

Photo Documentary on Motorcycle Crash Victims: A Preliminary Study on Road Users' Response

Y. Ghani^{*1}, Z. Mohd Jawi¹, K. A. Abu Kassim¹, M. H. Zakaria¹, M. D. Radzuan¹ and A. T. Azizan²

¹Malaysian Institute of Road Safety Research (MIROS), 43000 Kajang, Selangor, Malaysia ²Faculty of Creative Technology and Heritage, Universiti Malaysia Kelantan, Malaysia

*Corresponding author: yusofghani@miros.gov.my

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Abstract – The gravity of motorcycle crash fatalities in Malaysia requires an out-of-the-box and creative approach to alleviate the situation. While currently, various interventions emphasize science through education, engineering, and enforcement, a subtle approach with art in promoting road safety messages would be worth discovering. Therefore, this preliminary research explores the effectiveness of post-crash images of motorcycle victims in communicating road safety awareness. The series of photographs in this documentary is suitable for various road safety campaign platforms. A total of 20 motorcycle crash victims were documented using 35mm black and white film photography. The victims (or their respective caretakers) were interviewed to record the events that led to the crash and the post-crash implications on social and economic. The photos were traditionally printed (in the darkroom) on 16x20 inch Ilford Multigrade FB Classic Paper. The series were then exhibited at the Vehicle Safety Week in Melaka and Sekolah Kebangsaan Jalan Bukit 1, Kajang. To investigate the effectiveness of the message from the photographs, the audience was requested to answer a questionnaire in Google Form via the WhatsApp application. From 45 survey respondents, the results showed that most of them agreed that black and white film photography is effective in promoting safer roads; and such exhibitions should be held frequently. In conclusion, the use of black and white photography of crash victims' sufferings can stir up the audience's emotion and raise awareness of motorcycle safety. Furthermore, the use of these photographs should be amplified into other media platforms, especially social media to reach more audiences.

Keywords: Road safety campaign, motorcycle, motorcycle victims, art, black and white photography

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1.0 INTRODUCTION

A life lost on the road does not simply mean that there is one less person in the world. It is an indicator of a poor state of public health regarding traffic safety. According to the World Health Organization's (WHO) report on the Global Burden of Disease Project for 2004, approximately 1.27 million people, mostly from low- and middle-income countries, lost their lives in road crashes annually (Mathers, 2008). In addition, another 20 to 30 million became permanently disabled or suffered from some degree of non-fatal injuries due to road crashes. The report also suggested that if no action was taken, it is estimated that 2.4 million lives would be lost in road crashes by 2030.

The implication of the road crash is significant. Many of those disabled can no longer contribute to their respective family or country's economy. Some even become dependent on other family members, leading to various social and economic issues. As pointed out by WHO (2013), the global losses due to road traffic injuries are estimated at around USD 518 billion (MYR 2.1 trillion) a year. This costs the government in the low- and medium-income countries between 1 to 3 percent of their Gross National Product (GNP), which is more than the total amount these countries receive in development assistance.

Road casualties are so serious in Malaysia that there are about 22 deaths for every 100,000 population, far too high compared to developed nations such as Sweden or the Netherlands, which is only 3 per 100,000 people. In developed countries, particularly in Western Europe, the death figure is kept low and continues to decline (OECD, 2015). A projection on the Malaysian road traffic fatalities indicated that if nothing is done to curb the current trend from escalating, by 2020, there will be 10,716 fatalities involving road accidents in Malaysia (Sarani et al., 2012).

In particular, road crashes lead to about 7,000 deaths a year annually out of more than 450,000 reported cases. Of these, 60% of death involved motorcyclists. Statistics published by the Malaysian Institute of Road Safety Research (MIROS) on its website, of which data was obtained from the Royal Malaysia Police, the number of deaths had exceeded 6,000 over the past 15 years. In 2016, more than 7,000 deaths were reported. This has resulted in massive financial loss to the country, either in terms of the 'value of statistical life' or property damages and insurance claims. In 2010, every death from a road crash is estimated to cost MYR1.3 million (Yusoff et al., 2103). The value is even higher now after factoring in the inflation.

Therefore, various efforts are being carried out by the Malaysian government, especially through the agencies under the Ministry of Transport. One of the efforts is to educate road users either through formal or informal education, as well as through mass media campaigns (e.g. Ghani & Musa, 2008; Ghani & Haidzir, 2014; Jawi et al., 2015; Abu Kassim et al., 2018). This study focuses on photography to promote safer roads.

