

Riding in Action: Road Safety and Emergency Response Practices of Selected Angeles City Cyclists

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Among those identified as vulnerable on road accidents are the cyclists; as there are no existing laws to specifically protect them, more and more accidents occur. Cycling is considered as a major physical activity and the most convenient means of transportation; hence, there is a need to develop an academic discourse on road safety and emergency preparedness among cyclists. This study aimed to describe the concept of road safety and emergency response practices of cyclists in Angeles City. To contextualize this, the study employed the qualitative-descriptive method. Through participants' narratives, a descriptive-exploratory approach was initiated by means of in-depth interviews. Snowball sampling was used to identify known cyclists within Angeles City. After interviewing five (5) participants, data were analyzed using Manual Qualitative Analysis through Categorization, Coding, and Thematic Analyses. Major findings implicate that cycling is not just a physical activity but also employs several dimensions such as social and cognitive health. Under these dimensions, several aspects are in need to be emphasized and included in the formulation of road safety lessons and skill-based emergency response specifically integrated in Physical Education.

Keywords: cycling, emergency response, physical activity, physical education

Introduction

Approximately 1.3 million people die each year on the world's roads, and between 20 and 50 million sustain non-fatal injuries. Pedestrians, cyclists, and motorcyclists make up almost half of those killed on the roads, highlighting the need for these road users to be given more attention in road safety programs (World Health Organization, 2009). Among those identified as vulnerable on road accidents are the cyclists. According to Brake organization (2016), a website specifically catering to cyclists and cycling activities, there were 100 cycling fatalities and 3,239 cyclist serious injuries on the roads in Great Britain in 2015.

In the Philippines, at least 26 bike riders were killed in Metro Manila because of road crashes where at least 962 people were also injured in bike-related mishaps in 2015 (Torralba, 2017). As there are no existing laws to specifically protect the cyclists, more and more accidents occur. There has been a pending bill with the Committee on Transportation since 2016, House Bill 174 the (Bicycle Act of 2016).

The bill seeks to institutionalize bike lanes or bikeways in all major roads and highways as well as to improve road hazards among cyclists. Another bill, the Integration of Road Safety in the Basic Education Curriculum Senate Bill No. 1231, aims to integrate Road Safety Learners Materials developed by the Land Transportation Office to be included and used in the curriculum of primary and secondary (K12) levels (Subido, P. R. 2019),

While waiting for a more definite law to protect the cyclists in the Philippine roads, it is imperative that the academe must take its part in providing basic road safety and emergency response training among students who use bicycles for their daily lives. Currently, limited schools have been delivering road safety lessons focusing only to students as pedestrians.

Teaching road safety in schools is not anything new, but these are mostly short courses facilitated by volunteers and advocacy groups. Contrary to some First World countries, road safety is not officially part of the basic education curriculum in the Philippines. Thus, there is a need to look into how cyclists practice road safety and emergency response (Subido, 2019).

To contextualize this study, the following review of literature and state of the art on road safety and emergency response among cyclists are presented in the succeeding paragraphs.

The early history of cycling was marked with very quick technological jumps that enabled larger and larger groups of people to achieve not only better comfort and safety, but also lowering of costs as bicycles became more and more commoditized. Designs, chain drive system, pneumatic rubber tires and standardization of the diamond frame design were popularized with the introduction of the first Safety Bicycle by the English company Rover (Bicycle History, 2009).

The increasing rates of traffic crashes including cyclists are currently recognized as a main public health and road safety concern. Moreover, risky actions on the road and their precedent factors have been conceptualized as possible causes for explaining, intervening and preventing traffic injuries of cyclists. This study proposes that risky behaviors facilitate the relationship between the individual factors and the crash rates of cyclists, and that age utilizes an essential effect in the difference of the explanatory structure of the model. The design of educational tools would be useful for promoting not only the avoidance of risky behaviors, but also a generalized awareness on road safety issues (Safety Science, 2019).

Based on another study, helmet users were considerably more likely to use crash prevention measures in conditions of reduced perceptibility. Explanations may include higher levels of risk awareness and greater knowledge of safe cycling practices in the smaller helmet using group. Still, present measures by cyclists in a major cycling center may be insufficient to prevent crashes and resulting serious injury or death (Injury Prevention Cycling, 2000).

Road-traffic safety aims to reduce the harm (deaths, injuries, and property damage) resulting from crashes of road vehicles traveling on public roads (Daily Science, 2020). In some cases, various constructions are statistically different on safety effects. Therefore, the mentioned safety effect cannot be generalized. The road designs are different in accident composition on those individual streets where cycle tracks were constructed. Other road designs are safer than some cycle track (Jensen, Rosenkilde, & Jensen, N., 2007).

