Faculty of Health Sciences

THE VOICE OF FHS

VOLUME 3
ISSUE 1
MARCH 2020

ENVIRONMENTAL HEALTH

MEDICAL IMAGING

PHYSIOTHERAPY

The Voice of FHS is a quarterly e-newsletter by the Faculty of Health Sciences, MAHSA University. There are three departments under the faculty: Physiotherapy, Environmental Health and Medical Imaging. This newsletter highlights the Faculty's events, staff and students' achievements as well as student activities.

CONTENT

A WELCOME NOTE TO THE NEW DEAN OF FHS,

ASSOCIATE PROFESSOR DR. VERONICA CHUA

ASSOC. PROF. DR. VERONICA CHUA POH CHOO
BSc (UPM), MSc (UPM), M.Ed.M (UM), PhD (UPM)
Dean, Faculty of Health Sciences

We are extremely pleased to welcome Associate Professor Dr. Veronica Chua Poh Choo as the new Dean of the Faculty of Health Sciences of MAHSA University effective March 2020.

Prof. Veronica joined MAHSA University in July 2019 as the Deputy Dean of the faculty, bringing with her an impressive combination of academic leadership, teaching experience, industrial exposure as well as strong research background. Prof. Veronica has a sterling academic background comprising a Bachelor's Degree in Environmental and Occupational Health, a Master's Degree in Environmental Technology Management and a PhD in Environmental Health from University Putra Malaysia, as well as a second Master's Degree in Educational Management from University Malaya.

Prof. Veronica has more than 15-year experience as an academician and education administrator, beginning as a Lecturer and climbing the rungs to Head of Academics in a public-listed education institution. Prof. Veronica has previously held positions as Head of School of Education, Head of School of Nursing and Head of School of Allied Health Sciences. She has taught for many allied health programmes and has supervised students at Bachelor's as well as Master's degree levels. She has worked with numerous international education institutions in the UK, USA and Australia in the framework of various transnational educational collaborations

In addition to being a passionate academician, Prof. Veronica is also an avid researcher. She has been awarded several government research grants for her research works. Her research interests include indoor air quality (IAQ) and environmental management. Together with relevant Malaysian government agencies, