

Integrating Mental Health Awareness into Road Safety Measures: An Urgent Road Safety Perspective for Cameroon

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ABSTRACT

This article explores the intricate relationship between mental health disorders and their potential impact on road safety, with a particular emphasis on Cameroon. Mental health conditions such as Intermittent Explosive Disorder, Bipolar Disorder, Schizophrenia, Substance Use Disorder, and borderline personality disorder are examined in the context of driving behaviors, road rage incidents, and overall road safety. The objective is not to stigmatize individuals with mental illness but to highlight the importance of screening, support, and attention to mental health in the context of increasing road accidents. The paper discusses the symptoms of these disorders and how they may increase the risk of road accidents. It also explores the roles of government, community, and individuals in enhancing road safety through mental health support. Evidence-based data specific to road safety in Cameroon and other developing countries are utilized to support the arguments. Recommendations for interventions and support mechanisms are provided, emphasizing a non-discriminatory and objective approach.

INTRODUCTION: THE CONTEXTUAL FRAMEWORK OF ROAD ACCIDENTS

Road safety is a concern for health on a global scale, with approximately 1.35 million individuals losing their lives each year due to road traffic accidents. In Cameroon, there are around 16,000 reported road accidents annually, resulting in over 1,000 fatalities. However, according to the World Health Organization (WHO), the actual number of deaths related to road accidents in the country is estimated to be closer to 6,000 per year. In developing nations like Cameroon, factors such as infrastructure, limited law enforcement resources, and the often-overlooked issue of driver mental health contribute to the problem. Mental health conditions can impair emotional functions. Mental health disorders can significantly impair cognitive, emotional, and behavioural functioning, potentially increasing the risk of road traffic accidents. Conditions such as intermittent explosive disorder, bipolar disorder, schizophrenia, substance use disorder, borderline personality disorder, and post-traumatic stress disorder (PTSD) can affect driving abilities, leading to impaired decision-making, reduced reaction times, and increased susceptibility to road rage.

This article addresses the connection between mental health challenges and road safety in Cameroon. It emphasizes the importance of implementing screening processes and providing support and intervention measures that consider drivers' mental well-being as an aspect of road safety initiatives.

By promoting inclusivity, this article does not propose limitations on the driving privileges of individuals with mental illness. Instead, it advocates for tailored intervention to ensure those facing mental health challenges can drive safely and responsibly. This initiative is in line with improving road safety, reducing traffic-related deaths and injuries, and supporting the well-being of the people in Cameroon. By analysing how specific mental illnesses impact driving skills, considering political factors, and assessing evidence-based interventions, this article aims to contribute to developing informed public health policies and

programs in Cameroon. Overall, this work seeks to contribute more broadly toward building a much-needed body of literature on the nexus between mental health and road safety.

PROBLEM AND METHOD: THE SALIENCY OF MENTAL HEALTH DISORDER IN CAMEROON

Literature on mental health in sub-Saharan Africa is strikingly scarce despite a disturbing increase in the rate of the phenomenon. Mental health disorder is an issue of critical concern not only to Cameroonians but also to the international community. Qualitative and quantitative evidence suggests that the situation is alarming and deserve critical attention from the academia and policy makers. In a global burden of disease report, about 704, 874 and 48 thousand people in Cameroon were living with major depressive disorder, anxiety disorder and schizophrenia, respectively, in 2019. A study conducted in the Far North Region of Cameroon suggested that among the young adults, anxiety disorders were most prevalent at 24.3%, followed by trauma- and stressor-related disorders at 17.0%, and mood disorders at 8.0%. Females had 1.71 (95% CI 1.17, 2.50) odds of an anxiety disorder and 2.18 (95% CI 1.16, 4.10) odds of a mood disorder compared to males. Overall, in a youth sample in Cameroon self-identified as having mental health concerns, the study found high rates of psychiatric illness, particularly anxiety disorders.

