McIlroy et al.[14] identified a diverse range of actors from international and national committees, central and local

5 World Health Organization (2018). Global Status Report on Road Safety 2018. https://www.who.int/violence_injury_prevention/road_safety_status/2018/en/

6 World Health Organization (2018). Global Status Report on Road Safety 2018. https://www.who.int/violence_injury_prevention/road_safety_status/2018/en/

7 Mackett, R. L. (2014). The health implications of inequalities in travel. Journal of Transport & Health, 1(3), 202–209. https://doi.org/10.1016/j.jth.2014.07.002

8 Lucas, K., Stokes, G., Bastiaanssen, J., & Burkinshaw, J. (2019). Inequalities in mobility and access in the UK transport system. Future of Mobility: Evidence Review, Government Office for Science.

9 O'Toole, S. E., & Christie, N. (2018). Deprivation and road traffic injury comparisons for 4–10 and 11–15 year-olds. Journal of Transport & Health, 11, 221-229. https://doi.org/10.1016/j.jth.2018.08.003

10 Christie, N., Ward, H., Kimberlee, R., Lyons, R., Towner, E., Hayes, M., Robertson, S., Rana, S. and Brussoni, M. (2010). Road Traffic Injury Risk in Disadvantaged Communities: Evaluation of the Neighbourhood Road Safety Initiative. Road Safety Web Publication No.19. London: Department for Transport.

11 Özkan, T., & Lajunen, T. (2015). A general traffic (Safety) culture system (G-TraSaCu-S). TraSaCu Project, European Commission, RISE Programme. https://doi.org/10.13140/RG.2.2.16515.20006

12 Gaygısız, E. (2009). Economic and cultural correlates of road-traffic accident fatality rates in OECD countries. Perceptual and Motor Skills, 109(2), 531–545. https://doi.org/10.2466/PMS.109.2.531-545

13 Gaygısız, E. (2010). Cultural values and governance quality as correlates of road traffic fatalities: A nation-level analysis. Accident Analysis & Prevention, 42(6), 1894–1901.https://doi.org/10.1016/j.aap.2010.05.010

14 McIlroy, R. C., Plant, K. A., Hoque, M. S., Wu, J., Kokwaro, G. O., Nam, V. H., & Stanton, N. A. (2019). Who is responsible for global road safety? A cross-cultural comparison of Actor Maps. Accident Analysis & Prevention, 122, 8-18. https://doi.org/10.1016/j.aap.2018.09.011

governments, regulators, associations, industry, resource providers, equipment and environment, and end-users. All these dynamic relations emphasise the complexity of road safety and the need for a multi-level approach incorporating both local and higher level involvement.

In terms of differences between men and women, discrepancies have been observed in access to transport modes, travel behaviour[15], road user behaviour[16,17] crash involvement and deaths.[18] Understanding these differences is particularly important and would be beneficial in developing more effective interventions.[19] For example, while men are more likely to travel by bicycle, private car, and train, women are more likely to travel as a passenger in a private car or bus.[20] Sorenson looked at deaths from injuries and gender inequalities, including traffic crashes, in the US from 1981 to 2007. While more men than women died from unintentional or violent injuries, these figures continue to show the same patterns in terms of causes, age, etc. In terms of age and gender differences, the largest gap is observed between the ages of 20 and 24, the age group commonly defined as young drivers as well.[21] In a 13-year cohort study, Cullen et al. found a high risk of crash involvement among young males, which persists as they get older and gain more experience.[22] Death rates from road traffic injuries in the EU also show that, among

15 Mackett, R. L. (2014). The health implications of inequalities in travel. Journal of Transport & Health, 1(3), 202–209. https://doi.org/10.1016/j.jth.2014.07.002

16 e Winter, J. C., & Dodou, D. (2010). The Driver Behaviour Questionnaire as a predictor of accidents: A meta-analysis. Journal of Safety Research, 41(6), 463–470. https://doi.org/10.1016/j.jsr.2010.10.007

17 Öztürk, İ., & Öz, B. (2021). Investigating young male and female road users' pedestrian and driver behaviours. Psikoloji Çalışmaları - Studies in Psychology, 41(2), 581–614. https://doi.org/10.26650/SP2020-0045

18 Sorenson, S. B. (2011). Gender disparities in injury mortality: consistent, persistent, and larger than you'd think. American Journal of Public Health, 101(S1), S353–S358

19 Sorenson, S. B. (2011). Gender disparities in injury mortality: consistent, persistent, and larger than you'd think. American Journal of Public Health, 101(S1), S353–S358

20 Mackett, R. L. (2014). The health implications of inequalities in travel. Journal of Transport & Health, 1(3), 202–209. https://doi.org/10.1016/j.jth.2014.07.002

21 Sorenson, S. B. (2011). Gender disparities in injury mortality: consistent, persistent, and larger than you'd think. American Journal of Public Health, 101(S1), S353–S358

22 Cullen, P., Möller, H., Woodward, M., Senserrick, T., Boufous, S., Rogers, K., ... & Ivers, R. (2021). Are there sex differences in crash and crash-related injuries between men and women? A 13-year cohort study of young drivers in Australia. SSM-Population Health, 14, 100816. https://doi.org/10.1016/j.ssmph.2021.100816

males, those with lower levels of education have higher death rates.[23] However, women are more likely to be involved in crashes requiring hospital treatment.[24]

The above findings not only provide a snapshot of the existing inequalities in the transport system, highlighting significant undesirable outcomes, but also sheds light on wider societal inequalities in health, income, and other areas. For instance, Laflamme and Diderichsen concluded children from low socio-economic areas were more exposed to road traffic injuries and deaths.[25] In a review study examining child injury, mortality and morbidity, Möller et al. found substantial inequalities between Indigenous and non-Indigenous children, with Indigenous children being more disadvantaged and experiencing more injury morbidity and mortality.[26] Furthermore, transport injuries were one of the main causes of inequalities. Mobility inequalities for older people are important beyond access to health services and have a significant impact on mental health, social isolation, and loneliness in low- and middle-income countries.[27]

One of the socially disadvantaged groups in the transport system is road users with disabilities.[28,29] Data has shown that people with disabilities are less likely to travel.[30] Pyer and Tucker[31] found that teenagers with disabilities experienced frustration and safety concerns as well as negative travel experiences when using public transport, including buses and trains, highlighting inequalities in accessibility. In another UK study focusing on pedestrian injuries, Aldred[32] found that pedestrians with disabilities and those from low-income households were at higher risk of road traffic collisions. People with disabilities face significant challenges and inequalities in accessing transportation, which have a profound impact on their daily lives and safety on the roads.[33,34] Limited infrastructure and inadequate accessibility measures contribute to excluding individuals with disabilities from the transportation system, further exacerbating their vulnerability to road crashes.

There are also major inequalities for youth living with disabilities. The challenges faced by people with disabilities extend to the youth population, as approximately one in ten

23 Borrell, C., Plasencia, A., Huisman, M., Costa, G., Kunst, A., Andersen, O., ... & Mackenbach, J. P. (2005). Education level inequalities and transportation injury mortality in the middle-aged and elderly in European settings. Injury Prevention, 11(3), 138–142. http://dx.doi.org/10.1136/ip.2004.006346

24 Cullen, P., Möller, H., Woodward, M., Senserrick, T., Boufous, S., Rogers, K., ... & Ivers, R. (2021). Are there sex differences in crash and crash-related injury between men and women? A 13-year cohort study of young drivers in Australia. SSM-Population Health, 14, 100816. https://doi.org/10.1016/j.ssmph.2021.100816

25 Laflamme, L., & Diderichsen, F. (2000). Social differences in traffic injury risks in childhood and youth—a literature review and a research agenda. Injury Prevention, 6(4), 293–298. http://dx.doi.org/10.1136/ip.6.4.293

26 Möller, H., Falster, K., Ivers, R., & Jorm, L. (2015). Inequalities in unintentional injuries between indigenous and non-indigenous children: a systematic review. Injury Prevention, 21(e1), e144–e152. http://dx.doi.org/10.1136/injuryprev-2013-041133

27 Gorman, M., Jones, S., & Turner, J. (2019). Older people, mobility and transport in low-and middle-income countries: A review of the research. Sustainability, 11(21), 6157. https://doi.org/10.3390/su11216157

28 Henly, M., & Brucker, D. L. (2019). Transportation patterns demonstrate inequalities in community participation for working-age Americans with disabilities. Transportation Research Part A: Policy and Practice, 130, 93–106. https://doi.org/10.1016/j.tra.2019.09.042

29 Pyer, M., & Tucker, F. (2017). 'With us, we, like, physically can't': Transport, Mobility and the Leisure Experiences of Teenage Wheelchair Users. Mobilities, 12(1), 36–52. https://doi.org/10.1080/17450101.2014.970390

30 Henly, M., & Brucker, D. L. (2019). Transportation patterns demonstrate inequalities in community participation for working-age Americans with disabilities. Transportation Research Part A: Policy and Practice, 130, 93–106. https://doi.org/10.1016/j.tra.2019.09.042

31 Pyer, M., & Tucker, F. (2017). 'With us, we, like, physically can't': Transport, Mobility and the Leisure Experiences of Teenage Wheelchair Users. Mobilities, 12(1), 36–52. https://doi.org/10.1080/17450101.2014.970390

32 Aldred, R. (2018). Inequalities in self-report road injury risk in Britain: A new analysis of National Travel Survey data, focusing on pedestrian injuries. Journal of Transport & Health, 9, 96–104. https://doi.org/10.1016/j.jth.2018.03.006

33 Kett, M., Cole, E., & Turner, J. (2020). Disability, mobility and transport in low-and middle-income countries: a thematic review. Sustainability, 12(2), 589. https://doi.org/10.3390/su12020589

34 Tennakoon, V., Wiles, J., Peiris-John, R., Wickremasinghe, R., Kool, B., & Ameratunga, S. (2020). Transport equity in Sri Lanka: Experiences linked to disability and older age. Journal of Transport & Health, 18, 100913. https://doi.org/10.1016/j.jth.2020.100913

children worldwide have a disability.[35] This highlights the urgent need for improved road infrastructure that caters to the specific needs of vulnerable road users, including people with disabilities. Developing safe and accessible pathways and walkways is crucial for empowering youth with disabilities, enabling them to have better access to education, economic opportunities, and healthcare services. Accessible infrastructure allows them to navigate independently and move freely, whether it be to attend school, seek employment, or access essential healthcare facilities. Without sufficient access to these inclusive facilities, individuals with disabilities risk experiencing further marginalisation, poverty, and a sense of despair.

