Original Article

Burden of Commercial Motorcycle Riders' Involvement in Road Traffic Accidents in Benue State and the Persona- Socio Counselling Implications

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ABSTRACT

The study aimed to determine the influence of socio-demographic characteristics on road traffic accidents (RTAs) among commercial motorcycle riders (CMRs) in Benue State, Nigeria. Study was prompted by the surge of CMRs' involvement in RTAs, attendant consequences and lack of accident prevention-target counselling. The study recruited 412 CMRs in six (6) Local Government Areas of the State and utilized a descriptive study design. Multistage sampling was done using the LGAs as clusters. A self-constructed and validated questionnaire was used for data collection and descriptive statistics, t-test and ANOVA were used for analysis. Findings from the study revealed motorcycle related RTAs prevalence as 75.2% and the commonest cause category of accidents was 37.1% due to individual human error. CMRs less than 30 years (p=0.000), male gender (p=0.020), single marital status (p=0.000), no formal and only primary education as the highest level of educational attainment (p=0.000), daily income of less than 7,000 Naira (p=0.000) and CMRs without alternative employment had significant influence (p=0.000) on RTAs. Family size (p=0.205) and gender (p=0.060) of the CMRs did not have significant influence on RTAs. None (0%) of the CMRs received formal counselling tailored towards road accident prevention. The study concluded that motorcycle related road traffic accidents prevalence in Benue State was 75.2% and individual human error was the commonest (37.1%) cause category. Age less than 30 years, males, singles, no formal or only primary education, daily income less than 7,000 Naira and those without an alternative employment were likely to be involved in RTAs. Persona-socio counselling of CMRs aimed at reducing the high prevalence of motorcycle-related RTAs is recommended.

Keywords: Benue State, Commercial Motorcycle Riders, Persona-Socio Counselling, Road Traffic Accidents.

INTRODUCTION

Geographical locations and daunting economic challenges have dictated the mode of transportation in the developing nations necessitating the use of motorcycles in those areas. Motorcycles are used for sports or for movement of persons, goods and services from one place to another either for pleasure or for socio-economic gains. Unfortunately, motorcycles are also used to aid or commit crime in crime-prone areas by bandits and insurgents. Irrespective of how the motorcycles are used, they remain the most vulnerable vehicle involved in transport related accidents in many countries of the world including Nigeria.[1] Its use in Nigerian rural and urban areas are observed to be often involved in road traffic accidents resulting to varying degrees of injuries, property losses and even deaths.

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The prevalence of motorcycle related road traffic accidents (MRRTAs) varies from one geographical location to another. This variation is however dependent on the importance the user population places on the motorcycles as a means of transportation. In Bangladesh South Asia, the prevalence of motorcycle related road traffic accidents was found to be 68.7%.[2] In Ghana and Cameroon, the prevalence of motorcycle related road traffic accidents (MRRTAs) was reported as 74.0% and 77.4% in the year 2020 and 2021 respectively.[3, 4] In Nigeria, Adebayo et al reported a national prevalence of 68.0%.[5] The picture within the country and across the geopolitical zones and States is also varying. In Kwara state north-central Nigeria, the prevalence was reported as 54.0%, [6] Owo, south-western Nigeria, the prevalence was 56.6%, [7] Nnewi, south-eastern Nigeria the prevalence was 65.2%,[8] Sokoto, north-western Nigeria the prevalence was 63.2%.[9] The prevalence of the road traffic accident among the commercial motorcyclists in Benue State is not known to these researchers despite an extensive literature search.

The motorcycle related road traffic accidents result from either mechanical fault from the motorcycles, the environment (road infrastructure and weather) where the riders operate, the riders' emotional and psychological state of mind as well as the expertise/experience of his or her riding career.[10, 11, 12] Motorcycle related road traffic accidents are observed to be influenced by many variables. Some of these are but not limited to socio-demographic characteristics of the riders (age gender, marital status, family size, level of education, income and alternative employment status), psychological state of the riders, expertise/experience of riders, environmental and road infrastructure.[9, 13 - 22] Other causes or influencers of road traffic accidents among CMRs include: overloading, high speeding, beating of traffic rules and regulations, use of psychoactive substances and use of mobile phones while riding. [4,12, 13,14,23,24,25]

Motorcycle related road traffic accidents have social, emotional, economic and physical implications often with poor exposure of the riders to counselling as a way of prevention.[26] It therefore requires a multi-sector approach to tackle this public health concern.

