

See discussions, stats, and author profiles for this publication at: <https://www.researchgate.net/publication/368469462>

Biyaheng Padyak: The Psychological Well-Being, Experiences and Challenges Faced by Senior Citizen Cyclists

Article · January 2023

DOI: 10.5281/zenodo.7595382

CITATIONS

0

READS

70

10 authors, including:



Liezl Fulgencio

Jesus Is Lord Colleges Foundation Inc.

8 PUBLICATIONS 11 CITATIONS

SEE PROFILE



Krizia Joie Navales

2 PUBLICATIONS 11 CITATIONS

SEE PROFILE



Shearlene Manalo

2 PUBLICATIONS 11 CITATIONS

SEE PROFILE



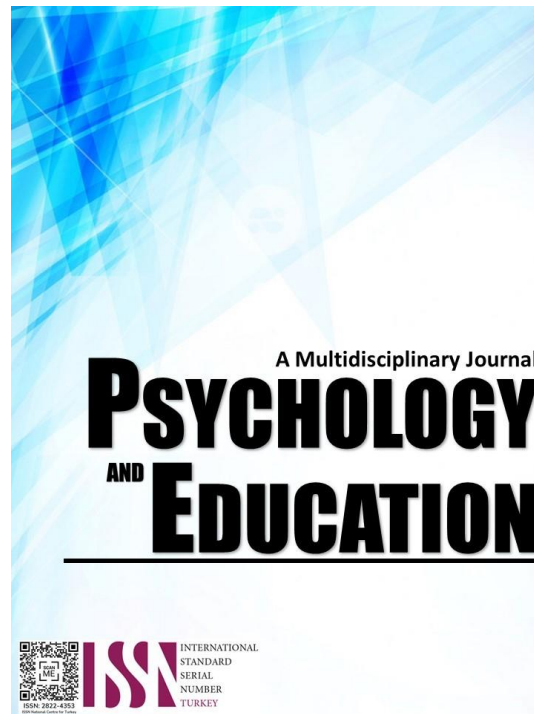
Galilee Jordan Ancheta

Jesus Is Lord Colleges Foundation

9 PUBLICATIONS 2 CITATIONS

SEE PROFILE

**BIYAHENG PADYAK: THE PSYCHOLOGICAL
WELL-BEING, EXPERIENCES AND CHALLENGES
FACED BY SENIOR CITIZEN CYCLISTS**



PSYCHOLOGY AND EDUCATION: A MULTIDISCIPLINARY JOURNAL

2023

Volume: 7

Pages: 34-43

Document ID: 2022PEMJ514

DOI: 10.5281/zenodo.7595382

Manuscript Accepted: 2023-27-1

Biyaheng Padyak: The Psychological Well-Being, Experiences and Challenges Faced by Senior Citizen Cyclists

Liez R. Fulgencio*, Krizia Joie P. Navales, Shearlene V. Manalo, Galilee Jordan C. Ancheta, Andrea Mae C. Santiago, Jericho Balading, Jayra A. Blanco, Christian Dave C. Francisco, Charles Brixter S. Evangelista, Jhoselle Tus
For affiliations and correspondence, see the last page.

Abstract

Cycling is one of the typical recreational activities, transportation, and sport among elderly adults in the Philippines. Based on the study, cycling provides many benefits to physical health, promotes well-being, contributes to improved quality of life, and is a great way for elderly adults to prevent depression, anxiety, and other mental health issues. As cycling becomes more prevalent during pandemics, the road has changed to include adding more bicycle lanes. Thus, the researchers explore the lived experiences of senior cyclists, specifically: (1) to describe the experiences, (2) challenges, and (3) coping mechanisms. Correspondingly, the study used fifteen (15) participants in an Interpretative Phenomenology Analysis (IPA) procedure. The following findings are drawn from the study: (1) Most of the senior cyclists experienced life-threatening events while cycling, they experienced a high level of satisfaction and happiness, (2) Most senior cyclists are not bothered by the difficulties that others might view as a barrier to them continuing to pedal with passion. (3) Despite all the obstacles they may encounter, senior cyclists choose to get through those challenges by being understanding, patient, and calm.

Keywords: *psychological well-being, lived experiences, challenges, senior citizen, cyclist*

Introduction

Cycling is one of the typical recreational activities, transportation, and sport among elderly adults in the Philippines. Based on the study, cycling provides many benefits to physical health and is an excellent way for elderly adults to prevent depression, anxiety, and other mental health issues (Grant, 2022). In addition, Zander et al. (2013) explained that cycling might also contribute to improved quality of life for older people through a sense of empowerment and pride, and it can be incorporated easily into a daily routine. On the other hand, Gladwin and Duncan (2022) stated that cycling was associated with achievement, enjoyment, improved self-esteem, and enhanced freedom.

Despite the benefits of cycling among older adults, a study shows that those above 60 commonly experience injuries due to physical health, calcium deficiency, physical activity, and bone mineral density (Kane, 2022). However, cycling is still an option for many seniors as long as they take the necessary precautions and wear protective gear to ensure their safety while cycling (Kane, 2022). Thus, unemployment or retirement was positively associated with the likelihood of taking up recreational cycling during the COVID-19 pandemic (Nguyen, 2022).

Furthermore, as cycling becomes popular during pandemics, the road has been transformed to include building more bicycle lanes. Still, unfortunately, the

infrastructure, policy, and enforcement are yet to catch up, resulting in increased bicycle road crashes and risk of injury (Pena, 2020; Luna, 2022). According to the Metro Manila Development Authority (MMDA)'s reported data, 82 cyclist deaths and 4,588 injuries were recorded from 2019-2021 (Luna, 2022).

Based on the written article by Luna (2022), the statement by non-profit AltMobility PH advocates for humane transport policy said that national bike lanes are generally substandard and risk the safety of users. Therefore, stricter enforcement should be implemented to meet the needs of the cycling community.