It can be claimed that the transportation system plays a role in society by connecting different components. Inequalities in other areas could directly or indirectly impact road safety, and inequalities in transportation systems while planning and designing could also lead to further problems in society by restricting access to certain modes of transportation and restricting the rights of more vulnerable and disabled road users. In other words, the current level of inequalities in the transportation system may affect access to jobs and educational opportunities.[36,37] Low-income households may have less access to reliable public transit services, meaning they may be more likely to be stuck in their neighbourhoods due to a lack of mobility options. This can lead to fewer job opportunities or spending a considerable amount of income on transportation to be able to reach job and education opportunities. As a result, people from low-income households may experience problems with social cohesion and feel excluded from society.

35 United Nationals (2021). One in 10 children worldwide live with disabilities. https://news.un.org/en/story/2021/11/1105412

36 Pereira, R. H., Banister, D., Schwanen, T., & Wessel, N. (2019). Distributional effects of transport policies on inequalities in access to opportunities in Rio de Janeiro. Journal of Transport and Land Use, 12(1), 741-764.

37 Guzman, L. A., Oviedo, D., & Rivera, C. (2017). Assessing equity in transport accessibility to work and study: The Bogotá region. Journal of Transport Geography, 58, 236-246. https://doi.org/10.1016/j.jtrangeo.2016.12.016

KEY DATA

Number of people killed yearly in road traffic accidents:

1.35 MILLION[38]

Over

50 MILLION

people are also injured in non-fatal crashes every year, causing an enormous burden of disability.[40]

The risk of a road traffic death is more than

THREE TIMES HIGHER

in low-income countries than in high-income countries.[39]

Injuries and their associated healthcare costs are a

COMMON CAUSE OF POVERTY

and bankruptcy, and the overall cost is as high as 5% of GDP in some low- and middle-income countries.[41]

Number of people living more than 2 km from the nearest usable road:

1 BILLION[42]

Percentage of the working population living in extreme poverty:

6.4%[43]

Men are more likely to be involved in fatal road traffic crashes compared to women. In the United States, in 2019, **71%** of motor vehicle crash deaths involved male drivers.[44]

Individuals with lower income levels may face challenges in accessing appropriate healthcare services following road traffic crashes due to financial constraints and limited health insurance coverage.[46]

Individuals from lower socio-economic backgrounds face increased risks and vulnerabilities in road traffic crashes due to factors such as limited access to safe transportation options, inadequate healthcare coverage, and reduced access to rehabilitation services.[45]

38 World Health Organization (2018). Global Status Report on Road Safety 2018. https://www.who.int/violence_injury_prevention/road_safety_status/2018/en/

39 World Health Organization (2018). Global Status Report on Road Safety 2018.

40 World Health Organization (2018). Global Status Report on Road Safety 2018.

41 World Health Organization (2015). Global Status Report on Road Safety 2015.

42 World Bank Group (2023). Beyond the gap: How countries can afford the infrastructure they need while protecting the planet. Rozenberg, J., & Fay, M. (Eds.). https://openknowledge.worldbank.org/bitstream/handle/10986/31291/9781464813634.pdf?sequence=18

43 International Labour Organization (2023). World Employment and Social Outlook: Trends 2023. https://www.ilo.org/global/research/global-reports/weso/WCMS_865332/lang--en/index.htm

44 National Highway Traffic Safety Administration. (2021). Fatality Analysis Reporting System (FARS) Encyclopedia: Gender. Retrieved from https://www-fars.nhtsa.dot.gov/Main/index.aspx

45 Anderson, C. L., & Browne, M. K. (2019). Unequal vulnerability: Intersectional disparities in emergency medical services response times. Social Science & Medicine, 226, 64-71.

46 Hanchate, A. D., Kapoor, A., Katz, J. N., McCormick, D., & Rosen, A. K. (2019). Disparities in utilization of 24-hour emergency care by race and ethnicity in US EDs. Medical Care, 57(3), 218-226.

Share of income earned by the bottom 40% of the population:

LESS THAN **25%**[47]

Percentage of labour income earned by the bottom 50%:

7.8%[48]

Number of SDGs where gender inequalities need to be addressed:

ALL[50]

Percentage decline in income between 2019 and 2021:

0.5% for the top 40% and **2.2%** for the bottom 40% of the global income distribution.[49]

Non-car ownership is higher among low-income households, women, younger and older people, minorities and people with disabilities.[51]

Following these high-level differences, inequalities in transport can be highlighted in the following categories:

INEQUALITIES BETWEEN COUNTRIES:

From 2021 to 2022, there was a 4% increase in road fatalities. While the EU has seen a 9% reduction in fatalities since 2019, some countries have seen an increase in road deaths.[52]

Distribution of road deaths by income at the country level: 7% for high-income 13% for low-income and 80% for middle-income countries.[53]

INEQUALITIES IN INFRASTRUCTURE INVESTMENT:

Although transport accounts for the largest share of investment in Africa, there are wide disparities within the region and transport quality is still far behind the rest of the world.[54]

47 United Nations (2019). Reduce inequality within and among countries. https://unstats.un.org/sdgs/report/2019/goal-10/

48 International Labour Organization (2023). World Employment and Social Outlook: Trends 2023. https://www.ilo.org/global/research/global-reports/weso/WCMS_865332/lang--en/index.htm

49 The World Bank (2022). Inequality and shared prosperity. https://www.worldbank.org/en/topic/isp/overview

50 UN Women (2018). Why gender equality matters across all SDGs. https://www.unwomen.org/sites/default/files/Headquarters/Attachments/Sections/Library/Publications/2018/SDG-report-Chapter-3-Why-gender-equality-matters-across-all-SDGs-2018-en.pdf

51 Lucas, K., Stokes, G., Bastiaanssen, J., & Burkinshaw, J. (2019). Inequalities in mobility and access in the UK transport system. Future of Mobility: Evidence Review, Government Office for Science.