The scope of this work will therefore be limited to unveiling the prevalence, causes and socio-demographic variables of CMRs capable of influencing motorcycle related accidents. It will also incorporate the appropriate counselling modality to help curb the menace.

MATERIALS AND METHODS

Study area: The study was conducted in the three (3) Senatorial zones of Benue State, Nigeria involving six (6) Local Government Areas (Makurdi, Gboko, Konshisha, Vandeikya, Otukpo and Oju).

Study population: The population for the study was 38,128 commercial motorcycle riders in Benue State.

Sample size and sampling technique: Sample size of 412 commercial motorcycle riders was estimated using Taro Yamane formula.[27] A multistage sampling technique was adopted using the three (3) Senatorial zones as clusters.

Study design: A descriptive study design was utilized by the study.

Method of data collection: A self-constructed questionnaire (Commercial Motorcyclists' Risky-Riding Behavioural Indexes Questionnaire-CMRRBIQ) with a reliability coefficient of 0.891 (Cronbach Alpha) and a response pattern of a four-point modified Likert Scale was used. Risk level of influence of CMRs' involvement in RTAs (from the questionnaire) was categorized as shown: Mean scores of 4.00-3.25 was considered Very High Influence, Mean scores of 3.24-2.50 as High Influence, Mean scores of 2.49-1.75 as Moderate Influence and Mean scores of 1.74-1.00 as Low Influence.[28]

Method of data analysis: Descriptive and inferential statistics of t-test and ANOVA were used for analysis.

RESULTS

Table 1 presents the mean analysis on road traffic accident (RTA) causes among the commercial motorcycle riders depicting the riding behaviours as causes of RTA among them. These causes

include: *'pick more than one passenger on bike'* ($\bar{x}$ =2.89, σ =1.17); *'usually beat traffic when in a haste'* ($\bar{x}$ =2.95, σ = 1.17); *'overtake vehicles and other motorcycles at road bends'* ($\bar{x}$ =2.92, σ = 1.16); *'ride at high speed -usually more than 50Km/hr'* ($\bar{x}$ =2.95, σ = 1.14); *'carry heavy loads at the front of my motorcycle'* ($\bar{x}$ =2.94, σ = 0.92); *'rarely check left and right side before crossing roads'* ($\bar{x}$ =2.61, σ = 0.87); *'hardly indicate the intending direction of turn (using the motorcycle traffic indicator) before stopping by the roadside'* ($\bar{x}$ =56, σ = 0.96); and *'rarely indicate the intending direction of the road to follow'* ($\bar{x}$ = 2.60, σ = 1.01).

Other causes in table 1 include: *'take psychoactive substances/drugs before setting out to ride'* ($\bar{x}$= 2.57, σ = 0.93); *'make use of my cellular phone while* riding' ($\bar{x}$ = 2.98, σ = 1.13); *'wet clay graded roads are navigated successfully without necessarily reducing the* speed' ($\bar{x}$ = 2.62, σ = 0.90); *'even dusty un tarred roads are successfully navigated without necessarily reducing the speed'* ($\bar{x}$ = 2.59, σ = 0.95); *'hardly look through the side mirrors of my motorcycle when riding'* ($\bar{x}$ = 2.95, σ = 1.17); *'hardly blow horn before overtaking vehicles'* ($\bar{x}$ = 2.93, σ = 1.16); *'hardly change tires of the motorcycle until they are completely worn-out'* ($\bar{x}$ = 2.94, σ = 1.16); and *'Sometimes ride on roads encroached by street hawkers who further makes them narrow'* ($\bar{x}$ = 2.92, σ = 1.14).