Although Africa and Cameroon in particular is not left out of the problem of traffic accidents, the connection to mental health disorder is sparsely explored. Cameroon records an average of 16,583 road accidents each year, killing more than 1000 people, according to official figures and over 6000 according to WHO estimates. These figures can be increased with regards to certain peaks such as the 39 victims of Ndikinimeki on December 27, 2020 and most recently the 55 victims of the Santchou-Dschang cliff on January 27, 2021. However, most road accidents occur along the Yaounde-Douala-Bafoussam-Yaounde triangle, also called the 'death triangle' because it records over 46%, of the entire road accidents on the highways in Cameroon. Moreover, the age-adjusted death rate for road injuries is 35.06 per 100.000 of population, which ranks Cameroon number 28 in the world.

Although these figures are relevant as they do indicate the magnitude of the problem, they do not point out the nature of the problem which could be relevant to possible remedies. Emphasis has often been on the the nature of the road and the state of the car, with little consideration of the driver and the possible exposure to mental health risk. If the human factor is the main cause of more than 90% of road accidents, it is almost obvious that there is a nexus between mental health and road safety. Among road accidents, the human factor remains a capital factor and should that be the case, it is an imperative to researchers and policy makers to pay a particular attention to the mental health of road users and in particular the drivers.

Overview of Mental Health Disorders and its Impact on Road Safety

The intersection of mental health disorders and road safety presents a significant public health challenge, particularly in the developing context of Cameroon. The complexity of diagnosing and managing mental health conditions, coupled with the socioeconomic constraints impacting healthcare access, underscores the urgency for targeted research and policy intervention. The symptoms and behaviors associated with various mental health disorders can directly impact driving abilities and road safety.

Bipolar Disorder

Bipolar Disorder, characterized by extreme mood swings that include emotional highs (mania or hypomania) and lows (depression), can significantly affect driving abilities and road safety. These mood swings can lead to varied driving behaviors, from overly cautious and indecisive driving during depressive episodes to risky and aggressive driving during manic phases. Understanding the impact of these symptoms on road safety, especially in environments with limited mental health support, like many third-world countries, is crucial for developing effective interventions.

Impact of Bipolar Disorder on Driving Behavior During Manic Episodes.

1. **Increased Risk-Taking:** Manic episodes often lead to increased risk-taking behaviors, including speeding, making dangerous overtakes, and ignoring traffic rules due to an inflated sense of confidence and a decreased perception of danger.
2. **Aggression and Impulsivity:** The heightened irritability and impulsivity associated with mania can result in aggressive driving, road rage incidents, and impulsive decisions without considering the consequences.
3. **Distractibility:** Mania's rapid thought processes and distractibility can make it difficult for individuals to focus on driving, leading to a higher likelihood of missing essential signs or signals.

Impact of Bipolar Disorder on Driving Behavior During Depressive Episodes.

1. **Decreased Focus:** Depression can lead to difficulty concentrating and decision-making, impacting a driver's ability to respond promptly to traffic conditions or road patterns.
2. **Slowed Reaction Times:** The psychomotor retardation often seen in depression can slow physical reactions, making it harder to respond quickly in traffic situations.
3. **Fatigue and Sleep Issues:** The fatigue and sleep disturbances common in depressive episodes can increase drowsiness while driving and elevate the risk of falling asleep.

Schizophrenia

Schizophrenia, a health condition characterized by distortions in thinking, perception, emotions, language, self-perception, and behavior, can have a significant impact on road safety. For example, symptoms of schizophrenia, hallucinations (perceiving things that are not present), delusions (holding onto fixed, false beliefs), disorganized thinking, and sometimes catatonia, can significantly affect driving skills and behavior on the road.

Effects of Schizophrenia on Driving Skills.