52 European Transport Safety Council (2023). 17th annual road safety performance index (PIN report). https://etsc.eu/17th-annual-road-safety-performance-index-pin-report/

53 World Health Organization (2018). Global Status Report on Road Safety 2018. https://www.who.int/violence_injury_prevention/road_safety_status/2018/en/

54 Nilsson et al. (2020). Connecting Africa Perspectives for Energy, Transport, Digitalisation and Research & Innovation. https://um.fi/documents/35732/0/Connecting+Africa_pages_2008+%282%29.pdf/9cc5601f-da43-9cde-a8db-d87f8af47ef1?t=1598942534691

INEQUALITIES BETWEEN ROAD USER GROUPS:

Around 40–80% of fatalities in low-income countries are non-motorised road users.[55]

Percentage of trips on 1- or 2-star roads: 88% for pedestrians and 86% for cyclists.[56]

Lack of accessibility in transport is one of the key barriers that cause inequalities, especially for disabled people.[57]

The rate of confidence in travelling has fallen from 90% to 69% for people with disabilities compared to able-bodied people in England.[58]

INEQUALITIES BETWEEN AGE GROUPS:

Age group in which road traffic crashes are the leading cause of death: 5–29 years.[59]

INEQUALITIES BETWEEN GENDERS:

Women account for 24% of road traffic fatalities. Twice as many women pedestrians are killed as men.[60]

Women and girls experience sexual harassment in public spaces, including public transport.[61,62,63]

Women experience greater inequalities in many aspects of society, including transport in developing countries, and are also at a disadvantage in comparison to men.[64]

55 UN Environment (2016). .Global Outlook on Walking and Cycling 2016. https://wedocs.unep.org/bitstream/handle/20.500.11822/17030/globalOutlookOnWalkingAndCycling.pdf

56 World Health Organization (2018). Global Status Report on Road Safety 2018. https://www.who.int/violence_injury_prevention/road_safety_status/2018/en/

57 World Health Organisation (2011). World report on disability, 2011. https://www.who.int/teams/noncommunicable-diseases/sensory-functions-disability-and-rehabilitation/world-report-on-disability

58 Steen, B., McCarhy, H., Mhonda, J., Lucey, G., Vey, J., & Ilic, N. (2021). Inclusive Transport Strategy – Evaluation: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1042358/inclusive-transport-strategy-evaluation-baseline-report.odt

59 World Health Organization (2018). Global Status Report on Road Safety 2018. https://www.who.int/violence_injury_prevention/road_safety_status/2018/en/

60 International Transport Forum (2018), Women's Safety and Security: A Public Transport Priority, OECD Publishing, Paris.

61 UN Women (2021). Prevalence and reporting of sexual harassment in UK public spaces.

62 Kacharo, D. K., Teshome, E., & Woltamo, T. (2022). Safety and security of women and girls in public transport. Urban, planning and transport research, 10(1), 1-19. https://doi.org/10.1080/21650020.2022.2027268

63 UN Women (2021). Safe Cities and Safe Public Spaces for Women and Girls global initiative: Global results report 2017–2020. https://www.unwomen.org/en/digital-library/publications/2021/07/safe-cities-and-safe-public-spaces-global-results-report-2017-2020

64 The World Business Council for Sustainable Development. Mobility for development (2011). http://docs.wbcsd.org/2011/08/Mobility_Econ_Development_Tanzania.pdf

SOLUTIONS THAT ALREADY EXIST

Recognising road traffic injury as a public health issue has the potential to reduce the inequalities we see, by addressing the underlying social, economic, and environmental factors that shape people's behaviour. According to UNICEF, there has been a 62% reduction in child road traffic injury deaths in high-income countries, compared to a mere 11% decline in low- and middle-income countries. Similarly, discrepancies exist between North America, which witnessed a 53% decline, East Asia, with a 42% decline, and Sub-Saharan Africa, with a 16% decline. On the other hand, countries such as Cameroon, Afghanistan, and Zimbabwe witnessed an increase in child deaths due to road traffic injuries between 2015 and 2019.[65] Several initiatives have been designed to reduce the stark inequalities in vulnerable groups' risk of being killed or seriously injured in road traffic crashes.

LAW ENFORCEMENT

30 km/h (20 mph) zones.[66] The 30 km/h as well as 20 km/h zones have been initiated in several cities across the world, with significant progress in European countries. The 30 km/h and 20km/h speed limits and zones yield significant reductions in road traffic crashes, injuries, and deaths; more so for vulnerable road users, including pedestrians, cyclists, children, and youth, as well as those with disabilities.[67] Cities like Graz, Austria; London, UK; New York, USA; and Toronto, Canada have been examples of low-speed streets and were a base for the 2020 Stockholm Declaration.[68] This application has now extended to Brussels, Belgium; Paris, France; Bogotá, Colombia; Accra, Ghana; Ho Chi Minh City, Viet Nam; and cities across Spain where all municipalities mandated 30 km/h speed limits on dual carriageways and 20 km/h on single carriageways.[69]

65 UNICEF (2022). Child and adolescent road safety. https://www.unicef.org/media/130721/file/UNICEF_Child_and_Adolescent_Road_Safety_Technical_Guidance_2022.pdf

66 Global Alliance of NGOs for Road Safety (n.d.). 30 km/h zones. https://www.roadsafetyngos.org/toolkit/priority-interventions/30-km-h-zones/#:~:text=30%20km%2Fh%20zones%20can%20reduce%20traffic%20congestion&text=At%20lower%20speed%20limits%2C%20the,vehicles%20from%20the%20side%20streets.