Most of the research that we know is either shelved or claimed to be made into policies, but their implementations are often disappointing. For effective communication, various senses could be applied. Apart from sight and sound, even the feel (touch) and smell could be used to communicate messages. Berlo (1960) explains that communication involved a process, which includes 'sender, message, channel, and receiver'. The sender must form a particular message and uses the right channel (such as exhibitions, publications, and seminars) to disseminate these messages to receivers.



Besides, in 'selling ideas' using the social marketing approach, the communicator must convey the right message to the right audience through the right channel. According to the International Social Marketing Association, European Social Marketing Association & Australian Association of Social Marketing (2013), the social marketing approach could be used to disseminate messages with a social cause to benefit the audience instead of the communicator himself. Thus, this project also falls under the frame of social marketing, which is to sell the idea of safer roads.

While there is a need to frequently communicate about road safety, 'art allows us to communicate,' wrote German-born American philosopher, professor, and scholar Martin Foss (1949). He stated that 'expression in the field of art is always communication.' In its most basic abstract definition, art is a documented expression of a sentient through, or on an accessible medium so that anyone can view, hear or experience it. The approach to safer roads should be a concerted effort from every direction.

The use of art for road safety – particularly through photography – has yet been attempted at least in Malaysia. However, in other social causes, the use of photography to advocate a good cause is not uncommon. In the early 1970s, notable photojournalist W. Eugene Smith documented the suffering of the Minamata village community with his famous picture 'Tamoko in Bath'. Dorothea Lange and other photographers were commissioned by Farm Security Administration to document the plight of American farmers during the era of the Great Depression from 1929 to 1933.

In March 2019, UKM Medical Faculty and photojournalist Ahmad Yusni hosted an exhibition for cancer awareness through stories of cancer survivors at the prestigious National Art Gallery in Kuala Lumpur (Ahmad, A., 2019). The exhibition received extensive news coverage both locally and internationally. A similar approach has been used for social marketing on AIDS and environmental issues worldwide. The use of arts as a medium of communication is not new. Be it painting, sculpture, music, or photography, art has always been an effective and impactful medium of communication if presented well to the audience.

As film photography and darkroom print photographs are making a comeback and are appreciated, it would be an excellent opportunity for road safety advocates to utilize this medium as a tool for communication. Film photography and darkroom print photographs have a better chance of making it to the prestigious gallery compared to digital.

Photography has long been in existence as a medium of communication. Hirsch (2017) explained that the word 'photography' (a Greek word that means 'painting with light') was coined by Sir John Herschel in 1839. Photography started in the mid-19th century, when images were printed on glass plates or tins, and later, on large-sized films. It became popular when Oscar J. Barnack of Leitz Camera (Leica) in Germany designed a simpler camera that uses Kodak's 35mm black and white film in the 1920s. Since then, film photography has been a medium of interest among photographers for about a century until the emergence of digital cameras. Today, film photography is desired by millennials who are born in the era of digital photography. Thus, this project is timely as the road safety messages could be embedded through film photography which is well loved by youngsters.



1.1 Objectives of the Study

The objective of the study is to measure the effectiveness of traditional black and white photography as a medium of communication for a road safety campaign. Photography was chosen as the medium because it universally has extensive reach (either through print copies or online versions) and is appreciated by people across gender, age, and ethnicity. The specific objectives are:

- i. To create a baseline study on the effectiveness of black and white photography as a medium of road safety campaigns; and
- ii. To establish materials for road safety campaigns or educational programs.

The outcome of this study will serve as a guide for the implementation of strategies to reduce the number of road traffic fatalities in Malaysia through the application of arts, namely photography, before being broadened into other mediums of art.

2.0 METHODOLOGY

This preliminary study involved two stages, namely producing black and white prints through photo documentary and evaluating public response through surveys. The post-crash documentary on motorcycle victims involved the following process:

- i. Identifying 20 motorcycle crash victims of various types of crashes, injuries, and from different demographic backgrounds;
- ii. Documenting the victim's story & photographs;
- iii. Processing and printing the photographs using traditional darkroom techniques (Figure 1(a)); and
- iv. Presenting the photographs talks/seminars/publications/exhibitions.

