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Research Report

Age Differences in Reckless Riding among Motorcyclists



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Abstract

Over the years, Malaysia never fails to achieve high numbers of road accidents. In fact, in the year 2016, the nation has been shocked with 7,152 of road users died due to the road accidents. According to the Annual Report of Ministry of Transport in 2016, motorcycle death comprises of 64.2% from the overall number of death due to road accidents. Reckless is a major contributing factor to road morbidity and mortality (McNally & Bradley, 2014). However, in motorcyclists' context, reckless riding was less emphasized as compared to risky riding among Malaysian. Thus, this study focused on determining the reckless riding among older motorcyclists. About 785 motorcyclists aged from 26 years old up to the golden age (where available) were surveyed in order to answer the objectives. Findings show that group of motorcyclists aged from 26 to 35 years old have the highest frequencies of committing reckless riding as compared to other age groups. Meanwhile, the older group depicts the lowest frequencies of committing reckless riding. In addition, a Pearson correlation also showed that there was a negative relationship exist between age and reckless riding score. However, the magnitude of age only contributes a small percent of the association. An appropriate countermeasure needs to be taken in order to instil discipline and specifically to older motorcyclists.

1. Introduction

Each year, Malaysia records a high number of road accidents. In 2016, the country registered a worrying figure of 7,152 road traffic deaths. According to the 2016 Ministry of Transport Malaysia Annual Report, motorcyclist deaths accounted for 64.2% of the overall number of fatalities due to road accidents. Even more alarming, the trend of road deaths among motorcyclists from 2008 to 2016 had been on the steady rise based on the Royal Malaysian Police report (RMP, 2016).

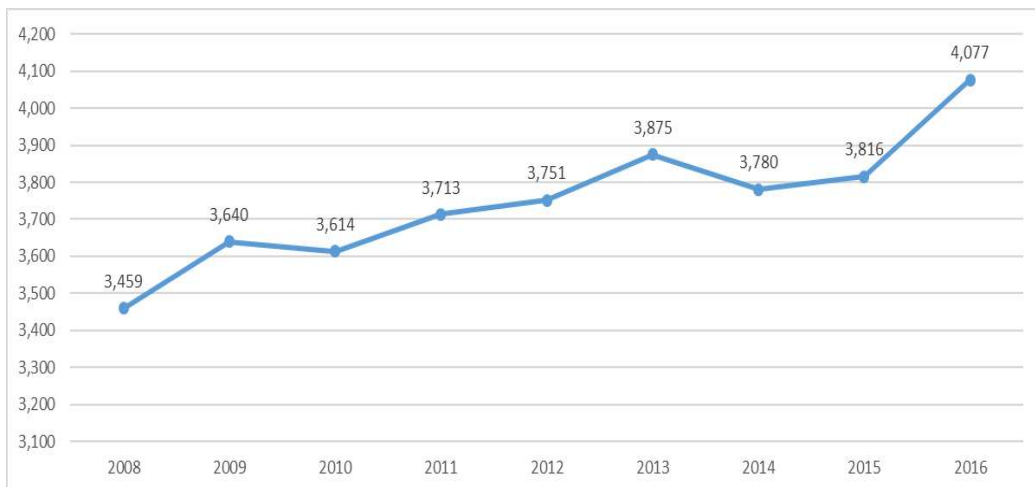


Figure 1 Number of deaths involving motorcyclists

The number of road casualties involving motorcyclists aged 26 years and above had also risen by 0.2% from 3,816 in 2015 to 4,077 in 2016 (RMP, 2016; RMP, 2015; DOSM, 2017). It is feared that the number of road deaths among motorcyclists might further climb up if the root cause is not immediately identified and rectified. The general public must be made aware that safety on the road cannot be taken for granted and that losing life while driving or riding a vehicle is not an option. To this end, corrective and preventive

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actions must be taken by the authorities to reduce motorcyclist fatalities across all age groups.