1. **Perceptions:** Hallucinations could cause drivers to perceive existing objects or obstacles or hear voices instructing them, leading to inappropriate driving responses.
2. **Unrealistic Beliefs:** Delusions may lead an individual to believe they are invulnerable or exempt from following traffic laws, which can potentially lead to dangerous driving behaviors.
3. **Cognitive functions** may be impacted by schizophrenia, causing issues with decision-making and judgment. Individuals with schizophrenia might struggle to make logical choices while driving or accurately assess speed and distance.
4. **Disorganized thinking** could lead to driving behavior difficulty in adhering to traffic signals or forgetting the intended destination or reason for the trip.

Substance and Opioid Use Disorder

Substance Use Disorder (SUD), including Opioid Use Disorder, significantly affects road safety by impairing an individual's cognitive and physical abilities, essential for safe driving. The consumption of substances, ranging from alcohol and cannabis to opioids and other psychoactive drugs, can lead to various impairments, such as reduced reaction time, impaired judgment, decreased motor coordination, blurred vision, and altered perception of time and distance. These impairments directly increase the risk of traffic accidents, as the ability to make quick decisions, respond to changes in traffic conditions, and operate a vehicle safely is compromised. Opioids can induce drowsiness, sedation, and euphoria, further endangering the safety of the user and others on the road. The use of opioids and other substances can make drivers more likely to ignore traffic laws, misjudge traffic situations, or fall asleep at the wheel. For example, an individual under the influence of opioids may not react appropriately to a stop sign, traffic light, or the actions of other drivers, leading to collisions or other dangerous incidents. The challenge is exacerbated in

third-world countries like Cameroon, where the infrastructure for addressing substance and opioid use disorders may be limited. Factors such as inadequate access to treatment, lack of public awareness about the dangers of driving under the influence, and insufficient enforcement of traffic safety laws contribute to the heightened risk of road accidents related to substance use. Moreover, the stigma associated with addiction can prevent individuals from seeking help, allowing the cycle of substance use and unsafe driving behaviors to continue.

Borderline Personality Disorders

Borderline Personality Disorder (BPD) can significantly impact road safety. This concern is magnified in third-world countries like Cameroon, where systemic challenges and limited mental health resources can exacerbate the problem. BPD is characterized by a pattern of instability in interpersonal relationships, self-image, and affect, along with marked impulsivity. Individuals with BPD may experience intense episodes of anger, depression, and anxiety, which can last from a few hours to days. These emotional swings and impulsivity can directly influence driving behavior, posing risks to road safety. The impulsivity aspect of BPD, one of the disorder's hallmark traits, is particularly relevant to driving behaviors. This impulsivity can manifest as risky driving practices, such as speeding, abrupt lane changes without signaling, and engaging in confrontations with other drivers or road rage. These actions affect the individual with BPD and other road users. Moreover, the intense emotional states associated with BPD, such as episodes of anger or profound depression, can impair judgment, reduce concentration, and slow reaction times—all critical components of safe driving.

Intermittent Explosive Disorder

Intermittent Explosive Disorder (IED) directly impacts road safety through its characteristic sudden, explosive outbursts of anger and aggression. Individuals with IEDs struggle to control their temper, causing frustration. These outbursts can manifest dramatically in driving situations, often full of stressors such as traffic congestion, slow-moving vehicles, or navigating complex roadways. The presence of IEDs elevates the risk of engaging in aggressive driving behaviors and experiencing road rage, both of which significantly increase the likelihood of traffic accidents. In high-stress driving scenarios, an individual with IED may react to minor provocations or annoyances with extreme anger, leading to aggressive driving tactics such as tailgating, speeding, honking excessively, or making hostile gestures toward other drivers. In more severe cases, IEDs can result in physical altercations, property damage, or even assaultive behavior toward other drivers, pedestrians, or objects. These reactions not only endanger the individual with IED but also pose a significant threat to the safety of other road users. The impact of IEDs on road safety is particularly concerning in contexts like third-world countries, where road conditions, traffic law enforcement, and public awareness about mental health issues may not be as advanced as in more developed regions. In countries such as Cameroon, the combination of less stringent traffic regulations, potentially hazardous road conditions, and a lack of mental health services can exacerbate the risks associated with IEDs. Moreover, the stigma surrounding mental health might deter individuals from seeking diagnosis or treatment, allowing the disorder's symptoms to go unmanaged.