67 Global Alliance of NGOs for Road Safety (n.d.). 30 km/h zones. https://www.roadsafetyngos.org/toolkit/priority-interventions/30-km-h-zones/#:~:text=30%20km%2Fh%20z Global Alliance of NGOs for Road Safety (n.d.). 30 km/h zones. https://www.roadsafetyngos.org/toolkit/priority-interventions/30-km-h-zones/#:~:text=30%20km%2Fh%20zones%20can%20reduce%20traffic%20congestion&text=At%20lower%20speed%20limits%2C%20the,vehicles%20from%20the%20side%20streets.

68 World Health Organization (2021). Streets for Life campaign calls for 30 km/h urban streets to ensure safe, healthy, green and liveable cities. https://www.who.int/news/item/17-05-2021-streets-for-life-campaign-calls-for-30-km-h-urban-streets-to-ensure-safe-healthy-green-and-liveable-cities

69 World Health Organization (2021). Streets for Life campaign calls for 30 km/h urban streets to ensure safe, healthy, green and liveable cities. https://www.who.int/news/item/17-05-2021-streets-for-life-campaign-calls-for-30-km-h-urban-streets-to-ensure-safe-healthy-green-and-liveable-cities

MULTIMODAL TRANSPORT PLANNING

Globally, multimodal transport systems that support the optimal mix of motorised and non-motorised transport modes not only ensure safety but also foster equitable access to mobility while responding to the diverse needs and preferences of a population.[70,71,72] This may help to reduce transport inequalities, social exclusion, and transport poverty by utilising cost-effective and safer options for the younger generations.

FEMALE CRASH TEST DUMMY

The biological and physical differences between men and women can significantly affect how our bodies react to the impact of a car crash. Introducing representative female-shaped dummies is informing how future cars, driver seats, and other vehicle safety features are designed, making roads safer for female drivers. The team at the Swedish National Road and Transport Research Institute in Linköping, led by Dr Astrid Linder[73], developed a female crash test dummy that better reflects the differences between male and female anatomy. The use of a female crash dummy can provide more accurate crash data, reduce inequalities and bias, and improve vehicle safety for women.[74]

70 Department for Health (n.d.). Multimodel transprotation. https://www.tn.gov/health/cedep/environmental/healthy-places/healthy-places/active-transportation/at/multimodal-transportation.html#:~:text=Multimodal%20is%20a%20transportation%20term,more%20connections%20and%20more%20choices.

71 Litman, T. (2017). Introduction to multi-modal transportation planning. Canada: Victoria Transport Policy Institute.

72 The Road Safety Toolkit (n.d.). Multimodal transport and land use planning. https://toolkit.irap.org/management/multimodal-transport-and-land-use-planning/

73 Jermakian, J. (2022). Improving safety for women requires more than a female crash test dummy. https://www.weforum.org/agenda/2022/12/female-crash-test-dummies-road-safety-gender-equality/

74 Barry, K. (2019). The crash test bias: How male-focused testing puts female drivers at risk. https://www.consumerreports.org/car-safety/crash-test-bias-how-male-focused-testing-puts-female-drivers-at-risk/

SAFE SCHOOL ZONE INITIATIVES

Several organisations, including the International Road Assessment Program (iRAP), Federation Internationale de L'Automobile (FIA), and AMEND, have implemented numerous programmes around schools such as Vision Zero for Youth[75], Star Rating for Schools[76], and the lifesaving School Area Road Safety Assessments and Improvements (SARSAI) programme and advocate for safe 30 km/h school zones[77] that seek to make journeys safer for the younger generation by reducing their exposure to risk on the road. In Germany, children helped co-design safer journeys to school. Together with professional planners, local children from underprivileged neighbourhoods went on walks to categorise their local areas, pointing out their favourite places; the places that they were scared of; and the ones where the traffic was unsafe. The end result was a child-friendly Regensburg neighbourhood, with a big park and inclusive playgrounds for children with

75 Vision Zero for Youth (n.d.). https://www.visionzeroforyouth.org/

76 Star Rating for Schools (n.d.). https://starratingforschools.org/

77 AMEND (2020). Safe school infrastructure and 30 km/h school zone advocacy. https://www.amend.org/portfolio/portfolio-title-18-2-12/

disabilities, and the recruitment of 'student pilots' who would ensure a safe journey for students to and from school.

3M[78] are using 3M technologies to improve school zone safety and make journeys safer for children and young people by updating crosswalks and signage using 3M reflective materials by using new technologies like Diamond Grade Reflective Sheeting. In Madrid, the FIA Foundation, as one of the initiatives, has designed and implemented the Road Safety Plan "Caminos Escolares Seguros" ("Safe School Journeys")[79] in partnership with Real Automóvil Club de España (RACE - Spain). The plan has supported the assessment of daily risks encountered by children on their journeys to school, followed by interventions such as road modifications that have saved lives and prevented serious injuries among children in the municipalities of Guadalix de la Sierra and Tres Cantos. Similarly, AMEND is leading numerous interventions to promote safer journeys to school in countries like Mozambique, Botswana, and Tanzania. Their multi-pronged road safety projects encompass a holistic approach consisting of environmental modifications, capacity development, stakeholder engagement, safety promotion, and policy development. For example, their infrastructural improvements, including footpaths, zebra crossings, speed calming measures (such as humps), pedestrian guardrails, and motorcycle barriers in Tanga[80] have reportedly benefitted over 4000 children across 6 schools, and reduced collisions, with none reported around schools in the intervention zones since the project inception in 2019.