The motorcycle is the most preferred mode of transport in Malaysia. Every year, about 500,000 motorcycles are registered based on RMP statistical reports. The two-wheeled vehicle is especially popular in the ASEAN region for several reasons, namely its low price, ease of maintenance, fuel saving capability and the shorter time taken to reach its destination. Nevertheless, a motorcyclist is more exposed to the risk of an accident while interacting with other road vehicle users.

Table 1 Motorcyclist casualties by age group

Age group	2015	2016	Difference in %
16 – 25	1384	1480	6.9
26 – 35	1774	1913	7.8
36 – 45	1059	1142	7.8
46 – 55	945	1020	7.9
56 – 65	722	782	8.3
66 & above	670	722	7.8

This current study aims to explore reckless riding behaviour among motorcyclists aged 26 years and above in the Klang Valley, Malaysia. Also, this study hopes to provide insights as regards motorcyclist riding behaviour to the relevant authorities and recommendations for suitable road safety interventions and campaigns targeted at motorcyclists in the lower age group.

1.1 Scope and Research Objective

The current study is conducted to achieve one general objective and two specific objectives. The project scope shall also be explained below.

General objective:

- To explore reckless riding behaviour among motorcyclists in Malaysia.

Specific objectives:

- To determine reckless riding behaviour among motorcyclists in different age categories.
- To determine the relationship between reckless riding score and age category.

Project scope:

The study will provide insights to the responsible parties to better understand Malaysian motorcyclists' behaviour especially those aged 26 years and above. Furthermore, the study findings can be a guide for designing suitable interventions based on the different motorcyclist age categories.

1.2 Research Limitation

Due to limited funding, this nationwide study was, however, restricted to only four (4) zones in the Klang Valley, Malaysia.

2. Literature Review

According to McNally and Bradley (2014), an important factor to road morbidity and mortality is recklessness. However, there is a lack of emphasis on reckless riding as compared to risky riding behaviour among Malaysian motorcyclists. Rather than conducting studies on reckless behaviour, most researchers in Malaysia have been focusing on groups with risky riding behaviour such as adolescent biker groups or “mat rempit”.

Arnett (1992) distinguishes between risky and reckless behaviours by defining the former as thrill-seeking activities that have gained mainstream social approval. On the other hand, reckless behaviour is defined as activities lacking social approval, being highly associated with negative consequences, and involving a failure to take the necessary precautions. It is believed that more studies on reckless behaviour should be conducted to curb the number of road crashes among motorcyclists.

A previous study conducted by MIROS (in press, 2018) reveals that the frequency of reported reckless behaviour was higher among licensed motorcyclists as compared to those unlicensed; even though the same types of reckless behaviour were committed. This might be due to the former’s experience and belief that committing such acts would not get them involve in a crash or be caught by the police. Further, Cameron, Newstead, Diamantopoulou, and Oxley (2003) confirm that high visibility of traffic enforcers along the road has proven to be a highly inhibitive means of reducing speeding. In fact, for some road users, being inspected by a police officer is an effective deterrent as they fear being reprimanded, and this threat is even greater than the fear of risking their lives or the lives of others (Silcock, Smith, Knox, & Beuret, 2000).

There have been several studies of motorcyclist riding behaviour in relation to age groups. For example, a study was conducted by Stutts, Foss and Svoboda (2004) to clarify age-related trends in motorcyclist deaths and injuries using national (US) and state

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(North Carolina) motor vehicle registration and crash data. The findings provided information on the distribution of “first” contributing factors; for motorcyclist deaths or injuries involving one or more factors. The factors more likely to be cited for younger motorcyclist deaths/injuries were exceeding the speed limit and careless, reckless or aggressive riding. The factors for older rider deaths and injuries included inattention and alcohol involvement. These factors were all significant at $p < .0001$ when tested in 2×4 crosstabulations of the data (e.g., exceeding safe speed or not exceeding safe speed by age). Other factors were more equally distributed across the age categories but the most frequently cited factor was exceeding a safe speed (Stutts, Foss, & Svoboda, 2004).

