



The Metro Manila Health Research & Development Consortium 6th International Symposium & 13th Annual Scientific Conference

in collaboration with
UNIVERSITY OF SANTO TOMAS

● ● ● ● ● ●
“Post COVID-19 Pandemic Transformations & Innovations: Rethinking Practices & Strategies for a Resilient and Healthy Juan and Juana”

HYBRID International Conference
Onsite: UST ● Online: Zoom
November 24-25, 2022

Frassati Auditorium, 21/F
Blessed Giorgio Frassati Building,
University of Santo Tomas
España Manila



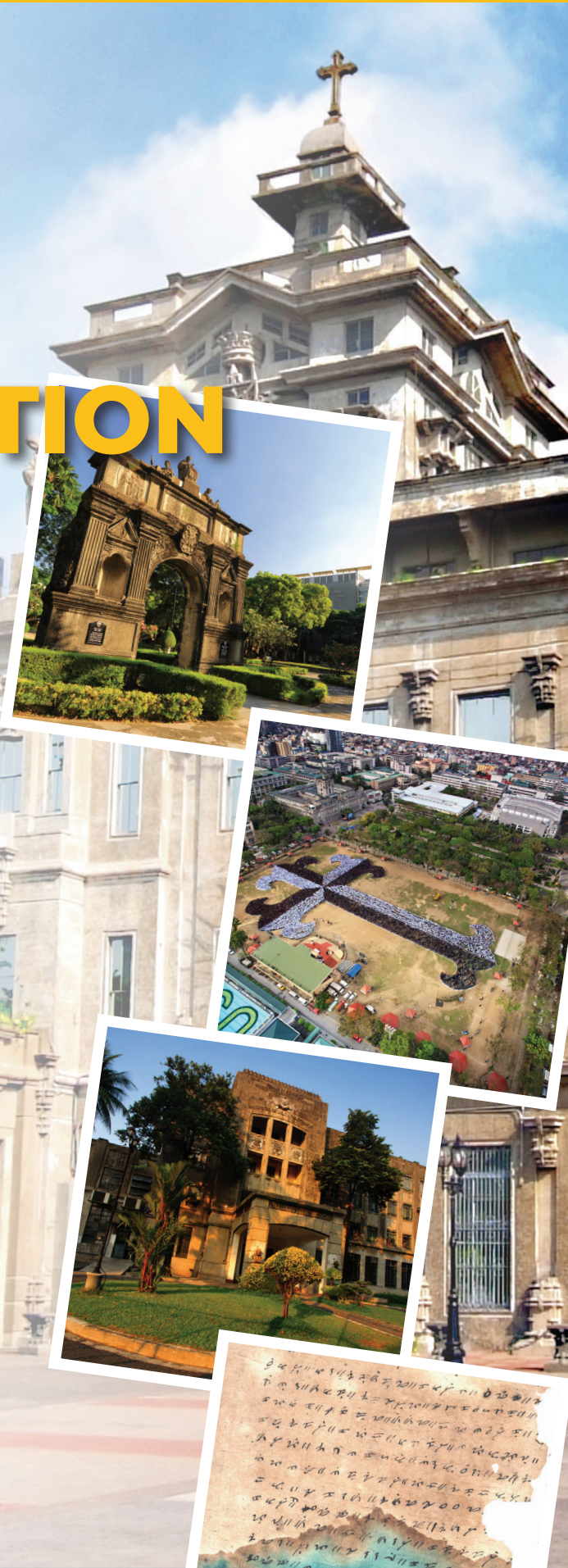
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The Pontifical and Royal University of Santo Tomas, the Catholic University of the Philippines, is a Dominican institution of learning founded in 1611. With 22 degree-granting academic units and over 40,000 students enrolled, it became the first University in the Philippines to secure a five-star rating from the international education network Quacquarelli Symonds (QS) in 2021. UST also has the highest number of accredited programs by the Philippine Association of Colleges and Universities Commission on Accreditation (PACUCOA).

In its 411-year history, UST has produced competent, committed, and compassionate graduates who became saints and martyrs, chief justices, award-winning writers, researchers, and national artists. Included within its honored alumni are four Philippine presidents and the national hero Jose Rizal. Four landmarks and one set of documents housed within its Manila campus have been declared National Cultural Treasures by the National Museum and the National Library respectively.

New campuses are currently rising in Sta. Rosa, Laguna, and General Santos City, South Cotabato. Through these new locations, and the Enriched Virtual Mode of Learning, UST will continue to provide more people with quality Catholic education.

A virtual tour of its 21.5-hectare campus can be accessed through: https://bit.ly/UST_VirtualTour



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- Commission on Higher Education - National Capital Region
- Department of Health, Center for Health Development - National Capital Region
- Department of Science & Technology - National Capital Region
- University of the Philippines Manila

The following institutions are the current members of the Metro Manila Health Research & Development Consortium (MMHRDC):

- | | |
|--|--|
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| 2. Arellano University | 25. Metropolitan Manila Development Authority |
| 3. Asian Eye Institute | 26. Metropolitan Medical Center - College of Arts, Sciences and Technology |
| 4. Asian Hospital and Medical Center | 27. Nutrition Center of the Philippines |
| 5. Ateneo School of Medicine and Public Health | 28. Olivarez College |
| 6. Cardinal Santos Medical Center | 29. Our Lady of Fatima University - College of Medicine |
| 7. Centro Escolar University | 30. Pamantasan ng Lungsod ng Maynila - College of Medicine |
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| 11. De La Salle University - Manila | 34. Philippine Women's University |
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| 14. Eye Referral Center | 37. St. Luke's Medical Center |
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| 18. Industrial Technology Development Institute | 41. Trinity University of Asia |
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The MMHRDC shall have the following functions:

1. identify priority health problems in the region
2. identify and implement research programs and projects targeting identified priority health problems
3. establish mechanism for human resource research capability strengthening
4. provide mechanism for coordinating R & D activities in the region
5. encourage resource sharing among institutions for mutual development
6. develop mechanism and implement strategies to ensure long-term viability of the committee

MMHRDC LOGO

The logo of the MMHRDC resembles an electrocardiogram tracing forming two letter M's, which symbolize Metro Manila. The progression of the tracing symbolizes the continuity of life, which in context of research also represents the continuing process of research. The tracing can also be seen as two pairs of people shaking hands in agreement. The crests of the tracing bead dots, which symbolize persons working together to make the research process possible. The troughs symbolize the inevitable rigors of research, which must not terminate the research process. The gridlines in the background symbolize that in essence all researches seek to elucidate relationships between data points.

This logo was the winning entry of Ms. Ma. Gabrielle Louise C. Reyes of De La Salle University to the logo design contest organized by MMHRDC in 2011. All official communications being issued by the MMHRDC shall bear the official logo.

HISTORY

Metro Manila Health Research and Development Consortium (MMHRDC)



The Ermita Health Science Community (EHSC) was formally organized in 1984 after the 13 founding member institutions signed a Memorandum of Agreement (MOA). The general objective of the EHSC was to help solve health problems of the Philippine population. In 1992, the EHSC accepted seven new members and became the Metro Manila Health Science Community (MMHSC). The general objective expanded to establish a system of coordination and sharing resources aimed at the promotion of research in order to help solve the health problems of the Philippine population.



In 1995, the MMHSC was registered in the Securities and Exchange Commission (SEC) to assume a legal personality, allowing it to access grants from various sources. It was however beset with few major challenges that led to inactivity.

As the country's response to the global call for the establishment of the country's specific national health research systems, the Philippine National Health Research System (PNHRS) was established. PNHRS' mission is to create and sustain an enabling environment for health research towards evidence-informed health and health-related policies and actions. In line with this, Regional Health Research and Development Consortia were organized in ever regions of the country. The consortia aim to link health research institutions together to complement and share resources for health research and development. In Metro Manila, the National Capital Region Health Research and Development Consortium was established (NCR-HRDC).



As a consortium, the NCR-HRDC offer various benefits to its member institutions such as opportunities for strengthening research capacities through mentoring and twinning arrangements, complementation and sharing resources. On February 13, 2009, the name of NCR-HRDC was changed to Metro Manila Health Research and

Development Consortium (MMHRDC), which organized 23 member institutions in a MOA signing at the Grand Pacific Ballroom, Pan Pacific Hotel.

As part of the PNHRS, the MMHRDC exemplifies partnerships and collaboration among member institutions fostering an active sense of community towards strengthening and sustaining networking within the NCR and with other local and international partners.

As of 2022, MMHRDC has 44 member institutions composed of 20 academic institutions, 9 medical centers and government and non-government agencies (private, NGOs, professional society). Over the years, MMHRDC has continued to:

1. Provide Basic Research Training to young and budding health researchers;
2. Facilitate in the provision of research funding;
3. Showcase research, including lectures and research posters;
4. Capacitate institutions to attain PHREB accreditation; and
5. Host scientific conventions and fora which allowed Filipino researchers and students to participate, learn and interact with other researchers and scientist in health research community.





MESSAGES



On behalf of the Department of Science and Technology-National Capital Region (DOST-NCR), I would like to congratulate the Metro Manila Health Research and Development Consortium (MMHRDC) as it holds its 6th International Symposium and the 13th Annual Scientific Conference.

I commend the organizers for choosing a timely theme for the convention, which is "Post COVID-19 Pandemic Transformations and Innovations: Rethinking Practices and Strategies for a Resilient and Healthy Juan/Juana". The convention provides an avenue to recognize the innovations that the scientific community delivered, as well as the opportunity to re-evaluate what we did right and what we should improve on.

The DOST is continuously coming out with innovations to help Filipinos manage through adversities. During the pandemic, for example, these initiatives included major projects, namely: Addressing and Responding to Covid-19 through Health

Research (ARCHER); S&T for a Resilient Community against the Pandemic (STRAP); Rebuilding the Agriculture, Aquatic and Natural Resources in Response to Covid-19 (ReAARRC); and the Feasibility Analysis of Syndromic Surveillance Using Spatio-Temporal Epidemiological Modeler For Early Detection of Diseases (FASSTER TANOD-COVID).

ARCHER encompasses a wide range of R & D areas: from vaccines, diagnostics, and kits to artificial intelligence-driven models, the enhancement of facilities, equipment and laboratories, and even regulatory studies and public health researchers. Yet none of these efforts would be successful if the information is not cascaded to the public, the media, the policymakers and the change agents.

The Metro Manila Health Research and Development Consortium and its vast network play a critical role in helping the public make sense of these innovations. Echoing the new DOST Secretary's slogan of "One DOST for You", we in DOST-NCR are looking forward to working with our partners in the health community towards our common goal of keeping Filipinos healthy in a "new normal" world.

Mabuhay!



Department of Science and Technology
National Capital Region



ENGR. ROMELEN T. TRESVALLES
Chief Science Research Specialist and
Officer-in-Charge, Office of the Regional Director



My warmest greetings to all the participants of the 6th International Symposium and the 13th Annual Scientific Conference!

In the past two years, we witnessed how the COVID-19 pandemic disrupted every aspect of our daily lives, from a global level down to the individual level. In the coming days, we will see nations examining the possibilities for post-pandemic transformations and development. Through this conference themed, "Post Covid-19 Pandemic Transformations and Innovations: Rethinking Practices and Strategies for A Resilient and Healthy Juan/Juana," we, at the Department of Science and Technology - Philippine Council for Health Research and Development (DOST-PCHRD), hopes that our stakeholders in health research will join the discussion in coming up with new ways forward post-pandemic.

We also hope that through this event, we will be able to showcase our supported innovations and initiatives aimed to curb the challenges of COVID-19, which made a huge impact on the lives of our fellow men.

I thank and commend the Metro Manila Health Research and Development Consortium for organizing this event and the University of Santo Tomas for serving as the host institution.

As always, the DOST-PCHRD is in full support of the Consortium's mission and contributions in making the Filipinos' lives better through health research.

As we come together to share our expertise and insights, and discuss the post-pandemic transformations, I would like to wish everyone a fruitful and memorable two-day event.

Mabuhay ang MMHRDC!



Greetings of health!

It is undeniable that all the changes brought about by the COVID-19 pandemic has caught everyone by surprise, heavily impacting all aspects in the society including health, education and where the two meet in between - health research.

If there is any consolation from our experiences, challenges have turned our beliefs around and have presented more ways that we could be resourceful, innovative, and resilient to attain more protected and generally better living. In this era of change and recent discoveries, it is but right that we immerse ourselves in formal discussions and that we put everything to paper. Science, research and its application proved to be our lifeline to survive the outbreak.

Mankind has survived various crises in existence and has lived this long through continuous evolution. The way that we evolve now is with the use of our modern tools, showcased in conferences such as this initiative by the Metro Manila Health Research and Development Consortium (MMHRDC). I appreciate that this established venue for professional discourse continues - this year to thoroughly breakdown the pandemic and its impact.

The Department of Health-Metro Manila Center for Health Development is one with MMHRDC, the University of Santo Tomas, the Department of Science and Technology, the Commission on Higher Education and the Unibersidad ng Pilipinas in transforming us to a risk-resilient and universally healthy country.

Cheers to the 6th International Symposium and 13th Annual Scientific Conference, onward and forward!



Philippine Council for Health Research and Development
Department of Science and Technology



JAIME C. MONTOYA, MD, MSC, PHD, CESO II
Executive Director



Department of Health
Metro Manila Center for Health Development



GLORIA J. BALBOA, MPH, MHA CEO VI, CESO III
Director IV, Center for Health Development Metro Manila



The members of the UP Manila community extend greetings to the Metro Manila Health Research and Development Consortium (MMHRDC) on the holding of its 6th International Symposium and 13th Annual Scientific Conference.

The theme, "Post COVID-19 Pandemic Transformations and Innovations: Rethinking Practices and Strategies for a Resilient and Healthy Juan and Juana," mirrors the research opportunities generated by the COVID-19 pandemic and the need for the health research community to fully explore and maximize these.

With more activities in store, such as the paper and poster presentations, spoken word poetry, short pitch to policy makers competition, and photo competition; researchers, educators, health practitioners, and students from

different institutions have every chance to impart their research outputs and engage with stakeholders.

I commend the solid 44-member MMHRDC representing 20 academic institutions, 9 medical centers, and government and non-government agencies for 36 years of capability building; promotion of collaboration, engagement, and networking among researchers; and heightened information campaigns through hosting of conventions such as this.

May this forum bring health research collaboration to new heights and ultimately help propel the country's progress and development, particularly in the fields of health.

Let me extend our gratitude to the MMHRDC for being our valued partner in using research as a tool for enhancing the health of the Filipinos. Mabuhay!



University of the Philippines Manila
The Health Sciences Center



CARMENCITA D. PADILLA, MD, MAHPS
Professor and Chancellor



Warmest Congratulations to the officers, organizers, member institutions, and delegates of the 6th International Symposium and 13th Annual Conference of the Metro Manila Health Research and Development Consortium (MMHRDC)!

The University of Santo Tomas is privileged to host the Metro Manila Health Research and Development Consortium (MMHRDC) Hybrid International Conference. We are grateful to MMHRDC for entrusting to the University of Santo Tomas the privilege of hosting and organizing this international conference which will take place on 24-25 November 2022.

Following the theme of the Congress "Post-Covid-19 Pandemic Transformations and Innovations: Rethinking Practices and Strategies for a Resilient and Healthy Juan and Juana" this two-day event will focus on the emerging issues and challenges

that we face, and how these things impact our lives as we embrace the new normal. Thus, the insights that we will gain from this international conference promise to be beneficial for all of us.

Our experience with COVID for the past two years may be a wellspring of life's lessons for us. First, it reminds us how vulnerable we are as human beings. It teaches us lessons about humility in human relationships and our fractured workplace ecosystem. Second, it communicates to us an appreciation for values such as interdependence and openness- the power to get involved, compromise, and dialogue. Part of our transcendent nature is to rise above the circumstances we can't control. Our spirits are pliable, we are resilient and we can adapt to change. The conference's theme provides an opportunity for us to reexamine our old practice and ways of thinking to better adapt to our current yet evolving situation. Our illustrious speakers will help us navigate our way forward.



University of Santo Tomas
Office of the Rector



VERY. REV. FR. RICHARD G. ANG, O.P., Ph.D.
Rector, University of Santo Tomas



conference RATIONALE

The COVID-19 Pandemic has brought far-reaching changes in all aspects of society. As we are emerging out of the pandemic, the academe has to re-evaluate the transformations which should be retained and which ones should be removed. Thus, the convention's theme is "Post Covid-19 Pandemic Transformations and Innovations: Rethinking Practices And Strategies For A Resilient And Healthy Juan/Juana". It will likewise discuss the changes that were adopted during the COVID-19 pandemic in the medical, engineering, and educational sectors, which would serve as a benchmark for future events of the same kind.

The convention will be held from November 24-25, 2022. It will be utilizing a Hyflex mode where lectures will be given face-to-face and via Zoom. It will be held at the Pier Giorgio Frassati Building Auditorium, Espana Blvd, Manila. It is located across from the main campus of the University of Santo Tomas.



Scientific PROGRAM

DAY ONE

24 NOVEMBER 2022

THURSDAY

07:30 **Online:** Logging in
Onsite: Registration for pre-registered only

08:30 **Opening Ceremonies**
Invocation
Philippine National Anthem
Welcome Remarks
Rev. Fr. Richard G. Ang, O.P., Ph.D.
Rector Magnificus
Message:
Hon. Sec. Renato U. Solidum, Ph.D.
DOST Secretary
Master of Ceremonies:
Mr. Philippe Jose S. Hernandez, LPT, M.Eng
Director – Communications Bureau (UST)

09:00 **Keynote Speaker**
Rev. Fr. Nicanor Pier Giorgio Austriaco O.P., Ph.D.
UST Professor of Biology & Theology

09:40 **Open Forum/Awarding of Certificate**

09:50 **Health Break & Deployment of Pre-Test , and Opening of Exhibits**

10:00 **Session 1:** Long COVID / Complications of COVID
Facilitator: Assoc. Prof. Maria Ruth B. Pineda-Cortel, Ph.D.
Researcher – Research Center for the Natural and Applied Sciences

10:00 **Pulmonary Complication**
Assoc. Prof. Ma. Rhona G. Bergantin, M.D., MSc
Academic Researcher – RCNAS
Medical Consultant - UST-Hospital

10:30 **Cardiac Complication**
Ronald Estacio, MD, FPCC
Officer in Charge
Department of Cardiology
Philippine Heart Center

11:00 **Neurological Complication**
Michelle Anlacan, MD, FPNA
Neurologist
Philippine General Hospital

11:30 **Open Forum**

11:40 **Session 2:** Engineering Innovation During Pandemic
Facilitator: Prof. Michael Francis D. Benjamin, Ph.D.
Researcher – Research Center for the Natural & Applied Sciences

11:40 Prof. Angelo R. Dela Cruz, Ph.D.
Dean -UST Faculty of Engineering
Academic Researcher - RCNAS

12:10 **Open Forum**
12:20 **Lunch Break**

01:00 **Session 3:** Guidelines in a Pandemic: What we have learned?
Facilitator: Prof. Ma. Luisa D. Enriquez, Ph.D.
Chair – Research Utilization Committee (MMHRDC)

01:00 **National Pandemic Response Playbook**
Prof. Hilton Y. Lam, Ph.D.
Director - MMHRDC

01:30 **Functional Foods for COVID Infection**
Myra Villareal, Ph.D.
Balik Scientist
Faculty of Life and Environmental Sciences
University of Tsukuba

02:00 **International Collaboration in the COVID Pandemic**
Jaime Montoya, M.D., Ph.D.
Executive Director – DOST-PCHRD

02:30 **Open Forum**

02:40 **Session 4:** Interprofessional Education
Facilitator: Catherine C. Romero, MSPH, MHA
Chair – Resource Mobilization Committee (MMHRDC)

02:40 Prof. Erlyn Sana, Ph.D.
Chair, Office of Research and Development
National Teacher Training Center for the Health Professions
University of the Philippines Manila

03:10 **Open Forum**

03:20 **Health Break & Intermission:**
The Salinggawi Dance Troupe

03:30 **Session 5:** Challenges in Education and Health During the Pandemic
Facilitator: Jennifer M. Nailes, M.D.
Chair – Structure, Organization, Monitoring, & Evaluation Committee (MMHRDC)

03:30 **Elementary and Junior High School**
Daniel B. Saroca Jr., Ph.D.
JHS Principal – Adamson University

04:00 **College**
Liza Magana, Ph.D.
Assistant Chief
Commission On Higher Education

04:30 **Medical and Paramedical Education**
Assoc. Prof. Ma. Lourdes D. Maglinao, M.D.
Dean
UST Faculty of Medicine and Surgery

05:00 **Open Forum**
End of Day 1

DAY TWO

25 NOVEMBER 2022

FRIDAY

07:30 **Logging in(online)**
Registration (onsite)

08:30 **Opening Ceremonies (recap)**

09:00 **Session 6:** “Ethical Issues and Changes in Research During the COVID Pandemic”
Facilitator: Prof. Mary Ann S. Vargas, Ph.D.
Chair – The Graduate School Research Ethics Committee

09:00 Fidela L. Moreno, M.D. (online)
Balik Scientist-DOST
Visiting Professor,
UST Faculty of Medicine & Surgery
Consultant,
Intermountain Healthcare, Utah USA.

09:30 **Reaction**
Prof. Filipinas F. Natividad, Ph.D.
Chair - National Ethics Committee
Philippine Health Research Ethics Board

10:00 **Health Break**

10:15 **Session 7:** Trends in Postgraduate Training in Health Sciences (online)
Facilitator: Prof. Florence C. Navidad, D.Ed.
Researcher – Research Center for Social Sciences and Education

10:15 **PhD in Health Sciences: By Research/Scoping Review**
Steve Milanese, Ph.D.
Director
International Center for Allied Health Evidence
Visiting Professor
University of Santo Tomas

10:45 **MS in Implementation Science**
Craig Lockwood, Ph.D.
Faculty
School of Public Health
Faculty of Health and Medical Sciences
University of Adelaide

11:15 **MS in Clinical Trials**
Nadine Jose, MD
Assistant Professor
Rutgers University

11:45 **Open Forum**

12:00 **Lunch Break**

01:00 **Break-Out Session 1**
Onsite Research Paper Presentation
Venue: Frassati Auditorium

Break Out Session 2
Online Research Paper Presentation
Venue: Function Room 4, 22nd/F

Break Out Session 3
Three (3) Minute Pitch (online)

03:30 **Health Break**

03:40 **Intermission:** Coro Tomasino

03:45 **Poetry Recital**

05:00 **Closing Ceremonies**
Awarding of Winners
Announcement & Passing on the Privilege to the next host
Deployment of Post-test and Event Evaluation
Closing Remarks
Prof. Eva Cutiongco-de la Paz, M.D.
Chair – Steering Committee
MMHRDC
Master of Ceremonies:
Assoc. Prof. Michael Jorge N. Peralta, MSc, PTRP
End of Day 2

Keynote Speaker

Fr. Nicanor Pier Giorgio Austriaco, OP completed his Ph.D. in Biology from Massachusetts Institute of Technology and a Doctorate in Sacred Theology (S.Th.D.) at the University of Fribourg in Switzerland.