On the other hand, as a person ages, they must rediscover life's purpose because the original has altered. Engaging with life and finding activities to keep busy are the keys to finding purpose, which aids seniors in discovering meaning and improving their quality of life (Yen & Lin, 2018; Morgan et al., 2019). According to Erik Erikson's stages of Psychosocial Development (McLeod, 2018), person of different ages is experiencing a psychosocial crisis that could have positive and negative results for personality development; in the seventh stage of this theory which is generativity was stated that during middle adulthood ages 40 to 65 years old, the person was looking for the meaning of life through developing or nurturing things that will outlive an individual.

Moreover, this study aims to explore the lived experiences and psychological well-being among senior citizen cyclists, their challenges, and how they

cope with their situation to continue pedaling their passion despite their age. Thus, this study will serve as a foundation for program development to create a program that will raise awareness and address problems in the cycling community.

Research Questions

This study explores the lived experiences and psychological well-being among senior citizen cyclists. Specifically, this sought to answer the following questions:

1. What are the lived experiences of a senior citizen cyclist?
2. What are the challenges faced by a senior citizen cyclist?
3. What are the coping mechanisms of a senior citizen cyclist?

Methodology

This study employed Heideggerian phenomenology to explore the participant's lived experiences.

Participants of the Study

The study's participants included fifteen (15) senior cyclists. Therefore, purposive sampling was used in this study. The following inclusion criteria were used to find participants: the participants had to be:

- senior Filipino cyclists;
- 60 years of age or older; and
- Willing to participate in the study and give their informed consent.

Instruments of the Study

Using a semi-structured interviewing process approved by a professional panel, it was possible to gather information about the senior cyclists' experiences and difficulties. This aids the researchers in providing relevant information about the participants. Each participant completed the consent form the researchers gave as proof of participation and receipt of the information disclosed. Following the validation, the interview focused on three parts of the participants' experiences: their experiences as senior cyclists, their

challenges, and their coping methods. These three components were based on the following codes: (1) their lived experiences; (2) the challenges faced by senior cyclists; and (3) their coping mechanisms.

Ethical Considerations

The proposed data collection procedure and data collection tools will be reviewed and approved for this study. Ethical requirements are meticulously followed to ensure that approval is guaranteed. Before the study and the chosen research subjects, support will also be sought. As soon as the application is approved, respondents who meet the requirements for participation and have been identified will be requested to provide explicit consent in the form of written informed permission.

The Data Privacy Act of 2012's standard procedure is followed, and written informed permission is discussed to protect the fundamental human right to privacy and communication while allowing the free flow of information to support innovation and progress. Senior cyclists are informed about their voluntary work and the nature and goals of the study. They are also aware that they can withdraw their interview at any moment and are informed of the study's personality and goals. Furthermore, confidentiality is covered; participants are assured that all information gathered for the study will be utilized only for research purposes and will not reveal their identities. It also requested additional permission for the voice tape of the interviews.

Data Analysis Procedure (IPA)

The overarching meaning of a phenomenon was found and described in this study using interpretative phenomenological analysis (IPA), a qualitative research method. Since it suspends the researchers' prior assumptions about the phenomenon and instead focuses on everyday human experiences, the IPA technique is particularly well suited for researching challenging, puzzling, or emotionally charged subjects.

In Addition, a collection of communication is interpreted using a procedure called theme analysis, which typically results in some thematic framework. Neuendorf et al. (2018) state that the content analyst must choose between manifest and latent content before continuing to more complex stages of data analysis. Vaismoradi et al. (2016) thematic analysis researchers consider both when analyzing data. The three main steps in data analysis are coding, organizing codes under potential subthemes or themes,

and comparing the emergent coding's clusters with one another and the entire data set.

Results and Discussion

The following part will present the analysis of the data gathered after a complex process. The following themes—The Satisfaction, The Absorbers, and The Unbothered—were discovered in this study based on the data gathered. The following subthemes were determined throughout the collection of data.

The Satisfaction

Life satisfaction is one of the most significant factors affecting an individual's mental well-being and social relationships. Sourjah (2021) stated that high life satisfaction leads to improved psychological well-being, including mood stability, positive thoughts, optimism, and a clear sense of purpose in life. Additionally, according to studies, people who have a high level of life satisfaction have a 46% lower risk of depression (University of British Columbia, 2021)

Most senior cyclists choose cycling as an exercise to keep their health in check. Based on the participants, they are satisfied when they achieve or obtain something they desire or consider necessary.

Furthermore, Wilhelmson et al. (2013) show that older adults are almost as satisfied with life as younger people. Overall health, financial standing, recreational activities, community interactions such as volunteering, social relations, living situation, work status, and demographic characteristics have all been linked to life satisfaction in old age (Park & Kang, 2022).

Reaching Destination with Happiness

According to Britannica (2022), defined happiness is a state of psychological well-being that individual experiences, either in its most basic form, when favorable events occur at a specific time or, more broadly, as a positive review of one's life and achievements over all—that is, subjective well-being.

Furthermore, according to the study conducted by researchers, the senior cyclist participants describe their feelings toward cycling as an enjoyable experience once they reach the destination, which is pretty fulfilling according to participant number 11 and the majority of the participant's answers.

“Enjoy. Sobrang enjoy yun kapag lalo't narating mo yung destinasyon mo, yung pupuntahan niyo. Napaka saya”. (Enjoy. It's really fun when you finally reach your destination. Quite fulfilling.)

In addition, according to Cotnam 2020, cycling improved participants' health significantly, and happiness was associated with the preservation of quality of life among older cyclists.

Feeling fulfilled

Maslow's hierarchy of needs includes self-actualization as one of its central themes. Self-actualization is defined as the full realization of one's potential, as seen in peak experiences that involve the full development of one's skills and appreciation for life (Perera, 2020)

Based on the responses provided by participant 5, when the interviewer asked what his realization in life as a senior cyclist he just answered with overflowing emotions that despite his age, he is still happy and proud to be a senior; he can still do his part as an older adult and can also do things like cycling, walking, and jogging, which makes him happy and satisfied.

