

A Study of the Use of Intoxicants among Rural Commercial Motorcyclists in Kwara State, Nigeria

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KEYWORDS Rural Transportation. Intoxicants Use Index. Ownership Status. Income. Working Hours

ABSTRACT This paper investigated the use of intoxicants among rural commercial motorcyclists (CMCs) in Kwara State, Nigeria. Multi-stage random sampling was used to select 230 respondents, and data were collected with structured interviewer administered questionnaire. Means, percentages, Pearson correlation, and Analysis of Variance (ANOVA) were used in data analysis. Results showed that the CMCs were exclusively male; most of whom were lowly educated, had alternative occupation(s), and operated rented motorcycles. About 40% of respondents used 1-3 types of intoxicants at least once a day, while 20% were occasional users. Intoxicants Use Index (IUI) was computed for each respondent, based on expenditure on type(s), frequency, and history of intoxicant use. Educational level, commercial motorcycling experience, daily income, and working hours were significant correlates of IUI. ANOVA revealed significant differences in mean IUI of CMCs on the basis of ownership of motorcycle, while no significant difference was exhibited based on number of alternative occupation(s) of the CMCs. Stricter enforcement of traffic regulations concerning drug/alcohol use and organizing of periodic educational and counseling programmes for rural CMCs are imperative to reduce the havoc associated with use of intoxicants among commercial motorcyclists.

I. INTRODUCTION

The importance of agricultural production in poverty eradication among developing countries is, perhaps, unarguable. In Nigeria, like many developing nations, the bulk of agricultural products used for food, raw materials and exports emanate from rural communities – where more than two-thirds of the population reside. Unfortunately, rural farming is beset with a number of problems that must be adequately addressed in order to achieve the Millennium Development Goals (MDGs). Availability and adequacy of infrastructure such as health, education, communication and transportation facilities are essential for agricultural and rural development. Among the most severe problems faced by rural people and their livelihoods is the poor state of infrastructure, especially in the area of transportation. Transportation of farm inputs and outputs has been a great problem for rural farmers in Nigeria. Poor or inadequate transportation facilities have caused great losses and underproduction among farmers.

Rural livelihood activities are not, however, limited to agriculture. Artisans, traders, teachers and others are increasingly found in rural communities (Adisa and Adekunle 2007). And just like the farmers, the other rural occupational

groups also rely on public transportation for the conduct of their day-to-day livelihood activities, and are nevertheless affected by the challenges occasioned by bad roads and other associated problems (Oginni et al. 2007).

Increasingly noticeable as a feature of rural transportation in a bid to solve transportation problems in Nigeria are commercial motorcyclists. They transport people and their goods, especially farm products, from place to place. It is however saddening that as much as commercial motorcyclists contribute to enhancement of livelihoods, their involvement in road accidents is increasing at a rate they are thought to constitute a menace to the society (Falope 1991). According to (United States) National Highway Traffic Administration 2002, motorcycles are the most dangerous type of motor vehicles to drive - at a rate of 35.0 fatal crashes per 100 million miles of travel, compared to just 1.7 fatal crashes per 100 million miles of travel by passenger cars. A study of rural CMCs in Nigeria by Amoran et al (2006) indicated that in a single year, about 46% of respondents were involved in at least one road accident. Non-adherence to safety measures and poor road conditions have been noted to contribute to the spate of commercial motorcycle accidents in Nigeria (Oginni et al. 2007). It is however not improbable that the reported high rate of use of intoxicants

among commercial motorcyclists could as well be a contributory factor (Adako 2007). According to Branas and Knudson 2001, intoxicated motorcyclists are also less likely to protect themselves by wearing crash helmets, thus aggravating road accident occurrences. However, another study of motorcyclists by Pillegi et al. (2006) found that routine helmet use was higher among current smokers and alcohol drinkers, while as well confirming the prevalence of accidents among motorcyclist engaged in risky behaviours that included intoxication and use of mobile phone while driving. Californiabiker (2008) posited that in more than half of motorcycle fatalities, alcohol use was the key ingredient, and that significantly higher levels of alcohol use are attributable to motorcycle riders than car drivers. Indeed, the leaders of commercial motorcyclists associations in Nigeria admitted complicity of their members regarding use of intoxicants and that most commercial motorcycle accidents were traceable to use of intoxicants (Adako 2007). Other empirical evidences for the use of intoxicants (alcohol) among CMCs was provided by the work of Ngim and Udosen (2007), who found that about 35% of CMCs in their study used alcohol to 'enhance job performance'.

Commercial motorcyclists are, however, not particularly undesirable in Nigeria's drive for socioeconomic development. Their contribution to social life and poverty reduction cannot be overlooked. The problems associated with the failure of rail transport, scarcity of taxis and buses have been eased, by appreciable degree, by the ubiquitous CMCs. The relatively low costs of purchase and operation/maintenance of commercial motorcycles keep attracting numerous job seekers, thus helping to reduce unemployment, particularly among school and college graduates (Oginni et al. 2007). But working under the influence of intoxicants, however, portends unfavourable consequences for the operators, their customers, and the society at large. A compelling need thus arises to ensure the safety of millions of passengers of CMCs while also keeping the operators gainfully employed and healthy. This study therefore investigated the use of intoxicants among rural commercial motorcyclists (CMCs) in Kwara State, Nigeria. Its specific objectives are to:

1. Describe the personal and occupational characteristics of the respondents,
2. Examine the intoxicants use behaviour of

respondents vis-à-vis types, frequency and history of use and expenditure on intoxicants, and

3. Determine the correlates of use of intoxicants among respondents.

The following hypotheses were also tested:

- I. There is no significant difference in the use of intoxicants among the respondents on the basis of motorcycle ownership status.
- II. There is no significant difference in the use of intoxicants among the respondents on the basis of number of alternative occupations they engaged in.

II. METHODOLOGY

Kwara State is located in the middle belt of Nigeria and has its predominantly farming population residing in rural communities. A multi-stage random sampling technique was used to select respondents for the study. The State is made up of 16 Local Government Areas (LGAs), out of which six (Asa, Moro, Edu, Ifelodun, Oyun, and Patigi) were randomly chosen. In each of the selected LGA, villages were randomly selected in a proportionate manner based on the number of villages in the respective LGA, using village lists sourced from the LGA offices. The number of respondents chosen from each LGA was based on the number of Commercial Motorcyclists Associations (CMAs) units. Ultimately, 29, 42, 51, 43, 34, and 31 respondents were selected from Asa, Edu, Ifelodun, Moro, Oyun, and Patigi respectively. This gives a total of 230 respondents. Access to respondents was facilitated by the leaders of the respective CMAs. All respondents willingly consented before the administration of the structured interview schedules used for data elicitation. For ethical reasons and to encourage them to be as cooperative as possible, all respondents were guaranteed anonymity. Enumerators were used for respondents that were not literate in English. Data collection was preceded by a reconnaissance survey to four randomly selected villages, while the test-retest method ($r = 0.83$) was used to determine the reliability of data collection instrument. Descriptive statistics such as percentages and means as well as Pearson correlations and Analysis of Variance (ANOVA) were used in data analysis.

Measurement of Variables

In order to achieve the objectives of this

research, certain variables were measured. These are: age (measured in years); educational level (as years of formal education); family size (as the number of dependants in respondent's family); commercial motorcycling experience (expressed as the actual number of years as a commercial motorcyclist); motorcycle ownership status (self-owned, hire purchase, rented); alternative occupations (number of other income-generating activities of respondents: none, one, two, or three); daily income (in Naira, the amount accruing at the end of a working day less expenditure on rent, maintenance and fuel); and working hours/day (determined as the actual hours of work per day devoted to commercial motorcycling).