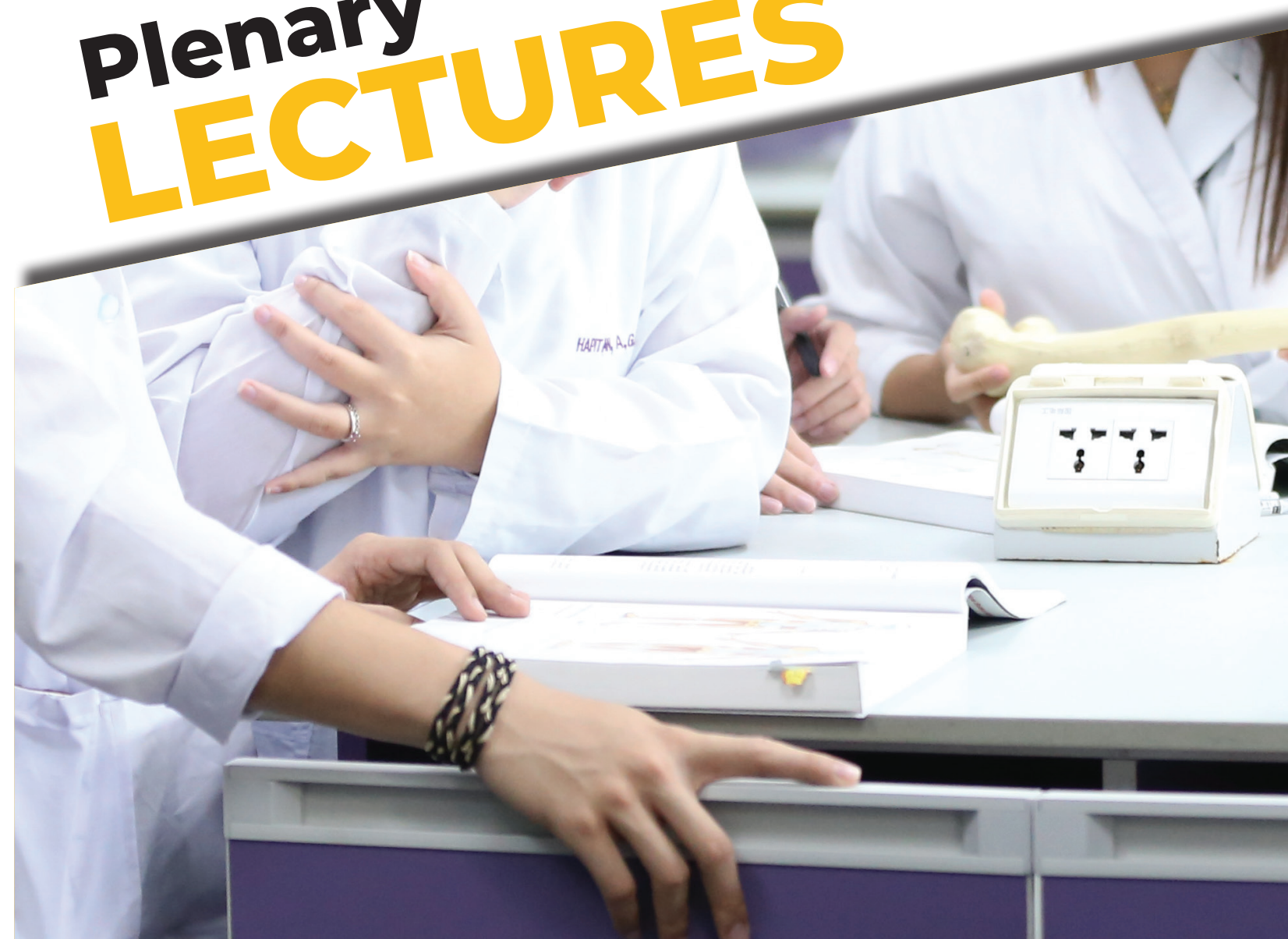
He is Professor of Biology and Theology previously at the Providence University in Providence, Rhode Island, USA, and now at the University of Santo Tomas, Manila, Philippines. He is the founding director of ThomisticEvolution.org, and is a bioethics consultant for the Catholic bishops' conferences of the United States and of the Philippines.

Fr. Austriaco had more than fifty publications in peer-reviewed journals in biology, philosophy, and theology. Among his widely accepted works is the book *Biomedicine and Beatitude: An Introduction to Catholic Bioethics*, which was recognized as a 2012 Choice outstanding academic title by the Association of College and Research Libraries.



Rev. Nicanor Pier Giorgio Austriaco, O.P., Ph.D., S.Th.D.

Plenary LECTURES



Session One

Long COVID / Complications of COVID

Pulmonary Complication

Dr. Maria Rhona G. Bergantin is an Associate Professor in the University of Santo Tomas Faculty of Medicine and Surgery, Manila, Philippines.

She is a clinician practising internal medicine and is specialist on infectious diseases interested in all aspects of ID but most especially virology.

She is an active staff and consultant in the section of infectious diseases, and a training officer for the adult infectious diseases fellowship training program at the Department of Medicine, University of Santo Tomas Hospital. She earned her Doctor of Medicine degree from the University of Santo Tomas Faculty of Medicine and Surgery, and her Master of Science in Virology from Liverpool John Moores University, United Kingdom.



Session One

Long COVID / Complications of COVID

Cardiac Complication

Dr. Ronald H. Estacio is the Division Chief for Clinical Cardiology where he supervises that care of all service patients in the different sections and supervises the training of adult cardiology fellows. He also serves as the Chairman for the expert advisory board of the medical device unit under the Department of Health. He earned his degree of Doctor of Medicine from the University of Santo Tomas Faculty of Medicine and Surgery. He had his residency at the University of Santo Tomas Hospital and his fellowships for Adult Cardiology and Interventional Cardiology at the Philippines Heart Center.



Session One

Long COVID / Complications of COVID

Neurological Complication

Dr. Veeda Michelle M. Anlacan specializes in neuroscience. She is an Associate Professor at the UP College of Medicine where she teaches at the Department of Neurosciences. She serves as the current head of the Center for Memory and Cognition of the Philippine General Hospital. She earned her Doctor of Medicine degree from the University of Santo Tomas. In 2004, she spent a year for her Clinical and Research Fellowship in Dementia at the National Neuroscience Institute Singapore General Hospital Campus Department of Neurology. Dr. Anlacan is the current President for the Alzheimer Disease Association of the Philippines.



Session Two

Engineering Innovation During Pandemic

The most disruptive technological advances will inevitably affect the future of health research. This is evident both from global and local perspectives, especially on the trend in the National Health R&D agenda. It is high time to promote cross-disciplinary research between Engineering and Health.

This presentation gives a general view of the current situation and issues in cross-disciplinary research between Engineering and Health in the Philippines and shares some of the completed and ongoing interdisciplinary funded projects at the University of Santo Tomas. This presentation also proposes possible solutions to the current issues in cross-disciplinary research moving forward.



Prof. Angelo R. Dela Cruz, Ph.D. is an Electrical and Electronics Engineer. He is the recipient of the Fr. Roque Ruano Professorial Chair in Engineering in 2019. His professorial lecture dealt with the "Cloud-Based Digital Health System: Monitoring, Assessment, and Prevention." He is a resident researcher under the Research Center for Natural and Applied Sciences of the University of Santo Tomas. He is currently the Dean of the Faculty of Engineering of the same university.

Session Three

Guidelines in a Pandemic: What we have learned?

National Pandemic Response Playbook

As of October 03, 2022, COVID-19 cost the Philippines 895.9 billion pesos in health expenditures, in addition to 795 billion pesos in lost gross domestic product, 3,690,000 reported infections, and 217,483 related deaths, while other countries like New Zealand registered an actual economic growth, and had 953,000 cases with only 731 deaths over the same time period. To prepare for the next pandemic, with the aim of fewer deaths, faster economic recovery, and greater social cohesion, a draft Philippine Pandemic Response Playbook was crafted from a review of literature, and then subjected to five validation focused group discussions with experts, leaders, and local government officials in Luzon, Visayas, and Mindanao. To achieve the three stated goals, the validated playbook contains eight key elements: (1) Constant, vigilant monitoring of events nationally and internationally with Big Data Analytics, (2) Epidemiologic Rating, (3) Rapid Containment at our borders, (4) Rapid Containment at community hotspots, (5) Risk-based National responses with LGU implementation, (6) Risk Communication to community, (7) Mass vaccination, boosters, and (8) Post Implementation Evaluation. These eight elements provide evidence-based balance of life and livelihood, national-local government initiatives, public and private implementation. With hindsight and evidence from science and actual experiences, the Philippine Pandemic Playbook will need a whole of government support not only in the actual implementation but also in the preparations that are rooted not only in science, but also in Universal Health Care, and may need new structures and supportive policies and laws.



Prof. Hilton Y. Lam, Ph.D. is the Director of the Institute of Health Policy and Development Studies at the University of the Philippines – Manila (UP Manila), National Institute of Health. He has a PhD in Health Economics, which he obtained from the University of Tokyo's Graduate School of Medicine. He has a Bachelor of Arts in Biology and Economics from Whittier College in California, U.S.A. and a Master's degree in Hospital Administration from UP Manila. Dr. Lam has researched extensively on Health Economics, Finance, and Policy, as well as written scientific articles covering a wide array of health- and economic-related topics.

Session Three

Guidelines in a Pandemic: What we have learned?

Functional Foods for COVID Infection

Food is believed to have two main functions: as our main source of energy and nutrients, and for pleasure (gastronomic delight). Then, in the mid-80's, Japan introduced the concept of foods as having a "third function," which is to prevent diseases or alleviate their symptoms, creating the concept of "functional foods for health". The COVID-19 pandemic underscored the importance of this third function by showing that those with poor health and/or underlying diseases are the most vulnerable to the SARS-COV-2 virus infection. Therefore, if one wants to be resilient against diseases, it is imperative that one maintains a healthy diet, all the while recognizing the function of foods and their components in maintaining good health and in protecting us from diseases. My talk will demonstrate how we can harness the potential of functional foods in creating a healthy and disease-resilient Philippines.



Myra O. Villareal, M.Sc., Ph.D. obtained her B.S. Agriculture and M.S. Microbiology degrees from the University of the Philippines (Los Baños), and her Ph.D. in Agriculture from the University of Tsukuba in Japan.

Prior to her pursuit of PhD and work in Japan, she has previously taught biology subjects at the Biology Department of Ateneo de Manila University. She also served as Quality Control Manager at Peter Paul Philippine Corp., and worked as University Research Associate at BIOTECH-UPLB.

Currently, she is a DOST-PCHRD Balik Scientist, with Bicol University as her host institution and at the same time affiliated with the Faculty of Life and Environmental Sciences of the University of Tsukuba in Japan. Prof. Villareal is engaged in functional food research, specifically in the use of natural products from foods for health, and she has authored and co-authored more than 30 publications in this field.

Session Three

Guidelines in a Pandemic: What we have learned?

International Collaboration in the COVID Pandemic

Dr. Jaime C. Montoya specializes in Internal Medicine. He started his medical education at the University of London, London School of Hygiene and Tropical Medicine and a post-graduate degree in Bioethics from the University of the Philippines-Manila College of Medicine. In 2014, he earned his Ph.D. in Medicine from the Jutendo University Graduate School of Medicine, Tokyo, Japan. He is currently a Professor in Infectious Diseases at UP Manila. Dr. Montoya is the Executive Director of the Department of Science and Technology-Philippines Council for Health Research and Development.



Session Four

Interprofessional Education

Participants who complete this session on “Interprofessional Education During the COVID-19 Pandemic” will be expected to distinguish the building blocks and outcomes of a health system and cite real experiences when these work effectively in synergy. As professionals in various fields related to health, participants will also be able to explain the World Health Organization Framework for Action on Interprofessional Education & Collaborative Practice to help them formulate practical innovations, practices, and strategies to help build a resilient and healthy community.



Dr. Erlyn A. Sana is a full-time professor of health professions education at the National Teacher Training Center for the Health Professions, University of the Philippines, Manila. She handles classes in educational planning, evaluation, research, organization and leadership both to master’s and doctorate students.

Dr. Sana also serves as a project leader and principal investigator of ongoing commissioned studies with the Health Policy Development and Planning Bureau of the Department of Health, Vital Strategies, the United Nations Children’s Educational Fund (UNICEF), and the Philippine National Police.

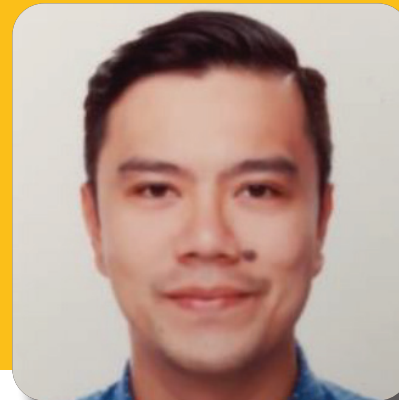
Session Five

Challenges in Education and Health During the Pandemic

Elementary and Junior High School

The pandemic due to COVID-19 virus had affected many sectors including Philippine education. It came as a surprise and disrupted classes towards the end of SY. 2019-2020 and caused a number of concerns and problems particularly on how to continuously provide education among learners to the succeeding school year.

The lecture is about the changes that occurred in response to the various challenges and difficulties encountered during the height of the pandemic and amidst community quarantines, as experienced in Adamson University Basic Education Department- Grade School and Junior High School. The discussion shall include changes in the following aspects: academics and co-curricular; safety and security; school operations and procedures; information and communication; and faculty, personnel and other stakeholders.



Daniel B. Saroca, Jr., PhD. obtained his Doctor of Philosophy in Educational Management at the De La Salle Araneta University. He has been an educator his whole life. He worked in a small private school, in a public school, and in the US before working as a grade school teacher in Adamson University.

Currently, he is the Grade School and Junior High School Principal of the Adamson University – Basic Education Department and a part-time faculty of the Graduate School under the College of Education and Liberal Arts of the same institution.

Session Five

Challenges in Education and Health During the Pandemic

College

Ms. Liza Libertine L. Magana is the OIC Chief Education Program Specialist of CHED-NCR. In her 20 years in CHED, she was assigned to various technical working groups of the Commission and became a member of Regional Inter-agency Committees and consortia such as Regional Statistics Committee, Regional Development Council and Metro Manila Health Research Development Consortium.

Aside from her technical expertise, Ms. Magana is a certified ISO Lead Auditor and the Regional Internal Auditor for ISO of the CHED-NCR. She is also a certified Mediator for the Conflict Resolution Program of the Commission.



Session Five

Challenges in Education and Health During the Pandemic

Medical and Paramedical Education

Ma. Lourdes P. Domingo-Maglinao, MD obtained her Doctor of Medicine degree from the University of Santo Tomas, Faculty of Medicine and Surgery, España, Manila, Philippines. She completed her residency training in Neurological Surgery in the same institution.

Dr. Maglinao is a diplomate of the Philippine Board of Neurological Surgery, a fellow of the International College of Surgeons, and fellow of the Academy of Filipino Neurosurgeons, Inc. She held numerous positions. She has been an Examiner of the Philippine Board of Neurological Surgery. She has been elected Secretary, Vice-president and President of the Academy of Filipino Neurosurgeons, being the only woman to become President and the first President to be re-elected in office. She has been a recipient of a citation for Excellence in Leadership given by the Philippine Board of Neurological Surgery. She was Chair of the World Federation of Neurological Surgeons, Educational Course in Neurological Surgery held in the Philippines and Chair of the Philippine Neurological Association and the Academy of Neurosurgeons, Inc. Joint Congress. She was the former Assistant Dean of the Faculty of Medicine and Surgery. Dr. Maglinao is currently the Dean of the Faculty of Medicine and Surgery, University of Santo Tomas, Chief of the Section of Neurosurgery, and Head of the Stereotactic Neurosurgery Unit, Benavides Cancer Institute, UST Hospital. She is also currently a Technical Evaluator for MD Program, member of the Regional Quality Assessment Team of the Commission on Higher Education (CHED) and member of the Board of Trustees of the Association of Philippine Medical Colleges, Inc.



Session Six

“Ethical Issues and Changes in Research During the COVID Pandemic”

Ethics is defined as the branch of philosophy which deals with the process of decision making and helps us determine right from wrong. Research ethics, on the other hand, is that part of applied biomedical ethics which deals with the application of moral rules to the collection, analysis, reporting, and publication of information obtained from research participants. There are a number of ethical frameworks, codes of conduct, and clinical trial guidelines recommended by subject matter experts that have sustained scientists and researchers in past years. However, with the advent of the COVID-19 pandemic in 2019/2020, unexpected and often confusing issues have emerged, leading us to the following questions: Are the existing guidance and ethical frameworks for clinical trials enough? And how do you implement these guidelines and frameworks during a state of public health emergency? Should there be changes in these guidelines? This presentation will review foundational knowledge of ethics and explore the mitigation strategies for meeting the anticipated ethical challenges of conducting clinical research during a public health emergency.



Fidela L. Moreno, MD. Fidela is a seasoned and well-rounded clinical research professional and physician, with extensive U.S. and international experience in clinical research. Her career to date includes 9 years in academia, 10 years as a clinical site investigator, 18 years with the pharmaceutical industry, 20 years in executive/management roles, on-the-ground clinical operations experience in Hong Kong for 3 years and in India for 1 year, and independent consultant work for cardiovascular research for the last 11 years.

Fidela is recipient of several distinctions and awards in research and medicine. She completed her medical education at the University of Santo Tomas (Manila), Residency in Internal Medicine at the Veterans Memorial Hospital (Quezon City), Fellowship in Adult Cardiology at the Philippine Heart Center for Asia, and Fellowship in Noninvasive Cardiology at the University of Utah and LDS Hospital in Salt Lake City, UT, USA

Session Six

“Ethical Issues and Changes in Research During the COVID Pandemic”

Filipinas Natividad, Ph.D., is the Chair of the National Ethics Committee since 2017. Having retired in as Vice-President of the Research and Biotechnology Group at St. Luke's Medical Center, Quezon City and Global City, she now serves as Technical Reviewer for PCHRD and CHED, as Member of the PCARI (CHED) Scholarship Committee, and Member of the Board of Directors at Rainiers Contract Research Services, Inc. She completed her Ph.D. in Zoology at the University of the Philippines and University of California Los Angeles (Sandwich Program) and has undergone Post-Doctoral Training in Biomedical Research at the National Institutes of Health, Japan. She also underwent Special Training on Hospital-based Clinical Research at LDS Hospital, Salt Lake City, Utah, USA

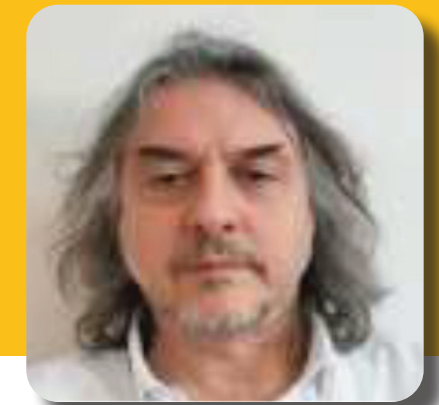


Session Seven

Trends in Postgraduate Training in Health Sciences (online)

PhD in Health Sciences: By Research/ Scoping Review

This presentation will cover the international trends in Doctor of Philosophy (PhD) programs, with a particular focus on the discipline of Health Science. PhD students are required to produce original research that expands the boundaries of knowledge, and are often required to defend their work. The aims and the scope of PhD projects in Health Sciences will be explored, and recent trends in PhD format and methodologies will be presented. These include the use of PhD by publication, introduction of coursework requirements and different formats for thesis defence



Steve Milanese, Ph.D., is an Associate Professor in the Allied Health and Human performance unit at the University of South Australia. Steve has postgraduate qualifications (Grad.Cert and M.App.Sc) in Physiotherapy and Ergonomics (Grad Dip.) and completed his Ph.D. in 2010. He has successfully supervised eight Ph.D. students to completion, is currently on the supervision panel for seven Ph.D. students, including students in India and the Philippines, and has been involved in the examination of nine Ph.D. projects from UK, South Africa, and Australia. He has published over 110 peer reviewed papers, eight book chapters and presented at over 25 international conferences. He also currently holds adjunct roles in universities in Philippines, Japan, India, Sri Lanka, Hong Kong, Malaysia, and Korea.

Session Seven

Trends in Postgraduate Training in Health Sciences (online)

MS in Implementation Science

Systematic reviews are considered inappropriate methods in some Ph.D programs. Major considerations which challenge this assumption include a) the history of higher degree research b) the quality and reliability of primary research and c) the necessity to publish often and early. This talk will challenge conventional notions of research, address methodological and scholarship requirements while demonstrating practical steps and relevance for preparing highly qualified, research ready Ph.D graduands of new ways of thinking about programmatic research.



Dr. Craig Lockwood, Ph.D., is the Director of Implementation Science for JBI, and has worked across each of the Institute's core programs. Craig's interests include scholarship and research related to implementation fidelity, and assisting practicing professionals to participate and lead local evidence-based practice initiatives. He has been the postgraduate coordinator for Higher Degrees by research over the last 10 years, and is a senior University of Adelaide supervisor.

Dr Lockwood completed his PhD at the University of Adelaide, is Adjunct Associate Professor at Queen's University School of Nursing in Canada, Co-Chair of the JBI Implementation Science Methods Group, and editor in chief of the journals JBI Evidence Implementation and BMC Systematic Reviews. He maintains ongoing interest in journalology and qualitative evidence synthesis methodology.

Session Seven

Trends in Postgraduate Training in Health Sciences (online)

MS in Clinical Trials

Nadina Jose, M.D., is a committed educator at Rutgers University's School of Health Professions. She assumed a variety of roles in the pharmaceutical, biotech, and clinical research management industry for more than 30 years and continues to be a subject matter expert and consultant for various biopharma and technology companies for site management, clinical operations, quality management, strategy development and overall clinical research management. She worked with programs that saw the successful delivery of blockbuster products to market such as Viagra, Seroquel, Zyprexa, Lupron, Biaxin, Adderall, Risperidone, Ciprofloxacin to name a few, along with landmark devices like Uroflow, ESWL and studies that validated PSA as a biomarker for Prostate Cancer. Dr. Jose continues to be actively involved with various industry organizations, regular contributor to industry publications and is a frequent speaker and lecturer at global conferences and workshops.