“Well, I'm happy. I'm proud to be a senior. And until now, I can do my part as a senior, and at the same time, I'm cycling, walking, and jogging. So I'm happy.”

In addition, according to Pausanos, 2022 elderly individuals reported greater levels of emotional intelligence, life satisfaction, and spiritual growth, all of which contributed to self-actualization. The study concludes that the realization of self-actualization in older adults contributed to their capability as a human beings and their life insight. Self-actualization can be positive, emotionally comfortable, and optimistic to fully realize one's potential and live a more satisfying life.

Feeling well connected

The majority of participants stated that they meet many people and make friends while cycling. As participant 11 said:

“Marami akong nakikilalang mga ibang tao. Nagiging kaibigan ganun.” (I met a lot of people that I became friends with.)

According to Miura et al., 2022 social connections are essential component of successful aging in older

adults. Connecting with peers, relatives, and society can give life meaning, contribute significantly to happiness, and improve a person's psychological well-being.

In addition, based on Lindsay (2018), cycling can also catalyze belongingness and a dynamic tool for combating a sense of isolation. It allows individuals to broaden their spatial networks and more easily engage with their surroundings, thereby increasing the possibility of social connection.

The Absorbers

Emotions are essential in every situation and experience that a person has. It enables an individual to prepare for behavior and significantly influences human cognitive processes such as perception, attention, learning, memory, reasoning, and problem-solving (Tyng et al., 2017).

According to Gu (2019), stated that fundamental emotions are internal states that are controlled by neuromodulators. These internal states are expressed externally as certain stereotypical behaviors, such as intuition, which is thought to be one of the earliest mechanisms of survival. Happiness, sadness, fear, and anger are the four basic emotions. They are variously correlated with the three core effects of reward (happiness), punitive measures (sadness), and stress (fear and anger).

It was a close call. Near-death experiences are too overwhelming to handle, and they can be emotionally difficult for those who experience them. Participant 15 claims that a negligent driver nearly caused him to lose either of his legs. Rather than offering assistance, the driver hit the participant and fled.

“Yan isa pa yan yung mga motor na yan kase naaksidente ako eh tinakbuhan ako ng motor yung isang bisikleta ko talagang wasak yun buti kamo hindi sa gitna tumama kung sa gitna yun eh baka yung isang paa ko eh putol kaya ang nangyari tinakbuhan pa ako non siya na ang may kasalanan siya pa yung ano non kaya ang nangyare ang mahirap sa may mga motor naka bike ka lang siya sumisingit ayaw nilang magbibigay ayaw nilang mag bibigay ng ano kaya mangyayare niyan minsan humihinto ako”. (I got an accident because of a reckless motorcyclist who never really mind their

driving, and they left me after causing such trouble. The good thing is I wasn't hit in the middle for it would really cost me my other leg. It's a shame on their side for “hit-and-running” me.)

An instinctive, intense, and primary human emotion is fear. It involves both a solid individual and emotional response. Fear makes us aware of the danger or the potential for harm, whether that danger is psychological or physical (Fritscher, 2022)

In addition, participant 15 revealed that after that event, he make sure to slow down and stop to avoid any situation like that again.

“Yung ano non kaya ang nangyare ang mahirap sa may mga motor naka bike ka lang, siya sumisingit ayaw nilang magbibigay ayaw nilang mag bibigay ng ano kaya mangyayare niyan minsan humihinto ako”.(That's why whenever I got to pass such sort of drivers, I make sure to slow and stop, to avoid that ever happening to me again.)

Losing one's comfort. Philippines roads frequently have potholes. Most roads that last received maintenance a while ago have them. This road issue develops when the pavement ages and creates a hole. It can be brought on by bad weather, heavy traffic, and a lack of cold patch pothole repair. As a result, these potholes serves as a danger and inconvenience among senior cyclist. As participant 3 stated that bumpy roads are huge trouble for them.

“Yan yan pa ang isa pag baku kabo eh laging malaking abala sa siklista yan dahil unang una pag baku bako eh masisiraan ka mapa flat ka tapos yung mga pyase ng bike o mababago magluluwagan yan kaya kailangan i che check mo pagka uwi mo”. (Bumpy roads really are a big trouble for us cyclists because, first of all, it causes our tires to flatten and some unexpected damages from our bikes, that's why after cycling, I should always check it.)

Barata et al., 2016 stated that an emotional state known as irritability is characterized by a propensity to feel unpleasant affective states like anger, annoyance, and frustration, which may or

may not be expressed in public.

What a hard-headed!

According to the Department of Public Works and Highways (2021), the construction of a dedicated road bike lane is intended to promote active transportation in the "New Normal." The Department of Public Works and Highways (DPWH) has constructed bike lane separators, reflectorized thermoplastic pavement markings, and road signage along important routes in Metro Manila, Metro Cebu, and Metro Davao to make it simpler for cyclists to go on them. The construction of dedicated lanes with concrete delineators, rubber bollards, steel railings, and solar studs on significant highways was another effort to encourage people to commute to work by bicycle. The bike lane network aims to promote active transportation, improve safety, and promote a fair distribution of road space. They further asserted that bicyclists needed a convenient and safe area. Therefore the Metropolitan Bike Lanes Network, which links cities, municipalities, and provinces, was established.

Some bikers, however, are dissatisfied with how motorist dominates the bike lanes and prevents them from being used effectively. He stated that according to what participant 4 said in an interview;

"Marami kaseng nagmomotorsiklo matitigas ang ulo dun sa bike lane ahh dinaanan nila hanggang ngayon na dapat ibigay na nila yon sa mga siklista" .(There were a lot of motorcycle riders who are so hard headed because they are passing on the bike lanes which they should give to the cyclists).