Frequency of use of intoxicants was operationalized as either never used, used occasionally, used only on weekends, used once, twice, or thrice daily. History of intoxicants use was determined as the number of years that a respondent has been using intoxicant(s). Expenditure on intoxicants was measured as the amount in Naira (N) that respondents spent per month on intoxicants.

Intoxicant Use Index (IUI) was computed for each respondent as a percentage of their scores on a scale based on four criteria that are relevant to intoxicant consumption namely: number of intoxicants used (minimum = 0, maximum = 6), frequency of use (minimum = 0; maximum = 5), history of use of intoxicants (minimum = 0; maximum = 5), and expenditure on intoxicants (minimum = 0; maximum = 5). This implies that IUI ranged from 0 to 21 (0.0%) to 21/21 (100.0%).

III. RESULTS AND DISCUSSION

Personal and Occupational Characteristics of Respondents

Table 1 shows the summary of personal and occupational characteristics of respondents. It was found that commercial motorcycling was entirely male-dominated, with no female participation at all. This further confirms the male domination of public transportation activities in Nigeria as found in similar studies including Fasakin (2002) and Amoran et al. (2006). Majority (about 66%) were between 16 and 35 years of age, while about 5% were above 55 years. It is however noteworthy that under-aged persons were engaged in commercial motorcycling, as about 11% of respondents were less than 16 years

of age. This signals serious implications for their education and future development. The preponderance of illiteracy associated with rural people became apparent as close to one-third (31.3%) of respondents had no formal education; even though about 10% had 13-20 years of formal education.

Table 1: Summary of personal and occupational characteristics of respondents

Variable	Frequency	%	Mean/mode
<i>Age (years)</i>			
< 16	25	10.7	
16-25	41	17.8	
26-35	86	37.4	32.9
36-45	3	16.9	
46-55	27	11.7	
56-65	12	5.2	
<i>Sex</i>			
Male	230	100.0	Male
Female	-	-	
<i>Years of Formal Education</i>			
No formal education	72	31.3	
1-4	31	13.2	
5-8	53	23.0	5.7
9-12	51	22.2	
13-16	19	8.3	
17-20	4	1.7	
<i>Marital Status</i>			
Single	66	28.7	
Married	139	60.4	
Divorced	17	7.4	Married
Widowed	8	3.5	
<i>Family Size</i>			
1-5	59	25.7	
6-10	87	37.8	
11-15	71	30.9	9
16-20	13	5.6	
<i>Commercial Motorcycling Experience (years)</i>			
1-5	93	40.4	
6-10	72	31.3	
11-15	43	18.7	7.9
16-20	22	9.6	
<i>Motorcycle Ownership Status</i>			
Self owned	76	33.0	
Hire-purchase	36	15.7	Rented
Rented	118	51.3	
<i>Alternative Occupation(s)</i>			
None	59	26.7	
One	121	52.6	One
Two	38	16.5	
Three	12	5.2	
<i>Daily Income (N)</i>			
000-500	63	27.4	
501-1000	114	49.6	
1001-1 500	35	15.2	784.78
1501-2 000	10	4.3	
2001-2 500	8	3.5	
<i>Working Hours/Day</i>			
2-5	57	24.8	
6-9	103	44.8	
10-13	46	20.0	8.1
14-17	24	10.4	

The participation of persons with relatively high education status could be attributable to rising graduate unemployment in Nigeria. However, with the mean years of formal education being 5.7 is a further testimony of the preponderance of illiteracy among the commercial motorcyclists. About 60% of respondents were married while 28.7% were single (never married). Table 1 further shows that the mean family size of the respondents was 9 persons indicating, perhaps, that rural households are composed of many members, with those of commercial motorcyclists not being exemptions. The average CMCs worked for 8 hours per/day, while 45% worked for 6-9 hours/day. However, 30% worked for 10 or more hours per day as CMCs. Two-third (67%) of respondents did not enjoy full ownership of the motorcycles they worked with, meaning that they either worked as hired hands to 'deliver' money to 'the owners' at the end of working hours or were part-owners of the motorcycles by paying for the cost on installment basis. About 27% were full-time CMCs, while the remaining were engaged in 1-3 other occupations. Mean commercial motorcycling experience was about eight years, while 40% had between 1-5 years working experience. About 29% have worked as commercial motorcyclists for more than 10 years. These perhaps imply that the respondents were relatively well-experienced in commercial motorcycling.