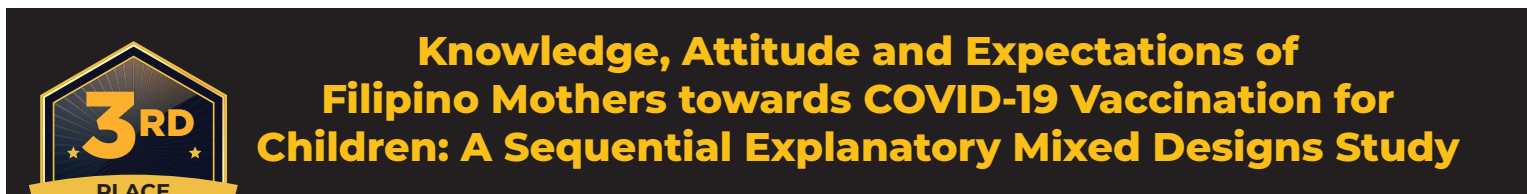
MMHDRC COMPETITIONS



RESEARCH COMPETITION



**ORAL RESEARCH PAPER
(UNDERGRADUATE)**



Khen Jee P. Faburada | Alyssa Eunice S. Degaños
Ramona F. Legaspi | Erika Denise J. Gonzales

Agnes V. Raymundo, PhD, RN
Research Mentor

Manila Central University



Anna Sophia G. Buan | Sophia Lorraine Joy V. Camacho
Maria Noela M. Ernacio | Femilla Faith S. Drueco

Faculty Mentor:
Agnes Valencia-Raymundo, PhD, RN

Manila Central University College of Nursing

Abstract

The recent COVID-19 vaccine approval for minors resulted in an increasing concerns and challenges. Parental confidence to vaccinate children against COVID-19 is pivotal. The purpose of this study was to determine the levels of knowledge and attitude of Filipino mothers towards COVID-19 vaccination for children. Moreover the study likewise explored their attitude and expectations towards COVID-19 vaccination for children. The study employed sequential explanatory mixed designs method. Descriptive-correlational and generic qualitative designs were utilized. It was conducted in the areas of CAMANAVA. Purposive sampling design augmented with snowballing was utilized in selecting the participants. The sample (N=103) was consisted of Filipino mothers with children aged below 18 years old. Data in the quantitative phase were collected using tools developed by the researchers that were validated by experts and pilot tested with Cronbach's alpha of 0.99 and 0.97. Hypotheses were tested using Pearson Correlation, ANOVA, and T-Test inferential statistics. Subsequently, a select group of participants (N=12) were interviewed online and data collected were analyzed using a descriptive study analysis which undergone data transcription, reflecting, categorizing, and developing themes in the qualitative phase. Most of the participants (24.27%) are 28-32 years old, single mothers (54%), have two to three

children aged below 18 years old (47%), attained high school education (45%), have less than ₱20,000 monthly income (76%), are residents of Malabon City (41%), have children with no pre-existing comorbidity (89%), have no family members previously diagnosed with COVID-19 (88%), and have family members vaccinated against COVID-19 (90%). Participants' level of knowledge is moderate (mean score=14.573, SD=2.63) while their level of attitude is moderately low (mean score=32.534, SD=9.09). There are positive correlations among participants' profile, knowledge and attitude ($\alpha=0.05$, $p\text{-value}=0.0464$). Two themes emerged in the qualitative phase namely: "Volatile" attitude and "Immersed" expectations.

Having moderate levels of knowledge, skeptical attitudes and ambivalent expectations affect participants' compliance with childhood COVID-19 vaccination. Ensuring the safety and effectiveness of children immunizations is crucial. Hence, strong collaboration among stakeholders is needed to increase the awareness on the benefits and safety of childhood COVID-19 vaccination.

Keywords: Attitude, COVID-19 Vaccination, Filipino mothers, Immersed, Knowledge, Volatile.

Abstract

Background: Coronavirus disease (COVID-19) vaccination is undertaken globally. Pervasive acceptance of COVID-19 vaccines is critical for attaining adequate immunization coverage to resolve the pandemic. Notwithstanding the widespread campaigns implemented, there remains a substantial level of hesitancy on COVID-19 vaccines among Filipino adults. Purpose: The study aimed to explore the vaccination hesitancy issues among Filipino adults.

Methodology: A single case study design was undertaken. It was conducted in the national capital region of the Philippines. Using the snowball sampling approach and applying the concept of data saturation, the sample (N=30) was comprised of unvaccinated Filipino adults within the age of 18 to 59 years old, both male and female, and who self-reported to be experiencing hesitancy to receive vaccines for the coronavirus. The data were collected through semi-structured virtual interviews. Data collected were analyzed following the analysis framework of descriptive phase where transcriptions were examined and data repository was created. Next was the exploration phase that entailed recognizing emerging patterns and identifying relationships. This was followed by the integration phase where comparisons across different cases were made and codes were expanded and rationalized. Lastly, the creation

phase wherein themes connected to the previously identified categories were generated. To ensure the trustworthiness of the study, the validation techniques of members checking and critical friend were utilized. To enhance the rigor of the study, bracketing, horizontalization, and resonance were applied.

Results: Varied themes relating to the participants' perceptions and concerns with COVID-19 vaccines were generated. Notably, vaccine hesitancy operates along multiple realms and issues categorized as intrapersonal, interpersonal, and extrapersonal. Intrapersonal issues ensue within the respondents' perceptions, concerns, and their uncertainty on what to expect of the COVID-19 vaccines. Interpersonal issues are the influences of the misinformation provided by individuals and social media that affect the respondents' vaccine hesitancy decision. Extrapersonal issues are those that arise beyond the respondents' periphery and control intervened by laws and policies.

Conclusions: COVID-19 vaccine hesitancy remains a challenge that continues to face skepticism, mistrust and is an important issue in the Philippines.

Key words: case study, COVID-19 vaccination, vaccination hesitancy

It's OK Not to Be OK: A Convergent Parallel Mixed Designs Study of Adaptation and Anxiety of First Time Mothers Amidst Pandemic

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Perceptions of Medical Clerks and Interns of St. Luke's Medical Center College of Medicine - William H. Quasha Memorial, (SLMCCM-WHQM) On Online Learning and their Clinical Skill Competencies

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Abstract

For the millions of women who gave birth for the first time in the years 2020-2022, their initial experience to motherhood occurred in the backdrop of the coronavirus (COVID-19) pandemic. Becoming a first-time mother during this global crisis comes with many unexpected and incredible experiences. The purpose of the study was to determine the levels of anxiety and adaptation of first-time mothers in their new role as parents during the COVID-19 pandemic. Furthermore, this study aimed to explore and understand the level of anxiety, and level of adaptation of Filipino first-time mothers. Likewise, it will describe and better understand their lived experiences as they adapt to their new role during the COVID-19 pandemic. It was anchored on this central question: How do participants describe their experiences with regards to their anxiety and adaptation as first-time mothers during the COVID-19 pandemic? The study employed the convergent parallel mixed methods design for the quantitative study and descriptive phenomenological approach of inquiry for the qualitative. It was conducted in the cities of CAMANAVA. The participants (N=70) were comprised of Filipino first-time mothers (18-40 years old) whose first child was born during the pandemic (2020 – 2021). A total of 15 study participants were virtually interviewed for qualitative study. To assess level of anxiety, Covid-19 Anxiety Scale (CAS) was utilized while Becoming a Mother Scale (BaM-13) for level of adaptation. Due to the pandemic, data collection process was conducted online through Google forms where the questionnaires were disseminated and virtual interviews were held using the study participants' preferred platforms. Analysis of data for quantitative utilized a descriptive and

inferential statistics-particularly using Pearson's r to test the relationship between the study participants' level of anxiety and their level of adaptation. Semi-structured in-depth interview was utilized to collect data which were analyzed using Amedeo Giorgi's 5-step descriptive analysis. To enhance the quality of the study, members checking, critical friend, bracketing, horizontalization, and resonance were applied. All rules of ethics on the the principles of beneficence, respect for human person and justice were observed all throughout the research process. The research protocol was approved by the ethics review board of a comprehensive university in Caloocan City. Study participants have moderate levels of anxiety and adaptation. There are significant relationships among the variables of levels of anxiety, adaptation, and participants' profile. The findings indicate the coexistence of adaptation and anxiety. The participants' experience of becoming a mother for the first time during the pandemic is both adaptive and disruptive. It is a time to adapt to their new roles, adapt to new ways of life, adapt to mother-infant bonding, and adapt personal control leading to anxiety if they are incapable to cope effectively. Motherhood for first time mothers is a life-changing experience. It takes place in absolutely new and unfamiliar circumstances. By increasing the understanding of the consequences of COVID-19 on the adaptation and anxiety of new mothers, healthcare providers could determine appropriate measures to facilitate the most optimal maternal and child health outcomes.

Keywords: adaptation, anxiety, first time mothers

Abstract

Introduction: The sudden shift toward online teaching platforms due to the coronavirus (COVID-19) pandemic has particularly affected the training of medical clerks and interns, as a significant part of the curriculum's hands-on practical portion were substituted for online alternatives. The impact of this change on clerks' and interns' perceived competencies remains largely unknown in the Philippine setting. The study then investigated the perceptions of medical clerks and interns of St. Luke's Medical Center College of Medicine - William H. Quasha Memorial (SLMCCM-WHQM) enrolled during Academic Year 2021 to 2022 on their online learning experience and their clinical skill competencies.

Methods: The study followed a phenomenological study design utilizing a qualitative method in which individual semi-structured interviews were conducted. A total of 12 participants (6 clerks, 6 interns) were asked about their positive and negative experiences, their perceived enablers and barriers of online learning, and their perceptions on their competencies in their clinical skills.

Results and Discussion: Thematic analysis was used to identify five overarching themes, namely Humans First and Doctor Second, Google Docs, No Pain No Gain, Never Enough, and Best of Both Worlds. These themes suggest key concepts that contribute to the clerks' and interns' perceptions with their online clerkship and internship experience, with Humans First Doctors Second, Google Docs, No Pain No Gain, and Best of Both Worlds encapsulating the positive and negative experiences along with their perceived enablers and barriers to online learning, and Never Enough discussing their perceptions regarding themselves and their skills. Overall, it was seen that though a hybrid learning setup had its disadvantages, it w

Perspectives of Filipino Stakeholders of Private Occupational Therapy Clinics on Telehealth Service Delivery within the National Capital Region

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Abstract

Background: Following the health protocols brought about by the coronavirus pandemic 2019 (COVID-19), Occupational Therapy (OT) services in the Philippines have transitioned to utilizing telehealth as a viable alternative service delivery model. Increased use of this service delivery model has led to the emergence of different perspectives regarding telehealth practice and shifts in the expectations from OT services among the stakeholders. Although other countries have adapted telehealth before the pandemic, limited information is available regarding the utilization of telehealth within the Philippine context.

Objective: This study aims to identify facilitators and barriers that affect OT telehealth service delivery and identify the expectations from OT services among different Filipino stakeholders.

Significance: The information gained in the study regarding the current utilization of telehealth as a service delivery model within the Philippine context can be used in further enhancing OT telehealth programs amidst and even beyond the pandemic. OT educators may also be informed of possible curricular and instructional modifications to ensure that entry-level practitioners are competent in delivering services through telehealth.

Methods: A qualitative descriptive approach was used in the study to gather perspectives on the facilitators, barriers, and expectations from Occupational Therapy telehealth services. Two focus group discussions via Zoom were conducted: one for the pediatric population with six participants and one for the adult population with five participants. NVivo12 software was utilized to facilitate the organizing and coding of data. From there, qualitative content analysis was used to examine data using categories that were generated inductively.

Findings: Three main themes and corresponding subthemes emerged; namely facilitators and barriers of OT services categorized under the Person-Environment-Occupation (PEO) model and expectations from OT services categorized according to pediatric and adult populations. Under the person component, facilitators included enhanced skills

and attitude of OTs and managers in implementing basic telehealth services while barriers included (1) low degree of telehealth acceptance among stakeholders, (2) blurring of work-life boundaries among caregivers and OTs, and (3) limited skills in fully transitioning all OT services to telehealth. Under the environment component, facilitators included conducting telehealth sessions within a naturalistic environment while barriers included (1) limited availability of resources and (2) increased environment and safety concerns. Under the occupation component, facilitators included (1) increased collaboration among stakeholders and (2) increased accessibility and convenience to receive OT services; while barriers included (1) difficulty in transitioning to this service delivery and (2) increased session cancellations and recurrent inconsistency in treatment implementation. Facilitators and barriers for both adult and pediatric populations would be similar except for those under the concept of the environment as the naturalistic environment was a more predominant facilitator in the pediatric population but was found to be a barrier in the adult population due to increased safety concerns. Expectations from OT services for pediatric and adult populations similarly included possible means to reach out to more clients, increased collaboration among stakeholders, and adaptation of stakeholders. Greater emphasis was put on the shifting of roles with OTs serving as coaches and caregivers as main facilitators in the pediatric population, while active participation from both clients and caregivers all throughout the OT process is now expected in the adult population.

Conclusion: The study shows OT telehealth services delivery as a viable alternative platform service delivery model for stakeholders amidst and beyond the pandemic. The facilitators and barriers identified may help improve the education curriculum and current policies and guidelines for telehealth service implementation and strengthen the training programs to ensure effective implementation of OT services in private clinics within the National Capital Region.

Keywords: Telehealth, Facilitators, Barriers, Expectations, Occupational Therapy

PrEP Talk: A Multivariate Analysis Exploring the Awareness, Attitude, and Preference of Filipino University Students in Metro Manila toward Human Immunodeficiency Virus (HIV) Pre-Exposure Prophylaxis (PrEP)

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Abstract

Background: Philippines has become the nation with the fastest growing HIV epidemic in the Asia-Pacific. Pre-Exposure Prophylaxis (PrEP), a combination of two antiretroviral treatments, acts as an additional preventive choice in the sexual transmission of the virus has been emerging in popularity. To date, the government implementation of PrEP in the country is still under pilot testing, thus according to the National HIV/AIDS & STI Surveillance and Strategic Information Unit (NHSSS), there are still no available detailed reports for this.

Purpose: The purpose of the study is to document and provide an analysis on the use of Human Immunodeficiency Virus (HIV) Pre-Exposure Prophylaxis (PrEP) as an additional preventive choice in the sexual transmission of the virus among Filipino university students by identifying their awareness, attitude, and preference.

Methods: Primary data was obtained from the responses of researchers' formulated survey of 300 Filipino students enrolled in public and private universities in Metro Manila. The survey was administered online via Google Forms and was distributed through various social media platforms including Facebook, Twitter, and Instagram. It employed multivariate analysis of the survey data in order to identify the factors that affect their attitude and preference, as well as to establish their knowledge and awareness to the medication.

Results: The study was able to identify abstinence, monogamy, and condom-use as the most common HIV prevention methods used by the respondents. Factor analysis was employed to determine the factors affecting preference over an HIV prevention method and the percentage of variability these factors can explain, these are Familiarity (43%), Social Impact (13%), and Sexual Lifestyle (9%). Consequently, the study explored the effects of these factors on different groups defined as cluster and resulted from cluster analysis. These clusters were Sexually Active, Sexually Informed, and Sexually Inactive each with 83, 106, and 111 respondents, respectively. Considerably low

knowledge and awareness scores were recorded across all clusters, with an overall 51.4% average correct response. In spite of that, respondents demonstrated favorable attitudes and high interest in PrEP, with 67% (201) saying that they would use the medication.

Conclusions: Despite the study serving as most of the respondent's first exposure to PrEP, as observed with their low knowledge and awareness scores, the results have demonstrated high levels of interest and an overall positive attitude towards the intervention. These highlight the importance of knowledge and awareness in promoting PrEP uptake to the key populations. Moreover, the three identified factors could serve as instrumental figures in influencing strategies that the public and private sectors may take on in furthering the cause of PrEP in the country. These sectors can tailor fit their actions based on the characteristics of different groups of people as described by the cluster analysis. Overall, the key insights from the study serve as guides in improving awareness, preference, and utilization of PrEP.

Ethical Approval Number: 2022-IERC2-0147

Keywords: human immunodeficiency virus, pre-exposure prophylaxis, multivariate analysis

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Authors' Biography: Ernest Van Rito, Danica Jane Rubi, Mila Iloiza Sangcap, Alicia Alaine Descargar, and Kenneth Domdom are currently undergraduate pharmacy students at the Our Lady of Fatima University Quezon City. Renz Marion Ricafrente and Zedierick Tanjista are currently faculty members of the College of Pharmacy at the Our Lady of Fatima University Quezon City.

Presentations: The abstract was submitted and accepted for oral presentation at the 28th Federation of Asian Pharmaceutical Associations (FAPA) Congress & National Pharmacists Convention 2022.

Risk Factors of PTSD, Depression and Anxiety in Patients with Previous COVID-19 Infection: A Systematic Review and Meta-analysis

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Abstract

Introduction: Since the start of the COVID-19 pandemic, several studies have found that those who tested positive for COVID-19 have a 65% risk for psychiatric disorder, while those undergoing isolation or quarantine puts the patient at risk for anxiety and depression. The objective of this study is to gather and appraise studies that determine risk factors and their association with psychiatric disorders post-COVID-19 infection.

Methods: All cross-sectional and cohort studies from 2019 onwards that had COVID-19 survivors that developed anxiety, depression and/or PTSD, and reported in English language were included in the study. A number of databases including Medline, Cochrane Library and Clinical key were searched using meSH terms including "COVID-19", "depression", "anxiety", "post-traumatic stress disorder", and "risk factor". Risk of bias was assessed using the Newcastle-Ottawa scale. The data extracted from the studies were characteristics of the participants, risk factors, outcome measures and outcomes.

Results: Four cohort, and four cross-sectional studies were included with a total of 1438 COVID-19 survivors that developed depression, anxiety and/or depression. The risk factors that were statistically significant were (1) female sex [RR 1.86 (1.06, 2.04); Z=2.32; p=0.02] for depression,

(2) having family members infected with COVID-19 [RR 1.56 (1.32, 1.85; Z= 5.17; p=<0.00001] for depression, (3) steroid administration during hospital admission [RR 1.62 (1.07, 2.47); Z=2.26; p=0.02] for anxiety and (4) female sex [RR 2.13 (1.16, 3.91); Z=2.45, p=0.01] for PTSD. Other risk factors were statistically insignificant.

Discussion: This meta-analysis shows that there are certain risk factors that can predict the incidence of depression, anxiety and PTSD in COVID-19 survivors. Female sex and having family members with COVID-19 increase the risk of patients to have depression. Female sex is also predictive for the development of PTSD. Steroid administration during hospital admission is a risk factor for anxiety in post-discharge patients. This study can impact management of patients with previous COVID-19 infection, as physicians become more aware of the risk factors that can lead to development of psychiatric disorders. This allows for further individualization of each patient's therapeutic plan through inclusion of psychotherapeutic techniques that can prevent aggravation of their mental health and improve their quality of life.

Keywords: COVID-19, risk factors, depression, anxiety,

RESEARCH COMPETITION



ORAL RESEARCH PAPER
(PROFESSIONAL)

Facemask use during exercise is recommended among healthy individuals: a systematic review and meta-analysis.



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Abstract

Question: What are the effects of facemask use during exercise on the tolerability and physiologic parameters of healthy adults?

Design: Systematic review and meta-analysis of randomized trials.

Participants: Healthy adults (>18 years old).
Intervention: Commercially-available facemasks.
Outcome measures: Facemask tolerability attributes and physiologic parameters.

Results: Of the 570 studies identified, 29 RCTs involving 860 participants were included. Using facemasks increased humidity (MD 2.36, [95% CI: 1.45, 3.28]), thermal sensation (MD 2.89, [95% CI: 2.07, 3.71]), breathing resistance (MD 4.77, [95% CI: 4.02, 5.51]), misfit (MD 2.28, [95% CI: 0.98, 3.58]), fatigue (MD 3.35, [95% CI: 2.39, 4.31]), overall discomfort (MD 3.17, [95% CI: 2.29, 4.05]), RPE (SMD 0.47, [95% CI: 0.31, 0.62]), itchiness (MD 0.74, [95% CI: 0.44, 1.91]) tightness (MD 0.85, [95% CI: -0.44, 2.14]), saltiness (MD 1.41, [95% CI: 0.61, 2.22]), odor (MD 0.45, [95% CI: -0.38, 1.28]), SBP (MD 0.99, [95% CI: -2.15, 4.13]), ETCO₂ (MD 3.48, [95% CI: 2.36, 4.61]), and blood lactate level (MD 0.04, [95% CI: -0.15, 0.23]), while HR (MD -1.04, [95% CI: -2.44, 0.36]), DBP (MD -0.33, [95% CI: -2.15, 1.50]), RR (MD -3.60, [95% CI: -5.28, -1.92]), SPO₂ (MD -0.31, [95% CI: -0.49, -0.12]), TV (MD -0.07, [95% CI: -0.15, 0.01]), and VO₂max (MD -1.90, [95% CI: -3.43, -0.36]) were decreased.

Conclusion: Using facemasks clinically and significantly increased humidity, thermal sensation, breathing resistance, misfit, fatigue, and overall discomfort, while physiologic effects were minor and clinically insignificant. Facemask use is safe even during maximal exercise among healthy adults.

Health Disinformation: A Review through Data Mining

Catherine Joy Escudra

Background: It has been predicted that data will be the new oil worldwide. Persons, groups, and organizations accessing and using more data will be advantageous. However, data volume, variety, and velocity increase are highly threatened by the continuously rising prevalence of disinformation in all aspects of life, like health. Understanding the phenomenon of disinformation is relevant to ensure that big data will be used correctly in any field, like health.

Objective: This study describes the pattern and publication trends in disinformation in health research.

Methodology: Research and review abstracts published in English were extracted from Web of Science and Scopus using the keyword ("disinformation" OR "misinformation" OR "fake news" OR "false news" OR "false information" OR "malinformation") AND ("health"). Data synthesis through pre-processing, word frequency and co-occurrence analysis, topic modeling using Latent Dirichlet Allocation, and trend analysis were done to identify patterns and publication trends. R studio and packages were utilized to manage and analyze the data.