When riding in the dark, a cyclist has an increased risk of having an accident. Wearing proper equipment like a helmet or visible clothing or having a cycling experience did not reduce the involvement in accidents. The focus of improvement for better cyclist-driver awareness and more interaction between car driver and cyclist is beneficial for both parties. (Saad, et al., 2019). Cyclists are less likely to be involved in a severe single-bicycle crash in municipalities with a high amount of cycling. Given the large numbers of patients admitted to hospital as a result of single-bicycle crashes, it is important to include the risks of these in road safety and health effect evaluations, and to take into account the non-linearity of the relationship between single-bicycle crashes and bicycle use if road safety measures are to affect the level of bicycle use (Schepers, 2012).

Emergency situations warranting a response can range from natural disasters to hazardous materials problems and transportation incidents. Emergency response plans are a critical component of workplace safety. Response time is an important aspect of emergency response. This refers to how long it takes for emergency responders to arrive at the scene of an emergency after the emergency response system has been activated. A long response time can

result in increased and permanent damage, a higher likelihood of fatalities, and greater distress to those involved. As such, response time is often used as a proxy for the effectiveness of an emergency response program (People360, 2011).

Lower back pain and anterior knee pain were the most prevalent overuse injuries, with knee injuries most likely to cause time loss and lower back pain causing the highest rates of functional impairment and medical attention (Clarsen, Krosshaug, & Bahr, 2010).

Based in the above literature and state of the art, road safety, emergency response, and common injuries among cyclists are integral to formulate a comprehensive program to alleviate road and cycling-related accidents. This study looked into how selected cyclists practice road safety, emergency response, and common injuries and at the same time examine the various factors that influence their cycling practices. Thus, the result of this study would be able to provide and promote multidisciplinary health education activities for the students and people engaged in cycling and biking.

In order to understand the dynamics of cycling and its consequences, this study aimed to describe the concept of road safety and emergency response practices of selected cyclists in Angeles City. It determined their demographic profile and biking histories, perceived road safety measures, and emergency response practices, and their implication to health education. Specifically, the following questions were answered:

1. What are the road safety practices and emergency response of the cyclists?
2. What are the cyclists' prevailing wellness dimensions as evidenced by their road safety practices and emergency response?
3. What is the implication of the result of this study in teaching Physical Education and Health?

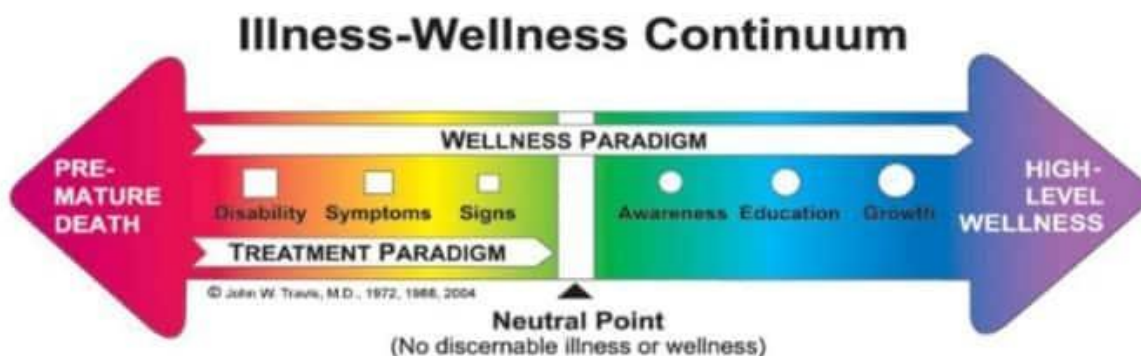


Figure 1. Theoretical Framework

This study is underpinned by the Illness-Wellness Continuum proposed by Travis in 1972. The Illness-Wellness Continuum is a graphical illustration of the well-being. Travis proposes that well-being includes mental and emotional health, as well as the presence or absence of illness. Moving from the center to the left shows a progressively worsening state of health and moving to the right of center indicates increasing levels of health and well-being.

The model shows that “there are actually many degrees of wellness, just as there are many degrees of illness”. These levels include signs, symptoms and disability leading to premature death on the one hand and awareness, education and growth leading to high-level

wellness on the other. In between them there is the neutral point with no discernable illness or wellness. "The treatment paradigm (...) can bring you up to the neutral point, where the symptoms of disease have been alleviated. The wellness paradigm, which can be utilized at any point on the continuum, helps you move toward higher levels of wellness. The wellness paradigm (...) is not meant to replace the treatment paradigm (...), but to work in harmony with it (Travis, 1972).

Illness-wellness continuum shows that bikers are also aware about their health and lifestyle to be sure that they are physically, mentally, and emotionally healthy. Biking helps them to have discipline when it comes to biking in other places and they are prepared by wearing their safety gears to prevent injury while they are biking. Bikers are also aware of their body and bike; they have a routine or practices before they engage in biking. Being in an organization, one gains many things like how the bike must be used and what are the things that need to change to make one's bike safer on the road.

Moving to the right of the center indicates increasing levels of health and well-being. In biking, bikers have an organization that promotes health and safety in every individual in the group. Bikers are required to attend a seminar to acquire knowledge about road safety and how to reduce the risk from accidents. Organization has rules and regulations that need to be followed to secure their safety and also to be aware about their health. As their preparation bikers need to condition their body and also their bikes before going to other places to prevent an injury and accident going in a long-distance biking.