Table 2 presents self-reported accident history of road traffic accidents among the commercial motorcycle riders as 310 (75.2%) as compared to those 102 (24.8%) without any history of RTA. This high prevalence of 75.2% implies that commercial motorcycle riders (CMRs) are generally prone to RTAs. The table further revealed *"individual human error"* of the CMRs as the commonest (37.1%) cause of road traffic accidents among the riders followed by the *"fault of another road user"* (28.4%). *"Mechanical faults on the motorcycle"* and *"fault of another road user"* were the least probable causes of their involvement in road traffic accidents which was 22.9% and 11.6% respectively. It therefore means that, the major cause of accidents among CMRs may likely be due to individual rider errors of either omission or commission as the case may be.

None of the CMRs received formal counselling targeted at accident prevention (table 2). A total of 205 (49.8%) CMRs were reported to have owned their motorcycles and the majority 229 (55.6%) of them had their business located in the urban areas while the remaining 183 (44.4%) had theirs in the rural communities of the state (table 2).

Table 3 shows that age of the CMRs had a significant (p=0.000) influence on being involved in RTAs. The CMRs (respondents) below the age of 20 years had the highest mean score ($\bar{x}$= 3.51, σ = 0.56) on risky-riding indicating very high influence on RTA, followed by those within 20-29 years with mean score ($\bar{x}$= 2.61, σ = 0.86) on risky-riding indicating high influence on RTA. Respondents within 30-39 years had a mean score of 1.79 (σ = 0.78) on risky-riding indicating moderate influence, while those aged 40 years and above had the least mean score ($\bar{x}$=1.71, σ = 0.73) on risky-riding of the motorcycles indicating low influence of RTA. The table also shows that gender of the CMRs had a significant (p=0.020) influence on being involved in RTAs.

Marital status (table 3) had significant (p=0.000) influence on road traffic accidents among the commercial motorcycle riders. The table showed the respondents who were single had the highest mean score ($\bar{x}$= 3.05, σ = 0.85) on risky-riding of motorcycles indicating high influence on RTA. The respondents who were married had mean score ($\bar{x}$= 1.92, σ = 0.86) indicating moderate influence on RTA. The respondents who were separated had a mean score of 2.23 (σ = 0.72) on risky-riding indicating moderate influence, while the widowed had the least mean score ($\bar{x}$=1.00, σ = 0.00) on risky-riding of the motorcycles indicating low influence on RTA. This implies that the commercial motorcyclists who were still single were more likely to be involved in road traffic accident.

The table shows that gender had no significant (p=0.060) influence on RTAs among commercial motorcycle riders. However, the male respondents had the highest mean score ($\bar{x}$= 2.48, σ = 1.02) on riskyriding of motorcycles indicating moderate

influence on RTA while the female respondents had a mean score ($\bar{x}$= 1.60, σ = 0.55) on risky-riding indicating low influence on RTA (table 3).

Family size (table 3) was however observed not to have any significant (p=0.205) influence on road traffic accidents among the commercial motorcycle riders. The table reveal the respondents whose family size was 1-3 members had a mean score ($\bar{x}$= 2.44, σ = 0.89) on risky-riding of motorcycles indicating moderate influence on RTA. The respondents whose family size was between 4-6 members had mean score ($\bar{x}$= 2.43, σ = 1.02) indicating moderate influence on RTA. The respondents with family size of more than 7 members had mean score of 2.60 (σ = 1.14) on risky-riding indicating high influence. The implication here is that CMRs living with more than 7 family members as dependents had high influence of being involved in RTAs while those that live with less than 7 members as dependents had moderate influence of being involved in RTAs.