Road safety researchers including Lund and Rundmo (2009) argue that interventions and campaigns employing psychological principles, if properly implemented might be productive in reducing reckless driving and vehicle crashes. However, prevention programs designed to modify driver behaviour are relatively rare, are too broad, and often fail to address the antecedents of specific reckless behaviours (Schwebel, Severson, Ball, & Rizzo, 2006; Sheehan, Siskind, & Schonfeld, 2004).

3. Research Methodology

The study uses a quantitative research design and a survey method. Data for the study was obtained through a survey questionnaire. The data collection process is described below.

3.1 Sample Size

Purposive sampling was used in this study whereby respondents were chosen based on whether they had a valid driver's license or otherwise. The sampling technique requires the sample to represent some appropriate characteristics of the sample members (Zikmund, 2003). The total population of Malaysia according to age groups acted as the base to determine the sample size and the states with the highest road fatality rate were also identified (Table 2). A sample of 800 respondents from selected government agencies, residents' associations and biker clubs were chosen as the study participants.

Table 2 Respondents' sample size

Age group	Population (%)	No. of sample	Location
26 – 35 years old	30.8	247	
36 – 45 years old	24.5	196	Ipoh, Melaka,
46 – 55 years old	21.2	170	Kuantan, Kota
56 – 65 years old	13.6	109	Setar, Kuala
Above 65 years old	9.8	78	Lumpur, Putrajaya,
			Kajang
Total	100	800	

3.2 Instruments

A study questionnaire was developed using the 'adopt and adapt' method. It featured the reckless driving behaviour scale as proposed by McNally and Bradley (2014) but was suited to the Malaysian riders' context. A total of 24 items were included in the questionnaire. The respondents needed to answer how many times they had engaged in each riding misconduct in the previous 4 weeks on an 11-point scale ranging from 0 (none) to 10 (100+times). A pilot test involving 30 respondents was carried out to determine the reliability of the study questionnaire. Based on the result of the pilot study, some amendments and adjustments were then made to the study instrument.

3.3 Procedure

The survey was conducted in several locations to depict the situation in East Malaysia as well. As stated earlier, the study participants were chosen at selected government offices and residential areas to represent adult motorcycle riders. The participants received a meal voucher for their participation. To be eligible for the study, they must be over 26 years old and ride their motorcycle frequently. Their verbal consent was obtained before the survey commenced as per ethical requirements. The participants were required to spend approximately 10 to 15 minutes to answer a range of questions including demographic background, riding experience and their behaviour while riding. They were given a brief explanation by the research assistants and then left to complete the survey in their own time or interviewed if they were from the more senior group.

3.4 Data Analysis

The data collected were coded into Statistical Package for Social Sciences (SPSS) version 20. Each data was scrutinized to ensure all the questions had been answered. Any incomplete or odd answer would be cross-checked with the questionnaire given to the respondent. The column was re-entered if there were missing information or wrong entry. Partially missing answers, for age (1.9%), were excluded from the analyses. The reckless riding score was assessed using descriptive analysis to get an overall view of the

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motorcycle riding behaviour. Later, all the items under “reckless behaviour” were computed into the sum to determine the difference according to the age group. The motorcyclist age category and reckless riding score were used as the comparison group. All the independent variables were entered according to their measures. Finally, the relationship between motorcyclist age category and reckless riding score was estimated using bivariate correlation.

4. Results

The results of the study comprise the demographic of the respondents, differences of self-reported (reckless) riding behaviour by age category, and the relationship between motorcyclist age category and reckless riding score.