78 3M (n.d.). A safer journey to school. https://www.3m.com/3M/en_US/company-us/school-zone-safety/

79 https://www.fia.com/news/race-launches-safe-school-journeys

80 https://blogs.bmj.com/injury-prevention/2022/03/24/safe-and-healthy-journeys-to-school-for-children-and-adolescents-in-tanga-tanzania/

LOCAL ACTIONS TO A GLOBAL PROBLEM

Members of the Global Youth Coalition for Road Safety are dedicated to using evidence-based approaches that contribute to saving lives and promoting meaningful youth participation in their communities. They actively take part in local initiatives that introduce creative projects at the community level. These projects are within our Local Actions programme.[81] They are led by young people and demonstrate practical solutions for building sustainable communities with safe, accessible, and inclusive roads. By doing so, they establish a foundation of evidence that allows successful approaches to be quickly adopted worldwide.

YOUTH CALLING FOR EQUITABLE TRANSPORTATION

USA

JACOB SMITH

In the heart of Washington, D.C., Jacob Smith, a passionate advocate for road safety and equity, has embarked on a local action project aimed at addressing the alarming intersection of road safety and inequalities. Jacob recognises that marginalised communities, particularly Black, Indigenous, and People of Colour (BIPOC) communities, face disproportionate risks and challenges in road safety. With determination and a vision for change, Jacob's project, *"BIPOC Youth Advocating for an Equitable Transportation System through Advocacy and Storytelling,"* seeks to empower BIPOC youth to advocate for policies and practices that ensure equitable transportation for all.

81 YOURS- Youth for Road Safety. (2021). Local Actions. Global Youth Coalition for Road Safety #claimingourspace. Retrieved 19 August 2022, from https://claimingourspace.org/localactions

Project Overview:

Jacob's project centres on harnessing the power of BIPOC communities and utilising their lived experiences, expertise, and creativity to advocate for equitable transportation policies and practices. Recognising that BIPOC communities are more likely to experience pedestrian fatalities, Jacob aims to address systemic issues that contribute to this disparity. By involving BIPOC youth in city policies, practices, and processes that impact the pedestrian environment, the project strives to bring about positive change.

Linking Road Safety and Inequalities:

Jacob highlights the significant link between road safety and inequalities, stating, "Poor walking infrastructure and a lack of safety features put marginalised people, such as disabled individuals, BIPOC, youth, and elders, walking in low-income neighbourhoods at higher risk of traffic violence." He emphasises the urgent need to address this critical issue, drawing from personal experiences witnessing the impacts on his own disabled mother, who faces daily challenges due to the lack of necessary infrastructure for disabled individuals.

Impact and Demand for Change:

Jacob's project aims to create a lasting impact at the local level by building a strong network of BIPOC youth and engaging city officials and transportation equity practitioners. Through advocacy and storytelling, the project seeks to form a sustainable coalition that can effectively influence policy recommendations made by young people and translate them into tangible actions at the city level.

Jacob's demand for change extends beyond local action. He calls upon the national government to establish a paid systemic body of young people, elected annually, to provide input and take action towards building a safer and equitable transportation system in Washington, D.C. With a primary focus on recruiting residents from Ward 7 and Ward 8, this demand seeks to ensure that the voices of marginalised communities are heard, and their needs are addressed.

"Decades of structural racism and discrimination have deeply impacted the field of road safety and directly connect to SDG 10 on reduced inequalities. Without equitable, accessible, sustainable, and affordable transportation options, communities, especially marginalised ones, suffer socially, economically, and possibly even politically."

- Jacob Smith.

Jacob Smith's project is a shining example of how young people can make a real difference in tackling the important issues of road safety and inequalities. By empowering BIPOC youth to stand up for fair transportation, Jacob is working towards a city that welcomes everyone and prioritises safety. Together, they are spreading awareness, speaking up for change, and inspiring others to join their movement. Their actions are paving the way for a future that is fair, sustainable, and inclusive for all.

YOUTH TAKING ACTION IN PEDESTRIAN POLICY

COLOMBIA

Maryfely Rincón's project, "Pedestrians First," demonstrates the strength of youth-led initiatives in tackling road safety and inequalities. By prioritising the needs of vulnerable road users, Maryfely and her team are driving positive change in Bogotá. Their efforts are focused on creating respectful and safe spaces for pedestrians, ensuring that their voices are heard by decision-makers and fellow citizens.

Project Overview:

"Pedestrians First" aims to address the pressing road safety issues faced by pedestrians, particularly older people, children, and individuals with disabilities, in Bogotá. The project acknowledges the significant number of pedestrian fatalities and injuries in the city, highlighting the urgent need for equal public spaces and improved pedestrian infrastructure. By advocating for these changes, Maryfely and her team strive to enable everyone to walk calmly and comfortably throughout the city.

"The smallest actions add up and are important. Our voices and actions as young people matter, and with them, we can start working from small and simple things like workshops with our community, or spaces for conversation, and reflection on road safety. Working as a team with other interested young people is also valuable in contributing to the construction of safer cities for all."