According to TopGear Philippines (2021), numerous drivers have been caught abusing the bike lanes on Visayas Avenue, Luzon Avenue, and Katipunan Avenue. The Quezon City bike patrol flagged every type of vehicle, including motorcycles, tricycles, SUVs, and vans, without a single car being spared.

This article, supports the participant's complaint that those circumstances happened up until now, and it is still a nuisance for most cyclists that need the existing bike lanes.

The Unbothered

The idea that elderly adults are slow, weak, and frail is a common stereotype. However, the stories of senior cyclists demonstrate that their ability to ride to their passion is unaffected by their old age.

Functional constraints and obstacles to independent living can affect life satisfaction—attitudes and beliefs about the quality of life. In addition, optimism can positively impact life satisfaction and lessen the detrimental effects of activity restrictions on life satisfaction (Usán Supervía et al., 2020).

Additionally, patience enables the person to maintain composure in the face of difficulties, suffering, or setbacks. A decrease in depression and other negative emotions is one of the many positive health outcomes associated with this virtue (Goldfarb, 2018).

Don't Mind At All

Some seniors have various attitudes regarding life, some of which appear to be based on their advanced age. According to Chateau La Jolla (2022), it seems as though we are being subtly taught that getting older is a bad thing that must be endured or that it renders us less capable. However, based on Participant 11's statement, he claimed that;

"Sa akin hindi naman balakid yung pagiging matanda e. Basta yung good health ko lang ma-maintain ko. Maipagpapatuloy ko yung pagbabike ko." (For me, my age is not a hindrance. As long as I maintain my good health. I can continue my cycling)

This response from one of our participants shows that their age is not a barrier to their passion for riding. The Optimism Effect also claims that age is a number without boundaries. The only restrictions you place on yourself are those you set. Those brave never age; Henry Ford once remarked, "Whether you think you can, or you think you can't-you're right" (Chateau La Jolla, 2022).

A placid nature. Being patient, understanding, and forgiving are some of the characteristics that an individual possesses. It is essential to have these qualities in ourselves, especially when we are put in a situation that will test our patience and how we will handle these situations by being understanding and, at the same time, forgiving others. As what participant 3 stated in his interview, he said that;

"Pag ako ay nalalapit sa aksidente sabi ko nga. sayo

di naman sinasadya eh ano nagpapaki usapan na lang nag aareglo yan naaksidente ako gaya ng sinabi ko sayo pagka yung bisikleta ko eh nasaktan na ako eh talagang ganon eh ang tao naman eh hindi naman sabi nga sayo walang taong sasadyain ka eh yun ang taong pinagpapasensyahan.” (As I told you, if I get close to an accident, it was unintentional. It can be solved through talking and agreement. If my bicycle and I got hurt, that’s part of cycling. We’re only human, no one does it intentionally and those people can be understood)

Ernst (2018) said that research has shown that people’s behavior in many settings can be strongly predicted by their patience. In addition, patience enables you to take a step back and reassess rather than retaliating violently or hastily giving up on someone aggravating you. Intuition lets you see things from a bigger, more compassionate perspective and choose the appropriate course of action (Orloff, 2012).

Conclusion

Based on the research findings, the following conclusion was discussed: Cycling has a positive impact on senior cyclists’ quality of life, mainly because it makes them happy, which is a significant factor in helping them feel empowered and revitalize their social networks as well as have a high level of life satisfaction and enjoyment. Additionally, most elderly cyclists had the support of their loved ones, who thought cycling would be an excellent activity for elderly adults to have successful aging and independence.

Moreover, senior citizen cyclists are strongly encouraged to keep up their passion for cycling. Their motivation to keep pedaling to their destination can be increased by joining and participating in cycling organizations and groups. It was also advised that they enter a riding group to improve their social connections, boost their self-confidence, and increase their sense of safety while riding on the road. Further, the family of senior cyclists should continue to support their loved ones who are passionate about cycling. According to the researchers, encouraging loved ones to pedal together would be a great activity to spend quality family time, foster mindfulness, and offer a great way to lower household carbon footprints and learn sustainable living practices.

References

- ABC Australia (2021). 78-year-old man feels 50 after clocking up 520,000km cycling worldwide. <https://youtu.be/P85r-W0Ck6w>
- Algorani, E. B., & Gupta, V. (2021). Coping mechanisms. In StatPearls [Internet]. StatPearls Publishing.
- Andersson, M. (2021). Older cyclists’ views on their possibilities to improve their safety. https://www.researchgate.net/publication/349819091_Older_cyclists'_views_on_their_own_possibilities_to_improve_their_safety
- Barata PC, Holtzman S, Cunningham S, O’Connor BP, Stewart DE. Building a Definition of Irritability From Academic Definitions and Lay Descriptions. *Emot Rev.* 2016 Apr 8;8(2):164-172. doi: 10.1177/1754073915576228. PMID: 27134650; PMCID: PMC4848029.
- Baughn M, Arellano V, Hawthorne-Crosby B, Lightner JS, Grimes A, et al. (2022) Physical activity, balance, and bicycling in older adults. *PLOS ONE* 17(12): e0273880. <https://doi.org/10.1371/journal.pone.0273880>
- Better Help (2022). What Is Psychological Distress? An Overview. <https://www.betterhelp.com/advice/grief/what-is-psychological-distress-an-overview/>
- Bicycling.(2017). It’s Not Just a Bike—It’s a Happiness Machine. <https://www.bicycling.com/news/g20028263/its-not-just-a-bike-its-a-happiness-machine>
- Blue Moon Senior Counseling (2019). Development of Coping Skills. <https://bluemoonseniorcounseling.com/specialties/development-of-coping-skills/>
- Britannica, The Editors of Encyclopaedia. "happiness". *Encyclopedia Britannica*, 29 Sep. 2022. <https://www.britannica.com/topic/happiness.%20Accessed%2016%20December%202022>.
- Bta4bikes.org , (2016). Cycling Safety Equipment. <http://www.bta4bikes.org/cycling-safety-equipment/>
- Cacioppo JT, Cacioppo S (2014) Older adults reporting social isolation or loneliness show poorer cognitive function 4 years later. *Evid - Based Nurs* 17(2): 59 – 60. <https://doi.org/10.1136/eb-2013-101379>
- Canadian Mental Health Association. (2022) Connection Between Mental and Physical Health. <https://ontario.cmha.ca/documents/connection-between-mental-and-physical-health>
- Center for Disease Control and Prevention.(2015). Bicycle Safety. <https://www.cdc.gov/transportationsafety/bicycle/index.html?>
- Centre for Policy on Ageing (2014). Resilience in Older Age. <http://www.cpa.org.uk/information/reviews/CPA-Rapid-Review-Resilience-and-recovery.pdf>
- Centre for Road Safety, (2022). Safe riding. <https://roadsafety.transport.nsw.gov.au/stayingsafe/bicycle-riders/safe-riding.html#>
- Chartwell (2015). Senior cyclists prove it’s never too late to get active. <https://chartwell.com/en/blog/2015/08/senior-cyclists-prove-its-never-too-late-to-get-active>
- Chateau La Jolla, (2022). Age Is Just A Number.