Antisocial Personality Disorder

In Cameroon, the challenges are amplified by several factors, including but not limited to less stringent enforcement of traffic laws, a higher prevalence of poorly maintained roads, and a lack of comprehensive mental health services. The combination of these factors with the predispositions associated with ASPD can exacerbate the risks associated with road safety. Moreover, the stigma surrounding mental health issues in many such contexts can prevent individuals from seeking help, further increasing the likelihood of adverse outcomes on the road. The relationship between ASPD and road safety in countries like Cameroon underscores the urgent need for integrated approaches that address mental health and road safety. Initiatives include.

- Improving mental health awareness and intervention programs,

- Enhancing the enforcement of traffic laws and
- Implementing educational campaigns focused on safe driving practices.

Moreover, establishing systems for diagnosing and treating personality disorders could mitigate these risks, contributing to safer road environments.

Cultural and Societal Influences on Mental Health and Road Safety

The statement from the Diagnostic and Statistical Manual of Mental Disorders (DSM) indicates a lower prevalence of mental health disorders such as Intermittent Explosive Disorder (IED) in specific regions and countries compared to the United States, and attributing this difference to potential cultural factors or disparities in diagnostic practices offers a critical lens through which to examine road safety in Cameroon. This insight is particularly relevant given that Cameroon, like many countries outside the Western context, may have unique cultural, social, and healthcare system factors influencing the understanding, diagnosis, and management of mental health disorders.

In Cameroon, cultural beliefs and societal norms are pivotal in shaping attitudes towards mental health. The communal nature of many African societies, including Cameroon, emphasizes on collective well-being, which can sometimes lead to the stigmatization of individuals with mental health disorders, discouraging them from seeking diagnosis or treatment. Such a stigma can prevent those experiencing mental health issues from acknowledging their symptoms or understanding their potential impact on tasks requiring high levels of concentration and decision-making, such as driving. Consequently, untreated or undermanaged mental health conditions can increase the risk of road incidents, given the potential for impaired judgment, reaction times, and emotional regulation.

Diagnostic Practices and Their Impact on Road Safety

The potential for underdiagnosis or misdiagnosis of mental health disorders due to cultural disparities in the expression and interpretation of symptoms can lead to a significant population of drivers whose conditions are not adequately managed. This situation is compounded by the limited mental health resources and infrastructure in many parts of Cameroon, where access to mental health professionals and treatments may be scarce.

Implications for Road Safety in Cameroon.

1. **Increased Risk on Roads:** The combination of underdiagnosis, stigma, and inadequate treatment for general mental health disorders poses a significant risk to road safety. Drivers with untreated mental health conditions are more likely to exhibit behaviors that compromise safety, such as decreased attention, impulsivity, or poor emotional control.
2. **Need for Culturally Adapted Mental Health Care:** Culturally adapted mental health services and diagnostic tools are critical in the Cameroonian context. Such adaptations would help ensure that mental health disorders are accurately identified and treated, reducing their impact on road safety.
3. **Public Awareness and Education:** Enhancing public understanding of mental health, reducing stigma, and promoting safe driving practices among individuals with mental health disorders are essential. Public health campaigns can be vital in educating the public about the links between mental health and road safety and encouraging individuals to seek help.
4. **Integrated Road Safety Strategies:** Developing road safety policies considering mental health's broader implications can lead to more comprehensive safety interventions. This includes traditional road safety measures and initiatives to improve access to mental health care and integrate mental health evaluations into driver licensing and renewal processes.