Moving from the center to the left shows a progressively worsening state of health. Bikers not wearing protective gear can cause an accident or injury. Some of them experience accidents on the road. Others are even brought to the hospital because of their conditions like bone fracture, wounds, and etc. Bikers that have a high fever and not feeling well are not required to join in the long-distance biking.

Methodology

The study employed the qualitative-descriptive method. Through participants' narratives, a descriptive-exploratory approach was initiated by means of in-depth interviews. The sampling technique used is snowball sampling drawn from known cyclists within Angeles City. The selection criteria are as follows:

- Must be bona fide members of any cycling club
- Should be using bicycle for work or studying within Angeles City
- Must be aged 18 years old and above.

Furthermore, this study did not measure any biometrical information such as height, weight, blood pressure, and the like.

A semi-structured questionnaire was developed by the researchers through intensive literature search. The developed questionnaire was then submitted for peer review, expert validation, and psychometrician review. The questionnaire has three parts: demographic profile, biking history, and road safety practices. In order to better facilitate a reliable questionnaire, the researchers conducted pilot testing on March 03, 2019. It is needed to point out any complications with the intended questions, instances where items are not clear, formatting, and other error issues. A letter of request was submitted to the City College of Angeles Office of the Vice President for Academic Affairs and Office of the Vice President for Research for protocol purposes. After giving the permission, the researchers explained the purpose of the study to the selected participants that corresponded to the criteria.

The researchers conducted the pilot testing at CCA since the targeted participants had the same characteristics with that of their targeted population. Two (2) student cyclists from CCA participated in the pilot testing. After processing the results of the pilot test, the developed questionnaire was then improved.

The final data gathering was conducted between April 10 to May 10, 2019. Prior to this, the researchers were able to identify targeted participants through social networks such as class mates, participants from the pilot testing, and neighbors. The targeted participants were then communicated through their mobile phones or Facebook Messenger and were informed about the objectives and intent of the study. Verbal consent was initially secured during the observation and immersion. A written consent was also secured during the interview process. All participants were assured of the confidentiality and anonymity of the study. To contextualize the narratives of the participants, the following are their biographical sketches:

Participant 1

The name of the participant is Juan Tamad. His age is 41 years old and he is working at Yokohama Clark. When he was 9 years old, he already learned how to play a bike. He used the BMX bike of his classmate after their class and his classmate taught him how to play or ride a bike until he learned it. He also said that biking is not easy to learn. You need to train hard and practice to master how to ride it successfully. When he was young bike riding for him was just fun and also for him bike is a way to go to other places, but later on his mind was changed; bike is not just for fun and it is a hobby and sports and also for him bike is a way to make the body physically fit and healthy.

According to Juan Tamad, biking is not just a hobby but also is a way to build a good and happy relationship with other people. Biking helps his body to become healthy and physically fit. He mentioned that he has a problem in his heart. Usually our normal heartbeat is 100 beat per minute but his heartbeat was 120; it is abnormal so his doctor suggested that to make his heart normal he needed to play a bike until he overcame that problem. Now his heartbeat is normal, which means biking is not just for fun or exercise but also it is a cure to other diseases that many people face right now.

Participant 2

Juan Masipag is 18 years old, is studying at Angeles City National Trade School and is from barangay Cut-cut Angeles City. Juan Masipag learned how to ride a bike by himself when he was six years old and that time biking for him was just a game that could make him happy and fun. He also said that a bike can help him when you need to buy something outside that is too far. Instead of walking he used his bike to buy something outside fast and easy.

For Juan Masipag, biking is not just a game or transportation; it is also a way to build a good relationship with others. Juan Masipag said that when you are good to your friends it benefits you a lot when you need them for your problems and also about the bike. He received many things from his friends for his bike and other things that can help him in biking. According to Juan Masipag, relationships with others are very important as a person.

Participant 3

The name of the participant is Juan Makisig. His age is 30 years old and he is working at Yokohama company in Clark. When he was six years old his hobby was biking. He used his brother's bike without permission because he knew that his brother would not let him use his

bike. For him bikes can help him to escape from his parents because according to him when he was a child his parents did not allow him to play or even ride a bike outside so what he did was to use his brother bike and escape. When he was six years old, he learned how to ride a bike by himself because he was curious about the people who were biking. What he did was he grabbed his brother's bike and went on biking. On his first attempt, he fell, getting scratches and wounds. That taught him to learn how to ride a bike, testifying that experience is the teacher to success. He considers biking as a stress reliever, making one relax and forget some problems

According to Juan Makisig as people grow old, they need to be independent but then sometimes they need someone to be with because he said that a person cannot live by himself. Juan Makisig used to be a shy and quiet person; he did not interact with others. But when he joined in an organization, he learned how to be friendly and talk to others. Juan Makisig had an ordinary bike which was stolen. He felt disappointed because that bike was his first bike and had a sentimental value to him. Hence, he asked many people outside about his bike but to no avail.