All photographs were taken with 35mm black and white films which are traditionally processed and printed in the darkroom. A total of 20 selected 16 x 20-inch prints were exhibited during the Road Safety Week in Melaka on 20-25 October 2019. In addition, six photographs were showcased in MIROS' Corporate Social Responsibility (CSR) Program at Sekolah Kebangsaan Jalan Bukit 1 & 2 in Kajang from 18-22 November 2019 (Figure 1(b)). All 20 photographs mentioned above are listed in **Appendix I** and each photograph comes with a respective caption.

Following the exhibitions, a set of questionnaires in Google Form was distributed to the audience. This was to obtain feedback on the effectiveness of photography as a tool for road safety campaigns. The self-administered questionnaire used a quantitative approach on the Likert scale of agreement from 1 (Strongly Disagree) to 5 (Strongly Agree) to each of the ten statements in the questionnaire. The answers were then analyzed in the SPSS.







Figure 1: (a) processing at darkroom; (b) MIROS' CSR showcase

3.0 RESULTS

A total of 57.8% of 45 respondents who took part in the study are male (Table 1). The ethnic background shows that all respondents are from the Malay ethnic, and none of the respondents from Malaysia's other ethnicities participated in the study. Age-wise shows that most respondents are between 18 and 40 years old, while the remaining are above forty. As for education level, 55.6% of respondents studied up to the first degree at university and another 35.6% have post-graduate qualifications. In addition, 8.9% of respondents completed high school. None of the respondents was without any formal education. The findings from the questionnaire are in Table 2.

 Table 1: Demographic profiles of respondents

Demographic Profile	N (45)		
Gender			
Male	26 (58%)		
Female	19 (42%)		
Ethnic (Malay)	45 (100%)		
Age			
■ 18 to 40	40 (89%)		
41 and above	5 (11%)		
Education			
 Completed high school 	4 (9%)		
Degree	25 (56%)		
Post-graduate	16 (35%)		

Impact of the photographs – With regards to the impact of photographs, 62.2% of respondents agreed that they are highly impactful, followed by another 24.4% who found them to be impactful. On the clarity of the message, 82.2% agreed that it was clear. In fact, of those who agreed, 53.3% responded that the message was very clear indeed. Almost all respondents (95.5%) wished not to be involved in a similar tragedy as shown in the photographs. Besides, more than 90% of respondents perceived that the victims do suffer from the crash, whereby 86.7% of respondents strongly agreed with it. The result shows that 98% of respondents believe that the crash also led the family to suffer.



Photo exhibitions – With regards to photo exhibitions, 93.3% of respondents agreed that photo exhibitions can be used as a tool to remind road users to stay away from a crash. Next, 88.9% agreed that photo exhibitions on road crashes should be held frequently.

Black and White Photography – 71.1% of respondents agreed that traditional black and white print photography positively impacted the audience. While 22.2% remain neutral in their views, only 6.6% of the respondent did not agree with the statement. Furthermore, 84.4% of respondents agreed that the photographs displayed have quality while 11.1% remain neutral and 4.4% did not agree with the statement. To the statement 'traditional black and white darkroom prints have a high quality of art', 80% of the respondents strongly agree with it.

Table 2: Demographic profiles of respondents

No.	Statement	N (45)				
		SD	D	N	A	SA
1	The photos have an emotional impact.	0 (0%)	2 (4.4%)	4 (8.9%)	11(24.4%)	28(62.2%)
2	The photographs convey a clear message.	0(0%)	5(11.1%)	3(6.7%)	13(28.9%)	24(53.3%)
3	I don't want to be in the victim's place.	1(2.2%)	1(2.2%)	0(0%)	1(2.2%)	42(93.3%)
4	The victim suffers as a result of the crash.	0(0%)	1(2.2%)	1(2.2%)	4(8.9%)	39(86.7%)
5	The victim's family suffer as a result of the crash.	0(0%)	1(2.2%)	0(0%)	10(22.2%)	34(75.6%)
6	Photography exhibitions can be used as a reminder for road users to stay away from crashes.	0(0%)	1(2.2%)	2(4.4%)	13(28.9%)	29(64.4%)
7	Photo exhibitions on road crashes should be held more frequently.	0(0%)	1(2.2%)	4(3.5%)	10(22.2%)	30(66.7%)
8	Photos of road crash victims in black and white print are impactful.	0(0%)	2(4.4%)	10(22.2%)	17(37.8%)	15(33.3%)
9	The displayed photographs have quality.	0(0%)	2(4.4%)	5(11%)	10(22.2%)	28(62.2%)
10	Traditional black and white darkroom print have artistic value.	0(0%)	1(2.2%)	8(17.8%)	10(22.2%)	26(57.8%)

4.0 OVERALL DISCUSSION AND CONCLUSION

To date, there isn't any similar study done to measure the effectiveness of black and white photographs of motorcycle crash victims as a tool for promoting traffic safety. While not a single similar research material is available online, this exploratory study proves to be helpful in determining public acceptance of the use of art – particularly black and white photography made with darkroom print – as a medium for communicating road safety messages.