4.1 Demographics of Respondents

The descriptive statistics of the sampled data are listed in Table 3. In the study, male respondents (75.3%) outnumbered female respondents (24.7%). In terms of age, 46.2% of the respondents were 35 years and below. This was followed by the age groups of 36 to 45 years (26.8%), 46 to 55 years (12.6%) and 56 years and above (14.4%). The mean age of the respondents was 40.4 years old. It was found that 48.9% of the respondents had obtained tertiary education while another 41.4% had attended secondary school. Another 9.4% of them had primary education while the rest (0.5%) did not have formal education. Most of the respondents, who were motorcyclists, were still working (88.9%) with 79.4% of them in the government sector and the other 13.4% in the private sector. Only a small proportion of them was self-employed (7.2%). Also, a number of respondents were unemployed and retirees with 3.2% and 7.9%, respectively.

Among those who were still working, the most reported monthly income was RM1,001 to RM2,500 with 56%. This was followed by respondents drawing monthly incomes of RM2,501 to RM4,000 (29.1%) and RM4,001 to RM5,500 (4.0%). Motorcyclists with a monthly income higher than RM5,000 accounted for about 3.0%. On another note, the study also managed to attract the participation of motorcyclists without a valid license (4.6%). However, the majority of them had a valid license (95.4%). Most of the motorcyclists rode their motorcycle (88.3%) while the remaining number borrowed their family, relative or friends' motorcycle. Only 39.7% of the respondents were riding with at least one (1) pillion while the others rode alone most of the time (60.3%). In terms of

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engine capacity (cc), most of them rode a motorcycle with less than 250 cc (97.1%). Meanwhile, a small number also reported riding a motorcycle with bigger cc (Not more than 500 cc (0.4%); More than 500 cc (2.5%)).

Based on the self-reported data, most of the motorcyclists had started riding at an early age. About 63.9% of respondents started to ride a motorcycle between 13 and 19 years old, with 46.2% of them starting at legal age. In terms of traffic violation, the majority of respondents (87.1%) had experienced getting summons while 85.2% of them had been involved in a road crash.

Table 3 Details of respondents

Item	n	%	Item	n	%
Gender			License ownership		
Male	591	75.3	Yes	749	95.4
Female	194	24.7	No	36	4.6
Age group			Education level		
35 years old & below	363	46.2	No education	4	0.5
36 to 45 years old	210	26.8	Primary	72	9.2
46 to 55 years old	99	12.6	Secondary	325	41.4
56 years old & above	113	14.4	Tertiary	384	48.9
Marital status			Working sector		
Single	106	13.5	Government	617	79.4
Married	655	83.4	Private	104	13.4
Divorcee/Widow	24	3.1	Self-employment	56	7.2
Monthly gross income			Early age during riding		
Less than RM1,000	62	8.0	Below 12 years old	129	16.4
RM1,000 – RM2,500	435	56.0	13 to 19 years old	502	63.9
RM2,501 – 4,000	226	29.1	20 to 29 years old	135	17.2
RM4,001 – RM5,500	31	4.0	30 to 39 years old	15	1.9
Above RM5500	23	3.0	Above 40 years old	4	0.5
Motorcycle ownership			Ride with pillion		
Yes	693	88.3	Yes	312	39.7
No	92	11.7	No	473	60.3
Engine capacity			Working status		

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Less than 250 cc	762	97.1	Unemployed/student	25	3.2
Less than 500 cc	3	0.4	Working	698	88.9
More than 500 cc	20	2.5	Retired	62	7.9
Summons experience			Crash involvement		
Yes	684	87.1	Yes	669	85.2
No	101	12.9	No	116	14.8

4.2 Differences of Self-reported (reckless) Riding by Age Category

The differences of self-reported (reckless) riding behaviour according to the respondents' age categories are explained below.

4.2.1 Age Group of 35 Years and Below

Table 4 shows the types of reckless riding behaviour among respondents aged 26 years to 35 years. The behaviour was rated based on the respondents' frequency of committing each misconduct. Among all the items in the table, most respondents reported to not wearing a helmet while riding ($M=7.39$; $SD=3.245$). This was followed by the act of speeding at road marking between vehicles ($M=4.31$; $SD=3.247$) and riding more than 15 km/h beyond the speed limit ($M=4.18$; $SD=3.139$).