- Maryfely Rincon.

Project Impact:

Through various activities, Maryfely and her team are making a meaningful impact. They are conducting periscope-assisted travel routes to identify infrastructure gaps and inequalities in diverse areas of Bogotá. By experiencing the city as children and young pedestrians, participants gain insights into the specific challenges faced by vulnerable groups, contributing to the project's advocacy efforts. Additionally, the project seeks to generate recommendations for expanding participatory spaces and integrating a gender perspective into Bogotá's pedestrian policy, fostering a more inclusive and equitable urban environment that is accountable to accommodate the needs of pedestrians from different genders, age groups, and health needs.

Demand from Decision-Makers:

Recognising the importance of engaging decision-makers, Maryfely and her team are actively pursuing opportunities for lasting change. They plan to organise a roundtable discussion to present their project's results, proposing a set of recommendations and demands for safe public spaces that reduce inequality in the city. Furthermore, they are establishing connections with the Pedestrian and Cyclist Office of the Secretariat of Mobility, aiming to secure commitment from decision-makers for implementing corrective actions and improving critical sidewalks.

"I would ask that any action or policy has a differential and gender approach so that the needs and voices of the most vulnerable people are taken into account. I would also ask for the creation of more spaces for youth participation in road safety, where our opinions, innovative ideas, and ongoing actions can be recognized and included."

- Maryfely Rincon.

Maryfely Rincón's project, "Pedestrians First," exemplifies the power of youth-led initiatives in advocating for safe and inclusive spaces. By prioritising the needs of vulnerable road users, Maryfely and her team are actively working towards a more just and sustainable future. Their local actions are raising awareness, demanding change, and inspiring others to join their cause. The project serves as an inspiring example for youth activists worldwide, demonstrating the potential to shape the global agenda and create safer cities for all.

RECOMMENDATIONS

Inclusive and quality infrastructure is of cross-cutting importance for increasing economic growth and attaining the SDGs. Policies that ensure inclusive and equitable infrastructure must be put in place to ensure accessibility and affordability of transport, which therefore help to promote equity. To promote road safety equity and ensure no one is left behind, we have highlighted the following recommendations:

GOVERNMENT

- The Government should gather data on road traffic injuries and fatalities to identify the specific causes and factors contributing to inequalities. Future interventions and policies should address these data-driven findings.
- Governments should communicate and share best practices and ensure that policy-making processes are inclusive and consider the needs and perspectives of all segments of society.
- Governments should prioritise road safety policy and law enforcement, which will bridge the gap between commitments made by stakeholders and actions taken to reduce road traffic fatalities and injuries, and should scale up evidence-based initiatives such as the School Area Road Safety Assessments and Improvements (SARSAI) and the star rating for schools (SR4S). Such initiatives that support a holistic approach to safer roads for all, including road assessments, environmental modifications, and speed calming measures, can help revert the rising road traffic fatality incident rates among vulnerable populations.

- Governments should invest in multimodal transport systems and boost financing of affordable and accessible public transport options that accommodate the needs of youth living with disabilities.
- Governments, more so in low- and middle-income countries, should increase investment in post-crash response to reduce the health and economic burden of road traffic crashes on the poorer populations. Enactment of laws that provide free or highly subsidised treatment for all victims of road accidents, regardless of socioeconomic status, will go a long way in saving the lives of road crash victims.
- Strengthen public-private partnerships to widen the funding base for road safety interventions. Governments should collaborate with private sectors and non-government organisations that are working towards safe and affordable mobility options and programmes that provide special services to vulnerable groups.
- Governments should design roads with the most vulnerable in mind. Putting the most vulnerable groups, including people with disabilities, children, and women, at the centre of road safety design is crucial to fast-tracking the attainment of several SDG targets such as SDG4 on education for all, SDG5 on gender equality, and SDG3 on good health and wellbeing among others. There is a need for constant intervention programmes that aid safety and the free flow of traffic. People with disabilities should be considered while initiating laws, as far as road safety is concerned.

INTERNATIONAL AND CIVIL SOCIETY ORGANISATIONS

- Civil society organisations possess significant knowledge and skills that can aid the implementation of evidence-based actions and policies required to reduce road-related injuries and fatalities. Organisations can strengthen follow-up mechanisms that hold Governments accountable for fulfilling international and national treaties. This will help bridge the gap between Government commitments and action towards safer and sustainable transport systems.
- Organisations should strengthen global and regional road safety coalitions to enhance collaborative advocacy and amplify the impact of road safety interventions. Organisations can play a vital role in advancing road safety as a cross-cutting issue and in advancing the role of road safety in the attainment of the low-hanging fruit targets on climate action, promoting gender equality, fostering education for all, etc.
- Organisations should increase road safety awareness among vulnerable road users. Educating vulnerable road users on safe road use is beneficial to reducing road traffic fatalities and injuries for pedestrians, children, women, and people with disabilities.
- Organisations can develop data collection systems that can provide reliable information regarding road fatalities and injuries and also help identify any existing inequality trends across different road user groups or countries and draw up policy decisions accordingly.

- Work with youth to review and formulate policies that work hand in hand with policymakers to reduce inequality and safer mobilisation. A good example of such a policy is the Pan-European Programme.[82]
- Mutual cooperation between governments, organisations, and young people should be established to enable active communication and the opportunity to share experiences.