Nevertheless, this project has been successful in two aspects: Firstly, it led to the establishment of black and white photography prints of 20 motorcycle crash victims; and secondly, research was conducted to evaluate the effectiveness of promoting road traffic awareness. The documentation of post-crash stories and images of motorcycle victims are used as a communication tool meant to create awareness among road users.

Based on the study, it is clear that the results of all the 10 statements are highly favorable; hence, suggesting that black and white photography (made with darkroom print) can effectively evoke the emotion of the audience. The audience agreed that the victims and their families suffer as a result of the road crash. Furthermore, the study suggested that such an exhibition should be held frequently.

The audience also perceived that black and white photography made with traditional prints is moving and impactful in conveying road safety messages. Therefore, reaching the audience through photo exhibitions, talks, and other channels of communication such as print and digital media should be made broader.

Applying the social marketing approach for road safety, the message about motorcycle crash victims' suffering must be delivered to the right audience through the right channels to ensure its effectiveness. The audience is road users in general, specifically motorcyclists who are the most vulnerable to crashes. The right channels to deliver the messages could be exhibitions in galleries, malls, universities and schools, public spaces, newspapers, magazines, talks, and seminars, and if money is not an issue – billboards. These messages would be further reinforced via social media platforms such as Instagram, Facebook, Twitter, TikTok, and websites.

The right messages that hit the right audience could not only create awareness but also led to behavior change and thus make roads safer for everyone. However, the use of art as a medium in promoting traffic safety awareness should not be limited to merely photography but should be expanded to painting, cartoons, doodling, sculpture, performance, drama, music, and other forms of art.

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Appendix I. Selected Outputs from Photo Documentary

No.	Photo	Story
1		Hashim Shamsudin, 50, was riding a motorcycle to work when he had a head-on collision with a bus. Part of his skull was removed and he also suffered knee injuries. His right leg is now 2-inch shorter than the one on his left. "My head injuries were bad because I didn't buckle up my helmet properly, but I'm lucky to be alive," he said.
2		Muhammad Amier Ashraf, 27, passed away three weeks after his photo was documented for this project, four years after the crash. He was hit by a car while riding a motorcycle and underwent seven head operations that cost more than RM500,000. The strong impact of the crash popped his right eye out and eventually turned blind. "My helmet hit the edge of the drain and broke into two, but I was lucky to have buckled it up properly," he recalled the event that changed his life.
3		Abdul Rahman Semail, 28, was overtaking a lorry when his motorcycle hit a pothole. He was thrown off his machine and suffered a broken thigh and hand, both on the right side. After six months, his thigh bone has yet to recover. He has since been jobless and depended on financial assistance from the Social Security Organization (SOCSO). "I'm dead bored, lost my freedom, and had only a guitar and cats to accompany me," lamented the welder.
4		Haniza Bajuri, 53, had a crash with a tractor in Thailand when she was riding a superbike on her own. Haniza and her husband both rode their motorbike during their anniversary ride to Chiang Mai, Thailand. She spent four months in hospitals, including two months in Thailand. It took her two years to walk again as a result of multiple injuries, especially thigh bone. She opted for early retirement from her government job due to health reasons. Both of them now both of them run a superbike workshop. "The crash changed my life, but life goes on," said Haniza, who depends on a crutch to walk.
5		In 2016, Mohd Shazly Mohd Ariffin was at his workplace when he received news about the sudden death of his wife's brother, who is also his best buddy. He was too sad and depressed with the news. He rode a motorcycle home while crying and didn't even remember how he rear-ended a lorry. After a few days in the hospital, the doctor told him that his right leg had to be amputated. He is lucky to continue with normal life after the crash, albeit without one leg.
6		Mohamad Fariq Iqrami Mohd Azman, 22, was riding his motorcycle from Bachok, Kelantan to Kedah when he lost control of his machine. He fell unconscious and was taken to Gerik Hospital and later transferred to Taiping and Kota Bharu hospitals. The 2017 crash broke his leg and he now had to use a crutch to move about. "When you have a physical limitation, getting a job is tough." He is now a parking attendant in Pantai Sabak, Kelantan.