Participant 4

The name of the participant is Mang Thomas and his age is 28 years old and he was working at the bike shop in Cut-cut, Angeles City. He already knew how to ride a bike at the age of 9; he was in 5th grade then. He learned to ride a bike on his own. His first bike was a BMXBanking on his experiences, he said that practicing and training on your own is the best way to learn how to ride a bike.

According to Mang Thomas, there are a lot of benefits that you can gain from biking. It can develop your health to become physically fit. And by biking you can learn how to become responsible for your things; such in the case when you need to know how to condition your bike for safety and the equipment that the organization needs in your ride.

Participant 5

The name of the participant is Mr. Bean, 45 years old and a bike shop owner. He learned how to ride a bike at the age of seven by himself and with some help from his friends. He decorated his bike when he was young and shifted to a mountain bike when he turned teenager. He used to consider biking as simply for fun and enjoyment but not sees it to be beneficial to one's health and helpful in building friendship with other people.

Mr. Bean founded a cycling organization to other bikers especially the beginners on techniques for proper biking. For him biking is a way to have or build a good relationship with other people; it is not just for fun but also for helping and caring other people.

Table 1. Demographic information of the participants

Participant	Age	Status	Organization	Year started	Occupation
1	18 year old	Single	Share the road	2018	Student
2	No disclosure	Married	Bikers YPH	2007	Employee
3	41 year old	Married	Bikers YPH	2017	Employee
4	28 year old	Married	Bikers YPH	2017	Mechanic
5	45 year old	Married	Bikers YPH	2015	Businessman

After interviewing five participants, the researchers decided to stop the recruitment due to data saturation. Data were analyzed using Manual Qualitative Analysis through

Categorization, Coding, and Thematic Analyses. As this study aimed to describe the concept of road safety and emergency response practices of selected cyclists in Angeles City, the following assumptions were proven by the researchers:

- Experienced cyclists have lesser tendencies for road injuries; and
- Amateur cyclists do not have proper training or emergency response.

Results and Discussion

Table 2. Biking history and influencers of the respondents

Common injuries
• Scratch
• Wounds
• Broken chin
• Bruises

In table 2 above, common injuries experienced by the cyclists were identified. Lacerations and abrasions are the most common injuries sustained in cycling (Kotlyar, 2016). Fortunately, among all participants, only minor injuries were noted. This can be an indication that the participants were aware of the risks of cycling. According to Ansari et al. (2017), using protective gear, improving technical proficiency, and physical fitness may somewhat decrease the risk of injuries. Table 3 below shows the biking history, the first bike and the purpose of biking. This is critical in understanding the experiences of the cyclists. Prevention of cycling-related injury in both the athletes and the recreational cyclists involves understanding the common mechanisms for both traumatic and overuse injury, and early correction of strength and flexibility imbalances, technique errors, and bicycle fit (Kotler et al, 2016).

Table 3. Biking history, first bike and purpose of biking

Participant	Age starts of biking	First bike	Purpose of biking
1	6 year old	BMX	transportation
2	6 year old	BMX	leisure
3	9 year old	BMX	physically healthy
4	10 year old	Mountain bike	leisure
5	7 year old	BMX	leisure

Table 4 depicts the identified major wellness dimension on road safety which is Social Wellness. Social wellness refers to the relationships one has and how one interacts with others. Relationships can offer support during difficult times. Social wellness involves building healthy, nurturing and supportive relationships as well as fostering a genuine connection with those around you. Under this sub category, the participants were able to identify social wellness through the codes which are: building relationship, communication, formation of organization and mentoring; every code has a meaning unit. According to Ferreira and Bordelon (2018), biking or cycling can provide major opportunities social upliftment and personal wellbeing among cyclists.

Table 4. Social Wellness and its meaning units

Codes	Meaning unit
Building relationship	<ul style="list-style-type: none"> • <i>Minsan nagbabike ako sa daan papunta trabaho may sasabay sa kinakapagkawayan, hindi ko man kilala pero dahil pareho kaming may hilig sa bike, nagkakilala kami. (JuanMakisig)</i>
Communication	<ul style="list-style-type: none"> • <i>Nagkakakilala kami dahil sa bike shop kapag nakikita kami sa daan o sa meeting place doon kami nagkakausap-usap. (JuanMakisig)</i> • <i>Bago umalis nagkakaroon kami ng usapan kapag one lane, dapat one lane lang. (JuanMakisig)</i>
Formation of organization	<ul style="list-style-type: none"> • <i>'Pag sinabing dito tayo pupunta, dapat sumama ka. (JuanMakisig)</i> • <i>Nabuo ang organisasyon namin dahil sa isang kaibigan. (JuanMakisig)</i>
Mentoring	<ul style="list-style-type: none"> • <i>Dahil sa mga customers na nakiusap sa kinakapagkawayan ng bumuo ng organisasyon. (Mr. Bean)</i> • <i>Si Mel Carlo at Mely, sila yung nagturo na magbike, kung ano ang gamit na fit edad ko. (Juan Tamad)</i> • <i>Kapag beginner ka tutulongan ka namin kung paano gagamitin ang bike ng maayos para hindi ka mapagod agad. (Juan Makisig)</i>