<https://chateaulajollainn.com/wellness/age-is-just-a-number/>

Chen T., Cruz, G., Vu, C., & Saito, Y. (2021). Falls among older adults in the Philippines and Vietnam: Results from nationally representative samples. *Innovation in Aging*, Volume 5, Issue Supplement_1, 2021, Page 1033, <https://doi.org/10.1093/geroni/igab046.3696>

Cherry, K. (2022). What Is Happiness? Defining Happiness, and How to Become Happier. <https://www.verywellmind.com/what-is-happiness-4869755>

Cho, H., Li, P., & Goh, Z. H. (2020). Privacy risks, emotions, and social media: A coping model of online privacy. *ACM Transactions on Computer-Human Interaction (TOCHI)*, 27(6), 1-28.

Cotnam, Victoria, "Exploring the Effects of the Cycling Without Age Program on Older Adults Living in Long-Term Care" (2020). Electronic Thesis and Dissertation Repository. 7374. <https://ir.lib.uwo.ca/etd/7374>

Curtis E, Litwic A, Cooper C, Dennison E. Determinants of Muscle and Bone Aging. *J Cell Physiol*. 2015 Nov;230(11):2618-25. doi: 10.1002/jcp.25001. PMID: 25820482; PMCID: PMC4530476.

David K., Bautista L. & Darisan L. (2019). Psychological Distress of The Elderly in Selected Barangays in Caoayan, Ilocos Sur

Davidson, K. (2021). Why Do We Need Endorphins? <https://www.healthline.com/health/endorphins>

De Frias C.M., Whyne E. Stress on health-related quality of life in older adults: The protective nature of mindfulness. *Aging Ment. Health*. 2015;19:201-206. doi: 10.1080/13607863.2014.924090.

Department of Public Works and Highways (2021). DPWH Promotes Active Transport in 'New Normal' by Constructing Dedicated Road Bike Lane. <https://www.dpwh.gov.ph/dpwh/news/23476>

Duquesne University (2022) Research Instruments, Home - Research Instruments - LibGuides at Duquesne University <https://guides.library.duq.edu/researchinstruments>

Eckstrom E, Neukam S, Kalin L, Wright J. Physical Activity and Healthy Aging. *Clin Geriatr Med*. 2020 Nov;36(4):671-683. doi: 10.1016/j.cger.2020.06.009. Epub 2020 Aug 19. PMID: 33010902.

Ernst, C. P. H. (2018). What drives in-app purchase intention in video games? An examination of patience and the enjoyment of routine tasks.

Esmailikia, M., Radun, I., Grzebieta, R. & Olivier, J. (2019). Bicycle helmets and risky behaviour: A systematic review. DOI: 10.1016/j.trf.2018.10.026

Freed, J. (2022). Cycling can make you happier, healthier, and even smarter. <https://momentummag.com/cycling-can-make-you-happier-healthier-and-even-smarter>

Friedrich Naumann Foundation (2021). Bikenomics: Assessing the Value of Cycling in the Philippines. <https://www.freiheit.org/philippines/bikenomics-assessing-value-cycling-philippines>

Fritcher, L. (2022). What Is Fear? <https://www.verywellmind.com/the-%20psychology-of-fear-2671696>

Forster, M., Grigsby, T., Rogers, C., Unger, J., Alvarado, S.,

Rainisch, B., & Areba, E. (2022). Perceived discrimination, coping styles, and internalizing symptoms among a community sample of Hispanic and Somali adolescents. *Journal of Adolescent Health*, 70(3), 488-495.

Gallardo, F. (2021, November 16). As Kagay-anons embrace bicycles during pandemic, CDO prompted to create bike lanes. <https://www.mindanews.com/top-stories/2021/11/as-kagay-an-ons-embrace-bicycles-during-pandemic-cdo-prompted-to-create-bike-lanes/>

Geng C. (2021, May 27). 10 benefits of cycling. <https://www.medicalnewstoday.com/articles/benefits-of-cycling#risks-and-safety>

GetMeds.ph. (2022). 10 Health Benefits of Riding a Cycle at Old and Young Age. <https://getmeds.ph/blog/10-health-benefits-of-riding-a-cycle>

Glackin, O. & Beale, J. (2018) 'The world is best experienced at 18 mph'. The psychological wellbeing effects of cycling in the countryside: an Interpretative Phenomenological Analysis, *Qualitative Research in Sport, Exercise and Health*, 10:1, 32-46, DOI: 10.1080/2159676X.2017.1360381

