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Road Traffic Accidents And Mental Health: A Synergizing Apocalypse

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Abstract:
Road traffic accidents (RTA) have increased in urbanization and advances in transport. There is a rise in mental health issues after the impact of the RTA on the survivors and their caregivers. While RTA has a psychological impact, it also affects the economy and vocational outcome of the affecting which further affects the quality of life.

Introduction:
Every year, approximately 1.5 lakh people die on Indian roads, which translates, on average, into 1130 accidents and 422 deaths every day or 47 accidents and 18 deaths every hour. These data seem disheartening so does their impact on the mental health of the survivors. While there is a rising trend of RTA and mental illness there is often a neuro-psychiatric sequelae to RTA that adds to the morbidity further (1). Road traffic accidents (RTAs) are the leading cause of death among children and young adults and the eighth leading cause of death for all age groups globally (1).
Depressive mood (DM) and post-traumatic stress (PTS) are very common mental health symptoms following an accident or injury [2-5], however, most studies have investigated PTS rather than depression. If these DM and PTS symptoms remain elevated, there is an increased risk of disability and progression to serious mental disorders (as per the Diagnostic and Statistical Manual (DSM) of Mental Disorders criteria), like major depressive disorder (MDD), post-traumatic stress disorder (PTSD), panic disorder and generalized anxiety disorder [2,5]. Post-injury rates of mental disorders have been reported in the range of 30–50% [2-4].
Mental health comorbidity is not uncommon after an injury, most often presenting as PTSD, major depressive disorders and phobia/anxiety [2,6]. Some researchers have explored shared predictors and vulnerability to clarify whether these conditions are unique or separate constructs [6]. Studies by Bryant et al., 2010; Guest et al., 2018; and Kenardy et al., 2018, showed the rate of mental disorders after road traffic injuries to be as high as 30–50% in some studies [2,4]. In some studies, there were reports of violent behaviour and increased substance use post-trauma among the RTA survivors (Beck & Coffey, 2007;

Copanitsanou et al., 2018; deRoon-Cassini et al., 2010). Apart from the mental and behavioural issues, there were difficulties related to the cost of impact of trauma, including medical management and rehabilitation, which further raises the psychological distress among the RTA survivors and their caregivers (Chan et al., 2003) [6].

A study from Croatia (2020), incorporating 200 RTA survivors showed rates of 35.5% PTSD, 20.0% depression symptoms, and a low rate (4.5%) of anxiety [7]. Other significant socio-demographic factors determined in this study were female gender for PTSD symptoms, below-average self-perceived economic status for PTSD and depression symptoms, and irreligiousness for depression symptoms. Females were found to be more susceptible to psychological disorders after RTA, especially for PTSD; that may be attributed to variablilty in coping and psyche of female gender [7,8].

Psychological impact:

1. PTSD:

RTAs are the leading cause of PTSD in the general population. PTSD prevalence after a RTA ranges from 6% to 45%, depending on the time frame and sample size, as well as the socioeconomic and cultural factors of the country where study was conducted [9,10]. The WHO World Mental Health Survey Initiative determined an overall PTSD rate of 2.5% after any RTA that was perceived to be life-threatening in a community-based epidemiological survey conducted in 13 countries, but concluded that even a relatively low prevalence of PTSD after RTAs represents a significant global public health problem, given the enormous number of RTAs that occur worldwide [24]. A recent meta-analysis found pooled prevalence of PTSD among RTA survivors to be 22.25%, with great disparity across studies in relation to the instruments used to assess PTSD, country, race, gender, and education level [8]. Consistent predictors of PTSD are rumination about the trauma, perceived threat to life, and lack of social support, severe acute stress disorder symptoms, persistent physical problems, previous emotional problems, previous anxiety disorders, and involvement in litigation/compensation [21]. Results regarding the association between the RTA injury level and PTSD are contradictory and demand more research [9]

Other psychological disorders after a RTA, such as depression and anxiety, are not as numerous as for PTSD. The obtained prevalence for depressive disorder after a RTA ranges from 7.8% to 63%], and for anxiety disorder from 19.4% to 60%. There are no meta-analyses for depression and anxiety after RTAs, nor for the predictors of these disorders after a RTA [8].

2. Anxiety and phobias:

Anxiety symptoms showed significant association with previous health status, i.e., previous chronic illness, previous psychiatric illness, previous permanent pain, and psychiatric medication used before a RTA, but not with injury-related factors. Furthermore, there were 11.1% of participants with depression symptoms, 5.6% with PTSD symptoms, and 5.6% with anxiety symptoms among uninjured RTA survivors [8].

3. Pathological grief and Depression:

10.9% of RTA victims met the criteria for a major depressive episode following the accident and 30.7% had a travel phobia after the accident [12]. A cohort study showed that depression after a minor injury affects the quality of life negatively, even a year after injury [13]. Depression is considered to be a consequence of chronic pain; victims who have a depressive disorder and intense pain will have a lower physical function, which affects the quality of life negatively [14]

4. Vocational and economic impact:

RTA survivors with persistent disabilities due to physical deficits suffer further due to their jobs loss and financial problems [15]. Further suffering is added due to delay in recovery and rejoining work that is attributed to disability and mental health consequences [16]. In France, a cohort study was conducted on 1,112 working-age subjects, where 23% of those who were working at the time of an accident reported that they delayed returning to work following the RTA [15]. In another study by Tournier C et al, 37.4% of subjects who had worked before an RTA reported an effect on their job, and 47% of the subjects reported persistent financial problems [17]. Persisting work absences after an RTA impacts negatively on the finances and economy of the survivors' and their families due to their income loss, job promotion delay; leading to considerable financial hardship because of an inadequate amount of sick leave or accrued annual leave to cover the long absences from work [18].

5. Quality of life and standard of living:

Data from the West **(**European Transport Safety Council) shows a significant decrease in the standard of living and quality of life. It was seen to be 90% of the families of dead causalities and 85% of the families of disabled victims [19].

6. Social impact:

A study conducted by Pfeifer R et al showed that patients younger than 18 years old are more likely to lose friendships; 82.1% of patients younger than 18 years reported that the number of their friends declined, while 29.9% of patients between 19 to 50 years and 6.9% of patients older than 50 reported a reduction in the number of their friends which might be due to the restricted contact with friends during long hospital stays and prolonged rehabilitation processes [20]. It is also seen that the family of the RTA survivor play an important and necessary role in the recovery and rehabilitation of the survivors. A study by Tournier C et al showed that family support was found to be beneficial in overcoming the stress of their injuries, this period may extend up to 2 years after the RTA [17].

Need for Mental health support:

RTA doesn't only affect physical health but has a deep impact on mental health as well. The RTA survivors and their family members are drastically troubled by its outcome effects; often affecting the quality of life and the livelihood. Therefore, apart from managing the physical disability, there is a need for providing holistic mental health professional support for the complete rehabilitation of the RTA survivor. All the patients should be screened for psychological stressors and mental health problems prior the event and as a sequelae to the same. Evaluating and understanding the risk factors and social factors that might impact the mental health of the survivors would be beneficial in managing the case individually. Early intervention by mental health professional would reduce the morbidity of mental illness and related disability and hence, improve the outcome and quality of life [7].

Conclusion:

The prevalence of PTSD, depression, emotional distress, anxiety, phobia and related disability is markedly associated with RTA. An integrated approach in the management of RTA cases along with a skilled mental health professional team in emergency and trauma units is a need of the hour. This would reduce the apocalypse impact of trauma on the affected persons and their family's mental health and secondary disability due to the impact; hence; improving post-trauma quality of life and morbidity.

Conflict of Interest: None.

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