7	Azmi Mastam, 45, was riding a motorcycle to Kluang, Johor when he was hit by a car near Labis. "The car driver said he didn't see me," Azmi recalled, admitting that he was wearing a black jacket. The crash occurred just before dawn. After months on sick leave, he received only a partial salary and had to move to a cheaper rented house. "I'm lucky that my leg was not amputated," admitted Azmi, who suffered multiple injuries, including a broken right thigh.
8	Mohd Rahiman Aladin, 30, is paralyzed waist-down and bedridden following a motorcycle crash with a car. Unable to move, he had to depend on his aging mother to take care of him in Kota Bharu, Kelantan. He was knocked unconscious and the car driver was nowhere to be seen after the crash. He is now living on welfare aid of RM350 from the government.
9	Sukhdev Singh, 49, was riding a motorcycle to work when the crash happened. A soil-laden lorry rear-ended his motorcycle, leaving him unconscious for three days. "The doctor told my family to prepare for the worst, but a miracle happened. I was quick to recover when I got out of the coma." Sukhdev may have lost his left leg over the past 22 years, but he remains a high-spirited person. "My next journey is to complete my Ph.D."
10	In 2016, Muhammad Sabri Hafiz, now 19, left home on his father's motorcycle to buy dinner. Soon after, his mother received a phone call that her son was found lying on the road as a result of a crash. The hit and run victim spent three months in the hospital and has never been able to walk again. His family must fork out about RM2,000 a month to tend to his needs.
11	Muhammad Haiqal Abdullah, 20, suffered from a broken leg and thigh, besides a damaged colon and bladder after his motorcycle was hit by a car. He was returning home from work when the crash occurred at Segamat – Kuantan state road. He spent three weeks in the ICU ward and is lucky to be alive. His medical bills are covered by SOCSO.



12		Muhammad Dini Ninuk bin Abdullah, 47, was approaching a junction when he was honked loudly by a car, resulting in him losing control of his motorbike. His motorcycle hit the road divider, causing him a broken thigh bone and multiple injuries. "I was thrown out, and my head hit the road, but luckily my helmet remained intact. It could have been a different story altogether if I didn't buckle up properly." This former driver at Forest City in Johor has been jobless since then.
14	The state of the s	Syuib Othman, 33, lost his leg in a 2008 motorcycle crash in Bandar Sunway, Selangor. The man from Yan, Kedah, was on the way home from work when a car driver made an illegal U-turn and crashed into his motorcycle.
15	The rate of the ra	Muhammad Amier Firdaus, 19, affectionately known as 'Abe Ngoh', passed away on the 10 th of December 2019, after five years in a comatose state. He was pillion riding on a friend's motorcycle on the way home from a waterfall in Tanah Merah, Kelantan when the crash occurred. Her parents had to fork out more than RM2,000 monthly to meet his needs.
16		When she was 12, Leng Chit a/p Enon was involved in a motorcycle crash on the way to school. The injuries caused the 40-year-old woman to lose her ability to walk and even lost her voice. She is taken care of by her 63-year-old mother, Tiu Sohun.
17		Muhammad Fitri Mustafa, 38, was approaching the motorcycle lane when a bigger motorcycle crashed into him from behind. He suffered multiple physical injuries, but the head injury is the worst, causing him regular pain and vertigo. The master's degree holder from University Malaya had to quit his IT job after the incident and spend more time making trips to the hospital instead.
18		Lee Chee Ann is 38, but he refused to wear clothes. When he was five months old, he fell off a motorbike driven by his father. His brain was damaged and that stopped his mental growth. He attended school for a short while but could not learn. Lee lives alone in a ramshackle shack at the fringe of the forest not too far from his parent's house. Every time he sees strangers, he would quickly hide in the forest, naked.



19	0	At 15, Mohd Amirul Asyraf was involved in a motorcycle crash near his house in Kampung Slow, Machang, Kelantan. He suffered serious head injuries resulting in the partial removal of his skull. For the past eight years, he lay motionless in a comatose state, surviving on special milk that cost about RM2,000 a month.
20		Muhammad Syahmin Abdul Aziz, 20, was stopping at the red light when his motorcycle was rear-ended by another motorcycle driven by an unlicensed14-year-old boy. The former Universiti Teknologi Mara student was seriously injured and fell into a coma after the 2018 incident. His family had to fork out almost RM2,000 a month for his needs.