The level of education (table 3) of the CMRs had a significant (p=0.000) influence on road traffic accidents among commercial motorcycle riders. The table shows that the respondents with no formal education had the highest mean score ($\bar{x}$= 3.69, σ = 0.47) on risky-riding of motorcycles indicating very high influence on RTA. The respondents who had only primary education had mean score ($\bar{x}$= 2.97, σ = 0.78) indicating high influence on RTA. The respondents who with secondary school education had a mean score of 1.80 (σ = 0.76) on risky-riding indicating moderate influence, while those with tertiary education had the least mean score ($\bar{x}$=1.69, σ = 0.77) on risky-riding of the motorcycles indicating low influence on RTA. This implied that CMRs with no formal and/or primary education have high influence on RTA while those with secondary and tertiary education as the highest level of education attainment respectively had moderate and low influence of being involved in RTAs. The interpretation of the above analysis is that, the higher the level of educational attainment of a CMR, the less likely the involvement in RTAs.

Daily income (table 3) of the riders had a significant (p=0.000) influence on road traffic accidents. The table illustrate the respondents with daily income less than 4,000 Naira had the highest mean score ($\bar{x}$= 3.24, σ = 0.72) on risky riding of motorcycles indicating high influence on RTA. The respondents whose daily income was 4,000-6900 Naira had mean score ($\bar{x}$= 2.81, σ = 0.88) indicating high influence on RTA. The respondents whose daily income was between 7,000-9,900 Naira had a mean score of 1.66 (σ = 0.80) on risky riding indicating low influence, while those with daily income above 10,000 Naira had mean score ($\bar{x}$=1.88, σ = 0.35) on risky-riding of the motorcycles indicating moderate influence on RTA. This implied that CMRs whose daily income was less than 7,000 Naira have high influence of being involved in RTAs than CMRs whose daily income was above 7,000 Naira.

CMRs with alternative employment status (table 3) had significant (p=0.000) influence on road traffic accidents. The table shows that the respondents with no alternative employment had the highest mean score ($\bar{x}$= 3.22, σ = 0.73) on risky riding of motorcycles indicating high influence on RTA while those employed had mean score ($\bar{x}$= 1.79, σ = 0.81) indicating low influence on RTA. The interpretation is that CMRs without an alternative job coupled with the motorcycling business were very likely to be involved in RTAs.

Table 1: Mean Analysis of Risky-Riding Behaviour (causes) on RTA among Commercial Motorcyclists in Benue State

Item	$\bar{x}$	σ	Remark
Pick more than one passenger on bike	2.89	1.17	Accepted
Usually beat traffic when in a haste	2.95	1.17	Accepted
Overtake vehicles and other motorcycles at road bends	2.92	1.16	Accepted
Ride at high speed (usually more than 50Km/hr)	2.95	1.14	Accepted
Rarely check left and right side before crossing roads	2.47	0.99	Rejected
Carry heavy loads at the front of my motorcycle	2.54	0.92	Accepted
Rarely clear off the road to the parking space before picking a passenger	2.61	0.87	Accepted
Hardly indicate the intending direction of turn (using the motorcycle traffic indicator) before stopping by the roadside	2.56	0.96	Accepted
Rarely indicate the intending direction of the road to follow	2.60	1.01	Accepted
Take psychoactive substances/drugs before setting out to ride	2.57	0.93	Accepted
Make use of my cellular phone while riding	2.98	1.13	Accepted
Ride to make up for the daily financial target even when tired and exhausted	2.30	0.94	Rejected
Ride at top speed on smooth roads	2.38	0.95	Rejected
Speed breakers on the roads do not necessarily reduce motorcycle speed	2.48	1.01	Rejected
Potholes on the roads are navigated without necessarily reducing the speed	2.48	1.02	Rejected
Wet clay graded roads are navigated successfully without necessarily reducing the speed	2.62	0.90	Accepted
Even dusty un tarred roads are successfully navigated without necessarily reducing the speed	2.59	0.95	Accepted
Hardly observe road signs while riding	2.48	1.03	Rejected
Ride sometimes at nights with poor lightings	2.37	0.99	Rejected
Ride sometimes despite suboptimal break system function	2.26	0.94	Rejected
Sometimes copes with a malfunctioned sprocket on the motorcycle to meet up with the daily financial target	2.35	0.93	Rejected
Hardly look through the side mirrors when riding	2.95	1.17	Accepted
Hardly blow horn before overtaking vehicles	2.93	1.16	Accepted
Hardly change tires of the motorcycle until they are completely worn-out	2.94	1.16	Accepted
Sometimes ride on roads encroached by street hawkers who further makes them narrow	2.92	1.14	Accepted