Results: A total of 4972 abstracts were found about the topic. Most publications were related to topics on the effects of disinformation (n=696, 14.19%), social media (n=657, 13.68%), COVID-19 (n=548, 11.41%), women's health (n=505,

10.52%), and community health (n=459, 9.56%). While topics with the least publications were media and information (n=302, 6.29%), lifestyle and wellbeing (n=353, 7.35%), and vaccination (n=385, 8.02%). Except for the three topics with the least publications (coefficient 0.38-0.97, p >0.05), all topics identified in the modeling were positive and significant, indicating increased publications for the past years (coefficient 0.52-1.23, p <0.05). Though related publications about health disinformation started as early as the year the 1980s, the majority of all research was published from 2010 onwards. It is also evident that no topics related to strategies or policies for disinformation were found among all the abstracts analysed.

Conclusion: The use of data mining for health disinformation publications revealed much research on varying topics since the 1980s. Though trends for all topics are generally increasing, variations in publication patterns, which may be related to different factors worldwide, were observed. The disinformation phenomenon was analyzed and discussed in almost all aspects of health, including vaccination, pandemic, women's health, media and information, lifestyle and wellbeing, community health, and social media. The synthesis and understanding of a large number of research findings in this study may be critical for developing relevant and specific strategies and policies for countering and preventing disinformation in health.



Saccharomyces boulardii vs *Bacillus clausii* for the treatment of Acute Diarrhea in children, a Systematic Review and Meta – Analysis

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Abstract

Introduction Probiotics is now advocated for the treatment of diarrhea. *Bacillus clausii* is the most popular probiotic used by pediatricians for the treatment of acute diarrhea in the Philippines although it is not in the clinical practice guidelines for the treatment of acute diarrhea in children. The objective of this meta-analysis is to compare the effect of *Saccharomyces boulardii* versus *Bacillus clausii* in the duration of diarrhea of children with Acute Diarrhea.

Methods MEDLINE, EBSCO, Clinical Key, and the Cochrane Library, Academia, and Google Scholar were searched for clinical trials which used *Saccharomyces boulardii* and *Bacillus clausii* as intervention. Outcome measured was duration of diarrhea. The CEBM Critical Appraisal tool together with the Cochrane collaboration tool were used to assess the risk of bias. RevMan 5.4 was used for encoding. Inverse Variance method was used to determine mean difference for analysis of the pooled data.

Results Four studies involving a total of 411 participants were included in the systematic review and meta-analysis. All studies showed a weighted mean decrease in the duration of diarrhea ranging from 4.70 – 25.20 hours in favor of *Saccharomyces boulardii*. Overall, there is a significant decrease of 11 hours in the duration of

diarrhea in favor of *Saccharomyces boulardii* ($p < 0.0001$). *Saccharomyces boulardii* has a shorter duration of fever as compared to *Bacillus clausii*. *Bacillus clausii* has a shorter duration of vomiting as compared to *Saccharomyces*. As for the cessation of Diarrhea, although *Saccharomyces* has 1.3 times better than *Bacillus clausii*, the results are not statistically significant.

Conclusion A systematic review and meta-analysis of 4 clinical trials showed that *Saccharomyces boulardii* is more effective than *Bacillus clausii* in the treatment of acute diarrhea in children.

Keywords: S. Boulardii, B. Claussii, Acute Diarrhea, Meta – analysis

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“Safety Attitudes & Safety Climate of Healthcare Workers at the COVID and Non-COVID Wards in MCU-FDTMF Hospital: A Single Center Study”

Krizzle L. Rovero, RMT

Abstract

Healthcare workers, the primary bulwark against healthcare related crises, are expected to maintain a high degree of safety climate as well as adhere to established levels of safety attitude within the healthcare premises. However, the unprecedented COVID-19 outbreak has raised concerns over the likelihood of a downward shift in patient safety. Such a shift within the parameters of an existing healthcare system, even if only probable, should be enough reason to raise a query. Moreover, the observed unavailability of studies regarding the matter further supports the significance of the study's need to reassess the levels of safety attitude and safety climate particularly between the COVID and non-COVID wards.

In this study, the participants were 237 randomly selected healthcare workers (excluding Junior and Senior Interns, Nursing Students, Medical Technology Students, unofficial employees) from Manila Central University Hospital Filemon D. Tanchoco Sr. Foundation Inc who had rendered service on either the COVID-19 wards or the non-COVID-19 wards from September 2021 to July 2022. The Safety Attitudes Questionnaire (SAQ) was used as the primary means of acquiring data from the respondents for the following parameters: Independent variables: Demographic Characteristics; Dependent Variables: teamwork climate, safety climate, job satisfaction, stress recognition, perceptions of management, and working conditions. The Mann-Whitney U and Kruskal-Wallis H Tests were used to evaluate distribution levels of safety attitude and safety climate among categorical variables. The difference between levels of safety attitude and safety climate of COVID and Non-COVID wards were investigated. $P < 0.05$ was used as a benchmark for the data's statistical significance.

The results portrayed the demographics of the healthcare workers' population in MCU FDTMF Hospital in terms of gender, age bracket, and seniority among many others. The notable results are of those respondents who had exposure to COVID with a weighted overall mean of 3.99 indicating a high level of safety attitude and safety climate. Similarly, the respondents without COVID exposure had a weighted overall mean of 4.21 indicating a high level of safety attitude and safety climate.

It was revealed that the workers' sex, the teamwork climate, and perception on hospital management did not show any significant relationship with the respondents' level of safety attitude and safety climate. On the contrary, the safety climate was evaluated to have a p-value of 0.008, and job satisfaction with an evaluated p-value of 0.038. Meanwhile, the categories stress recognition, unit manager perception, and working condition had a p-value of 0. There was no observed significant difference on the level of safety attitudes and safety climate between the COVID and non-COVID wards. Therefore, we conclude that Manila Central University Hospital FDTMF and its staff operate within a high level of safety attitude and safety climate. In addition, the lack of significance in safety attitude and safety climate between COVID and non COVID wards indicate that the hospital and its staff maintain the same level of standards regardless of the ward classification. The researchers would recommend further studies which help explore areas which the MCU Hospital and its staff can improve.

Keywords:

Safety Attitude - how a health worker responds to safety goals, ideas, procedures, plans, or situations, both positively and negatively.

Safety Climate - this is how health workers, individually, view the importance of safety within the institution.

Health Care Worker - a worker in the identified institution. He/she may be identified as a nurse, a nursing aide, a doctor, a medical technologist, a pharmacist, or any other medical professionals, and any non-medical allied health worker (utility) who is directly involved in patient care.

Ethical Approval Number: 2022-01

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Safety Profile and Health Potentials of Pili (*Canarium ovatum* Engl.) Oils



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Abstract

Canarium ovatum, Engl. (Burseraceae) is one of the indigenous trees in the Philippines and is cultivated because of its kernels. Several *C. ovatum* (Pili) products are processed from the plant including pili nut, pili kernel oil, and pili pulp oil which are generally consumed by people. This study aims to establish the safety profile of Pili Kernel Oil (PKO) and Pili Pulp Oil (PPO) by evaluating the hematological, biochemical, and histopathological parameters in 14-day (acute), 28-day(sub-acute), and 90-day (sub-chronic) treatment in rats fed with pili oils. No clinical signs of toxicity, behavioral changes, and mortality were recorded in 2000 and 5000 mg/kg BW doses during the conduct of *in vivo* toxicity studies. The approximate lethal dose 50 (LD50) of PKO and PPO is greater than 5000 mg/Kg body weight. The no observable adverse effects level (NOAEL) of the oils are 1000 mg/Kg, 500mg/Kg and 250mg/Kg. The pili oils at different concentration revealed reduced serum

glucose level, triglycerides, and cholesterol level compared to the control ($P < 0.05$). In addition, the PKO and PPO displayed significant α -glucosidase inhibitory activity with an IC50 values of 1.66 and 2.29 $\mu\text{g/mL}$, respectively. A Dunnett's post hoc test revealed that α -amylase inhibition in pili pulp oil ($p = .001$) and pili nut oil ($p = .045$) were statistically significantly lower than the standard acarbose at 95% confidence interval. In conclusion, consumption of PKO and PPO are safe and effective in preventing metabolic disorders which might lead to cardiovascular diseases.

Keywords: Canarium ovarium, functional food, health potentials, pili oils, food safety

KEYWORDS: Self-reported Perception of Quality of Care Among Dermatology Patients Using Telemedicine in a Private Dermatology Center

Edward Ashley Arcilla

Throughout the years, the field of medicine has been making innovations. Part of this is creating and integrating technology with the practice of physicians. During the pandemic, this was further emphasized by the need of distance communication and management in the Philippines wherein telemedicine became the primary tool for seeing patients. According to an article by Guevara from the Philippine Dermatological Society, teledermatology consultations increased from 14.1% to 70% since the pandemic began. Since telemedicine is still an emerging practice in the Philippines, it is important to understand the different views that pertain to its usage. The perspective of the patient's experience with telemedicine must be taken into consideration to provide better health outcomes. Through this research study, understanding the dynamics between the patient, physician and telemedicine platform plays a role in establishing the foundation of how telemedicine will be created and implemented for the use of Filipinos.

The study aims to evaluate different factors that could affect the overall efficacy of the telemedicine platform of Skin and Cancer Foundation Inc. To analyze which factors have greater importance for its service delivery the researchers aim to understand how patient satisfaction is affected by sociodemographic factors, infrastructural factors, and perspectives of the patients. Results from this study can help healthcare institutions, physicians, policy makers, and developers of telemedicine platforms assess what needs to be improved and the aspects that can be considered for their respective use and development of telemedicine programs. This will also improve the quality of service that caters to the needs of Filipinos availing of telemedicine.

This research is a descriptive cross-sectional study that was done primarily by distributing online surveys. Its aim was to evaluate socioeconomic factors, infrastructural factors, and patients' perceptions, and their effect on patient satisfaction. The survey consists of basic sociodemographic questions as well as questions on perception based on the Telehealth

Usability Questionnaire. 78 participants were needed to be acquired based on Slovin's formula. Convenience sampling was done to meet this quota and 80 respondents were able to answer the survey. Sociodemographic factors that were measured include age, sex, educational status, and income status. Infrastructural factors that were gathered were the gadgets and type of internet used to access the telemedicine platform. Patient perceptions were measured based on usefulness, ease of use, interface quality, interaction quality, and reliability. Each of the factors and perceptions were rated on a 7-point Likert scale wherein 1 means strongly disagree and 7 is strongly agree. Pearson correlation was used to analyze the correlation between the patients' perceptions, and satisfaction

Based on the results there is a positive correlation within most sociodemographic factors and overall satisfaction ratings of the patient. However, it is important to note that since convenience sampling was done the respondents are not evenly distributed within these factors which can be a point of improvement for future studies. The study has shown that most respondents were females wherein females (88.7%) and 20/27 males (74%) rated their overall satisfaction as 6-7. There is no significant difference between the two, but females are nearly half more than males. Then, those aged 18-29 had 48/54 (88.8%) scored a positive overall satisfaction with 6-7 while those 30-60 had a lower combined amount of 6-7 overall satisfaction ratings with 19/26 (73%). This can be a hint about the difference in adeptness with technology which can be further explored. Regardless of educational status all had a positive correlation with patient satisfaction, however, there were more frequencies of lower ratings within those who achieved a lower educational status. This can show telemedicine is generally understandable but those with a lower educational attainment may have a small chance of encountering difficulties with the system. Since Skin and Care foundation has a lot of charity patients, most of the respondents had incomes below 11, 000 pesos and most of them with 40/46 rating their satisfaction with a 6-7. There is not

enough data to show significance between the other income brackets because other brackets only had around 17 respondents maximum. Experience with telemedicine based on income status can be further explored in future studies but results have shown that most still had positive outcomes.

Most of the patients used mobile phones (70/80 respondents) while other gadgets such as laptops, desktops and tablets had less than 10 respondents each which cannot show significant differences between them. However, most mobile users had a satisfaction rating of 7 which can indicate that easily accessible gadgets are important to satisfy patient needs. Then, 27/39 respondents using fiber and 26/36 mobile data users graded their overall satisfaction with a score of 7, which shows that the telemedicine service was still useful and accessible despite internet speed differences. This shows the importance of a platform that is not heavy on data usage because not all may have a stable connection. Among patient perceptions interface quality highest Pearson R value of 0.942 which indicates that patient satisfaction is tied with the visual appearance of the platform because its appearance and functionality controls how the patient interacts with the. Usefulness with a Pearson R value of 0.937 that highlights the importance of telemedicine in meeting the patient's expected needs and expected resources saved. Ease of use and learnability is important for conveying information and being easily adaptable to the system, which had the third highest Pearson r correlation. Interaction quality and reliability have a

strong positive correlation with patient satisfaction but have shown lesser values which show areas of improvement. Reliability is a measure of how patients can use the system despite making errors and how it can be compared to in-person consultations. A question in reliability that had the lowest mean score of 5.47 was seen in the question that asked whether the telehealth system was like in person visits. This indicates that this is a good alternative to in person consultations, which is still the preferred method by some. In summary, the strongest correlated factors show the importance of having a simple and learnable system that allows the patient to convey their needs to the doctor immediately. While improvements can be done to make the system more reliable by mitigating errors and receiving service like in-person consultations.

Overall the study showed positive correlations between sociodemographic factors, infrastructural factors, and perceptions, however future research can balance out the skewed sociodemographic results to make the study more controlled. This study has also shown the importance of creating a simple yet visually appealing system that has importance on practicality and usability that allow the patients to access the service and meet their healthcare needs that is similar to in-person consultations. Future studies can also look into more specific aspects of medical care when using telemedicine such as specific health outcomes desired, specific diseases managed, or experiences for specific specialties.

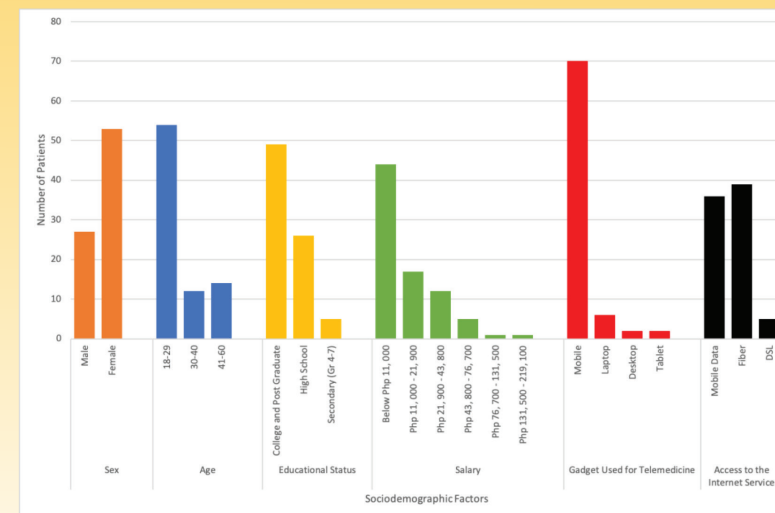


Figure 1: Sociodemographic Factors of the Respondents

Table 7: Correlation Analysis

Relationship to Satisfaction	Pearson R	p-value	Interpretation	Decision	Remarks
Usefulness	0.937	0.000	Strong Positive	Reject Ho	Significant
Ease of Use	0.931	0.000	Strong Positive	Reject Ho	Significant
Interface Quality	0.942	0.000	Strong Positive	Reject Ho	Significant
Interaction Quality	0.893	0.000	Strong Positive	Reject Ho	Significant
Reliability	0.831	0.000	Strong Positive	Reject Ho	Significant

Figure 2: Correlation of Patient Perceptions to Patient Satisfaction

The effectiveness of telehealth in hypertension management of 1 adults in communities: A systematic review and meta-analysis

Christian Rey D. Rimando

Abstract

Background. Telehealth has gained interest in offering better access to health care services for chronic conditions, such as hypertension, especially on communities. The COVID-19 pandemic further affected the health care access among these vulnerable patients due to the health and safety protocols.

Objective. This systematic review and meta-analysis aim to assess the effectiveness of telehealth in hypertension management among adults in communities.

Methods. This study followed the guideline statement of the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses). Systematic literature review of 30 randomized controlled trials that conducted community health care services using telehealth in managing hypertension among adults were considered. Included studies were assessed for risk of bias, quality, and internal validity using the Revised Cochrane Collaboration Risk of Bias tool. The meta-analysis was done using the fixed and random effects models combined with narrative analysis.

Results. The systematic search for relevant studies in bibliographic databases along with the hand-searching strategies, trial and review registries and citation searching returned 1,902 total hits and 30 were

included in the meta-analysis. The pooled data shows that systolic blood pressure (SBP) measurements in a random effects model were significantly lower with telehealth group versus control group – usual care (SMD -2.80, 95% CI -4.28, -1.32; Z=3.71, p<0.05). Grouped analysis for SBP measurements done ≤6 months (SMD -2.56, 95% CI -4.83, -0.28; Z=2.20, p<0.05), and >6months (SMD -3.16, 95% CI -5.08, -1.24; Z=3.22, p<0.05) yield significant results favoring telehealth group. Blood pressure (BP) control in a random effects model were significantly higher with telehealth group versus control group (SMD 0.53, 95% CI 0.31, 0.91; Z=2.29, p<0.05). Results show that there was insufficient evidence to show that telehealth group improved versus the control group on these outcomes: diastolic BP (DBP) (SMD -0.79, 95% CI -1.90, 0.33; Z=1.38, p=0.17), DBP measurements for ≤6 months (SMD -0.89, 95% CI -2.10, 0.32; Z=1.44, p=0.15), and >6months (SMD -0.82, 95% CI -2.56, 0.92; Z=0.92, p=0.36). Among the telehealth modalities, text messaging was the most used by 36.7% of included studies.

Conclusion. Telehealth is an effective strategy in improving the SBP, SBP diff and BP control among adults with hypertension in communities when compared to usual care.

Keywords: *Telehealth, Community Health Care, High Blood Pressure 31*

RESEARCH COMPETITION



POSTER PRESENTATION
(UNDERGRADUATE)

COVID-19 Vaccination: The Greater Manila Experience

Bianca Bermejo

Introduction. The emergency use of COVID-19 vaccines is being promoted worldwide to protect the public from severe symptoms. Vaccine confidence is an issue in the Philippines since it dropped between 2015-2018, triggered by the Dengvaxia scare. With almost half of adult Filipinos unwilling to receive the COVID-19 vaccination in early 2021, this study aims to describe the COVID-19 vaccination experience in the Greater Manila Area.

Methods. Using an analytical cross-sectional study design, 1,248 Filipinos aged 18-60 years old residing in Greater Manila Area answered a validated four-part questionnaire given through Google Forms. A sample size of 361 was computed using OpenEpi with an assumed 62.5% anticipated percent frequency and a 95% confidence level. The study focused on clinico-sociodemographic characteristics as the independent variable and a subject's willingness or refusal to get vaccinated against COVID-19 as the dependent variable. IBM SPSS 25.0 and MedCalc were used to analyze the data. A Fisher's exact test was used to compute the p-values

for the association between the willingness or refusal to get vaccinated and five clinico-sociodemographic characteristics. A two-sided p-value of <0.05 was used as the significance threshold. The relative risk and 95% confidence intervals were also computed.

Results. Results show that 97.92% are willing to get vaccinated against COVID-19. Among those who are willing, majority of the participants strongly agree that the COVID-19 vaccines outweigh the risk of harm (47.5%) and are a societal responsibility (47.9%). Majority of participants who refused to be vaccinated strongly agreed that the vaccine might cause immediate serious side effects (46.2%) and unforeseen side effects in the future (34.6%). Most of the participants are willing to get vaccinated with CoronaVac, while the least preferred is Bharat BioTech. Those who are more likely willing to get vaccinated are males, college graduates, above Php10,000.00 monthly income earners, and those with comorbidities and a family history of COVID-19. Educational attainment, monthly income, and family history of COVID-19 have a p-value of <0.05 .

Conclusion. There are more Filipinos willing to get vaccinated and there is a significant association between educational attainment, monthly income, and history of COVID-19 in the family with vaccine willingness or refusal.

FILIPINO COMMUNITY DWELLERS' COVID-19 KNOWLEDGE, ATTITUDE, PRACTICES AND HEALTH LITERACY INFLUENCE ON THEIR PANDEMIC FATIGUE: A CORRELATIONAL STUDY

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Abstract

Background: Filipinos were staggered with the COVID-19 pandemic last March 2020. The government issued one of the longest lockdowns leading to economic and health access decline. However, despite these, the number of COVID-19 cases is still increasing. This may be attributed to pandemic fatigue (PF), which is the public's demotivation to follow health protocol relate to information and behavioral fatigue. Factors affecting PF in the community still needs to be explored to develop programs and address their needs to battle COVID-19.

Purpose: This study aims to describe COVID-19 knowledge, attitude, practices (KAP), and health literacy's influence to the level of PF among community dwellers.

Method: This study utilized a quantitative, cross-sectional correlational research design. Through consecutive sampling, Filipino community dwellers (n=150) residing in a suburban community were invited to participate. They answered a validated 4-part instrument namely: Demographic profile, Knowledge, Attitude, KAP toward COVID-19, Newest Vital Signs, and Pandemic Fatigue Scale - Filipino version. Data were analyzed using descriptive statistics and multiple linear regression.

Results: The study determined that the participants have a moderate level (40%) of PF, and information fatigue (52%) contributes significantly to this. It is also interesting to note that COVID-19 attitude negatively influences PF ($p=-0.240$). COVID-19 knowledge directly influences health literacy ($p=0.215$), COVID-19 attitude ($p=0.400$) and practices ($p=0.373$). Whereas, health literacy affects COVID-19 attitude ($p=0.161$) and practices ($p=0.06$).
Conclusion: The COVID-19 attitude among community-dwellers negatively influences PF. While, COVID-19 knowledge has been observed to have no direct relationship or effect to PF. However, it significantly contributes to health literacy, COVID-19 attitude, and practices. Therefore, community program development that supports positive COVID-19 attitude by enhancing COVID-19 knowledge and health literacy may be beneficial.