Intoxicants Use Behaviour of Respondents

Intoxicants use behaviour of respondents was studied from four perspectives namely: number of intoxicants used, frequency of use, history of use, and expenditure on intoxicants. Table 2 shows the commonly used intoxicants among the respondents and the percentage of users. It was found that 60% of the respondents indulged in the use of intoxicants, while the remaining claimed not to use any type of intoxicants. The most commonly used was herbal-gin mixture (19%) which is widely believed to be both analgesic and antibiotic. It is relatively cheap and made with local gin and herbs. Perhaps because of their costs, bottled beer and hot drinks were the least used among respondents (3.0%). Table 2 also shows that 7.4% of respondents used Indian hemp, while 5.7% used more than one of the intoxicants.

An investigation of how frequently respondents used intoxicants yielded the data contained

Table 2: Percentage distribution of types of intoxicants used by respondents

<i>Type of intoxicant</i>	<i>Number of users</i>	<i>Percentage of users</i>
Local Gin	21	9.1
Herbal-Gin Mixture	43	18.7
Palm wine	14	6.1
Local corn brews	24	10.4
Bottled beer/hot drinks	7	3.0
Indian hemp	17	7.4
Any combination of the above	13	5.7
Non-users of intoxicants	91	39.6
Total	230	100.0

in Table 3. About 31% of respondents used intoxicant(s) only once in a day, while 11.4% and 8.3% respectively used it occasionally and on weekends. Occasional users were those who took intoxicants only when they attended ceremonies or when someone bought it for them. It is worthy of note that the majority of those who used intoxicants once daily did so in the mornings. This obviously does not favour the usual heavy traffic of rural inhabitants that set out on their daily livelihood activities in the mornings. Respondents that used intoxicants more frequently were those who claimed to use them twice or thrice per day. Table 3 shows that 5.2% and 4.8% of respondents used intoxicants twice and thrice daily respectively. Although, this paper did not investigate accidents among respondents, it is not unlikely that these groups of users might be the most accident-prone.

Table 3: Frequency of use of intoxicants among respondents

<i>Frequency of use</i>	<i>Number of users</i>	<i>Percentage of users</i>
Never used	91	39.6
Occasionally	26	11.4
Weekends only	19	8.3
Mornings only	32	13.8
Afternoons only	15	6.5
Evenings only	24	10.4
Twice daily	12	5.2
Thrice daily	11	4.8
Total	230	100.0

A study of the history of intoxicants use showed that 5.7% of the respondents were beginners, as they claimed to have used intoxicants for less than a year (Table 4). It may perhaps mean that they were influenced by their peers. It is also discernible from Table 4 that although 39.6% of respondents abstained from use of intoxicants,

Table 4: History of use of intoxicants among respondents

Length of use (years)	Number of users	Percentage of users	Mean
Not applicable (0)	91	39.6	3.2
< 1	13	5.7	
1-3	37	16.1	
4-6	44	19.1	
7-9	19	8.2	
>10	26	11.3	
Total	230	100.0	

about 39% had used intoxicants for more than four years. Indeed, 11.3% had used intoxicants for 10 years or more. It is thus not improbable that they had become addicted to the intoxicants they used.

The mean years of use of intoxicants among respondents (3.2), though not too high, is worrisome, considering the fact that 39.6% of them did not indulge in any form of intoxicants. Actually, the mean years of intoxicants use among those the users was 5.3 years, which is also long enough for the development of addiction. Without doubt, the domination of rural commercial motorcycling by users of intoxicants does not portend good omen for rural inhabitants and visitors.