Socioeconomic and Political Factors

A complex interplay of socioeconomic and political factors influences the relationship between mental health and road safety. In Cameroon, limited access to mental health services, especially in rural areas, exacerbates the risk. Furthermore, the stigma surrounding mental health can prevent individuals from seeking the help they need. Politically, while there is growing recognition of the importance of mental health and road safety, resource allocation remains a significant challenge. This is compounded by a lack of comprehensive data on the prevalence of mental health disorders among drivers and their impact on road safety, hindering effective policy formulation and intervention implementation.

Governmental and Community Interventions.

The relationship between mental health disorders, including Intermittent Explosive Disorder, and road safety is a critical issue for public health and transportation policy, particularly in countries like Cameroon. According to a Road Safety Performance Review presented by the United Nations Economic Commission for Europe (UNECE), Cameroon records an average of 16,583 road accidents yearly, with over 1,000 fatalities according to official figures and over 6,000 according to World Health Organization estimates. Despite efforts to decrease accidents since 2012 through user awareness, monitoring, and enforcement activities, road deaths increased from 2008 to 2014 due to the increase in the vehicle fleet and the severity of accidents.

Cameroon's government has also recognized the economic impact of road accidents, with estimated losses of nearly 100 billion CFA francs per year, equivalent to 1% of GDP. These figures underline the importance of enhancing road safety measures, which include addressing mental health disorders that can impair driving ability.

Moreover, innovative solutions like the Ym@ne Driver application, launched by the Ministry of Transport, aim to monitor drivers' behavior in real-time to reduce accidents. This platform marks a significant step toward leveraging technology to enhance road safety by automatically sending alerts to drivers and slowing down vehicles if excessive speeding is detected.

The Nkafu Policy Institute also emphasizes that human factors, mechanical defects, and environmental conditions have caused road traffic accidents in Cameroon. To combat these issues, the institute suggests several measures, including public education on safe driving, enforcing laws on speed limits and alcohol impairment, and encouraging the importation of safer vehicles.

This evidence underscores the multifaceted approach needed to improve road safety in Cameroon. This approach involves tackling mental health disorders among drivers and addressing mechanical and environmental factors contributing to road traffic accidents. The concerted effort of the government, private sector, and international organizations in implementing these recommendations can significantly enhance road safety in Cameroon, making the roads safer for everyone.

RECOMMENDATIONS

Incorporating mental health considerations into road safety strategies is a multifaceted approach that necessitates coordinated efforts across different sectors. Adopting and implementing these strategies could substantially enhance road safety and overall public health in Cameroon, a country with a significant burden of road traffic accidents. Here is a detailed exploration based on the strategies outlined.

Screening and Support

Implementing routine mental health screenings for drivers is an essential preventative measure. This initiative could identify drivers who may be at risk due to underlying mental health disorders, thereby

enabling early intervention. Access to treatment and support services is crucial, ensuring that individuals identified during screenings receive the necessary care to manage their conditions effectively. In Cameroon, where resources might be limited, leveraging existing healthcare structures and integrating mental health services into primary care could be cost-effective. Moreover, partnerships with international organizations such as the World Health Organization, which has emphasized the importance of mental health in public health, could provide the necessary support for developing these services.

Policy Development

Developing policies integrating mental health considerations into road safety strategies involves several vital components. This includes revising driver licensing regulations to include mental health assessments as part of the criteria for obtaining and renewing licenses. Driver education programs could also be enhanced to cover mental health awareness, teaching drivers about the impact of mental health on driving abilities and strategies for managing stress and other psychological conditions while driving. Public awareness campaigns are essential for changing societal attitudes towards mental health and driving safety. These campaigns can disseminate information on the importance of mental health in driving, the availability of support services, and the risks associated with untreated mental health conditions on the road.

Community Engagement

Mobilizing community support for individuals with mental health disorders is vital for creating an inclusive and supportive environment. Community engagement initiatives can promote a culture of safety and wellness on the roads, encouraging community members to look out for one another and support those struggling with mental health issues. Such initiatives could include community-based mental health programs, workshops, and forums that educate the public on mental health, road safety, and how to provide support to individuals in need. Engaging local leaders, community organizations, and the media can amplify these messages, ensuring widespread reach and impact.