MOLECULAR DOCKING AND PHARMACOKINETIC PROFILING OF NAB-PACLITAXEL AS ADVANCED CHEMOTHERAPEUTIC AGENT AGAINST BREAST HER-2 POSITIVE BREAST CANCER PATIENTS

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Jan Marnyle V. Eslabra | John Lawrence D. De Borja | Johji G. Nakama
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Breast cancer is one of the deadliest types of cancer among women worldwide. The human epidermal growth factor (HER2) is a transmembrane receptor that is highly expressed in breast cancer and in different other cancers, and recent studies show that the overexpression of the HER2 protein in HER2 positive breast cancers have exhibited a resistance to therapies with Paclitaxel. The objectives of the study are: (1) to assess the binding affinity of Nab-paclitaxel to the HER2 receptor; (2) to determine the qualities of Nab-paclitaxel as a drug candidate through pharmacokinetic parameters; (3) to identify gene expression that may be inhibited or promoted by the Nab-paclitaxel through Comparative Toxicogenomic Database; and (4) to identify the physicochemical properties of Nab-paclitaxel. The molecular docking process involved the

use of Avogadro, Discovery Studio Visualizer, Chimera, and Auto dock Vina. Moreover, the active site of the receptor was determined through the use of Protein Data Bank where the X, Y, and Z coordinates of chains A and B were stated to be 17.37, 17.58, 27.00 and 34.28, 45.23, -11.01, respectively. While the physicochemical properties and pharmacokinetic profiling search made use of Swiss Target, CTD, Swiss ADME, ADMET Lab 2.0, ADVER-Pred, CLC-Pred. Results reveal that the docking pose of chain B of HER-2 receptor with Paclitaxel is greatest which is -9.4 kcal/mol, where the strongest hydrogen bond can be seen in ARG849 with a distance of 3.0 Angstrom (Å). It was documented that Paclitaxel has effects on the genes of breast cancer patients, specifically the ABCB1 gene which codes for the P-glycoprotein and is responsible for the resistance against chemotherapeutic drugs. Since NAB-paclitaxel is an already established chemotherapeutic drug, this may potentially imply the clinical significance of the study. NAB-paclitaxel can also be potentially metabolized easily since it does not inhibit most of the drug-metabolizing cytochrome P450. The results warrant the development of new candidate drug combinations or discovery of new favorable drug binding interaction sites which would further improve the drug treatment.

An Assessment of Perception of Metro Manila Residents and Workers on the Effectiveness and Implementation of COVID-19 Contact Tracing Technologies

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Abstract

Background: In response to the COVID-19 pandemic, contact tracing became one of the main control measures in fighting the spread of the virus. The World Health Organization (WHO) mentioned that contact tracing remains a key and effective strategy in disrupting the chains of transmission of SARS-CoV-2 and reducing COVID-19-associated mortality.

Objectives: This study aimed to assess the perception of individuals and establish the factors affecting the implementation and effectiveness of available COVID-19 contact tracing strategies and technologies in the Philippines.

Methodology: This quantitative research study utilized a 28-item descriptive survey divided into three parts - sociodemographic profile, implementation, and effectiveness. The researchers used Slovin's Formula with a 95% confidence level to compute the sample size of 400. Prior to the conduct of the main study, a pilot study among 35 respondents to check the validity of the questionnaire. Descriptive statistics were used to summarize the sociodemographic profile of the respondents, while Cronbach's alpha was calculated for the implementation and effectiveness portion to exhibit reliability. A frequency table and multivariate regression analysis were then used to interpret the data collected.

Results: A total number of 425 respondents participated in the main study. Results found that Metro Manila residents and workers strongly agree on the convenience of using their mobile

device's camera to scan QR codes. However, they strongly disagree that contact tracing applications allow interoperability. Contact tracing promotional materials on social media have a better perception of the implementation ($\beta=0.236$, $p<0.001$) and effectiveness ($\beta=0.247$, $p=0.005$) of contact tracing. Furthermore, those who prefer using pen and paper to write personal information in the contact tracing form consider ($\beta=0.268$, $p<0.001$) contact tracing more effective. However, they tend to disagree ($\beta=-0.185$, $p<0.001$) with the implementation.

Conclusions: This study showed that respondents give a somewhat agreeable perception of the implementation and effectiveness of COVID-19 contact tracing strategies and technologies in the Philippines. The need for a standardized contact tracing application is acknowledged upon data analysis. Furthermore, increasing promotional advertisements regarding contact tracing applications on social media can help influence the implementation of a standardized contact tracing application.

Keywords: contact tracing, COVID-19

Dawning of a New Chapter: A Grounded Theory Study on the Transition to Parenthood of Filipino Young Adult First-time Parents

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Keywords: transition to parenthood, Generation Z, first-time parents, young adult.

Abstract:

Introduction: Parenthood is a gratifying yet overwhelming chapter of an individual's life as it entails demanding responsibilities and obligations. Numerous challenges arise when parents enter parenthood and assume their new role as being a parent bears changes that may affect various aspects of life. There is paucity of in-depth studies about transition to parenthood. The study aimed to determine how Filipino young adult first-time parents go through the process of transition to parenthood.

The philosophical underpinning of the study is the post-positivist paradigm. It discovers the truth while also recognizing that the truth about the transition to parenthood. Unlike positivism and constructivism, it is not only confined to what can be physically observed and it is not affected by personal biases of the researchers.

Methodology: The study employed the classical Glaserian grounded theory design and was anchored on the post-positivist paradigm. It was conducted within the NCR plus utilizing purposive sampling augmented by snowballing. Data were collected through semi-structured interviews. The constant comparative method was utilized which comprised the analysis framework of open coding using kelly grid where categories were created which were then sorted based on similarities and differences. Relationships of the codes were then determined in the axial coding. Subcategories were identified which was followed by theoretical coding where themes were identified. To ensure the trustworthiness of the study, the validation techniques of members

checking and critical friends were employed.

Findings: Four themes emanated from the study, namely: The letting go phase, the elimination of certain previous lifestyles of the participants as they enter parenthood. The bracing through phase, refers to the strategies utilized to overcome the struggles of being a first-time parent. The stepping up phase, denoted as the participant's exploration and identification of the best and appropriate parenting style. Lastly, the adapting to phase, refers to the participant's constant adjustment and refinement of their visions in life and their way of parenting as they embark on a new role in life. Although four themes emerged, the process of transition is nonlinear in which each first-time parent goes through each phase differently.

Discussion: The LeBraSA Model by CBDB provides insights into the process of transition to parenthood. Certain mindsets and lifestyles of the participants are eliminated to overcome the struggles of being first-time parents by exploring the appropriate parenting styles as they constantly embark on a trial-and-error basis to adapt and adjust to their new role. The model does not only provide insights but as a theory, it defines & explains the complex nonlinear process of the transition to parenthood by providing information about the different phases and the subthemes within.

Recommendations: The model engendered from the study can be used by healthcare professionals and other stakeholders to assist and guide first time parents to understand the process of transition to parenthood.

Knowledge, Attitude, and Practices on Pap Smear as a Diagnostic Assessment of Cervical Cancer Among Filipino Women in Cebu, Philippines

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Introduction: Cervical cancer continues to be a preeminent cause of gynecological-related morbidity and mortality, causing worldwide public health concerns for women. In Metro Cebu, it is accounted as the second leading cause of female cancer in Lapu-lapu City. With the advent of Pap smear as a screening method in detecting cervical cancer, progression is halted. The primordial purpose of this study is to assess the knowledge, attitude, and practice (KAP) on Pap smear as a cervical cancer screening test among women aged 25-55 years old in a subdivision in Lapu-lapu City, Cebu, Philippines

Materials and Methods: The study integrated a cross-sectional type that utilized a 30-item e-survey questionnaire via google form. The respondents of this study include 106 females, ages 25-55 residing in Lapu-lapu City, Cebu selected via purposive sampling. Data were analyzed using descriptive statistics, Kruskal Wallis H and Spearman Rank Rho.

Results: Out of the 106 participants, the majority were 45 years old and above, married, with tertiary education, has medical-related occupations, with >₱30,000 monthly household income, with 1-2 children exhibiting high knowledge ($\mu=2.90$; $SD=0.90$), positive attitude ($\mu=3.24$; $SD=0.76$), and moderate practice ($\mu=2.92$; $SD=0.98$) on Pap smear. On multivariate analysis, no significant differences were found in their knowledge and attitude. However, women aged 35-44 years old ($p=0.00$), and those with tertiary education ($p=0.04$) were

perceived to have higher participation in Pap smear. There is also a weak positive relationship between respondents' knowledge, attitude, and practice on Pap smear.

Conclusion: Findings suggest that respondents were perceived to be very knowledgeable have a positive attitude have a moderate practice, towards pap smear, indicating a weak positive relationship between each KAP variable. Women of ages 35-44 years old and with tertiary education have higher screening practice as compared to other groups. Further actions to strengthen the health education on cervical cancer and its available screening methods must be implemented to increase their knowledge, thus encourage public participation to combat the current and future cervical cancer burden in the locale and country.

Keywords: Attitude, Cervical cancer, Knowledge, Pap smear, Practice

Spiritual Well-Being and Health-Related Quality of Life of Filipino Older Adults During COVID-19: An Explanatory Sequential Mixed Designs Method

Knoop, Mark | Fernandez, Sophia | Castolo, Therese | Dacumos, Xyrus

During our review of relevant literature, it was found there were gaps in our study's focus. Namely, the studies currently available were not based on the elderly specifically, did not take place during our time frame of the covid pandemic, and were not based from the Philippines. The study aimed to better understand and describe the spirituality of a select group of Filipino older adults during the COVID-19 pandemic, as well as to note any defining relationship between spirituality and health related quality of life. This was an explanatory sequential mixed design method which employed Husserlian descriptive phenomenology design of inquiry. The purposive sample (N=75/15) is composed of Filipino adults aged 65 years old and above, both male and female, who were community dwellers of the study sites, and mentally capable based on a mini-mental state exam. The aggregation of data was collected in two parts, first employing the use of two tools, Fisher's SHALOM and the WHOQOL-BREF. Subsequently, the data

was sourced out by self-report method, an aide memoire was devised that contained open-ended guide questions. A Kelly grid was developed to facilitate data analysis. Data collected were analyzed following the Colaizzi strategy. Confirmability, dependability, and credibility were ensured. The technique of critical friend was also applied. Bracketing, horizontalization, and resonance were observed to increase the rigor of the study. The ethical principles of beneficence, respect for person, and justice were considered throughout the research process. Ethical approval was obtained from the Ethics Review Board of a university in Caloocan City. The Pearson correlation results revealed a significant large positive relationship between levels of spiritual well-being and health-related quality of life ($r(73) = .625, p.001$). Through examination of the individual and collective articulations of the participants the following themes emerged: spirituality as sense making, spirituality as source of support, and spirituality as a form of solace. The findings of the study illuminated the point that individuals' care must always be considered holistically, and greater efforts be applied to examining a person's spirituality.

Keywords: Filipino older adults, Spiritual well being, Health related quality of life.

Media and Social Environment Influence on COVID-19 Immunization Decision Making: A Comparative Study about 3rd Year Students from Selected Allied Health and Non-Allied Health Programs of a Higher Education Institution in Lagro, Quezon City

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Abstract

Everything normal became unsafe and unusual in March 2020, signaling the start of a massive change. This study aims to compare the decision-making of third-year students from selected allied health and non-allied health programs towards getting immunized (COVID-19 vaccine) and to determine whether media and social environment influenced their decisions. There are 271 third-year students from BS Nursing, BS Medical Technology, BS Pharmacy, BS Computer Science, BS Information Technology, and BS International Tourism Management, majoring in travel and tour operations. Data are collected using online platforms such as Google forms. The statistical tools such as frequency and percentage distribution, weighted mean, one-way analysis of variance, independent samples t-test and Pearson Product-Moment correlation were used. The results showed that the majority of the respondents are considered Tagalog (85.6%), female (69.4%) who are 21 years old (55.7%), and Catholic (76.4%). In addition, allied and non-allied health students use social media (4.30 & 4.24) as their primary source of information about COVID-19 immunization, with medical professionals (4.13) and friends (3.80) serving as their social environment sources. As the most common influencing factors in COVID-19 immunization, their

safety purpose is the most significant for allied health (4.80) and non-allied health students (4.64). There was a significant difference in students' media exposure based on their programs, allied health (3.59), and non-allied health (3.74). There is also a significant difference in decision-making between allied (3.21) and non-allied health (3.41) students. The results show that the higher their exposure to the media and social environment, the higher the influence of the factors on their decision-making about COVID-19 immunization. In conclusion, there is a significant relationship between allied and non-allied health students' media and social environment exposure to their COVID-19 immunization decision-making. Lastly, the researchers would like to advise future studies to broaden the population and include unvaccinated students to assess the effect of media and social environment on their decision-making toward COVID-19 Immunization.

Doodles be Told: Unpacking the Self-Perception of Children with Cleft Lip-Palate Surgical Repair

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Agnes V. Raymundo, PhD, RN
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Abstract

Objectives: Cleft lip-palate touch on the very essence of a child's identity and self-perceptions. The study aimed to understand and describe how children with cleft lip-palate surgical repair perceive themselves.

Methods: The study was anchored on the epistemologically constructivist paradigm. This study employed generic descriptive design. The purposive sample is consisted of 15 children aged 6-12 years old, who received surgical repair during their early childhood. Data were collected through doodling and elicitation interviews. Utilizing "draw-and-talk" technique, child-participants "tell their story through drawing" how they perceive themselves physically, emotionally, and socially. They then describe their doodles. The key informant mothers cross-

validated the descriptions. Using the analysis framework of critical visual methodology, doodles were analyzed with their subsequent significant descriptions. These descriptions were determined and compared for relationships and commonalities. Then sorted into categories and themes according to the extent of meaningfulness and relatedness.

Results and Discissions: The doodles unpacked three significant themes: Exteroception reveals how they plainly perceive their facial appearance and functional ability. Interoception depicts how they internally perceive events that influenced feelings of normalcy and satisfaction. Socioception conveys how they socially perceive themselves through peers and family to form social belongingness.

Conclusions: Scars from cleft repair might have healed already, however, "scars" will remain in their self-perceptions and identity. Contextualized supportive holistic and biopsychosocial interventions must be implemented to address the needs of these children and their families.

Keywords: cleft lip-palate surgical repair, doodling, self-perceptions

AN ASSESSMENT OF THE KNOWLEDGE AND ATTITUDES OF TYPE 2 DIABETES MELLITUS (T2DM) PATIENTS IN SEEKING MEDICAL ADVICE USING TELECONSULTATION SERVICES AMID THE PANDEMIC IN MALABON CITY

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Abstract

The adoption of minimum health safety guidelines and the implementation of transportation and mobility restrictions were imposed during the COVID-19 outbreak in the Philippines during which time individuals with Type 2 Diabetes Mellitus (T2DM) were faced with a dilemma not only with regards to accessing basic daily necessities, but also in terms of complying with their healthcare needs and conforming to their prescribed medications, suggested lifestyle, and diet changes. Fortunately, teleconsultation is seen as a potential avenue to address the current gaps in healthcare access and delivery with the use of electronic devices, video conferencing applications, and internet reception. The goal of this study is to assess whether T2DM patients in Malabon City possess sufficient knowledge and positive attitudes in terms of their demographic factors such as sex, age, educational attainment, employment, and socioeconomic status. Data gathered from 108 respondents with T2DM from Brgy. Longos and Brgy. Concepcion revealed that most respondents were females aged 56 to 60 years and were mostly high school graduates and full-time employees with an average monthly household income of less than ₱11,000. Results also revealed that the demographic factors of interest are not correlated with their knowledge and attitudes

on teleconsultation, except for the significant association observed between their employment status and their attitudes towards teleconsultation ($\chi^2 = 9.68$; $p < 0.05$). In addition, knowledge and attitude scores of the respondents demonstrated a strong positive relationship with each other, indicating direct proportionality ($r = 0.955$). With this information, it was determined that, on average, the respondents possessed adequate knowledge but negative attitudes towards teleconsultation, which reflected not only their level of exposure towards such services in the community, but also their hesitancy to frequently use it to access healthcare needs due to factors related to their livelihood.

Keywords: teleconsultation, knowledge, attitudes, T2DM, overall extent, correlation



Factors associated with proper disposal of unwanted medicines among college students in Metro Manila

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Abstract

Background: The World Health Organization (WHO) reported that 50% of all medications are prescribed and sold to patients inappropriately which results in unused, unwanted, or expired medicines that often end up in landfill and water systems. As a result, the disposal of these medicines becomes a global environmental and public health concern. In the Philippine setting, the data about disposal practices of medicines is limited.

Aim: Therefore, this study aims to measure the baseline knowledge on proper disposal of unwanted medicines and to examine the factors associated with its proper disposal.

Methods: A school-based cross sectional study was conducted online among 770 college students in Metro Manila from June to July 2022. In choosing the representative sample of the population, the researchers used a type of non-probability sampling which is the quota sampling technique wherein the participants were categorized based on their field of study. With an unknown large population exceeding 100,000 people, the infinite population formula was utilized to compute the sample size. Thus, 770 respondents served as the sample size. Interpreting the baseline knowledge and practices of the respondents about unwanted medicines and their proper disposal was done using Bloom's cut-off point scoring

system. Multiple logistic regression analysis was then used to determine if the variables (year level, sex, field of study, knowledge of unwanted medicines, knowledge of proper disposal) were significantly associated with the respondents' disposal practices.

Results: The knowledge of proper disposal, year level, and field of study are significantly associated with the students' disposal practices. The knowledge of unwanted medicines is a significant predictor of the level of knowledge on proper disposal. Those with adequate knowledge of unwanted medicines are 2.61 times more likely to have adequate knowledge of the proper disposal of unwanted medicines.

Conclusions: The baseline knowledge on proper disposal of unwanted medicines among college students was moderate to good; however, there is still a gap between the two fields of study since students from health-related programs got most of the correct responses regarding unwanted medicines and their proper disposal. Moreover, knowledge of proper disposal of unwanted medicines, year level, and field of study are the factors associated with proper disposal.

Keywords: Proper disposal, unwanted medicine, pharmaceutical waste, environmental hazard, health-related program, non-health related program

FORMULATION, CHARACTERIZATION, AND EVALUATION OF MOISTURIZING HAND CREAM FROM MANGO KERNEL OIL (*Mangifera indica*) AND SWEET ORANGE PEEL EXTRACT (*Citrus sinensis*)

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Abstract

As an effective way of protecting oneself from contracting COVID-19, handwashing is highly recommended. Its frequent practice, however, causes dryness and irritation to the skin. As such, the study focused on the formulation and characterization of a moisturizing hand cream using Indian Mango (*M. indica*) kernel oil and Sweet Orange (*C. sinensis*) aqueous peel extract as bioactives. The phytochemical analysis confirmed the presence of flavonoids, alkaloids, saponins, phenols, and tannins in the *C. sinensis* extract. *M. indica* kernel oil, on the other hand, was found to contain flavonoids, triterpenes, sterols, saponins, and tannins. These phytochemicals were found to be responsible for the moisturizing and potential antibacterial activities. Thirty (30) consenting participants (male=9: female=20: unknown=1) ages 20- 51 years old evaluated the formulated products with regard to their sensory attributes. Overall, the participants were very satisfied with the Cream Base (\bar{x} =3.83) and the Formulated Hand

Cream (\bar{x} =3.77). The Formulated Hand Cream had a percentage increase of 38.03% in moisture, 82.59% in oil, and 85.22% in softness. The hand creams were stable for one week, which equates to three (3) months of warehouse storage. The Formulated Hand Cream is safe for use as 100% of the participants did not experience adverse reactions.

Keywords: moisturizing, hand cream, bioactive, *Citrus sinensis* aqueous peel extract, *Mangifera indica* kernel oil



***In Silico* Approaches in Epidermal Growth Factor Receptor and Vascular Endothelial Growth Factor Receptor for Targeted Intracellular Drug Delivery for Treatment in Lung Cancer**

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Abstract

On-going clinical studies have been conducted on the anti-cancer medication candidate motesanib due to its highly promising potential in treating a variety of cancer types. With the modernization, risk in developing lung cancer is highly probable with over 600,000 deaths in 2004 caused by secondhand smoking (Barta et al., 2019). This research investigates the ability of motesanib to inhibit the epidermal growth factor receptor (EGFR) and vascular endothelial growth factor receptor (VEGFR) in non-small cell lung cancer. Structure of motesanib was obtained from PubChem and receptors EGFR and VEGFR structures were obtained from Protein Data Bank

(PDB). The ligand-receptor interactions have been investigated using Autodock Vina and the pharmacokinetic profiles have been screened via SwissADME and ADMETlab 2.0. Molecular docking results revealed that motesanib exhibits a stronger binding affinity with EGFR (-8.3 kcal/mol) and presented favorable absorption, distribution, metabolism, excretion, and toxicity (ADMET) properties alongside common FDA approved EGFR inhibiting and VEGFR inhibiting drugs. Satisfactory blood brain barrier (BBB) penetration, intestinal absorption, and druglikeness (0.55 bioavailability score) has been evident, conforming with Lipinski's rule, GSK rule, and Golden Triangle; and predicted to have good intestinal absorption. The BOILED-egg from SwissADME and the pharmacokinetic properties from ADMETlab 2.0 show that motesanib also has exemplary BBB penetration and human intestinal absorption (HIA). Based on the *in silico* studies, it is with great recommendation to further investigate the therapeutic properties of motesanib as an anti-cancer drug that may target EGFR in lung cancer.

***In silico* prediction of pharmacokinetic profile and safety of relevant SARS-CoV-2 mRNA-based vaccine ingredients**

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Abstract

The rapid spread of the Coronavirus Disease 2019 (COVID-19) has caused a global pandemic as declared by the World Health Organization in March 2020. Short and long-term effects of COVID-19 include respiratory, neurological, heart conditions, and blood clots. As prevention, mRNA vaccines developed by Pfizer-BioNTech and Moderna were among the first in the vaccine race. However, the new technology and side effects contributed to vaccine hesitancy among Filipinos. This study aims to serve as a potential cost-effective tool in screening for the health and environmental safety and efficacy of mRNA vaccines. Absorption, distribution, metabolism, and toxicity profiles of relevant vaccine ingredients such as lipid nanoparticles (LNPs) used for drug delivery and the active ingredient (viral spike of mRNA epitope) were analyzed through computer simulation tools. Results showed that the vaccines are highly effective, neuroprotective, exhibit anti-bacterial and anti-inflammatory properties, and strengthen the immune system. There were no significant health concerns found other than its potential

for allergic reactions and heart implications. Likewise, the vaccines were not found to be harmful to the environment. Overall, the results showed that the mRNA vaccines exhibit an effective mechanism in boosting the immune response against SARS-CoV-2, outweighing the benefits from potential risks. Ultimately, this study serves as a low-cost alternative testing for screening safety, efficacy, and potential adverse effects arising from mRNA vaccines which will be essential to policymakers and pharmacovigilance activities.