Table 5 presents the summary of monthly expenditure of respondents on intoxicants. The average expenditure on intoxicants for the studied sample was N435.22 (N117=\$1). However, this figure becomes N720.15 among only those that used intoxicants. It thus implies perhaps that the average CMC using intoxicants in the study area spent about N24.00 daily on intoxicants. Also, the modal expenditure range was N600-N800, implying that majority of users of intoxicants spent N20.0 and N26.67 per month on intoxicants.

Table 5 also reveals that 15.5% of respondents spent above N1000 on intoxicants per month, while 3.5% accounted for those incur the highest range of expenditure on intoxicants. It is observable that the proportion of income spent on intoxicants is very low. Indeed, the mean daily expenditure on intoxicants was just 5.5% of the mean daily income. The relatively low level of expenditure might be due to the fact that most of the intoxicants used by the CMCs were locally made and cheaper than in urban centers. This relative cheapness of the commonly used intoxicants might contribute to rate and level of use among the CMCs in the study area.

Table 5: Monthly expenditure on intoxicants among the respondents

Amount (Naira, N)	Number of users	Percentage of users	Mean
Not applicable (0)	91	39.6	435.22
1-200	10	4.3	
201-400	22	9.6	
401-600	25	10.9	
601-800	33	14.3	
801-1000	13	5.7	
1001-1200	16	7.0	
1201-1400	12	5.2	
1401-1600	8	3.5	
Total	230	100.0	

Correlates of Use of Intoxicants

A major thrust of this research was to determine the factors associated with use of intoxicants among CMCs in the study area. Table 6 presents the results of Pearson correlation analysis of some variables with IUI scores of respondents. The variables that were tested for correlation were age, years of formal education, commercial motorcycling experience, daily income, and working hours/day.

The results of Pearson correlations showed that, at 0.05 a priori level of significance, years of formal education and commercial motorcycling experience were negatively but significantly correlated with Intoxicant Use Indices (IUI) of respondents. This implies that as years of formal education increased, the indices of intoxicant use among respondents decreased and vice versa. This might mean that CMCs with higher education tended to abstain from using intoxicants, as they might be more aware of the associated risks than the CMCs with less lower education. The negative correlation of commercial motorcycling experience means that IUI declined with increasing occupational experience among the CMCs and vice versa. The implication, perhaps, is that relatively new entrants into the job of commercial motorcycling tended to indulge in the use of intoxicants more than their colleagues with longer years of experience.

Table 6 also shows that daily income and working hours per day had positively significant correlation coefficients with respondents' IUI, indicating that they increased with increasing values of IUI. Increasing daily income could create the possibility for higher expenditure on intoxicants among users and vice versa. The positive correlation of working hours could mean that

Table 6: Results of Pearson correlations of the Intoxicants Use Index (IUI) with socio-economic variables of respondents

Variables	Correlation coefficient	p-value
Age	.342	.106
Years of education	-.711	.002*
Family size	.253	.198
Commercial motorcycling experience	-.785	.024*
Daily income	.713	.005*
Working hours/day	.696	.013*

*Significant at 5

CMCs working for long hours used intoxicants more than those working for shorter periods. It could also be possible that those working for longer hours made more money and were therefore able to spend more money on intoxicants than those that worked for lesser hours. Family size and age of respondents were not significantly correlated with the IUI scores of respondents as could be observed from table 6.

Results of Tests of Hypotheses

Table 7 shows the summary of the results of hypotheses testing using the Analysis of Variance (ANOVA) procedure. The first hypothesis was that there is no significant difference in the IUI scores of respondents on the basis of motorcycle ownership status. With an F-value of 9.77 ($p = 0.001$), the stated hypothesis is thus rejected. This implies that there are statistically significant differences in the IUI scores of respondents on

Table 7: Results of Analysis of Variance of Intoxicants Use Index (IUI) with motorcycle ownership status and number of alternative occupations among respondents