$\bar{x}$ - Mean, σ – Standard deviation, Accepted 'represents the affirmation of high risky-riding behaviour; 'Rejected ' represents negation of high risky -riding behavior of the CMRs

Table 2: Analysis of Accident History and Causes of Road Traffic Accidents among Commercial Motorcyclists in Benue State

Variables	Freq (%)	$\bar{x}$	Remark
Self-Reported Accident History (n=412)			
No	102 (24.8)		
Yes	310 (75.2)		
Causes (Categories) of Accidents (n*=310)			
a) Individual human error	115 (37.1)		
b) Mechanical fault on the motorcycle	71 (22.9)		
c) Poor environmental/road infrastructure	36 (11.6)		
d) Fault of another road user	88 (28.4)		
CMRs Received Counselling (n=412)			
No	412 (100)		
Yes	0 (0)		
Motorcycle Ownership Status (n=412)			
Not Owner	205 (49.8)	3.18	High Influence
Owner	207 (50.2)	1.79	Moderate Influence
Business Location (n=412)			
Rural	183 (44.4)		
Urban	229 (55.6)		

n=sample size; n*=*total number of CMRs who had accident*

Table 3: Analysis of Socio-demographic Variables on Road Traffic Accidents among the Commercial Motorcycle Riders

Socio-demographics	n=412	Percent.	$\bar{x}$	P-value	Remark
Age (years):*					
< 20	98	23.8	3.51	0.000	Very High Influence
20 - 29	144	35.0	2.61		Moderate Influence
30 - 39	95	23.0	1.79		Low Influence
> 40	75	18.2	1.71		High Influence
Gender:**					
Male	407	98.8	2.48	0.060	Moderate Influence
Female	5	1.2	1.60		Low Influence
Marital status: *					
Single	204	49.5	3.05	0.000	High Influence
Married	164	39.8	1.92		Moderate Influence
Separated	31	7.5	2.23		Moderate Influence
Widowed	13	3.2	1.00		Low Influence
Family size:*					
1 - 3	71	17.3	2.44	0.205	Moderate Influence
4 - 6	251	60.9	2.43		Moderate Influence
> 7	90	21.8	2.60		High Influence
Level of education:*					
No Formal	65	15.8	3.70	0.000	Very High Influence
Primary	143	34.7	2.97		High Influence
Secondary	118	28.6	1.80		Moderate Influence
Tertiary	86	20.9	1.69		Low Influence
Daily income (₦)*					
< 4000	131	31.8	3.24	0.000	High Influence
4000 - 6900	113	27.5	2.81		High Influence
7000 - 9900	160	38.8	1.66		Low Influence
>10000	8	1.9	1.88		Moderate Influence
Alternative employment status:**					
No					
Yes	198	48.1	3.22	0.000	High Influence
	214	51.9	1.79		Low Influence

**ANOVA; ** Analysis with student t-test*

DISCUSSION

The study revealed the prevalence of accidents among the commercial motorcycle riders (CMRs) in Benue State to be 75.2%. This high prevalence was similar to 77.4% and 74.0% from independent studies in Cameroon and Ghana respectively.[3,4] This prevalence from Benue State was marginally higher than the Nigeria national prevalence of 68%.[5] Furthermore, it was observed to be higher in the other geopolitical zones within the country: 65.2% in South East,[8] 63.2% in North West,[9] and 56.6% in the South West.[7]