Keywords: mRNA vaccines, SARS-CoV-2, toxicity, health, safety, efficacy

IN SILICO SCREENING OF RHIZOME-BASED PHYTOCONSTITUENTS EXTRACTED FROM GINGER TEA (ZINGIBER OFFICINALE) AS POTENTIAL CHIKUNGUNYA E2 GLYCOPROTEIN AND DENGUE NS1 VIRAL PROTEIN CO-INFECTION INHIBITOR.

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Currently, there are no specific treatments for dengue virus (DENV) and chikungunya virus (CHIKV). In previous studies, rhizome-based phytoconstituents have exhibited anti-viral activity. Screening of ginger tea phytoconstituents might help determine their potential as viral inhibitors, which can help future studies on drug development. The primary objective of this study is to screen identified ginger tea phytoconstituents as potential inhibitors of DENV NS1 viral protein and CHIKV E2 viral glycoprotein through molecular docking and pharmacokinetic profiling.

Among the 45 ginger tea phytoconstituents that were used in Autodock 4 for molecular docking, only 10 candidates showed promising binding energy towards the DENV NS1 and CHIKV E2 viral protein, ranging between -6.0 kcal/mol to -7.1 kcal/mol. More specifically, 7 out of 10 of these ligands were for DENV NS1, while 3 out of 10 were for CHIKV E2. Among the 7 ligands against DENV NS1, 1-dehydro-[10]-gingerdione had the best-docked score (-6.89 kcal/mol). And among the 3 ligands against CHIKV E2, (-)-Zingiberene had the best docked score (-7.1 kcal/mol). In the interaction studies performed with Discovery Studios, it was found that 6 out of 7 ligands formed hydrophilic

bonds with DENV NS1 amino acid residues (Asn130 & Lys85), proven to be important for viral entry. Meanwhile, 2 out of 3 ligands formed hydrophobic bonds with CHIKV E2 amino acid residues (Ile200 and Phe205), which are important for viral attachment. To support these interaction studies, Prediction of Activity Spectra for Substances (PASS) program was used to determine the potency of the ligand candidates as viral entry inhibitors. It was found that 6 out of the 10 ligands showed potency for other viruses such as rhinovirus, influenza, CMV, herpes, etc.

Pharmacokinetic profiling of the 10 ligands showed significant properties that can be advantageous for their candidacy as anti-viral agents. The 7 ligands for DENV NS1 showed high gastrointestinal absorption and can enter the blood brain barrier (BBB), while the 3 ligands for CHIKV E2 showed low absorption for the same parameters. Furthermore, the 10 ligands showed high LD50 values as reflected in their non-carcinogenic and Ames non-toxic nature. Because of the safe nature and high potency of the 10 ligands for co-infection drug candidacy, it was determined from druglikeness data that no ligand was rejected under Lipinski's, Ghose's, Egan's, and Veber's standards. Out of the 10 candidates, (S)-6-Gingerol and Gingerenone A had zero violations for any standard used by pharmaceutical companies.

There were 8 out of 10 ligands that exhibited significant interactions with amino acid residues that are important for either viral entry or attachment. Their pharmacokinetic profile shows that there is a possibility for these ligands to be anti-viral agents, with (S)-6-Gingerol and Gingerenone A as the top ligand candidates. An in vitro screening is currently being performed, where high performance liquid chromatography (HPLC) and affinity chromatography will also be utilized.

KNOWLEDGE AND PRACTICE OF MEN IN THE USE OF SKINLIGHTENING PRODUCTS: A CROSS-SECTIONAL STUDY CONDUCTED IN MANILA CITY

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Background: Skin-lightening products are used to remove localized dark patches by decreasing the melanin pigment through tyrosinase catalytic action inhibition [1]. These products are commonly used by women [2]. Thus, formulations as well as studies on these types of products are focused on women and minimal is known for men [3]. The study aims to assess the knowledge and practices of men and the association of the occurrence of unwanted effects from skin-lightening agents.

Methods: Descriptive cross-sectional method was used in the conduct of the study. The study utilized a validated and internally consistent researcher-made survey questionnaire. The sample size of 422 male respondents was derived using Cochran's Formula with a CI of 95%, with 5% margin of error, and a proportion of 0.5. Data was treated using Chi-square test with a p-value of <0.05.

Result: Most of the respondents are in their early adult years. The data shows that the respondents have adequate knowledge and good practice on skin-lightening products. However, the knowledge and practice does not contribute and predict the number and occurrence of unwanted effects experienced while using skin-lightening products.

Conclusion: There is no association between the number of unwanted effects experienced from using skin-lightening products, and the demographics, as well as the adequate knowledge and good practice of the respondents. Thus, there is a need to review the formulations for the said products to fit the skin of men to minimize unwanted effects.

Keywords: health risks, skin-lightening, cosmetics, men

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KNOWLEDGE, ATTITUDE AND PERCEPTION AMONG FILIPINO WOMEN TOWARDS CONTRACEPTIVE METHODS AMIDST COVID-19 PANDEMIC

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The COVID-19 pandemic has reduced the number of contraceptive users due to issues on availability and distribution. In spite of the possibility of an increase in the number of fertility, marriage, and birth during the pandemic, only a few studies have dealt with contraceptive methods in the Philippines. Hence, this study aimed to determine the knowledge, attitude and perception among Filipino women towards contraceptive methods amidst COVID-19 pandemic. The research is a mix of comparative and correlational descriptive research design. Four hundred two (402) respondents from the 10 barangays in Quezon City with the highest COVID-19 cases were the subject of the study using stratified and voluntary sampling. The researchers obtained the data by conducting an online survey using a modified survey questionnaire. The obtained data were subjected to the different statistical tools including percentage, weighted mean, ANOVA, T-test, and Pearson-R Correlation Coefficient

for the analyzation of the results. Based on the result, the majority of the respondents are ages 18-27 years old, in a relationship, college graduates, have a monthly income of below PHP 15,000, and users that have been using contraceptives ranging from 1 to 12 months. Filipino women showed a moderately high level of knowledge in terms of use and risks, positive attitude, and positive perception towards contraceptive methods amidst the COVID-19 pandemic. The researchers concluded that there is a significant relationship among the Filipino women's knowledge, attitude and perception. Furthermore, there is a significant difference among the Filipino women's knowledge, attitude and perception towards contraceptive methods amidst COVID-19 pandemic when grouped according to demographic profile except for the monthly income. To increase the knowledge of Filipino women towards contraceptive methods, the researchers encourage pharmacists and other healthcare workers to be more involved in counseling towards the use and risks of different contraceptive methods.

Keywords: *Contraceptive methods, COVID-19, Filipino women*

The Sensitivity of Common Ocular Pathogens to Commercially Available Antimicrobial Lenses

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Abstract

Introduction:

The COVID-19 pandemic had a huge influence on our environment and on hygiene. (WHO, 2020). With eyeglasses being the most recommended technique of reducing refractive problems during these pandemic and ophthalmic lenses can be a breeding ground for microorganisms. Anti-microbial lenses are now being introduced by ophthalmic lens manufacturers. The lenses were embedded with silver nanoparticle within the coating structure. The silver within the coating releases silver ions (Ag⁺) responsible for its antimicrobial claims. The research aimed to identify the efficacy of the antimicrobial lenses against the common ocular pathogens *S. aureus*, *E. coli*, *C. albicans*, and *A. brasiliensis*.

Materials and Methods: The Measurement of antimicrobial activity on plastics and other non-porous surfaces (ISO 22196:2011) was adopted by the researchers. The ISO 22196:2011 method is meant to quantitatively examine the potential of plastics to prevent the growth of microorganisms (bacteriostatic) or kill them (bactericidal). It's a sensitive test, which means it can pick up on low-level antimicrobial effects over extended periods of time. The method expands its application to various Non-porous Surfaces, rather than being limited to only plastic surfaces.

Results: The antimicrobial lenses yielded a percentage efficacy against *S. aureus* of 96.20% and 96.45% efficacy against *E. coli*. However, the antimicrobial lenses did not show an antifungal activity against *C. albicans* and *A. brasiliensis*. The results

demonstrated that the silver nanoparticles in the lens coating are responsible for the antibacterial efficacy. Notably, the silver-containing lenses exhibited potent antibacterial activity.

Conclusion and Recommendation: The study focused on evaluating the effect introduced by the antimicrobial lenses on the microorganism presented in the study. Moreover, the antimicrobial features of the samples were assessed applying the ISO 22196:2011 protocol. Furthermore, the samples show no antifungal activity as highlighted by the results of the antifungal test. Finally, the test using the ISO 22196:2011 confirmed the antimicrobial activity of the silver nanoparticle treated lens (antimicrobial lenses) against *S. aureus* and *E. coli*. The antimicrobial efficacy is attributed to the presence of silver nanoparticles in the lens coating. Notably, the lenses containing Ag showed potent antibacterial activity.

Keywords: *Antimicrobial lenses, Antibacterial activity, Antifungal Activity, Silver nanoparticle*

Factors Associated with Burnout Among Medical Students of St Luke's Medical Center College of Medicine - William H. Quasha Memorial

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Abstract.

Introduction. Burnout in medical students was found to be higher than the general population. This study aimed to determine the factors associated with burnout and its prevalence among medical students of St. Luke's Medical Center College of Medicine-William H. Quasha Memorial (SLMCCM-WHQM) enrolled during A.Y. 2021-2022.

Method. This is an analytic cross-sectional study. Stratified random sampling was used wherein 420 students were selected. A total of 205 students responded to the online questionnaire for the assessment of sociodemographic characteristics, morbidities, extracurricular activities, burnout (Oldenberg Burnout Inventory - Student version), social support (Multidimensional Scale of Perceived Social Support), physical activity (The Godin-Shephard Leisure-Time Physical Activity Questionnaire-GSLTPAQ), and impact of COVID-19 (questionnaire adapted from the study of Harries et al.,2021). The online questionnaire was emailed to the selected participants. Chi-square test of independence was used to determine the association of burnout with extracurricular activity. Spearman rank order

correlation was used to determine the relationship of year level, physical activity, and social support with burnout. Univariate analysis using Odds Ratio and confidence intervals was done. Ordinal logistic regression analyses were carried out to control for the confounders. A p-value of less than 0.05 was considered statistically significant.

Results. From the 205 participants, the majority have moderate burnout (72.20%), 22.4% have high burnout, and 5.37% have low burnout. Year level, physical activity, social support and extracurricular activity showed no significant association with burnout. However, burnout showed a weak positive correlation with year level ($r=0.0835$) and a weak negative correlation with physical activity ($r=-0.0707$) and social support ($r=-0.1255$). Mental health disorder (p -value=0.036) and impact of COVID-19 (p -value=0.001) showed significant association with burnout. Second year students were twice as likely to develop burnout, OR=2.21, 95% CI [0.70,7.03], compared to first years. Students with high physical activity, OR=0.69, 95% CI [0.34,1.42], and social support, OR=0.65, 95%CI [0.31,1.36] were less likely to develop high burnout, while students with no extracurricular activity were less likely to develop high burnout, OR= 0.69 , 95% CI [0.32, 1.49]

Discussion and Conclusion. The study shows high prevalence of moderate and high burnout among the medical students of SLMCCM-WHQM. High levels of negative impact of COVID-19 and presence of mental health disorders are significantly associated with burnout, which may be due to increased cynicism and mental health deterioration during the pandemic.

Keywords: Burnout, Medical Students, Physical Activity, Extracurricular Activities, Social Support, COVID-19

DETERMINANTS OF COMMUNITY PHARMACISTS' ATTITUDE IN THE CITY OF MANILA TOWARDS THE USE OF ELECTRONIC PRESCRIPTION DURING COVID-19 PANDEMIC

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Abstract

Background: In this continuing crisis brought about by the COVID-19 pandemic, community pharmacies have been serving as one of the significant providers of healthcare services and medication. To continuously provide accessible medicine and healthcare services during the pandemic and quarantine restrictions, electronic prescription innovation was implemented by the Food and Drug Administration. Through this study, the socio-demographics, knowledge, and barriers or challenges experienced by the community pharmacists in the City of Manila was evaluated to associate to their attitude towards the use of electronic prescriptions.

Methods: This study utilizes Community-based Analytical Cross-sectional design. Snowball Quota Sampling Technique was used for data gathering through a research made questionnaire via google forms and Cochran's equation was used to determine the sample size of 205 with a 10% contingency plan making a total size of 225. Logistic regression analysis was used to interpret the data collected. The overall knowledge and attitude of the participants towards the use of electronic prescription was evaluated using Modified Bloom's cut-off point.

Results: Of 205 computed sample size, 55.1% (n=113) participated in the study. The results showed respectively, that 69.9% (n=79) and 64.6% (n=74) of the participants had an adequate knowledge and has a positive attitude towards the use of electronic prescriptions. Additionally, there are 31.9% (n=36) of the participants has experienced troubles in using or handling electronic prescriptions. Furthermore, through logistic regression analysis with a p-value of less than 0.05 the association of knowledge, socio-demographic's household income and years of work experience, and barriers or challenges experienced by the community pharmacists was determined.

Conclusions: The community pharmacists in the City of Manila has an adequate knowledge and positive attitude towards the use of electronic prescription which indicates that they are aware and valued the importance of electronic prescriptions in terms of its use and functions. Moreover, having an adequate knowledge with regards to electronic prescription was associated with the attitude and was perceived as a positive attitude of the community pharmacists. Furthermore, the determinants barriers or challenges and socio-demographic profile were associated with the community pharmacists' attitude towards electronic prescription usage. Thus, having a household income of more than Php 30,000 and more than 10 years of work experienced of the community pharmacists was perceived as positive attitude with regards to electronic prescription usage. Additionally, the barriers or challenges experienced by the community pharmacists was associated with their attitude and perceived as a negative attitude towards electronic prescription usage. However, the results do not generalize the entire population of community pharmacists in the Philippines. Thus, future studies can be conducted elsewhere and in other areas of pharmacy practice.

Keywords: Community pharmacists, electronic prescriptions, Attitudes

KNOWLEDGE AND PRACTICE OF THE FILIPINO CONSUMERS IN UTILIZING TEAS WITH SLIMMING CLAIM

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Slimming teas have been seen as one of the congruent solutions to the obesity that greater Manila has been facing over the years of lifestyle and pharmaceutical claims. The main objective of the study is to determine Filipino consumers' knowledge and practice in utilizing teas with slimming claims. Even though slimming teas may cause negative effects, consumers disregard them to maintain their appearances. The researchers used two types of non-probability sampling techniques to gather the respondents; the purposive sampling technique and the voluntary response sampling technique. The researchers have conducted a pre-survey to gather respondents of users of teas with slimming claims, the participants who were allowed to participate whose ages are between 18 to 45 years old and must be taking slimming teas for at least a month and above. Based on the result of the pre-survey, Quezon City became the research locale of the study. The self-made questionnaire has been validated by a panel of experts. T-test and F-test were used to

determine if there was a difference between the consumer's knowledge and practice toward teas with slimming claims when grouped according to their demographic profile. Frequency and Percentage have been used to analyze the demographic profile wherein ages between 18-25, females, normal BMI, and consumers who have 10,957 monthly incomes are the majority users of teas with slimming claims. The study reveals that Filipino consumers of teas with slimming claims have an average mean of 3.09 which is interpreted as a high level of knowledge in terms of safety and efficacy; while an average of 2.82 and 3.01 for the level of practice in terms of frequency and convenience which are also interpreted a high level of practice. Results showed that Filipino consumers in Quezon City have high knowledge and high practice in utilizing teas with slimming claims. Based on the results of the study, the researchers would like to recommend the involvement of a larger population or specific group like professionals, students, etc. to determine if the same result will be obtained. The researchers would also like to recommend the encouragement of conducting an information drive to promote the correct practice of the utilization of teas with slimming claims so that the well-being of the consumers will be assured.

Keywords: Filipino consumers, Knowledge, Practice, Teas with slimming claims

RESEARCH COMPETITION



POSTER PRESENTATION
(PROFESSIONAL)



“U- Turn”: The Transformation of Filipino Hospital Nurses Living with HIV

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Abstract

The HIV epidemic continues to be a burden across the globe and among the Filipino population. The striking increase in HIV cases in the country has not spared healthcare workers including nurses. This Descriptive Phenomenological qualitative research study aimed to explore the lived experience of Filipino nurses living with HIV and working in the hospital setting. Utilizing a purposive, maximum variation and snowball sampling method, six (6) Filipino hospital nurses living with HIV in the Philippines participated in the study. Recruitment of participants was through the assistance of Pinoy Plus Advocacy Pilipinas, Inc. in Manila. The researcher acquired approval from the Ethics Review Board before commencing with data collection. Colaizzi's method of data analysis revealed four (4) major themes that described the lived experience of Filipino hospital nurses living with HIV. These were: (1) Ground Zero: The Journey of HIV Transmission, (2) Silent Battles: Fighting HIV-related Challenges, (3) Silver Lining:

Coping and Road to Recovery , and, (4) U-Turn: Transformation of a Hospital Nurse living with HIV.

The findings from this study highlighted the transformational process that Filipino hospital nurses living with HIV experience. Disclosure, a strong support system, a positive outlook, forgiveness, and acceptance play a vital role in the nurses' journey toward a normal and transformed life. Results of the study further imply a holistic approach to HIV, drafting of hospital policies and guidelines specific for nurses living with HIV, engaging mental health, intensifying reproductive health and HIV stigma reduction strategies, promoting occupational health and safety and, empowering nurses living with HIV through unions and employee assistance programs. Future directions of the study suggest extending the scope of the study on hard-to-reach areas and other fields of nursing practice like the community, academe, other healthcare institutions and facilities, and not just in the hospital setting. More research participants are also recommended for future studies on this topic of interest.

Keywords: HIV Infections, Occupational Health, Qualitative Research



ASSESSING MENTAL HEALTH STIGMA AND HELP-SEEKING BEHAVIOR AMONG MANILA CENTRAL UNIVERSITY UNDERGRADUATE NURSING STUDENTS

GILBERT L. TAGUFA

Background: Mental illness is the third most prevalent form of disability in the Philippines. However, mental health stigma levels remain high in the Philippines. The topic of mental illness is treated with humor or hatred, and consequently, mental health stigma is a barrier that influences the utilization and allocation of resources for mental health.

Purpose: The general objective of this study was to determine the mental health stigma and help-seeking behavior among Manila Central University (MCU) College of Nursing undergraduate students. Nursing students will become an integral part of the healthcare team who will support patients mentally, emotionally, and physically during difficult times. Understanding their views on mental health and the barriers they face in seeking help for mental illness can possibly mitigate the development and consequences of mental illness.

Methods: Participation was open to all non-international students at Manila Central University College of Nursing who were at least 18 years old at the time of research. This was an analytic study that utilized a 37-question online questionnaire made available for 30 days. Specifically, the questionnaire determined the student's personal level of mental health stigma (Discrimination-Devaluation Scale), perceived level of public mental health stigma (Discrimination-Devaluation Scale), mental health level (Personal Health Questionnaire-9), and help-seeking behavior (Healthcare for Community Questionnaire).

Results: 154 of the total 372 (41.4%) MCU undergraduate nursing students participated and completed the questionnaire. The average scores for

perceived public and personal mental health stigma were 2.17 out of 5 (low) and 0.77 out of 5 (very low), respectively. 79.5% of participants had positive help-seeking behavior in the past 12 months, and 66.2% of students had a score of 20-27 (severely depressed) on the PHQ-9 questionnaire. A significant weakly positive relationship was found between students' level of depression and personal mental health stigma (p -value = 0.03). A significant relationship was also found between help-seeking behavior and personal mental health stigma (p -value = 0.004). All other relationships between independent variables (age, sex, year level, level of religiosity, current financial status) and personal and perceived public mental health stigma were not statistically significant.

Conclusion(s): Mental health stigma does not seem to be a pressing problem among the nursing students at MCU College of Nursing. Personal mental health stigma levels among the students are relatively low and have only a small effect on the student's willingness to seek help for their mental health. Future qualitative research may want to explore other possible factors affecting the help-seeking behavior of nursing students and how these compare with students enrolled in non-allied health courses. An unintended result of this research study showed that many of the students may possibly be suffering from depression. As a result, the school may also want to investigate this issue further and tailor its programs to help support the mental health of its students. The results of the study differed from the trends seen in previous literature which may be explained by the population studied and the inherent limitations of surveying people on sensitive topics such as the ones studied.

Determinants of Glycemic Control in the Philippines

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Abstract

Introduction: There was marked improvement in the diabetes care situation in the Philippines from the 2008 Diabcare study to the latest 2020 Phildiabcare study. Glycemic control defined at HbA1c level of <7.0 increased from 15% in 2008 to 47.4% in 2020. However, there was a paucity of studies on the determinants of glycemic control in the Philippines. The purpose of this population-based cross-sectional study is to identify the determinants of glycemic control in the Philippines.

Methodology: This study included patients with diabetes mellitus for at least one year from the clinics of physicians who have taken courses at the Institute for Study of Diabetes Foundation Inc. for at least three months. Through review of records of patients, the following data were

collected: the glycemic control of the subjects based on the American Diabetes Association (ADA) guideline owho are f < 7% as manifested by the current Hba1C of the subjects on record; Determinants of Diabetes Control in the Philippines; Compliance and adherence to medications; and Clinico-socio-demographic profile of diabetics in the Philippines. Association of the different determinants to Glycemic control was determined and presented.

Results: Although there are more middle aged adults and older adults who achieved glycemic control the results were not statically significant. There was no association between glycemic control and gender, working status, nor presence of comorbidities.

There was a statistically significant (p-value 0.022) association between glycemic control and absence of complications whereby those without complications have better glycemic control. Odds ratio for this association was 1.650 with a confidence interval of 1.07 to 2.54.

For patients that had management intensification, pairwise comparison also showed statistically significant difference between 2

specified time points. Initial mean HbA1c as compared to mean HbA1c after 3 months showed a significant p-value of 0.021 whereas mean Hba1c at initial visit versus mean HbA1c at 6 months has significant p-value of < 0.0001. Comparing the mean HbA1c levels at 3 months versus 6 months also showed a significant p-value of 0.002. However, when computing for association of intensification to glycemic control although there is a positive association at 1.805, the results are not statistically significant Glycemic control at 6 months was also compared with the results of the Brief Medication Questionnaire (BMQ). The results showed no statistically significant association between patients' compliance to medication and glycemic control.

There is a statistically significant positive association between less than seven years duration of Diabetes and Glycemic Control (OR 2.692 p <0.0001).

It would take 9 months of treatment before

there can be a statistically significant positive association with glycemic control (OR 1.978 p 0.02).

Discussion: For the determinants of glycemic control only the duration of diabetes at less than 7 years showed a statistically significant association with good glycemic control. Intensification has a statistically significant effect on decreasing Hba1c but no statistically significant association was seen. The duration of management has a curvilinear association with glycemic control. Good Glycemic control starts at 9 months duration of management peaks at 1 year then declines at 4 years of management.