Next in line was dangerously cutting into traffic (zig-zag) ($M=3.91$; $SD=3.063$) and riding in bad weather ($M=3.66$; $SD=2.724$). The respondents also admitted to accelerating once the traffic light changed to green ($M=3.66$; $SD=2.724$). Also, in the same manner, they would accelerate when the traffic light turned yellow ($M=2.98$; $SD=2.752$). Respondents in this age group would ride the motorcycle when experiencing fatigue ($M=3.32$; $SD=2.586$) and emotional distress such as being angry, sad etc ($M=2.13$; $SD=2.190$).

Seldomly, they might eat or drink while riding a motorcycle ($M=1.97$; $SD=2.170$). This was followed by making or answering a phone call ($M=1.66$; $SD=2.105$), texting or looking for a contact number ($M=1.50$; $SD=2.010$) and smoking ($M=1.42$; $SD=2.784$).

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Respondents in this age category would rarely be searching for songs or radio station on their smartphone ($M= 0.70$; $SD=1.603$) and riding under influence (alcohol, medication etc) ($M=0.13$; $SD=0.796$).

4.2.2 Age Group between 36 to 45 Years Old

Respondents in this age group were asked to state their frequency of misconduct as listed in the questionnaire. A large number of them indicated frequent traffic violations. The highest frequency was for riding without wearing the safety helmet ($M=6.58$; $SD=3.782$). This was followed by riding more than 15 km/h beyond the posted speed limit ($M=3.66$; $SD=3.046$) and speeding at road marking between vehicles ($M=3.56$; $SD=3.288$).

However, most respondents were not prone to speeding. The number was higher for other forms of misconduct such as dangerously cutting into traffic (zig-zag) ($M=2.93$; $SD=2.876$), accelerating once the traffic light turned yellow ($M=1.93$; $SD=2.039$), not stopping at the pedestrian crossing ($M=1.48$; $SD=2.263$) and speeding near construction sites, schools and hospitals ($M=1.28$; $SD=1.909$).

In terms of health and the environment, most respondents indicated that they had ridden in bad weather such as heavy rain, flood etc ($M=2.70$; $SD=2.280$). This was followed by riding while fatigued ($M=2.49$; $SD=2.168$) and under emotional distress ($M=1.52$; $SD=1.759$). Among the misconduct that could lead to distraction were eating or drinking while riding ($M=1.66$; $SD=1.992$), texting or looking for a contact number ($M=0.97$; $SD=1.635$), making or answering a phone call ($M=0.96$; $SD=1.546$), looking for songs or radio station on the phone ($M=0.69$; $SD=1.633$) and smoking ($M=1.15$; $SD=2.197$).

Some of the misconduct was related to dangerous riding behaviour such as accelerating once the traffic light changed to green ($M=2.57$; $SD=2.482$), tailgating ($M=1.87$; $SD=1.916$), changing lane without indicating ($M=1.47$; $SD=1.900$), racing with friends ($M=1.00$; $SD=1.931$) and racing with strangers ($M=0.84$; $SD=1.620$). However, riding

under influence ($M=0.13$; $SD=0.683$) was the least reported violation among motorcyclists aged 36 to 45 years old.

4.2.3 Age Group between 46 to 55 Years old

The frequency of riding misconduct was markedly lower for motorcyclists from the 46 to 55-year-old category. The study found that the most frequently committed riding misconduct was not wearing helmet ($M=6.44$; $SD=3.914$). This was followed by speeding at road marking between vehicles ($M=3.85$; $SD=3.759$) and riding more than 15 km/h beyond the posted speed limit ($M=2.44$; $SD=2.596$).

Next, the group reported to have ridden their motorcycle during bad weather ($M=2.43$; $SD=2.181$) and while fatigued ($M=2.29$; $SD=2.287$). As regards their speeding violations, the respondents admitted to dangerously cutting into traffic (zig-zag) ($M=2.93$; $SD=2.876$), accelerating once the traffic light turns yellow ($M=1.93$; $SD=2.039$), not stopping at the pedestrian crossing ($M=1.48$; $SD=2.263$) and speeding near construction sites, school and hospital areas ($M=1.28$; $SD=1.909$).