Individual human error as revealed by the study was the commonest cause category (115; 37.1%) of RTAs among CMRs amid other cause categories. This finding was consistent with those of World Health Organization (WHO) and Federal Road Safety Corps (FRSC) that 'individual human error' was said to be a momentous contributor of motorcycle related road traffic accidents among CMRs in Nigeria and the world over.[11, 12] These CMRs with the associated errors are young people less than 30 years who are generally known to be risk-takers even while riding and are likely to indulge in activities that could lead to road traffic accidents thereby justifying this high prevalence rate reported by this study. Some of the commonest risky-behaviours (as causes) of the commercial motorcycle riders associated road traffic accidents identified by the study were: use of cellular phone while riding, riding at high speed and beating of traffic signs and regulations when in haste. These study findings agree with those of many independent studies of FRSC, Tumwesigye *et al*, Borhan *et al*, Obi and Widyanti *et al* all reported that

high speeding and the use of mobile phones of CMRs could result to RTAs. [4,12-14,23] Beating of traffic signs and regulations by the commercial motorcyclists as a cause of RTA was also upheld by Babafemi *et al* and Ogunkeyede *et al*.[24,25]

The study also showed that most CMRs owned the motorcycles (207; 50.2%) and most operated in the urban areas (229; 55.6%).The implication here is that motorcycle business in Nigeria and the world-over is fast becoming attractive with economic and health advantage but still pose public health challenge of road traffic accidents.

The commonest cause category of the accidents among the CMRs from the study was due to "individual human error" which may be precipitated by the use of phones while riding, use of psychoactive substances, overloading, over speeding among others. This agreed with the findings of WHO that 'individual human error' was a momentous contributor of motorcycle related road traffic accidents among CMRs the world over. [11] It also corroborated the study findings of Federal Road Safety Corps which revealed that most of the MRRTAs observed in Nigeria were due to individual human error of the riders.[12]

The population of CMRs less than 20 years amounting to 98 (23.8%) had very high influence while those between 20-30 years amounting to 144 (35.0%) had high influence of being involved in RTAs. Altogether, the population of the CMRs less than 30 years (242; 58.8%) who were largely young people are generally known to be risk-takers even while riding and are likely to indulge in activities such as over speeding and overloading that could lead to road traffic accidents thereby justifying this high prevalence rate reported by this study. Age influence observed from the study agreed with independent study findings of several studies with the conclusion that young commercial motorcycle riders were more at risk of being involved in MRRTAs than the older CMRs.[9, 15, 16] The reason for this age group predilection and vulnerability may be that young riders face pressure to perform and are more likely to be engaged in high-intensity competitive riding activity that leads to stress and anxiety. Persona-socio counselling utilizing the cognitive behavioral therapy can be helpful in developing coping mechanism. These coping mechanisms are geared towards modifying negative thoughts and attitudes (fear of failure, self-doubt etc.). Reshaping these attitudes by learning healthier and safer ways to approach riding and decision making, by replacing negative thoughts with positive constructive thoughts (such as building self-motivation) helps to reduce performance related stress which leads to accidents cases.

The study found gender of the commercial motorcyclists to have moderate influence of being involved in RTAs and that the male gender was more likely to be involved. This support findings from other studies that also established more male participation in the business of motorcycling and their involvement in RTAs than the females. [17, 18] These young male CMRs are more likely to engage in risk-taking behaviors such as speeding, aggressive riding, riding under the influence of alcohol or drugs compared to their female counterparts. Counseling therefore helps to address psychological factors like overconfidence, peer pressure and also making safety choices on the road while riding. CMRs who were single had high influence of being involved in RTAs which agreed with findings of Obadeji *et al,* that most of the CMRs studied were singles. [19] The reasons for singles' involvement in the business of motorcycling could be multi-factorial. For some of the CMRs, it may be an opportunity to be financially independent, while for others, it could be a means to achieving life-set goals and aspirations. As a result, the single male CMRs are prone to risk-taking behavior due to social pressure, over confidence and stress for optimal performance. Persona-socio counselling helps them to recognize their vulnerability and avoid risky-riding pattern leading to more responsible behaviors on the road. The study further revealed that gender and family size of the commercial motorcyclists did not have significant influence on road traffic accidents in Benue State.