Conclusion: Among the determinants of glycemic control only the duration of diabetes of less than seven years, absence of complications, and more than 9 months duration of treatment showed a statistically significant positive association with glycemic control in the Philippines

Table 1. Determinants of Glycemic control

Determinant	Target Glycemic Control (HbA1c <7% at 6months)	Not in Target Glycemic Control (HbA1c ≥7% at 6months)	Odds Ratio (95% CI)	P-Value
Presence of DM Complications				
Without Complications (n = 163)	92 (57.14%)	80 (44.69%)	1.650 (1.07 – 2.54)	0.022
With Complications (n = 140)	69 (42.86%)	99 (55.31%)		
With intensification	146 (90.68 %)	151 (84.36%)	1.805 (0.9346 to 3.422)	0.0797
Without Intensification	15 (9.32%)	28 (15.64%)		
Non-Compliant (n = 115)	55 (37.16%)	60 (35.29%)	0.922 (0.583 – 1.459)	0.815
Compliant (n = 203)	93 (62.84%)	110 (64.71%)		
Duration of less than or equal to 7 years	69 (42.86%)	39 (21.79%)	2.692 (1.665 to 4.368)	<0.0001
Duration greater than or equal to 8 years	92 (57.14%)	140 (78.22%)		
9 months onward duration of Management	141 (87.58)	139 (77.65%)	1.978 (1.088 to 3.562)	0.0214
Less than 9 months duration of Management	20 (12.42)	40 (22.35%)		



Food Spoilage-Causing Bacteria Inhibition: Synbiotic Effect of *Bifidobacterium* species and Pili (*Canarium ovatum* Engl.) Pomace as Potential Biopreservatives

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Supplementation of a prebiotic component to a probiotic, or as previous studies call it – synbiotics, was studied to assess the inhibitory potential against common food spoilage-causing bacteria via *in vitro* studies. This research utilized *Bifidobacterium* species and Pili (*Canarium ovatum* Engl.) Pomace Powder (PPP) as the prebiotic. Pure cultures of *Bifidobacterium* spp. (*B. bifidum* ATCC 29521 ®, *B. breve* ATCC 15700 ®, *B. infantis* ATCC 15697 ®, *B. adolescentis* ATCC 15703 ®, and *B. longum* ATCC 15707 ®) were obtained from Japan Collection of Microorganisms (JCM) RIKEN BioResource Research Center in Koyadai, Tsukuba-shi, Ibaraki, Japan while pili was sourced from Sorsogon City. Three food spoilage-causing bacteria were isolated from spoiled fruits. The prebiotic effect of PPP on the growth of *Bifidobacterium* spp. was analyzed through the comparison of *Bifidobacterium* consortium only, as the control vs the synbiotic mixture to establish its effect with food spoilage-causing bacteria expressed in pH, optical density (OD) and viability (log CFU/ml). Inhibitory capacity of this synbiotic mixture with food spoilage-causing bacteria was presented in % survival rates. Finally, antimicrobial substances produced by the synbiotic mixtures were identified.

Fermentation was observed by a significant lowering of pH values of the synbiotic mixture (3.67±0.58) vs *Bifidobacterium* consortium alone (5.00±0.00). Population density and viability of synbiotic mixtures (OD = 1.09 ±0.10; 9.37 ±0.02 log CFU/ml) were also significantly greater than *Bifidobacterium* consortium alone (OD = 0.12±0.03; 9.18±0.04 log CFU/ml). The inhibitory capacity of the food spoilage-causing bacteria vs. synbiotic mixtures grown in MRS broth with 1% PPP, shown as % survival rates [*Staphylococcus* spp. (35.34%) vs. synbiotic mixture (77.37%); *Enterobacter* spp. (44.85%) vs. synbiotic mixture (91.87%); and *Staphylococcus* spp. (56.68%) vs synbiotic mixture (85.81%)] were all observed to be lower than those of the synbiotic mixtures which survived after a period of incubation. In addition, there was no observed antimicrobial effect of given by PPP alone against the three food spoilage-causing bacteria. The antimicrobial substance responsible was found to be organic acids as the by-product of bifidobacterial fermentation.

The results of this study showed that the synbiotic mixtures of *Bifidobacterium* consortium and Philippine Pili (*Canarium ovatum* Engl.) Pomace were able to inhibit food spoilage-causing bacteria: *Staphylococcus* spp., *Enterobacter* spp., and *Streptococcus* spp. These findings suggest that this synbiotic mixture may have promising application in food biopreservation.

Keywords: *Bifidobacterium*, probiotic, prebiotic, synbiotic, *Canarium ovatum*

Phenomenological Study on COVID-19 Vaccine Acceptability and Risk Perception among Vaccinated and Non-Vaccinated Senior Citizens of a Selected Barangay in Valenzuela City, NCR

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ABSTRACT: The COVID-19 pandemic displayed challenges when it comes to vaccine acceptability and knowledge on risk perceptions among one of the vulnerable population: elderly. The phenomenological study was intended to compare the level of perception and knowledge on COVID-19 vaccine acceptability and risk perception among vaccinated and non-vaccinated senior citizens in a selected barangay in NCR.

SCREENING OF PARTICIPANTS: A purposive sampling method was administered in this study due to unavailability of a master list of senior citizens with their COVID-19 vaccination status. With the help of the local government unit, seven vaccinated senior citizens and seven unvaccinated senior citizens were invited on a one-on-one interview, provided that they were willing to be interviewed, met the inclusion criteria, and were unsatisfactory of the exclusion criteria.

DATA GATHERING PROCEDURES: Using a semi-structured survey questionnaire, each participant was interviewed to gain their level of knowledge and perspective towards COVID-19 disease and its vaccine. All responses were recorded individually via Microsoft Word and salient points were highlighted and organized via Microsoft Excel in preparation for the Thematic Analysis.

THEMATIC ANALYSIS: The collated data, upon transcription and organization, codes were generated from the interpreted responses which helped produce similar themes seen among the respondents presented in a thematic diagram for the two major variables in the study: vaccine acceptability and risk perception.

RESULTS: Study revealed multiple recurring themes shaped one's decision when it comes to vaccination. Both populations shared basic information about COVID-19 disease and vaccine benefits but still admitted lack of knowledge. Personal choice influenced by family, religion, and access to information were also considered, highlighting spread of misinformation, doubt about COVID's existence, and fear, eventually leading to vaccine hesitancy. Majority of the participants, 64.29%, believed that COVID-19 vaccine offers protection from the virus. Among the vaccinated population, 85.71% of the participants responded that COVID-19 vaccine offers beneficial protection against infections. Despite this, vaccine hesitancy among the unvaccinated were due to the lack of correct information about COVID-19 and misinformation.

CONCLUSION: Vaccine acceptability among vaccinated senior citizens was found to be mainly due to the knowledge that vaccines are helpful, effective, reduce the severity of disease incidence, and lower the chance of contracting COVID, among elderly citizens who have had vaccinations. On the other hand, vaccine hesitancy and distrust among the unvaccinated senior citizens revealed that their refusal to get vaccinated was influenced mostly by fear of the unknown. The lack of knowledge about the COVID-19 disease and its vaccines led to their fear of the vaccine because of its alleged complications, pointing to widespread misinformation.

Keywords: Vaccine Acceptability, COVID-19 Risk Perception, Elderly

Psychosocial interventions used by mental health professionals for in-patients of tertiary hospitals referred for psychosocial problems: a mixed method design.

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Introduction: In the Philippines, the psychosocial interventions are being provided at public specialist mental health facilities, which are mostly mental hospitals or general hospitals with psychiatric units and out-patient services. However, there has been no local in-depth investigation of psychosocial interventions in hospitals prior to this research. This study aimed to determine psychosocial interventions used by mental health care providers among in-patients referred for psychosocial problems in the collaborating tertiary hospitals.

Methods: This study employed a mixed-method design, using both qualitative and quantitative methodologies following the convergence model of triangulation. The following were the data sources: (1) cross-sectional review of charts of patients diagnosed with mental health and behavioral disorders; (2) a survey of mental health service providers; (3) key informant interviews and focus group discussions of mental health providers. All data were collated, compared, and contrasted, then analyzed using descriptive analysis and convergence model of triangulation design.

Results: Among the 3,502 patients in the chart review, 1,631 patients (46.57%) were females and 1,870 (53.40%) were males. The median age at the time of admission was 46.08 years, only 7.94% were pediatrics and 92.06% were adults. The most common diagnosis among the patients was mood disorder (744, 21.25%) and organic mental disorder (710, 20.27%). Combination treatment of psychosocial intervention and pharmacology was

the most common strategy received by patients in the FGD, KII, survey, and records review. There was a higher proportion of patients admitted to public hospitals who received psychosocial interventions only compared to those admitted to private hospitals. There were 2420 (69%) in-patients referred for psychosocial interventions who received psychosocial education, 67.4% received supportive psychotherapy/counseling, 15.3% family therapy, and 8.2% behavior modification interventions. There were 2,541 (72.56%) who were discharged with instruction to follow-up, while around one in 10 were not instructed to do a follow-up consultation (456, 13.02%).

Conclusion: The most common type of management for psychosocial problems of in-patients in tertiary hospitals was a combination of psychosocial intervention and pharmacotherapy. Psychoeducation, supportive psychotherapy/counseling, and family therapy were the most often given psychosocial interventions.

Recommendation: Implications to practice on patients, providers, and hospital factors conducted in the local setting provide evidence for the effectiveness and outcomes of psychosocial interventions. Increasing awareness of and improving skills in psychosocial interventions may improve outcomes of psychiatric illness, decrease its stigma and improve the quality of life of patients.

Keywords: psychoeducation, supportive

Role of perceived social support on academic persistence of performance-oriented medical students in a private school in CAMANAVA

Kristine Camacho

Medicine is a long and tedious journey thus; academic persistence is necessary to obtain a medical degree. Academic persistence is associated with several factors, some of which are the student's perceived social support and the student's goal orientation. This study aims to determine the perceived social support of performance goal oriented medical students and its correlation to their academic persistence. Elliot and Murayama's AGQ-R, Zimet's MSPSS and Altman's adapted scale on academic persistence were adapted and used to determine the goal orientation, perceived social support and academic persistence, respectively of 297 medical students from a medical school in CAMANAVA. The study used a cross-sectional analysis study design, with an inclusion criteria that are as follows: the participants must be students who are enrolled in the College of Medicine during the study, and they must be willing and able to comply with the study requirements. In contrast, irregular students, those who failed to enroll, those who dropped out of medical school during the study, those who are unresponsive to the follow-ups, those who did not provide full consent, and the researchers are part of the exclusion criteria. To align with the interpretation of the goal orientation based on the adapted questionnaire's original author, Zimet, there was no randomization done in this study, and instead, the census was used. The data was analyzed through Spearman Rank Correlation Test to determine the relationship between perceived social support and academic persistence while a Regression Analysis was done to identify if the changes in perceived social support caused the changes in academic

persistence of the medical students. It was found out that both mean and median values of performance orientation domains (performance-approach and performance-avoidant) were the highest in the 4th year level and lowest in the 1st year level. Additionally, Friends subscale of MSPSS has the highest mean in all year levels while academic persistence is the highest in the 4th year level and lowest in the 2nd year level. Spearman rank correlation test showed a weak (significant) positive relationship (p -value < 0.0001) between perceived social support and academic persistence among respondents. Furthermore, there is a significant linear relationship between these two variables ($r = 0.5$). Regression analysis showed 0.312116 unit increase in academic persistence mean score per unit increase in perceived social support mean score. The results of this study indicated that the increase in perceived social support showed an increase in academic persistence of performance goal oriented medical students in CAMANAVA.

Keywords: *Perceived social support, Academic Persistence, Achievement Goal Orientation*

Safety evaluation of endemic fruit *Canarium ovatum* (Pili) Pomace, an emerging functional food ingredient for treating metabolic disorders

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Abstract: Pili pomace (Pp), an agro-industrial waste, is gaining interest as a functional ingredient for treating metabolic disorders. Due to the increasing demand for pili pomace, there is a need to evaluate the potential toxicity of this product in short- and long-term consumption. This study aims to establish the toxicity profile of Pp by evaluating the hematological, biochemical, and histopathological parameters in 14-day (acute), 28-day (sub-acute), and 90-day (sub-chronic) treatment in rats (n=5/group/sex) with Pp aqueous extracts (PPAE). For acute toxicity, experimental groups were orally administered PPAE at a single dose of 2,000 and 5,000 mg/kg BW. For sub-acute and sub-chronic studies, rats were orally administered 1,000, 500, and 250 mg/kg daily until the termination period. During acute toxicity, no clinical signs of toxicity, behavioral changes, and mortality were recorded

in 2000 and 5000 mg/kg BW doses during the 14-day cage observation. Hematological parameters, blood chemistry, and histological profiles were not altered by PPAE treatment. For the sub-acute test, no death, alteration in hepatic and renal functions, and toxic clinical manifestations were observed within the 28 days of treatment in all groups.

Similarly, all groups recorded no mortality within 90-day daily treatment for the sub-chronic test. Serum triglyceride, total cholesterol, serum bilirubin, and liver enzyme levels were within normal values during days 0, 45, and 90. The acute toxicity study estimated that Pp's median lethal dose (LD50) was more than 5000 mg/kg BW. Pili pomace is safe for repeated doses in rats in short- and long-term exposure.

Keywords: *Canarium ovarium*, functional food, metabolic disorder, pomace, toxicity

Stories from the Frontlines: Exploring the Experiences of Frontliners during the CoViD-19 Pandemic and Assessment on Vaccine Decision Making & Hesitancy

Matthew Dominic Q. Torres

Abstract

Background of the study: COVID-19 is an infectious disease caused by beta coronavirus called SARS-CoV-2. There is still no effective treatment for this and people need to follow standard precautionary measures. The history of vaccine success has provided confidence to the respondents in accepting the new COVID-19 vaccines. The majority believed that once the complete and correct information is properly disseminated and enough vaccine is provided to society, a greater number of citizens will be encouraged to trust the vaccine's efficacy. Adding to the people's doubts and anxieties is the inefficiency of the government in completely informing the public about the adverse effects of the vaccine. These factors cause only a few of them to be willing enough to take risks and be part of the first group of people to receive the vaccine. Nonetheless, the majority of the respondents believe in the efficacy of the vaccines in fighting off the infection and strengthening the immunity of every individual injected with them. They know that the benefits given by the vaccines outweigh the probable risks a person could have upon receiving it, thus, the participants are not swayed in their opinions and beliefs on the vaccine's importance in our community.

Purpose: The study is intended to determine the experiences of medical frontliners who cater COVID-19 patients during the COVID-19 pandemic and assess their vaccine decision-making hesitancy.

Methodology: The study includes 2 phases. The 1st phase is a qualitative method that uses interview for data collection that will elicit responses from all participants. Thematic Analysis is used on collected data. The 2nd phase is a quantitative method that uses One-way ANOVA which will be done once data collection for the target participants of the Phase 2 is done.

Results: There is little to no hesitancy among the medical frontliners regarding vaccines. Misinformation on vaccines did not play a role in the decision-making of frontliners themselves. The only observed factor of the frontliners affecting the decision to take the vaccine is the adequacy of the information. Most of the

participants believe that the COVID-19 vaccine should be obligated but some also believe that it is the right of the patient to decline vaccination. Most of them believed that once the correct information is properly discussed and disseminated, a greater number of the citizens will be encouraged to trust the vaccine's efficacy.

Conclusion: Importance of scientific evidence, information, and studies on vaccines played a crucial role in the decision making of medical frontliners. Misinformation came from the people relaying concerns about the new vaccines which they heard or read on unverified sources. This may imply that better fact-checking for the population is needed and the removal or diminution of misinformation may help reduce vaccine hesitancy among the people.

Keywords: COVID-19 Vaccine, Hesitancy, Frontliner

Ethical Approval Number: 2022-20-OR

Authors' Biography

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Matthew is a graduate of Microbiology in the University of Santo Tomas. He is born and currently lives in Caloocan City, Metro Manila with his mother who is a pharmacist. Matthew is currently taking doctor of Medicine. His hobbies include gaming, baking, and reading.

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Jonelle is a 23-year-old, 3rd year Medical student studying in Manila Central University. She took BS Medical Technology as her pre-med course at Far Eastern University.

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Synbiotic Effect of *Bifidobacterium* spp. and Pili (*Canarium ovatum*) Pomace Crude Extract in inhibiting food spoilage molds

MUBARAK MAREAI FARAJ SHRESHER ALNAHDI

Abstract

Food spoilage is a major global problem, regardless of how far the food industry's technological advancements reached in the 21st century. Aside from the atypical alteration of chemical or mechanical preservation techniques to food products, microorganisms present ubiquitously still pose the biggest challenge in maintaining sanitary and consumable food products. With the recent breakthroughs in using probiotics or Lactic Acid Bacteria (LAB) in the food industry as possible preservatives, it is considered a value-added addition to their essential role as fermenters. In addition, incorporating prebiotics acts as an added stimulating agent for probiotics to live longer and influence a lengthy healthy host, the combination of these two agents is termed synbiotics. This study aimed to evaluate, characterize, and identify a probiotic consortium, *Bifidobacterium* spp. and Philippine pili pomace extract (PPP), a fibrous and phenolic-rich compound with great potential to be considered as an ingredient in functional foods. Specifically, to examine how this extract affects *Bifidobacterium* spp. and their synbiotic effect against common food spoilage molds. Five strains of Bifidobacteria comprised as a consortium were subjected to physiological tests such as pH, temperature, and salt tolerance, followed by an evaluation of the effect of PPP on the growth of *Bifidobacterium* spp. consortium and its synbiotic effect at inhibiting the growth of isolated food spoilage-causing molds *Aspergillus*

flavus, *Aspergillus niger*, and *Penicillium* spp. Lastly, the inhibitory effect of antimicrobial compounds produced by the LAB consortium against molds were evaluated. Results showed that the bacteria favored 37°C and 6.0-7.0 pH levels as its optimum growth conditions; however, increasing salt concentrations beyond 1% were unfavorable. Effect of 3% and 5% PPP on *Bifidobacterium* consortium significantly impacted its doubling times and demonstrated significant change in pH than controls. Percent dry mycelial inhibition of *A. flavus*, *A. niger*, and *Penicillium* spp. was reduced considerably by the synbiotic mixture. Lastly, the extraction of antimicrobial compounds showed the presence of both organic acids and bacteriocins as inhibitory substances. These findings suggest this synbiotic combination is a good candidate as a food biopreservative solution.

Keywords: *Bifidobacterium*, Synbiotics, Pili Pomace, Spoilage molds, biopreservatives

Scoping Review on Child Well-Being: An Update

Morato-Espino, Gomez, Ramos, Boshoff

Abstract

Objective: The objective of this scoping review is to update and expand on the previously published systematic review and assess the current extent of the literature regarding child well-being. Introduction: Child well-being is an important outcome and has received attention from researchers for decades. Until recently, there has been difficulty in drawing conclusions from these studies because of a lack of a unified definition and a wide variety of measures used. Inclusion criteria: This scoping review focuses on publications with children ages 18 years old and below as the population and well-being as the main concept. Methods: The search strategy was able to locate 6,219 published studies in English from 2000 to 2022. The databases searched include ERIC, PubMed, EBSCOhost (MEDLINE complete, CINAHL plus, ERIC, Psychology & Behavioral Sciences Collection, and Biomedical Reference Collection: Basic), and Google Scholar. After initial screening, 1,367 references were collated in Mendeley and exported into Covidence where 250 duplicates were removed. The full text of selected citations are currently undergoing detailed assessment against the inclusion criteria by two independent reviewers. Charting and extraction will be performed by two independent reviewers. Disagreements will be resolved by discussion or with the help of a third reviewer. The search results and the study inclusion process will be reported in full in the final scoping review and presented in a Preferred Reporting Items for Systematic Reviews and Meta-analyses extension for scoping review.

Association of Biomechanical Parameters (Kinematics and Kinetics) with Recurrent Hamstrings Injury Among Running-Related Athletes_ A Scoping Review_

Reil Vinard Espino

Abstract

Hamstring strain injury (HSI) is the most common cause of injury absence across all sports, and a non-contact muscle injury, with the majority of cases occurring among running-related athletes and sporting events. A recurrence affects 12 to 63 percent of those with an HSI. While various risk factors for HSI have been identified, the involvement of biomechanical elements in the cause of strain injury has been largely overlooked. Limited research has been conducted to investigate whether the same biomechanical risk factors are associated with recurrent hamstring strain injuries. This scoping review aims to determine the biomechanical parameters in terms of kinematic, spatiotemporal, and kinetic variables associated with recurrent hamstring injury among running-related athletes. This scoping review is registered in Open Science Framework and was conducted based on PRISMA-ScR. Peer-reviewed journals focusing on biomechanical parameters among running-related athletes with a history of HSI were included in this scoping review. A data extraction tool created by the reviewers was used to extract data from the papers included in the scoping review. 876 articles were searched from 6 electronic databases, and after several screenings, 80 articles were sought for retrieval

of the full text. 63 papers were excluded for several reasons. Finally, a total of 10 articles were included in the review. The commonly assessed biomechanical variables in the included studies are the following: (1) trunk flexion angle, hip flexion angle, and knee extension angle (kinematic variables), (2) flight time, stance time, and velocity (spatiotemporal variables), and (3) EMG activity of Biceps femoris, semitendinosus, semimembranosus, vastus lateralis, and rectus femoris, knee flexion and extension angle peak joint torque (kinetic variables). This review revealed a dearth of studies focusing on this area such that limited kinematic, kinetic, and spatiotemporal variables were only presented in those research. This advocate more high-quality research in this area that may benefit athletes and coaches and help guide the coaches and sports medicine staff on preventing and treating HSI recurrence.