In relation to health and the environment, most of the respondents admitted to having ridden in bad weather including heavy rain, flood etc ($M=2.70$; $SD=2.280$). This was followed by riding while experiencing fatigue ($M=2.49$; $SD=2.168$) and emotional distress ($M=1.52$; $SD=1.759$). Other acts of riding misconduct included eating or drinking while riding ($M=1.66$; $SD=1.992$), texting or looking for contact numbers ($M=0.97$; $SD=1.635$), making or answering a call ($M=0.96$; $SD=1.546$), searching for songs or radio station on their smartphone ($M=0.69$; $SD=1.633$) and smoking ($M=1.15$; $SD=2.197$).

Some violations were related to dangerous riding behaviour such as speeding after the traffic light turned green ($M=2.57$; $SD=2.482$), tailgating ($M=1.87$; $SD=1.916$), changing lane without indicating ($M=1.47$; $SD=1.900$), racing with friends ($M=1.00$; $SD=1.931$) and racing with strangers ($M=0.84$; $SD=1.620$). However, riding under influence ($M=0.13$; $SD=0.683$) was the least reported misconduct among motorcyclists aged 46 to 55 years old.

4.2.4 Age Group of 56 Years Old and Above

The study also found that motorcyclists aged 56 years old and above reported the highest frequency of not wearing helmet while riding. The score of 6 for such misconduct was the highest among the items on the list (M=6.54; SD=3.733). This was followed by speeding at road marking between vehicles (M=4.19; SD=3.773). However, the other items did not exceed the mean score of 1.8.

The frequency of riding misconduct also decreased as we go through the list. In terms of health and the environment, the respondents admitted to riding in bad weather such as heavy rain, flood etc (M=1.79; SD=2.351). This was followed by riding after drinking coffee or energy drinks (M=1.74; SD=2.344) and riding more than 15 km/h over the speed limit (M=1.26; SD=1.949). In addition, they reported to riding while experiencing fatigue (M=1.17; SD=1.899) and accelerating once the traffic light turned yellow (M=1.05; SD=2.129).

Starting from speeding after the traffic light turned green (M=0.93; SD=1.912), the mean frequency of the other misconduct did not exceed 1. These included changing lane without indicating (M=0.88; SD=2.052), not stopping at pedestrian crossing (M=0.81; SD=1.797), dangerously cutting into traffic (zig-zag) (M=0.81; SD=1.797), tailgating (M=0.78; SD=1.651), failing to observe the stop sign (M=0.75; SD=1.645) and speeding near construction sites, school and hospital areas (M=0.48; SD=1.389). Also, overtaking other vehicles had the least frequency (M=0.30; SD=1.051).

As for riding distractions, the respondents admitted to smoking (M=0.61; SD=1.520), making or answering a phone call (M=0.39; SD=1.064), texting or looking for a contact number (M=0.36; SD=1.078), eating or drinking (M=0.35; SD=1.125) and searching for songs or radio station on their smartphone (M=0.24; SD=0.837). All these items registered very low frequency.

Looking across the age categories, most of the respondents portrayed similar reckless riding behaviour especially in relation to not wearing their safety helmet. Motorcyclists regardless of their age admitted to leaving their helmet on most occasions. This was followed by speeding violations. The study findings suggest that most motorcyclists in

Malaysia had poor knowledge particularly as regards helmet wearing and riding at safe speeds.