Gladwin, K. & Duncan, M. (2022) COVID-19's impact on older adults' cycling behaviors in a small, auto-centric urban area. *Transportation Research Interdisciplinary Perspectives*, Volume 16, 2022, 100675, ISSN 25901982

<https://doi.org/10.1016/j.trip.2022.100675>, (<https://www.sciencedirect.com/science/article/pii/S259019822200135X>) Grant, S. (2022, Sept. 01) The Many, Many Benefits Of Cycling For Seniors. <https://www.grayingwithgrace.com/benefits-of-cycling-for-seniors/>

Grant, S. (2022). The Many, Many Benefits Of Cycling For Seniors. <https://www.grayingwithgrace.com/benefits-of-cycling-for-seniors/>

Goldfarb, A. (2018). How to Be a More Patient Person. <https://www.nytimes.com/2018/11/05/smarter-living/how-to-be-a-more-patient-person.html>

Gu, S., Wang, F., Patel, N., Bourgeois, J., & Huang, J. (2019). A Model for Basic Emotions Using Observations of Behavior in *Drosophila*. <https://doi.org/10.3389/fpsyg.2019.00781>

Horrigan-Kelly, M., Millar, M., & Dowling, M. (2016). Understanding the Key Tenets of Heidegger's Philosophy for Interpretive Phenomenological Research. *International Journal of Qualitative Methods*, 15(1). <https://doi.org/10.1177/1609406916680634>

Ikpeze TC, Glaun G, McCalla D, Elfar JC. Geriatric Cyclists: Assessing Risks, Safety, and Benefits. *Geriatr Orthop Surg Rehabil*. 2018 Jan 23; 9:2151458517748742. doi: 10.1177/2151458517748742. PMID: 29383267; PMCID: PMC5784561.

Importance of Physical Activity and Exercise during the COVID-19 Pandemic. (2022) <https://medicine.umich.edu/dept/psychiatry/michigan-psychiatry-resources-covid-19/your-lifestyle/importance-physical-activity-exercise-during-covid-19-pandemic>

Injury Prevention & Control: Bicycle Safety. Published February 2015, Updated June 2017 <https://www.cdc.gov/motorvehiclesafety/bicycle/>. Accessed July 2016. [Ref list] MacLeod S,

Jose, P. E., Lim, B. T., Kim, S., & Bryant, F. B. (2018). Does savoring mediate the relationships between explanatory style and



- mood outcomes? *Journal of Positive Psychology and Wellbeing*, 2(2), 149-167.
- Kane, E. (2022) The Benefits Of Bike Riding For Seniors: Tips On Cycling And Adults. *SeniorSafetyAdvice.com*. <https://seniorsafetyadvice.com/benefits-of-bike-riding-for-seniors/>
- Kural, A. I., & Kovacs, M. (2021). Attachment anxiety and resilience: The mediating role of coping. *Acta Psychologica*, 221, 103447.
- Leyland L-A, Spencer B, Beale N, Jones T, van Reekum CM (2019) The effect of cycling on cognitive function and well-being in older adults. *PLoS ONE* 14(2): e0211779. <https://doi.org/10.1371/journal.pone.0211779>
- Lindsay, E. (2018). Mobilizing Community Through the Power of Cycling. <https://www.socialconnectedness.org/the-power-of-cycling>
- Link. (2021). Cycling: Building Physical Strength and Community. <https://www.linkreit.com/en/media/channel823/wellness/benefits-of-cycling>
- Lumiguide. (2019). The benefits of cycling is more than reduction of traffic. <https://lumi.guide/the-benefits-of-cycling-is-more-than-reduction-of-traffic>
- Luna, F. (2022, June.02) On World Bicycle Day, transport group says Filipino cyclists 'should arrive alive'. *Philstar global*. <https://www.philstar.com/headlines/2022/06/02/2185531/world-bicycle-day-transport-group-says-filipino-cyclists-should-arrive-alive>
- Ma, L., Ye R., & Wang H. (2021). Exploring the causal effects of bicycling for transportation on mental health. <https://doi.org/10.1016/j.trd.2021.102773>
- Matud MP, García MC. Psychological Distress and Social Functioning in Elderly Spanish People: A Gender Analysis. *Int J Environ Res Public Health*. 2019 Jan 26;16(3):341. doi: 10.3390/ijerph16030341. PMID: 30691104; PMCID: PMC6388209.
- McLeod, S. A. (2018, May 03). Erik Erikson's stages of psychosocial development. *Simply Psychology*. <https://www.simplypsychology.org/Erik-Erikson.html>
- Meyerson, J., Gelkopf, M., Eli, I., & Uziel, N. (2022) Stress Coping Strategies, Burnout, Secondary Traumatic Stress, and Compassion Satisfaction Amongst Israeli Dentists: A Cross-sectional Study. *International Dental Journal*, Volume 72, Issue 4, 2022, Pages 476-483, ISSN 0020-6539, <https://doi.org/10.1016/j.identj.2021.09.006>.
- Ministry of Health, (2020, January 20). Elderly Health. <https://www.moh.gov.sa/en/HealthAwareness/EducationalContent/Health-of-Elder-Persons/Pages/What-Is-Aging.aspx>
- Miura, K.W., Sekiguchi, T., Otake-Matsuura, M. et al. Patterns of social relationships among community-dwelling older adults in Japan: latent class analysis. *BMC Geriatr* 22, 75 (2022). <https://doi.org/10.1186/s12877-022-02748-7>
- Moore N, Houghton J, Lyle S. Slow-cycling therapy-resistant cancer cells. *Stem Cells Dev*. 2012;21(10):1822-1830. [PMC free article] [PubMed] [Google Scholar]
- Morgan, G.S., Willmott, M., Ben-Shlomo, Y. et al. A life fulfilled: positively influencing physical activity in older adults – a systematic review and meta-ethnography. *BMC Public Health* 19, 362 (2019). <https://doi.org/10.1186/s12889-019-6624-5>
- Morin, A. (2022, Feb 10). How to Improve Your Psychological Well-Being. <https://www.verywellmind.com/improve-psychological-well-being-4177330>
- National Academies of Sciences, Engineering, and Medicine. (2020). *Social Isolation and Loneliness in Older Adults: Opportunities for the Health Care System*. Washington, DC: The National Academies Press. <https://doi.org/10.17226/25663externalicon>.
- National Institute on Aging (2020). Understanding the Dynamics of the Aging Process. <https://www.nia.nih.gov/about/aging-strategic-directions-research/understanding-dynamics-aging>
- National Safety Council. (2022). Bike Safely and Enjoy Your Ride. <https://www.nsc.org/community-safety/safety-topics/seasonal-safety/summer-safety/bicycles>
- Neuendorf, K. A. (2018). Content analysis and thematic analysis. In *Advanced research methods for applied psychology* (pp. 211-223). Routledge.
- Nguyen, M. H., & Pojani, D. (2022). The emergence of recreational cycling in Hanoi during the Covid-19 pandemic. *Journal of Transport & Health*, 24, 101332.
- Olivier, J. & Creighton, P. (2017) Bicycle injuries and helmet use: a systematic review and meta-analysis, *International Journal of Epidemiology*, Volume 46, Issue 1, February 2017, Pages 278–292, <https://doi.org/10.1093/ije/dyw153>
- Orloff, J. (2012). Psychology today. The Power of Patience. The importance of patience as a coping skill and how to achieve it. <https://www.psychologytoday.com/us/blog/emotional-freedom/2012-09/the-power-patience>
- Pang, L. H. G., & Thomas, S. J. (2020). Exposure to domestic violence during adolescence: Coping strategies and attachment styles as early moderators and their relationship to functioning during adulthood. *Journal of Child & Adolescent Trauma*, 13(2), 185-198.
- Park JH, Kang SW. Factors Related to Life Satisfaction of Older Adults at Home: A Focus on Residential Conditions. *Healthcare (Basel)*. 2022 Jul 10;10(7):1279. doi: 10.3390/healthcare10071279. PMID: 35885806; PMCID: PMC9316249.
- Patria, B. Modeling the effects of physical activity, education, health, and subjective wealth on happiness based on Indonesian national survey data. *BMC Public Health* 22, 959 (2022). <https://doi.org/10.1186/s12889-022-13371-x>
- Pausanos, M. (2022). Attaining self-actualization among older adults. <https://www.herdin.ph/index.php?view=research&cid=63393>
- Pednault, K. (2022). What Is Serotonin? The purpose of serotonin, ways to increase it, and how much is too much. <https://www.verywellmind.com/what-is-serotonin-425327>
- Pelonia, A. (2022, July 07). Bumpy road ahead for Pinoy bikers: discrimination, substandard infrastructure among daily hazards. <https://philstarlife.com/news-and-views/388617-pinoy-biker-s-discrimination-hazards-bike-safety/>
- Peña, D. (2020, Nov.27) As cycling booms during pandemic, advocates pedal toward sustainable transport. *Rappler.com*. <https://www.rappler.com/moveph/cycling-advocates-pedal-sustainable-transport-forward/>