Table 5 illustrates the Environmental Wellness as another emerged dimension on road safety. According to Bellin Fitness (2020), environmental wellness is an awareness of the unstable state of the earth and the effects of daily habits on the physical environment. It is maintaining a way of life that maximizes harmony with the earth and minimizes harm to the environment. The codes identified through the narratives are road signs, city policies, rules and regulations, road safety training, biking rules, biking lane rules, and government consideration. Jackson and Burayidi (2017) emphasized that policy, ordinances, design, infrastructure, and the planning process affect the bikers as well.

Table 5. Environmental Wellness and its meaning units

Codes	Meaning unit
Road signs	<ul style="list-style-type: none"> • <i>Sumunod sa mga rules at road signs ng bayan. (Juan Masipag)</i> • <i>Dapat sundin ang traffic light. Kapag color red na, kailangan magstop. (Juan Masipag)</i>
City policies	<ul style="list-style-type: none"> • <i>Hindi ka pwedeng pumunta sa Clark kung wala kang gear. (Mang Thomas)</i> • <i>Bago makapasok sa Clark kailangan makakuha muna ng safety sticker. (Juan Tamad)</i>
Rules and regulations	<ul style="list-style-type: none"> • <i>Sa biyahe, unang-una walang iwanan kahit sino pinakamabagal o mabilis. (Juan Makisig)</i>
Road safety training	<ul style="list-style-type: none"> • <i>Kapag wala kang helmet at flashlight, hindi ka pwedeng sumama. (Mr. Bean)</i> • <i>May inaattend kaming seminar na safety riding center. (Juan Makisig)</i>
Biking rules	<ul style="list-style-type: none"> • <i>Kung paano yung mga gagawin kapag nagkaproblema sa daan. (Juan Masipag)</i> • <i>Hindi mo kailangan magmaneho ng mabilis sa daan. (Juan Makisig)</i>
Biking lane rules	<ul style="list-style-type: none"> • <i>Kailangan meron kang sapatos, hindi tsinelas. (Juan Masipag)</i> • <i>Kailangan kapag maraming sasakyan, dapat nasa single lane ka lang at huwag magalaw. (Juan Makisig)</i>
Government consideration	<ul style="list-style-type: none"> • <i>Kapag aalis, meron kaming procedure na one lane lang lahat. (Juan Makisig)</i> • <i>Sa mga ibang roads natin, binibigyan ng bicycle lane, well that's good. (Mr. Bean)</i>

Table 6 illustrates the sub-category Intellectual Wellness. According to Illinois State University, intellectual wellness refers to active participation in scholastic, cultural, and

community activities. It is important to gain and maintain intellectual wellness because it expands knowledge and skills in order to live a stimulating, successful life. The codes identified through the narratives are road signs, city policies, rules and regulations, road safety training, biking rules, biking lane rules, and government consideration. Howard et al. (2016) emphasized that engaging in physical activity, formal exercise, and specific recreational activities had a favorable effect on short-term cognitive decline. The physical and intellectual domains of wellness are prominent aspects in protection from cognitive decline. Inherent in these two domains are mutable factors suitable for targeted efforts to promote older adult health and well-being (Howard et al, 2016).

As disclosed in the narratives, cyclists must focus on mental abilities. Cognitive performance may be enhanced or impaired depending on when it is measured, the type of cognitive task selected, and the type of exercise performed (Lambourne & Tomporowski, 2010). Underestimation of risk and lack of knowledge about relevant traffic rules may contribute to car-bicycle collisions in roundabouts. Cyclists prefer road designs with a clear regulation of road user behavior. A need to increase knowledge about traffic rules regulating road user behavior in roundabouts is identified (Møller & Hels, 2008). To further emphasize this, the following tables suggest the interplay of both Intellectual and Physical Wellness in promoting safety practices among cyclists:

Table 6. Intellectual wellness and meaning units

Codes	Meaning unit
Presence of mind	<ul style="list-style-type: none"> • <i>Katulad ngayon, dapat hindi lang padyak ang ginagawa mo sa pagbabike, dapat may kasamang isip din. (Juan Masipag)</i>
Seminar purposes	<ul style="list-style-type: none"> • <i>Sa safety, pagtingin mo sa side mirror titignan mo kung may biglang mag stop maanticipate mo kung delikado. (Mang Thomas)</i> • <i>Mayroon kaming inaattend na seminar na safety riding center. Kung ano ang road safety at ano ang maaaring gawin kapag nagkaproblema sa daan. (Juan Tamad)</i>
Safety awareness	<ul style="list-style-type: none"> • <i>Ang seminar also serves as a reminder. (Juan Makisig)</i> • <i>Para makaiwas sa kapahamakan at aksidente. (Mang Thomas)</i>
Identification of risk	<ul style="list-style-type: none"> • <i>Kasi hindi mo masasabi kung kailan mangyayari ang aksidente, safety first dapat. (Juan Makisig)</i> • <i>Yung safety gears kapag hindi mo sinuot yung helmet, gloves sigurado pagtayo mo sa bike or kung makakatayo ka pa o may sugat sigurado pati ulo mo masugatan. (Mr. Bean)</i>
Importance of safety	<ul style="list-style-type: none"> • <i>Kapag yung pupuntahan mo ay pababa siguro bawal yung walang brakes dahil pwede mong mabangga yung kasama mo o matamaan mo siya. (Mr. Bean)</i> • <i>Sinusundan talaga kung saan ka komportable. (Mr. Bean)</i>
Prevention for accident	<ul style="list-style-type: none"> • <i>I always advise na kailangan kapag nagbabike, yung safety ang pinakaimportante. (Mr. Bean)</i> • <i>Kailangan magsuot ng mga protective gears para iwas injury. (Juan Makisig)</i>
Purpose of equipment	<ul style="list-style-type: none"> • <i>Yung mga accessories ay kailangan lalo na kapag magna-night ride ka, kailangan visible ka may mga ilaw yung bike mo. (Juan Makisig)</i> • <i>Sa helmet kung mauntog ka hindi masyado masakit yung masyado mababagok yung ulo mo dahil may helmet ka. (Juan Masipag)</i>
	<ul style="list-style-type: none"> • <i>Ilaw, iyan yung pinaka natutunan ko kasi yun nga iyong pinakamalayo naming biyahe. Wala kaming ilaw, nagiging delikado ang biyahe namin dahil maraming humps. (Juan Makisig)</i>

Another major dimension noted is Physical Wellness. This is defined as the ability to maintain a healthy quality of life that allows people to get the most out of their daily activities without undue fatigue or physical stress. Based on the narratives of the participants, the codes are protective gears, lessen injuries, biking skills, biking routine, bike conditioning, proper

equipment, self-conditioning, proper riding of bike, bike tools, preparedness, and warm-up. Gotschi et al. (2016) mentioned that substantial benefits from physical activity dominate the public health impacts of cycling. Furthermore, the health benefits of physical activity such as cycling outweighed the health risk of traffic fatalities and air pollution (Otero et al., 2018).

Table 7. Physical wellness and meaning units

Codes	Meaning unit
Protective gears	<ul style="list-style-type: none"> • <i>Especialy helmets, gloves, flashlights, first aid kits, and eyes glass. (Mr. Bean)</i> • <i>Kasi kapag bike talaga dapat dalawang klase ng sapatos na pwede mong gamitin. Iyong pang-pedal lang flat shoes, mabilis mo matatanggal yung sapatos, kapag sa boots matagal. (Juan Makisig)</i>
Lessen the injuries	<ul style="list-style-type: none"> • <i>Kunwari nagdadown hill ka dahil mabato at mapuno, kapag wala kang elbow at knee pads sigurado magsusugat-sugat ka. (Mr. Bean)</i> • <i>Kung nakahelmet ka atleast gasgas lang hindi tatamaan iyong ulo mo. (Juan Makisig)</i>
Biking skills	<ul style="list-style-type: none"> • <i>Kailangan meron talaga skills sa pagbabike (Juan Makisig)</i>
Biking routine	<ul style="list-style-type: none"> • <i>May mga routine kang sinusunod regarding sa pagbabike. (Juan Makisig)</i>
Bike conditioning	<ul style="list-style-type: none"> • <i>Dapat nasa kondisyon ang bike, usually bago magbike nirerequire namin ipatune-up yung bike. (Mr. Bean)</i>
Proper equipment	<ul style="list-style-type: none"> • <i>Yung shifters at brakes kailangan functional mga yan. (Mr. Bean)</i> • <i>Lalo na kapag ina-assemble mo iyong bike tulad sa trail bike dapat malalaki yung gulong mo. (Mr. Bean)</i>
Self-conditioning	<ul style="list-style-type: none"> • <i>Hindi ka makakapagtrail kapag mahina iyong mga gulong mo. (Juan Makisig)</i> • <i>Kung long drive siya, kailangan sleep well at mahaba-haba iyong pahinga mo. (Juan Makisig)</i>
Proper riding of bike	<ul style="list-style-type: none"> • <i>Tamang ethics ng pagbabike. (Juan Makisig)</i>
Bike tools	<ul style="list-style-type: none"> • <i>Dapat way yung pagbike mo in public road. (Mr. Bean)</i> • <i>Kailangan ng bell or horn. (Mr. Bean)</i>
Preparedness	<ul style="list-style-type: none"> • <i>Kasi kailangan prepared in case na ano man ang mangyayari para meron kang gagamitin. (Mr. Bean)</i> • <i>Kailangan mo ng mga protective gear na gagamitin at prepared din yung isip at katawan mo. (Juan Makisig)</i>
Warm-up	<ul style="list-style-type: none"> • <i>Yung pagbabike namin papuntang meeting place iyon yung warm up. (Juan Makisig)</i> • <i>Nagkaproblema kasi ako, yung puso ko is mabilis tumibok, sumosobra ako sa limit na 100. Iyong akin umaabot ng 120 per minute kaya nirequired ng doctor na mag exercise ako kaya pinili ko yung bike at iyon ang sinalihan ko at naging normal na heartbeat ko. (Mr. Bean)</i> • <i>Part ng cardio vascular endurance ang exercise tulad ng pagbabike. (Mang Thomas)</i>