Variable	Mean Intoxicant Use Index (%)	F- value	Pro- babi- lity
Motorcycle Ownership Status			
Self-owned (76)*	40.61	9.77	0.001
Hire-purchase (36)	50.02		
Daily Rent (118)	58.73		
Alternative Occupation			
None (59)*	47.58	1.06	0.42
One (121)	48.66		
Two (38)	50.88		
Three (12)	51.23		

*Figures in parentheses are the associated frequencies (i.e. number of respondents)

the basis of motorcycle ownership. Table 7 showed that CMCs that owned commercial motorcycles had the least mean IUI (40.61%), while those operating on hire purchase and rented motorcycles had mean IUI of 50.02% and 58.73% respectively. This perhaps indicates that CMCs that operated their own motorcycles had lesser tendency to use intoxicants than their colleagues that did not own commercial motorcycles. This might be due to a resort to use of intoxicants (thought to be 'energizers' and performance enhancers among many rural inhabitants) in order to meet financial targets on the part of CMCs that were yet to own motorcycles.

Table 7 also illustrates the findings in respect of the second hypothesis, which was to determine the significance or otherwise of any possible difference in the IUI scores of respondents on the basis of number of alternative occupations. The mean IUI of respondents with no, one, two, or three alternative occupations were 47.58%, 48.66%, 50.88%, and 51.23% respectively. These findings reveal that the IUI means increased with increasing number of alternative occupations. Analysis of their variances however revealed that, with F-value of 1.06 ($p = 0.42$), the differences were statistically insignificant. The second hypothesis is thus accepted, implying that number of alternative occupations practiced by CMCs has no significant effect on the use of intoxicants.

IV. CONCLUSION AND POLICY IMPLICATIONS OF FINDINGS

Recognizing the role of commercial motorcyclists in the socioeconomic activities of rural communities in Nigeria and the increasing rate of motorcycle accidents, the study addressed the use of intoxicants among rural commercial motorcyclists. It could be concluded from the findings that commercial motorcycling in the study area was exclusively carried out by males most of whom were lowly educated, married, used rented motorcycles, relatively experienced, and breadwinners of relatively large families. The average CMCs made up to \$6 per day implying that commercial motorcycling in the study area is a prosperous venture. Majority of the CMCs used intoxicants and most commonly used were locally brewed alcohols. Expenditure on intoxicants by CMCs is an insignificant fraction of their income, perhaps, due to the low prices of the intoxicants in the rural communities. Increasing years of

education and commercial motorcycling experience were significantly related to reducing indices of use of intoxicants, while the indices increased with daily income and working hours per day. Respondents exhibited significant differences in the use of intoxicant on the basis of ownership of motorcycle, but did not on the basis of number of alternative occupations. Based on the findings this study, the following recommendations are hereby proffered:

There is need for more effort in the area of education of rural people. In particular, rural CMCs should be encouraged through adult education programmes. This could be carried out by both governmental and non-governmental agencies freely or at subsidised costs.

Commercial motorcyclists should be constantly and properly counseled on the dangers of the use of intoxicants, especially when on duty, before or even after work through seminars and workshops organized at various accessible rural locations. The workshops/seminars should be organized in conjunction with recognized CMC associations in languages understood by the CMCs.

The enforcement of road traffic laws prohibiting underage persons from operating vehicles and use of intoxicants while operating vehicles should be strengthened through provision of equipment for testing alcohol consumption levels, and meting appropriate punishment to offenders. This should be preceded by well-targeted mass media campaigns to discourage the use of intoxicants among the CMCs.

Rural commercial motorcyclists should be assisted to own motorcycles on easy terms. Local Governments could be of help in this regard by designing a motorcycle acquisition scheme whereby beneficiaries would pay 'without tears'. It is also recommended that CMCs associations start/strengthen their cooperative unions, whereby members could access loans to acquire their own motorcycles.

Finally, rather than spend their income on intoxicants, rural commercial motorcyclists need to be counseled on how to properly manage the relative prosperity associated with the job. This could be achieved through effective collaboration between their associations and other stakeholders, such as rural banks and local investors.

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