YOUTH AND YOUTH-LED ORGANISATIONS

- Youth-led organisations can launch campaigns for better roads and infrastructure and scale up effective interventions that promote the safety of roads for vulnerable road users, including people with disabilities, pedestrians, and cyclists.
- Youth should initiate peer-to-peer road safety education programmes to boost safer road use among most at-risk groups.
- Youth needs to advocate for meaningful youth engagement in road safety policy formulation and review. There is a need for youth to take a proactive approach to claim their space at global, regional, and national decision-making spaces.
- Youth should mobilise resources and increase investment in youth-led local actions. Youth-led organisations can support mentorship and training of the current and next generation of youth road safety changemakers.

82 World Health Organization (n.d.). Transport, Health and Environment Pan-European Programme (THE PEP). https://www.who.int/europe/initiatives/transport-health-and-environment-pan-european-programme-(the-pep)

CONCLUSION

Road Safety is undeniably a pressing public health concern, and it demands the immediate attention of decision-makers worldwide. Throughout this policy brief, we can see that addressing inequalities in Road Safety is not merely a matter of improving statistics; it's about safeguarding lives, well-being, and opportunities for all. Our policy paper has spotlighted the multifaceted nature of these inequalities, stretching from the individual to the national level, and permeating various aspects of society.

The data presented here unequivocally demonstrate the far-reaching consequences of these disparities, extending beyond the realm of road safety itself. Inadequate access to safe transportation disproportionately affects education, health, and employment, contributing to cycles of disadvantage and exclusion.

Policymakers need to ensure that their policies reflect a commitment to reducing inequalities in road safety so that all road users have access to safe transportation, regardless of their socioeconomic background or other factors such as gender, age, or ethnicity. If we focus on the need for better road safety from Kingdon's[83] perspective, the three streams (problems, politics, and policies) operate independently of each other, and we should make use of the "window of opportunity" to achieve an effective policy change.

83 Kingdon, J. W. (1984). Agendas, Alternatives and Public Policies. Boston, MA: Little, Brown and Company.

To take concrete action, we propose several key steps:

1. Awareness and Education: While education and training programmes are vital for changing road user behaviours, we must also create programmes that raise awareness about inadequate infrastructure and other risk factors.
2. Targeted Safety Measures: Implementing targeted safety countermeasures, such as infrastructure improvements and policies prioritising vulnerable road users' safety, is crucial.
3. Policy Commitment: Policymakers must prioritise reducing inequalities in road safety, ensuring that all road users enjoy safe and inclusive transportation, irrespective of socioeconomic factors, gender, age, or ethnicity.
4. Youth Engagement: Youth play a pivotal role in this endeavour. The energy, innovation, and advocacy of young people can be a driving force for change. Decision-makers should meaningfully involve youth in shaping road safety policies and initiatives.
5. Research Gaps: It's imperative to identify and address research gaps that hinder progress in understanding road safety inequalities. Funding and support for comprehensive studies in this field are essential.

Inequalities in any aspect of life leading to any form of social exclusion cannot be accepted. While education and training programmes are essential for changing the attitudes and behaviours of road users, further programmes might be used to make road users aware of inadequate infrastructure or other problematic issues leading them to be vulnerable to certain risks. This can also involve implementing targeted safety countermeasures, such as infrastructure, and implementing policies that prioritise the safety of vulnerable road users.[84]

84 Kingdon, J. W. (1984). Agendas, Alternatives and Public Policies. Boston, MA: Little, Brown and Company.

DEFINITIONS

Inequality

Differences or disparities in the distribution of certain aspects between groups in society, resulting in an unfair distribution of opportunities.[85]

Accessibility

The ease of reaching and using different modes of transport to reach different social and economic activities in the environment, taking into account the proximity of the individual to the opportunities and the time and distance to travel.[86]

Vulnerable road users

Individuals who are at a higher risk of road crashes or injury on the road, such as pedestrians, motorcyclists, and cyclists.[87,88]

Road Safety Equity

ensuring that all individuals, regardless of their characteristics or circumstances, have equal access to safe road transportation and are not unfairly burdened by road safety risks. It involves addressing disparities in road safety outcomes and providing equitable access to safe infrastructure and resources for all road users.

SDG10 reduced inequalities

It seeks to address economic, social, and political inequalities, emphasising the importance of inclusivity and ensuring that no one is left behind in the pursuit of sustainable development.

85 Oxford Learner's Dictionaries (2023). https://www.oxfordlearnersdictionaries.com/definition/english/inequality

86 Batty, M. (2009). Accessibility: in search of a unified theory. Environment and Planning B: Planning and Design, 36(2), 191-194.

87 Scholliers, J., Van Sambeek, M., & Moerman, K. (2017). Integration of vulnerable road users in cooperative ITS systems. European transport research review, 9(2), 1-9. https://doi.org/10.1007/s12544-017-0230-3

88 Komol, M. M. R., Hasan, M. M., Elhenawy, M., Yasmin, S., Masoud, M., & Rakotonirainy, A. (2021). Crash severity analysis of vulnerable road users using machine learning. PLoS one, 16(8), e0255828.https://doi.org/10.1371/journal.pone.0255828

YOURS official contacts are as follows:

For partnership-related or general inquiries

Email: info@youthforroadsafety.org.

Initiated by:

YOURS YOUTH FOR ROAD SAFETY

GLOBAL YOUTH COALITION FOR ROAD SAFETY #CLAIMINGOURSPACE

Programme partners:

MICHELIN CORPORATE FOUNDATION

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