Implementing these strategies in Cameroon would require collaboration between the government, health sector, transport authorities, community organizations, and international partners. While specific data on the implementation and outcomes of these strategies in Cameroon might not be readily available, the evidence from other countries suggests that integrating mental health into road safety significantly reduces accidents and improves public health outcomes.

Cameroon can make significant strides in enhancing road safety and addressing mental health's broader implications for public wellness and safety by adopting a comprehensive approach that includes screening and support, policy development, and community engagement.

Case Studies: International Examples of Successful Interventions.

Several interventions have demonstrated efficacy in bridging the gap between mental health management and road safety. In Norway, the implementation of comprehensive driving assessments for individuals diagnosed with severe mental health conditions has contributed to a significant reduction in road accidents. This approach involves detailed evaluations of an individual's ability to drive safely and tailored treatment plans. Similarly, in Australia, the "Drive Safe" initiative offers specialized driving training and mental health support for individuals with psychiatric conditions, emphasizing safe driving habits and accident prevention strategies. These examples illuminate the potential of targeted interventions to mitigate the intersectional risk of mental health disorders and road accidents, providing a blueprint for adaptation and implementation within the Cameroonian context and beyond.

The 'Dakar Declaration,' adopted by 21 African countries, emphasizes strengthening data capture, analysis, and sharing to better inform road safety policies. While this initiative does not directly mention mental

health, it establishes a framework that could incorporate mental health considerations by improving understanding of road safety challenges and crafting informed interventions.

Moreover, the World Health Organization (WHO) has launched campaigns and endorsed strategies to bolster mental health care in the African region. A notable focus has been on suicide prevention, which involves equipping health workers to support those with suicidal thoughts—a critical aspect of mental health care that could also impact road safety by addressing one of the risk factors associated with unsafe driving behaviors. The campaign aims to raise awareness and increase support from governments and policymakers to enhance mental health programming.

In addition, the WHO's efforts in supporting countries to ramp up mental health services, as seen in Zimbabwe, Kenya, Uganda, and Zimbabwe, through training initiatives and developing investment cases for mental health services, demonstrate a broad approach to improving mental health care. While these initiatives are not directly linked to road safety, better mental health care can contribute to safer roads by ensuring drivers are mentally fit.

These initiatives show a growing recognition of the importance of mental health care and its indirect effects on road safety. However, direct integration of mental health into road safety strategies requires further development and implementation. As African countries continue to work on enhancing their road safety and mental health care frameworks, there is potential for more integrated approaches that directly address both road safety and mental health.

CONCLUSION

The emphasis on integrating mental health into road safety strategies emerges as a vital approach to reducing traffic accidents, a principle that could be significant for Cameroon. This synthesis derives from the broader understanding that mental health directly impacts driving behaviours and road safety. Therefore, studying mental health and road accidents can identify initiatives to improve safe travels on the road and prevent road accidents.

Critical interventions such as routine mental health screenings for drivers, ensuring access to treatment and support services, and crafting policies that recognize the intersection of mental health and road safety can significantly reduce traffic accidents. These interventions and community engagement initiatives that promote mental wellness and safe driving practices underscore the need for multi-sectoral collaboration. Such collaborative efforts would involve government agencies, healthcare professionals, community organizations, and international bodies like the WHO, all working to foster an environment where mental health and road safety are interconnected components of public health and safety strategies.

In summary, the call for an integrated approach to road safety and mental health in Cameroon—and by extension, highlights the critical need for concerted efforts among various stakeholders. By acknowledging the intricate link between mental well-being and road safety, Cameroon can pave the way for innovative, comprehensive strategies that protect its roads and people, ensuring a safer, more health-conscious society.

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