- People for bikes (2021). How Bicycling Changed During A P a n d e m i c .
https://www.peopleforbikes.org/news/how-bicycling-changed-during-pandemic?gclid=EAIaIQobChMIot3ngNqd_AIVjh0rCh3VyAlEiEAA YASAAEgJOWvD_BwE
- Perera, A (2020, Sept 04). Self-actualization. Simply Psychology. www.simplypsychology.org/self-actualization.html
- Prins, R. & Lenthe, F.(2015). The hour-to-hour influence of weather conditions on walking and cycling among Dutch older adults. DOI: 10.1093/ageing/afv103
- Popov, S., Sokić, J., & Stupar, D. (2021). Activity matters: Physical exercise and stress coping during the 2020 COVID-19 state of emergency. *Psihologija*, 54(3), 307-322.
- Reyes, K. (2020). This head-turner lol is the most youthful biker y o u ' l l see o n t h e streets t o d a y .
<https://www.spin.ph/life/cars-and-tech/viral-senior-citizen-cyclist-gil-gener-palomar-shares-his-story-a2442-20200823>
- Sapranaviciute-Zabazlajeva L., Luksiene D., Virviciute D., Kranciukaite-Butykinieni D., Bobak M., & Tamosiunas A. (2018). Changes in psychological well-being among older Lithuanian city dwellers: Results from a cohort study. Vol. 18. Issue 3. *International Journal of Clinical and Health Psychology*. doi: 10.1016/j.ijchp.2018.05.002
- Sarne, V. (2020). Here are the challenges faced by cyclists in Metro Manila.
<https://visor.ph/bikes/here-are-the-challenges-faced-by-cyclists-in-metro-manila/>
- Siebentritt, H.M., Keppner, V., Britting, S. et al. Safer cycling in older age (SiFar): a protocol of a randomized controlled trial. *BMC Geriatr* 21, 546 (2021). <https://doi.org/10.1186/s12877-021-02502-5>
- Situmorang DDB, Ifdil I, Wati CLS, Mamahit HC, Papu YM. Cycling Therapy for Reducing Psychological Problems of Patients With COVID-19: As an Alternative Treatment After Recovery. *Infect Dis Clin Pract (Baltim Md)*. 2021 Nov;29(6):e490. doi: 10.1097/IPC.0000000000001061. Epub 2021 Jun 25. PMID: 34803357; PMCID: PMC8594400.
- Situmorang DDB. Using TikTok app for therapy and sharing happiness in COVID-19 outbreak. *Addict Dis Their Treat*. 2021;in press.
- Shock N. (2022, October 12). Human aging physiology and sociology <https://www.britannica.com/science/human-aging>
- Sourjah, S. (2021). Why Life Satisfaction Is Important for Your Health and Well-Being .
<https://wholesomepathway.com/life-satisfaction-importance-health/>
- Stefanaci R. (2022 May). Overview of Aging.
<https://www.msmanuals.com/home/older-people>
- Stepoe A, Deaton A, Stone AA. Subjective wellbeing, health, and ageing. *Lancet*. 2015 Feb 14;385(9968):640-648. doi: 10.1016/S0140-6736(13)61489-0. Epub 2014 Nov 6. PMID: 25468152; PMCID: PMC4339610.
- Tan, J., Abdin, E., Shahwan, S., Zhang, Y., Sambasivam, R., Vaingankar, J., Mahendran, R., Chua, H., Chong, S., & Subramaniam, M. (2019). Happiness and cognitive impairment among older adults: investigating the mediational roles of disability, depression, social contact frequency, and loneliness. *International Journal of Environmental Research and Public Health*, 16(24), 4954-. <https://doi.org/10.3390/ijerph16244954>
- TopGear Philippines, 2021. Motoring News 2021: QC Bike-lane violators, LTO 10-year license (topgear.com.ph)
- Torralba, A. (2017). Cycling: Not fun in the Philippines. <https://verafiles.org/articles/cycling-not-fun-philippines>
- Tyng, C., Amin, H., Saad, M., & Malik, A. (2017). The Influences of E m o t i o n o n L e a r n i n g a n d M e m o r y .
<https://doi.org/10.3389/fpsyg.2017.01454>
- University of British Columbia. (2021, March 3). High life satisfaction linked to better overall health. *ScienceDaily*. Retrieved December 22, 2022 from <https://www.sciencedaily.com/releases/2021/03/210303091405.htm>
- Usán Supervía P, Salavera Bordás C, Murillo Lorente V. Exploring the Psychological Effects of Optimism on Life Satisfaction in Students: The Mediating Role of Goal Orientations. *Int J Environ Res Public Health*. 2020 Oct 28;17(21):7887. doi: 10.3390/ijerph17217887. PMID: 33126438; PMCID: PMC7663095.
- Useche, S., Montoro, L., Sanmartin, J., & Alonso, F. Healthy but risky: A descriptive study on cyclists' encouraging and discouraging factors for using bicycles, habits and safety outcomes, *Transportation Research Part F: Traffic Psychology and Behaviour*, Volume 62, 2019, Pages 587-598, ISSN 1369-8478, <https://doi.org/10.1016/j.trf.2019.02.014>.
- Vaismoradi, M., Jones, J., Turunen, H., & Snelgrove, S. (2016). Theme development in qualitative content analysis and thematic analysis.
- Van den Brande, W., Baillien, E., Elst, T. V., De Witte, H., & Godderis, L. (2020). Coping styles and coping resources in the work stressors-workplace bullying relationship: A two-wave study. *Work & Stress*, 34(4), 323-341.
- Walljasper, J. (2015). Bicycles Aren't Just for Kids. <https://www.aarp.org/livable-communities/getting-around/info-2015/bicycles-bike-riding-older-adults.html>
- Wilhelmson K, Fritzell E, Eklund K, Dahlin-Ivanoff S. Life Satisfaction and Frailty Among Older Adults. *Health Psychol Res*. 2013 Sep 23;1(3):e32. doi: 10.4081/hpr.2013.e32. PMID: 26973917; PMCID: PMC4768568.
- Wirtz P.H., Thomas L., Domes G., Penedo F.J., Ehlert U., Nussbeck F.W. Psychoendocrine validation of a short measure for assessment of perceived stress management skills in different non-clinical populations. *Psychoneuroendocrinology*. 2013;38:572-586. doi: 10.1016/j.psyneuen.2012.07.017.
- World Health Organization (2022). Ageing and health. <https://www.who.int/news-room/fact-sheets/detail/ageing-and-health>
- World Health Organisation. World Report on Ageing and Health. 2015 Available from: http://apps.who.int/iris/bitstream/10665/186463/1/9789240694811_eng.pdf?ua=1
- Yang, F. (2021). Coping strategies, cyberbullying behaviors, and depression among Chinese netizens during the COVID-19 pandemic: a web-based nationwide survey. *Journal of Affective Disorders*, 281, 138-144.
- Yen, H. & Lin, L. (2018). Quality of life in older adults: Benefits from the productive engagement in physical activity, *Journal of Exercise Science & Fitness*, Volume 16, Issue 2, 2018, Pages