To ensure safety during bike rides, the participants were able to identify strategies in preparing for crisis management. The following table below reflects the bikers' most common emergency response actions. Te Pai and Pai (2015) agreed that the system cognition, environment cognition, personal perception and personal preference are four vital aspects influencing the cycling behavior, and the extent is varied by different travel purposes.

Accordingly, injuries will require multiple strategies that integrate approaches from education, engineering, and evidence-based safety measures and their enforcement (Caine et al, 2018).

Table 10. Emergency Response and their meaning units

Codes	Meaning unit
Gears and equipment	<ul style="list-style-type: none"> • <i>Kailangan may dala kang interior, coldpouch, water, food, backpack, and bike tools. (Juan Makisig)</i>
	<ul style="list-style-type: none"> • <i>Palagi akong may kasamang bike mechanic kapag nagbibiyaha. (Mr. Bean)</i>
	<ul style="list-style-type: none"> • <i>Nakaligtas ako noong unang trip, natatanggal iyong kadena. Naayos ko pa pero noong papasok ako sa trabaho, nangyari nanaman. Hindi kona nabawi kaya bumaligtad ako. (Juan Makisig)</i>
	<ul style="list-style-type: none"> • <i>Kapag may biglang huminto sa harapan natin, atleast makapagbreak agad tayo. (Juan Makisig)</i>
	<ul style="list-style-type: none"> • <i>Kapag kasi biker ka, iyong unang aalahanin mo ay iyong mismong bike mo, hindi 'yong sarili mo, 'yung bike talaga. (Juan Makisig)</i>
	<ul style="list-style-type: none"> • <i>Pinag-isipan ko ang pinakaproblema pero noong una balak ko nang palitan yung kadena. (Juan Makisig)</i>
First Aid	<ul style="list-style-type: none"> • <i>Hindi ko na nakontrol pababa kasi gumagalaw 'yung manibela kaya bumaligtad na ako. (Juan Makisig)</i>
	<ul style="list-style-type: none"> • <i>In case naman ng aksidente, tinamaan 'yung kasama mo wala kang first-aid kit, nakita mo nagdudugo 'yung kasama mo at walang magagamit panggamot. (Juan Makisig)</i>
	<ul style="list-style-type: none"> • <i>Mayroon din kami mga padges and bandage in case na may mafracture sa kasamahan namin. (Mr. Bean)</i>
	<ul style="list-style-type: none"> • <i>Hindi ba sa first-aid lang maliit na bagay pero malaki ang benefits kapag may dala. (Juan Makisig)</i>
	<ul style="list-style-type: none"> • <i>Hindi naman masyadong grabe, gasgas lang naman. Tinanggal namin 'yung dugo at natuyong dugo. (Juan Makisig)</i>
	<ul style="list-style-type: none"> • <i>Nakita mo nagdudugo 'yong sugat ng kasamahan mo, lalagyan mo ng herbal na dahon. (Juan Makisig)</i>
	<ul style="list-style-type: none"> • <i>Nirerequire namin ang cold pouch. Usually minor fractures lang naman ang madalas nangyayari sa bike, kailangan meron ka talagang emergency tools pang kontra pulikat at tubig. (Mr. Bean)</i>
	<ul style="list-style-type: none"> • <i>Noong natumba ako, pahingamuna. Habang 'yong baba dahil malapit yung hospital deretso nalang kami ng hospital habang nakabike. (Mang Thomas)</i>
	<ul style="list-style-type: none"> • <i>Tatawag kaagad sa hospital para sa emergency. (Mr. Bean)</i>
	<ul style="list-style-type: none"> • <i>First- aid kapag nagka problema sa daan na kailangan matutunan ng aking mga members sa grupo. (Juan Makisig)</i>
<ul style="list-style-type: none"> • <i>In case na mayroon maaksidente, kailangan 'yong mayroon lang knowledge 'yon lang ang hahawak. (Mr. Bean)</i> 	
<ul style="list-style-type: none"> • <i>Tinanong namin kung kaya niya, ginamot namin ang sugat niya. (Juan Makisig)</i> 	
<ul style="list-style-type: none"> • <i>In case naman na magkaroon ng aksidente sa grupo, minsan kasi</i> 	