No formal education of the CMRs had very high influence of being involved in RTAs while those

with only primary education had high influence of being involved in RTAs. The implication is that CMRs with at least secondary education were less likely to be involved in RTAs. The above findings from the study are also consistent with those of Borhan *et al* and Babafemi *et al*, who reported that the more educationally disadvantaged a CMR is, the more prone such a rider is to motorcycle related road traffic accidents.[13, 24] CMRs who are educationally disadvantaged may not be conversant with traffic rules and may be involved in unsafe and risky-behaviors, such as speeding, improper lane usage and ignoring traffic signals. Persona-socio counselling will help riders become conscious of these risky behaviors such as aggressive riding, lack of focus, while encouraging safer habits such as staying focus and been aware of the surrounding, anticipate hazards, keeping safe distance and use of protective riding gear and goggles , use of helmet and other protective clothing.

CMRs with daily income of less than 4,000 Naira and between 4,000-6,900 Naira had high influence of being involved in RTAs. The implication is that CMRs whose daily income was less than 7,000 Naira are likely to be involved in RTAs. These findings were consistent with those of Gumel *et al* who concluded in their study that CMRs' meager daily incomes predisposed them to being involved in road traffic accidents.[20] This meager daily income from CMRs had been corroborated by the findings of Oyedepo *et al* who also established that the daily income was observed to be dependent on the resilience of an individual rider.[21] The required resilience may be the reason why most of the riders were young people below the age of 30 years in order to be able to cope with the adjoining stress of the job. Riding under stress or emotional strain can be dangerous. Persona-socio counselling therefore provides riders with techniques such as mindfulness and progressive muscle relaxation which help in calming down the mind before and during riding to improve focus and control, to manage their emotions thereby, reducing risky behavior on the road.

CMRs with alternative employment had high influence of being less involved in road traffic accidents. These findings are consistent with those of Olumide and Owoaje. [22] When a rider's daily living depends on the financial outcome of his alternative income, it is imperative he balances his work and life. Most riders struggle with maintaining a healthy work life balance, especially when they work for longer hours. Counselling helps to set boundaries and prioritize self-care to avoid burn-out.

CONCLUSION

The study revealed a prevalence of road traffic accidents among commercial motorcycle riders in Benue State as 75.2%. The commonest cause (category) of the accidents was due to 'individual human error' (27.9%) which comprised of use of: cellular phone while riding, riding at high speed and beating of traffic signs and regulations when in haste. CMRs below the age of 20 years (Very High Influence), single marital status (High Influence), no formal education (Very High Influence) and only primary education (High Influence) as the highest level of educational attainment, daily income of less than 7,000 Naira (High Influence) and those without alternative employment (High Influence) were likely to be involved in road traffic accidents in Benue State. The study further revealed that family size of the CMRs does not have significant influence on road traffic accidents in Benue State. Persona-socio counselling of CMRs aimed at reducing the high prevalence of motorcycle-related RTAs is recommended.

Recommendations

As appropriate, the State Government, Federal Road Safety Corps (FRSC), Vehicle Inspection Service (VIS) and Commercial motorcycle rider's association in Benue State (BEMOA) should:

1. Ensure that traffic rules are duly observed by CMRs.
2. Should raise the minimum riding age and licensing from 18 years to 20 years.
3. Encourage active participation of more females in the business of motorcycling.
4. Periodically advise her members against keeping too many dependents beyond their

coping limit.

5. Ensure the minimum educational attainment of prospective commercial riders as a prerequisite to licensing be secondary education
6. Encourage members to be enrolled to learning institutions (as appropriate to them) to have formal education and to ensure compulsory periodic refresher trainings on basic road safety.
7. Should periodically issue advisory to their members on the need for local financial savings from their daily income.
8. Should periodically encourage members to start small scale businesses to support them and their dependents.
9. Should establish counselling facilities and integrate persona-socio counselling in the fabric of the business to reduce the burden of the accidents.

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Conflict of Interest

None

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