49-54, ISSN 1728-869X, <https://doi.org/10.1016/j.jesf.2018.06.001>.

Zander, A., Passmore, E., Mason, C., Rissel, C. (2013) Joy, Exercise, Enjoyment, Getting out: A Qualitative Study of Older People's Experience of Cycling in Sydney, Australia, *Journal of Environmental and Public Health*, <https://doi.org/10.1155/2013/547453>

Affiliations and Corresponding Information

Liezl R. Fulgencio

Jesus Is Lord Colleges Foundation, Inc. - Philippines

Krizia Joie P. Navales

Jesus Is Lord Colleges Foundation, Inc. - Philippines

Shearlene V. Manalo

Jesus Is Lord Colleges Foundation, Inc. - Philippines

Galilee Jordan C. Ancheta

Jesus Is Lord Colleges Foundation, Inc. - Philippines

Andrea Mae C. Santiago

Jesus Is Lord Colleges Foundation, Inc. - Philippines

Jericho Balading

Jesus Is Lord Colleges Foundation, Inc. - Philippines

Jayra A. Blanco

Jesus Is Lord Colleges Foundation, Inc. - Philippines

Christian Dave C. Francisco

Jesus Is Lord Colleges Foundation, Inc. - Philippines

Charles Brixter S. Evangelista

Jesus Is Lord Colleges Foundation, Inc. - Philippines

Jhoselle Tus

Jesus Is Lord Colleges Foundation, Inc. - Philippines