	<i>may nurse na kasama. (Mr. Bean)</i>
Environment	<ul style="list-style-type: none">• <i>Kapag mainit at walang carinderia, hindi ka makakahingi ng tubig. (Juan Masipag)</i>• <i>First-time 'kong pumunta paakyat sa daan, medyo okay pa pero 'nong pababa na biglang sobrang bilis, then 'yong dala ko pa road bike. Akala ko okay lang pero 'nong dinadatnan ko na rough road nap, muntik na ako matumba. (Mr. Bean)</i>• <i>Noong natumba ako patay malisya, biglang tayo at bahala na sila wala naman nakakakilala. (Juan Makisig)</i>

The social aspect of road safety, influence the practices of the bikers

According to one participant (the bike shop owner), he created a cycling organization upon the suggestion of one of his customers to have a strong relationship among them (the customers). The organization aims to raise awareness on the safety and health related to biking. A biking organization plays an important role in road safety as it teaches safety procedure, ethics, rules and regulations among its members.

A biking organization plays an important role in road safety as it teaches safety procedure, ethics, rules and regulations among its members. If one does not have the gears, he/she automatically can not join in biking. Professional bikers in a biking organization also teach ethics in biking, and how to condition a bike, among others.

Prior to the day of bike ride, members communicate with one another; they remind themselves to be in one lane to prevent accidents on the road.

The health of the bike is the safety of the bikers

Based on our participant, he was concerned about his bike instead of himself. According to him bikes serve as their safety; if the bike is not in condition it means you are not in safety. He spends a lot of money to make sure that their bike is in good condition. The participant regularly goes to bike shop to ask for an advice to the owner on what are the things he needs to do about his bikes. Bike shop owners are the ones who teach other participants on how to use their bikes properly and how to maintain their bikes to keep them in good condition. In an accident, one participant's first checks on his bike to make sure no part is missing or broken and then checks on himself for scratches or wounds. The medic is the one who gives the first aid before bringing the injured biker to the hospital. Participants are more concerned about their bikes which serve as their safety tool in traveling in other places.

One participant even hired a medic and mechanic to ensure the safety of both the bikers and the bikes. All members in the organization are required to have knowledge about the first aid procedure and what are the things they need to bring in travelling to other places. Environmental factors have a big effect when one rides a bike like when cycling without light. It's hard for a biker to ride in the evening because there is a possibility he will get into an accident and get injured.

Based on the statement of the participants, biking helps a person to enhance his/her cardiovascular endurance through cycling and it may lessen the possibilities to have an illness. Biking makes one healthy. A biker is willing to join a biking organization due to the benefits

derived such as making new friends, being physically fit and sharing and helping each other as a group.

Biking builds social relationship

In cycling, one learns how to engage and be friend with other people or members of the biking group. Biking brings people together who share the same interest and provides further knowledge on biking.

Being a member of an organization provides so many benefits like sharing of knowledge, providing financial or emotional help, and spare parts. It brings people together to become friends.

When cyclists ride in other places, they help street children on the road and they give food and water. And also, they work as a group to achieve their goals and enjoy traveling in every place they go to. Many people are willing to join biking organizations because they gain not only knowledge about the bike but also meeting other people which is wonderful for them.

The illness-wellness continuum (Travis, 1972) is a graphic illustration of well-being. Long distance biking promotes good physical and mental health among bikers. They have an organization that helps them to be disciplined and aware of their health. All members of the organization are required to wear protective gears and equipment to lessen and prevent the accident and injuries. An importance of an organization is to have a seminar about road safety to be knowledgeable about the road signs and the rules and regulation of biking on the road.

The following demographic profiles and biking history of participants are the age, status, organization, year started, and occupation. Based on the analysis of data the age of the cyclists has an influence on the road safety and emergency response. Through joining an organization they can acquire knowledge on the rules and regulations of the organization and experiences of other cyclists. Biking history is influential in the road safety and emergency response for cyclists. Past experiences of cyclists can also give them knowledge on how to prevent injuries and accidents while on road. Most of the participants are working and the bike is their means of transportation going to work. They create an organization to ensure the safety of cyclists by means of seminars, rules and regulations, protective gears and other practices in organization.

Conclusions and Recommendations

Based from the responses and stories made by the participants, as well as the emerged themes, the researchers conclude that: (1) joining an organization benefits a cyclist in terms of his physical health, as well as his social relationships by building and meeting new friends; (2) bikers also believe that cycling can enhance cardiovascular endurance; thus, the possibility of an increased overall physical health can be attributed to their current physical activities; in terms of road safety, (3) cyclists follow the rules and regulation of the organization to secure their safety in going to other places as well as wearing protective gears can lessen the injuries of the bikers.

Furthermore, the following recommendations are presented to preserve a better understanding and appreciation of the research: (1) a quantitative research can be employed in the future research to validate the findings of this study; (2) more cyclist participants must be invited to capture a more comprehensive perspective on the identified phenomena; and (3) future researchers may look for a varied study population that includes female cyclists to look into the intersectionality within the identified phenomena. This research can also be used a

basis to formulate a seminar or a comprehensive training plan about cyclists or students to have knowledge about the benefits of cycling and the road safety practices.

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