Table 4 The comparison of reckless behaviour by age category

Age category	35 years old & below (n=363)		36 to 45 years old (n=210)		46 to 55 years old (n=210)		55 years old & above (n=210)	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
<i>In a month, my frequency of ... is</i>								
<i>Texting or looking for contact</i>	1.50	2.010	0.97	1.635	0.69	1.569	0.36	1.078
<i>Looking for songs/radio station on my smartphone</i>	0.70	1.603	0.69	1.633	0.35	1.128	0.24	0.837
<i>Eat or drink</i>	1.97	2.170	1.66	1.992	0.78	1.266	0.35	1.125
<i>Smoking</i>	1.42	2.784	1.15	2.197	1.32	2.373	0.61	1.520
<i>Emotional (grief, angry etc.)</i>	2.13	2.190	1.52	1.759	1.26	1.549	0.66	1.354
<i>Fatigue</i>	3.32	2.586	2.49	2.168	2.29	2.287	1.17	1.899
<i>After drinking coffee, energy drinks etc.</i>	2.81	2.900	2.29	2.586	1.91	2.250	1.74	2.344
<i>Riding under influence (paracetamol etc.)</i>	0.13	0.796	0.13	0.683	0.11	1.009	0.14	0.766
<i>Racing with strangers</i>	1.36	2.305	0.84	1.620	0.48	1.181	0.25	0.959
<i>Heavy rain, flood etc.</i>	3.66	2.724	2.70	2.280	2.43	2.181	1.79	2.351

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<i>Ride more than 15 km/h from speed limit</i>	4.18	3.139	3.66	3.046	2.44	2.596	1.26	1.949
<i>Tailgating other vehicle in front</i>	2.67	2.419	1.87	1.916	1.61	1.851	0.78	1.651
<i>Speeding in construction, school etc. area</i>	1.78	2.240	1.28	1.909	0.85	1.541	0.48	1.389
<i>Speed up after light change to green colour</i>	3.58	2.848	2.57	2.482	1.74	2.141	0.93	1.912
<i>Dangerously cutting into traffic (zig-zag)</i>	3.91	3.063	2.93	2.876	1.37	2.112	0.81	1.797
<i>changed lane without indicating</i>	1.87	2.091	1.47	1.900	1.06	1.441	0.93	1.806
<i>Overtake others</i>	1.52	2.031	1.07	1.648	0.67	1.443	0.30	1.051
<i>Racing with friends</i>	1.50	2.245	1.00	1.931	0.43	1.080	0.27	0.916
<i>Make or answering phone call</i>	1.66	2.105	0.96	1.546	0.69	1.103	0.39	1.064
<i>Unable to stop at stop sign</i>	1.45	1.906	1.06	1.728	0.85	1.424	0.75	1.645
<i>Accelerate once traffic light turns yellow</i>	2.98	2.752	1.93	2.039	1.48	1.837	1.05	2.129

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<i>Not wearing helmet</i>	7.39	3.245	6.58	3.782	6.44	3.914	6.54	3.733
<i>Did not stop at pedestrian crossing</i>	1.90	2.543	1.48	2.263	1.76	2.677	0.88	2.052
<i>Speeds up in between vehicles (at road marking)</i>	4.31	3.247	3.56	3.288	3.85	3.759	4.19	4.365

4.3 The Relationship between Age Group and Reckless Riding Score

Pearson’s correlation method was performed to determine the relationship between the respondents’ reckless riding score and age group. The result is shown in Table 8.

As shown in the table, there is a negative correlation between the respondents’ reckless riding behaviour and crash involvement, which is statistically significant ($r = .382$, $n = 785$, $p = .0001$). The negative result indicates that there is a reverse pattern in the relationship between reckless behaviour and the respondents’ age. The act of reckless riding will decrease as the respondents’ age increases. Next, the coefficient of determination, R^2 was calculated ($R^2 = r^2 \times 100\%$) to measure the amount of variability in age. We can conclude that age of the motorcyclists accounts for 14.5% of the variability in reckless riding behaviour.

Table 5 Pearsons’ correlation table

Variable	Reckless behaviour	Crash involvement	R² (%)	Mean	SD
<i>Reckless riding</i>	-	-.382**	14.6	47.50	31.685
<i>Age</i>	-.382**	-	-	40.35	11.951

**Significant at 0.01 level (2-tailed)

5. Discussion

This section shall discuss reckless riding behaviour according to the motorcyclist age category and the relationship between age and reckless riding score.