Keywords: Hamstrings Injury; Biomechanics; athletes; scoping review

Prevalence of Covid-19 Vaccine Acceptance amongst Non-Medical Professionals residing in Tandang Sora, Quezon City

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EDSA, Caloocan City

Abstract

In December 2019 in Wuhan China, a virus that is regarded as "COVID 19", has caused pandemic that greatly affects people's lives (WHO, 2020). The World Health Organization "WHO" defines vaccine hesitancy as a delay in accepting or refusing to get vaccinated as a management, even though vaccination services are readily available. The study is intended to determine the acceptance rate and factors that affect the attitude towards the acceptance of vaccination among non-medical professionals in Barangay. Tandang Sora, Quezon City. The study used purposive sampling, with participants drawn from the population of Barangay Tandang Sora who are classified as non-

medical professionals. There are 58 respondents that include 20 males and 38 females. Single respondents dominated the set of respondents with 60.3% and the age group between 20 to 29 got the highest number of participants in this study comprising 43.1%. Among all the respondents, the prevalence rate is 34 or equivalent to 58.62% which agreed to get the vaccination and only 24 or equivalent to 41.38% had no intention to get vaccinated. Following potential factors that affect the attitude of the respondents towards the acceptance of vaccination includes severity, positive information, relevance, and availability. In determining the significance of the correlation between the potential factors, severity, availability, and positive information, only these three factors may influence an individual's vaccination decision. Using hierarchical linear regression tool, the significant value of 0.000 and r-value of 0.077, shows only that Availability is the only factor that is considered significant for future prediction of vaccination engagement. Therefore, and the most effective reasons for people to get vaccinated were the vaccine's availability and the intensive COVID-19 vaccination campaigns.

Keywords: COVID-19, acceptance, non-medical professional, vaccine hesitancy, availability

Progression of First-in-Family Students in Medical Education at a Private Institution: A Phenomenological Qualitative Study

Main Author: Ervin M. Barroga

Asha Marie Alexandra M. Acuña | Kate Shannon R. Galo | Reinelle R. Pesante
Hitha Ramesh | Eliza Marie A. Ramirez | Aster A. Sagun, III | Aemie Joanna T. Santos, RN Adviser:

Adviser: Ma. Leonora B. Raboc, MD

Abstract

Background: Underrepresented minority students (URMS) are also referred to as non-traditional students, indicating their conventionally low participation in higher education. They include students with low socioeconomic status, ethnic minority origins, disabilities, or first-in-family (FIF) status. Inherited advantage increases disparity between social classes. The benefits of higher education must be distributed to counteract this phenomenon, and there should be proportional representation across academic institutions to help achieve social equity. To address this issue, multiple studies were done regarding the academic journeys of URMS. However, only few have focused on FIF students, especially those who are studying medicine.

Purpose: This study aimed to assess the medical education journey of first- to fourth-year FIF students enrolled in a tertiary institution in Caloocan City, Philippines.

Methods: The respondents were screened and selected using an online survey. FIF students were defined as those with both parents who have not attended college (FIFa), or without any relative up to the 3rd degree who is a medical doctor (FIFb). Eligible participants were invited for online one-on-one interviews, then the transcripts were thematically analyzed to identify prevailing themes.

Results: A total of 12 students were interviewed (1 FIFa, 11 FIFb). The medical education journey involves the transition of students before, during, and after medical school. The themes identified under the first transition include the motivations of students in entering medical school, and the reactions they received regarding the said decision. Most of the students said that it was their personal choice to study medicine, although this was also found to be associated with their encounters with actual physicians or patients, or the occurrence of disease or death in their families. Some students pursued medicine

because of persons who actively influenced them. Although some students recognized the benefits of having a doctor in the family, none of them entered medical school with the aim of increasing their family's social status. However, the apparent challenge to familial status quo emerged as reactions of doubt and hesitation were experienced by half of the participants. In the second transition, the themes identified include the obstacles encountered in medical school, and the type of support needed by students. No actual instances of othering or classism were mentioned. Nevertheless, the students recognized their disadvantages compared to their peers which resulted for some to experience self-doubt, with a few who reported that it affected their mental health. Thus, all participants emphasized the importance of emotional support for their persistence. In the third transition, the issues that emerged were the availability of training opportunities if they return to their provinces, and the difficulty of being accepted for internship since they lack connections.

Conclusions: The presence of significant life events or encouraging individuals were key motivators. Pre-medical school teachers have the capacity of influencing students to aspire or consider participating in high-status degree programs. Resiliency is also an important characteristic as discouragements may be experienced after deciding to study medicine, or sufficient emotional support while studying may not be received. Medical schools should consider social gap among students as they formulate supportive programs, such as peer mentoring and promotion of student organizations. Research is recommended to explore post-graduation outcomes and career trajectories of doctors with FIF backgrounds.

Keywords

First-in-Family Students, Massification of Higher Education, Medical Education Journey

Self-Reported Assessment of the Level of Mental Health during COVID-19 Pandemic among Women Frontliners: A Single Center Study

Pia Isabel T. Dizon

Abstract

The COVID-19 pandemic has significantly burdened healthcare systems all throughout the world. Healthcare workers (HCWs) exposed to COVID-19 may be at an increased risk of developing mental health problems due to the nature of their work. The study aimed to assess the level of mental health particularly depression, anxiety, and stress among women frontliners working in a private hospital at Alicia, Isabela during the COVID-19 pandemic. The study also intended to determine and correlate the demographics and work-related variables of the women frontliners with their level of mental health. A randomized cross-sectional study was conducted among thirteen women frontliners, aged between 22 to 61 years old (M = 33.38 and SD = 9.55) from Tomas-Cacal Medical Clinic and Hospital through an online survey. The participants were women frontliners of legal age of consent, working full time in Tomas-Cacal Medical Clinic and Hospital with the following professions: Doctors, Nurses, Medical Technologists, Pharmacists, Radiologic Technologists, and Respiratory Therapists who are willing to participate in the study. Women frontliners aged over 65 years old, worked as part-timers/relievers, and those on

maternity leave were excluded from the sampling frame. The Depression, Anxiety, and Stress Scale-21 (DASS21) was used to measure depression, anxiety and stress. Demographic profile and work-related data were also collected. The study utilized the prevalence ratio, coefficient, average weighted mean, t-test statistical tool and the effect size (Cohen's d) to quantify the level of depression, anxiety and stress. Chi-square, Mann-Whitney U test, Pearson's correlation, and regression analyses were used to explore the relationship between the demographic profile and the women frontliners' mental health level. The results showed 69% of the respondents worked on the frontline and comprised mostly nurses (n= 6; 46%). Majority of respondents were single (54%) with an average usual time of shift and work hours per shift of 8 hours and 16 hours, respectively. The prevalence of mild-to-extremely severe depression, anxiety, and stress was 8.97%, 10.90%, and 8.33%, respectively. It can be concluded that anxiety has the highest overall prevalence rate from mild to extremely severe (11%) compared to depression (9%) and stress (8%). In correlation of the demographic profile of the respondents with their level of mental health, there was a positive association ($p < 0.05$) with the position and time of shift, and a negative association ($p < 0.05$) with age, civil status, and work hours per shift. It is recommended that other scales in measuring anxiety, stress and depression be used, along with the inclusion of male correspondents, to observe for the presence of any significant difference in comparison to this study.

Keywords: *Mental Health, Women Frontliners, COVID-19*

3-MINUTE PITCH TO POLICYMAKERS COMPETITION





Doodles be Told: Unpacking the Self-Perception of Children with Cleft Lip-Palate Surgical Repair

Tyrone Philippe O. Mauricio
Dianne B. Magno
Christa P. Matic
Rojen Ivan G. Mallare

Agnes V. Raymundo, PhD, RN
Research Mentor

Abstract

Introduction: Cleft lip and/or palate touch on the very essence of a child's identity. The children's thoughts, feelings and behavior related to their facial appearance construct their self-perception. This qualitative study aimed to understand and describe how children with cleft lip-palate surgical repair perceive themselves.

Methodology: This study employed generic descriptive approach of Caeli and anchored on the epistemologically constructivist paradigm. The study was conducted virtually through Facebook messenger in selected regions of the Philippines. The purposive sample (N=15) is consisted of children aged 6-12 years old, who received surgical repair during their early childhood. Data were collected through doodling and elicitation interviews. Utilizing "draw-and-talk" technique, child-participants were requested to "tell their story through drawing" how they perceive themselves physically, emotionally, and socially. The child participants were then asked to describe their doodles. The key informant mothers cross-validated their descriptions. Using the analysis framework of critical visual methodology, doodles were analyzed with their subsequent significant descriptions. These descriptions were determined and compared for relationships and commonalities. Then sorted into categories and themes according to the extent of meaningfulness and relatedness.

Results and Discussion: The doodles unpacked three significant themes: Exteroception reveals their physical appearance and functioning became known to them. They plainly perceive their facial appearance and functional ability. Interoception depicts how they perceive within them. They internally perceive events that influenced feelings of normalcy and satisfaction. Socioception conveys how they recognize where they are in relation to other people. They socially perceive themselves through peers and family to form social belongingness. Physical appearance is an important psychological and social factor, which is fundamental to the constitution of the human being. Scars from cleft repair might have healed already, however, "scars" will remain in their self-perceptions and identity.

Recommendation: Therefore, contextualized supportive holistic and biopsychosocial interventions must be implemented to address the needs of these children and their families.

Keywords: cleft lip-palate surgical repair, doodling, self-perceptions

Dawning of a New Chapter: A Grounded Theory Study on the Transition to Parenthood of Filipino Young Adult First-time Parents

Carl Joshua G. Castillo*
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Ma Jessica D. Dumdum
Dennize Andrea H. Bedana

Institution:
College of Nursing
Manila Central University

Abstract

Introduction: Parenthood is a gratifying yet overwhelming chapter of an individual's life as it entails demanding responsibilities and obligations. Numerous challenges arise when parents enter parenthood and assume their new role as being a parent bears changes that may affect various aspects of life. There is paucity of in- depth studies about transition to parenthood. The study aimed to determine how Filipino young adult first-time parents go through the process of transition to parenthood.

Methodology: The study employed the classical Glaserian grounded theory design and was anchored on the post-positivist paradigm. It was conducted within the NCR plus utilizing purposive sampling augmented by snowballing. Data were collected through semi-structured interviews. The constant comparative method was utilized which comprised the analysis framework of open coding using kelly grid where categories were created which were then sorted based on similarities and differences. Relationships of the codes were then determined in the axial coding. Subcategories were identified which was followed by theoretical coding where themes were identified. To ensure the trustworthiness of the study, the validation techniques of members checking and critical friends were employed.

Findings: Four themes emanated from the study, namely: The letting go phase,

the elimination of certain previous lifestyles of the participants as they enter parenthood. The bracing through phase, refers to the strategies utilized to overcome the struggles of being a first-time parent. The stepping up phase, denoted as the participant's exploration and identification of the best and appropriate parenting style. Lastly, the adapting to phase, refers to the participant's constant adjustment and refinement of their visions in life and their way of parenting as they embark on a new role in life. Although four themes emerged, the process of transition is nonlinear in which each first-time parent goes through each phase differently.

Discussion: The LeBraSA Model by CBDB provides insights into the process of transition to parenthood. Certain mindsets and lifestyles of the participants are eliminated to overcome the struggles of being first-time parents by exploring the appropriate parenting styles as they constantly embark on a trial-and-error basis to adapt and adjust to their new role.

Recommendations: The model engendered from the study can be used by healthcare professionals and other stakeholders to assist and guide first time parents to understand the process of transition to parenthood.

Keywords: transition to parenthood, Generation Z, first-time parents, young adult.



Introduction of “WASH App Kids!” mobile application in the community and schools as an intervention for the control of soil-transmitted helminthiasis among schoolchildren in the Philippines: A formative Research

Abstract

Introduction: The Philippines needs to explore innovative soil-transmitted helminthiasis (STH) control strategy other than those longstanding and costly intervention programs existing in the country.

Methodology: This study used mixed methods of qualitative and quantitative formative research approaches in Cagayan Valley. The goals of this research are to (a) describe study community, (b) design an intervention program, (c) develop recruitment and retention strategies, and (d) design evaluation instruments.

Results: Schoolteachers and staffs in Cagayan Valley perceived the opportunities of strengthening health education and school rules on hygiene and sanitation at schools. It was supported by the low level of knowledge, attitudes, and practices on STH of the 452 schoolchildren and the identified prevalence rate of STH. The identified key health messages are paired with theory-based and practical strategies to design an intervention program in a form of a mobile application for kids. A

qualitative data on the usability of the mobile application shows minor points for improvement before the actual program implementation.

Discussions and Recommendation:

“WASH App Kids!”, supports self-care management among Filipino schoolchildren at risk of STH infection. Having mHealth as a new normal, it may improve the existing intervention programs for the control of an almost impossible to eradicate tropical disease in the Philippines.

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Development of “Your Rx” Telepharmacy Application: A Facility-based Pilot Study

Maan D. Balt
 Radha Kaur Lal
 Christine Veronica A. Misola
 Zoe Nicolette Beatrice Oreta
 Christopher G. Misola
 Danica L. Resuello

Abstract

Introduction: Telepharmacy is a method utilized in pharmacy practice where pharmacists interact with patients and deliver pharmaceutical care services via telecommunication technology. Telepharmacy creates an opportunity for pharmacists to extend the provision of health services to patients distantly amidst the COVID-19 pandemic. In Philippines, the current process for patients to avail Telepharmacy services utilizes a variety of existing applications or websites instead of using a single application.

Method: “Your Rx” will be utilized as a platform for receiving and processing inquiries, and as a source of communication. The study is composed of 3 phases: (1) Design and development phase, (2) Implementation phase in which the registered pharmacists enrolled in the Doctor of Pharmacy program of Adamson University, and patients were oriented beforehand with regards to the use of the mobile application, and (3) Evaluation phase, wherein the developed telepharmacy application is evaluated for its functionality, usability, security, and performance by the respondents through the use of a survey questionnaire and an interview.

Results: The developed telepharmacy application, Your Rx is available for android users and has the following primary features: video call, sharing, and setting an appointment features. A total of 46 patients used the application. Most of the Your Rx users were age 19-33 years old (41.3%), and are diagnosed with hypertension (23.91%). Moreover, the majority of the users were very

satisfied with regards to the navigation, service acquisition, and overall design of the application. Certain recommendations were also suggested by the users for further improvements of the “Your Rx” mobile application

Discussion: Your Rx application was developed and evaluated successfully. It was capable of providing telepharmacy services particularly the pharmacist-patient counseling. Through this application, users may connect through video call with a licensed pharmacist and receive telepharmacy services at their own convenience or designated place and time therefore answering their inquiries with less time and effort. Based on the overall evaluation of users to the application, they were very satisfied with the features provided of Your Rx mobile application in terms of its navigation, service acquisition, and overall design. Nevertheless, additional services and features may be included to better provide pharmaceutical care services to patients

Recommendation: To expand the scope of the study, extract more information to further improve and to seek whether this application will work in other populations. Extension of the application to an iOS version for the apple mobile users and to have uploaded it in Google Play Store and App Store. Furthermore, to improve the application by adding more features to be more convenient and accessible being an user-friendly application.

Factors and Attitude of Telepharmacy Service Users in the Philippines amidst COVID-19 Pandemic

Althea Gem R. Alegre
Diosdado R. Cabilino III,
Mia Laureen R. Daroy
Juan Carlo Q. Rallos

Abstract

Pharmacists are one of the most easily accessible health professionals in a patient's healthcare team. However, due to the restrictions brought about by limited face-to-face contact during the COVID-19 pandemic, patients' access to proper pharmaceutical care, like patient counseling and medication management, has drastically declined, which led the pharmacists and patients to resort to using telepharmacy services. Telepharmacy refers to a pharmaceutical service in which pharmacists and patients are not in the same area but may communicate through the use of information and communication technology. This study was designed to determine the knowledge and attitude of Telepharmacy service users in the Philippines, and to identify the factors associated with them. Identifying these factors benefits individuals from this telepharmacy service as it provides free counseling and increased adherence to medication, along with easy access to quality healthcare services in remote and rural areas.

An electronic standardized self-administered questionnaire, consisting of both dichotomous true or false scale, and a four (4)-point Likert Scale, was administered to a total of 286 telepharmacy service users (64 Adamson Telepharmacy users and 171 University of the Philippines Telepharmacy users, 27 for both Telepharmacy services). Descriptive Statistical Analysis, and Multiple Logistic Regression Analysis were used to treat and interpret the data.

The results revealed that telepharmacy users are mostly female, aged 30 years old below, residing in urban areas, earning a household salary of Php30,001 and above per month, and have completed college or higher education. Almost 157 of the respondents

availed telepharmacy services 1-3 times, while 93 availed 4 times and above. Moreover, 93% of respondents have demonstrated an adequate level of knowledge about telepharmacy services and 70% have shown a positive level of attitude towards it.

Based on the data gathered, Telepharmacy users have positive level about telepharmacy services. It implies that previous telepharmacy users are aware of the general purpose and basic knowledge of the service. There is a significant correlation between respondents' level of knowledge and their sociodemographic profile. These variables, notably gender, highest educational attainment, and telepharmacy provider, were found to be related to their level of knowledge. Wherein every factor affects how telepharmacy users utilize services. Human resources such as time and money, physical resources like gadgets and devices, technological knowledge and skills, and their confidence and willingness, influence how individuals use and adhere to these telepharmacy services.

Provision of information to local pharmacies and government institutions regarding the significance of telepharmacy services can help in implementing and improving telepharmacy programs nationwide in providing healthcare access, involving the management of proper training and seminars. These practices can improve telepharmacy access, medication adherence, and telepharmacy support, as well as launching a campaign for potential telepharmacy rules and regulations, such as government licenses and programs. To develop and strengthen national guidelines governing the potential use of telepharmacy services, particularly in underserved communities.

CREATIVE COMPETITION



SPOKEN WORD POETRY

List of Entries

SPOKEN WORD POETRY

INOBASAYON: Bayani ng Pandemya

Catherine Raisa Kimberly P. Mandigma, RND
Zuellig Family Foundation

Kaya pa ba o Kinakaya na lang?

Helaena Adelle L. Africa
Trinity University of Asia

WHAT'S NEXT?:

NAVIGATING THE POST-PANDEMIC WORLD AND BEYOND

Richard Raphael T. Muniz
University of Santo Tomas (Pharmacy)

"Nag Iba Na"

Mica Ella S. Respicio
Our Lady of Fatima University

PAGBABAGO

Louise Juliana B. De Guzman
Trinity University of Asia



TUGON SA PAGBABAGO

Lovely Mae C. Allas
Trinity University of Asia

Pandemic Equation

Henrieka Anne Baldado
Trinity University of Asia



Resiliency Within Us

Alliah Kyle De Castro

The Beauty in the Madness of Space

Christine Marie Gabriel
Trinity University of Asia

"Panibagong Yugto"

Jasen Denise B. Placido
Trinity University of Asia

"Facing Rough Seas"

Andrea Grace C. Pereña
Trinity University of Asia

Metathesiophobia

Derick Thomas P. Juan
University of Santo Tomas (CRS)

Living with the Pandemic

Charissa Joy C. Gacutan
University of Santo Tomas
Graduate School (Music)



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Prof. John Jack Wigley, Ph.D. (UST)

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Assoc. Prof. Lilia De Jesus, Ph.D. (UST)

Asst. Prof. Joselito de los Reyes, Ph.D. (UST)

PANEL OF JUDGES:

Joel Toledo, Ph.D.

Ms. Beverly Siy

Mr. Mesándel Virtusio Arguelles

PHOTOGRAPY COMPETITION



The MMHRDC Symposium's Photography Competition elicited entries from university students, faculty and employees affiliated with the Consortium's member-institutions. Some of these entries (found in this souvenir programme) sought to show Filipinos' efforts to move forward from a SARS-CoV-2 pandemic. Resiliency reveals the rage of Filipinos to row past the ravages of COVID-19.

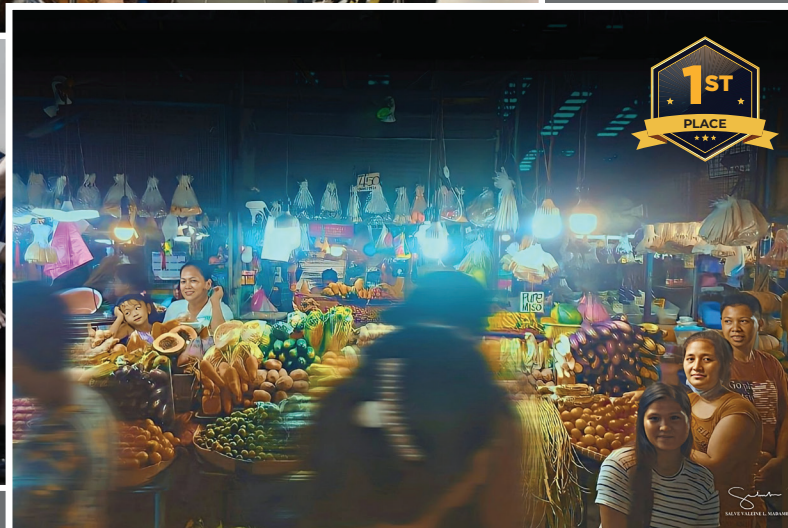
Jurors:

Mr. Segundo Barrameda, Jr.*
Mr. Gamaliel Parazo*

Committee Members:

Dr. Mary Ann Bulanadi
Dr. Belinda de Castro
Dr. Jeremaiah Opiniano

** Both jurors graduated from the University of Santo Tomas and had earned certificates in professional photography from the New York Institute of Photography*



Winners:

Honorable mention:
Prepared Pandemic Babies [Nikon D5600]
Mr. Raiziel B. Sangrenis
Our Lady of Fatima University

Third prize: Not-so Post-pandemic: Transport {Apple iPhone XR}
Mr. Jan Mari Cristian Bunagan
Trinity University of Asia

Second prize: Safety-IN-LINE [Samsung A51]
Ms. Shanelle Mae Bautista
Trinity University of Asia

First prize: Ginintuang Pag-asa [Samsung A71]
Ms. Salve Valeine Madamba
Trinity University of Asia

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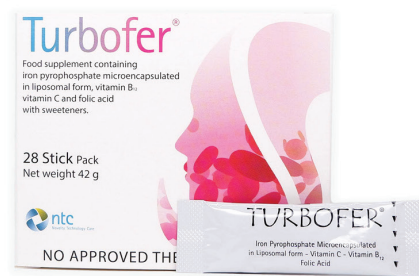
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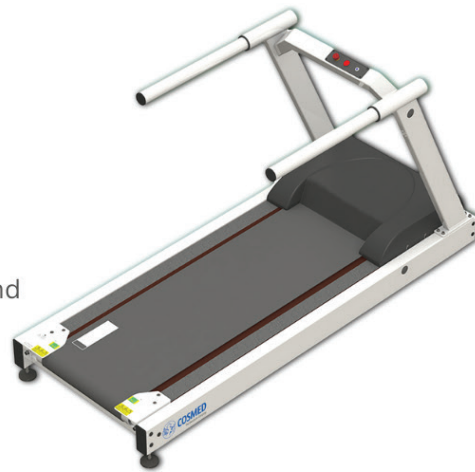
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- The Facilities Management Office
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