5.1 Reckless Riding Behaviour According to Age Category

The first objective of the study is to determine the respondents' reckless riding behaviour according to their age category. From the results, it is clear that the frequency or tendency for the respondents to perform reckless riding misconduct was lesser as we go up the age category. The first group of respondents (age 26 to 35 years old) recorded the highest frequency as opposed to the other age groups. This group had a frequency of 7.39 for not wearing the safety helmet while riding. This shows that out 10 times, motorcyclists would not wear the helmet 7 times while riding. However, such misconduct also appears in all age groups. Although having a lesser frequency, not wearing the helmet appeared as the most common riding misconduct in this study. Most of the respondents seemed to think that it was okay to leave their safety helmet for short distance travels. This would indicate their lack of awareness of the importance of wearing a helmet while riding a two-wheeled vehicle.

The situation is different in the North Carolina study discussed earlier, where motorcyclist deaths primarily involved older riders. The involvement of younger riders (16 to 24 years old) in fatal crashes had seen a decline over the past decade although the situation remained the same for motorcyclists in the 25 to 34 years old category. The sharpest increase in crash involvement had in fact been recorded for motorcyclists aged 45 years and older. This trend has been noted elsewhere in the literature (NHTSA, February 2002); but there has been little examination of the characteristics of older motorcyclist crashes directed at improving road safety interventions (Stutts, Foss, & Svoboda, 2004).

It should be noted that helmet use significantly decreases the incidence of non-fatal brain injury (Auman et al., 2002); length of hospitalization, probability of long-term disability, cost of medical treatment, and necessity for special medical treatments (Sreedharan et al., 2010). Further, mandatory helmet laws have been enforced around the globe to alleviate the burden of road traffic injuries (Cawich et al., 2010; Hyder et al., 2007). In Malaysia, the responsible parties need to do more to increase helmet wearing and encourage safe riding speeds among motorcyclists.

5.2 The Relationship between Age and Reckless Riding Score

Next, the study also aimed at determining the relationship between motorcyclist age and reckless riding score. Based on the analysis, there is a negative correlation between the respondents' reckless riding behaviour and crash involvement, which is statistically significant. This indicates that as the motorcyclists grow older, they would commit less riding misconduct.

Psychological factors play an important role in determining someone's behaviour. The study results are consistent with a growing literature suggesting that older drivers adapt their driving patterns to match age-related changes in their functional abilities. According to Erikson (1982), as we grow older our priorities change. During such a period, the major conflict centres on forming intimate, loving relationships with other people and we begin to share ourselves more intimately with others. A sense of responsibility and love yourself and your family will take over and one will no longer take the risk of losing one's life while on the road.

6. Conclusion and Recommendations

To conclude, this study highlights that reckless riding behaviour is prevalent among younger and older motorcyclists in Malaysia. The most common riding misconduct was not wearing a helmet, followed by speeding between lanes (road marking) and not observing the speed limit. The media tend to portray younger riders as being reckless but this study proves that reckless riding behaviour exists across all ages.

Furthermore, the study finds a significant negative relationship between motorcyclist age and reckless riding. This indicates that as we grow older, the tendency to commit riding misconduct will also decrease. However, the contribution of age was relatively small for explaining the cause of such behaviour.

Following this study, several recommendations are proposed:

- i. Appropriate injury countermeasures for motorcyclists should be targeted not only to male and young adults but also to female and older motorcyclists.
- ii. Road safety campaigns and advocacy programmes focusing on helmet wearing or any reckless riding behaviour should be conducted among older motorcyclists especially in rural areas.
- iii. Experienced motorcyclists should undergo a refresher course to enhance and refresh their riding skills.
- iv. Medical check-ups must be a compulsory component for license renewal.

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Research Report

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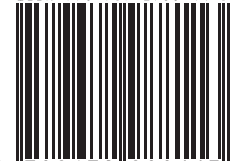
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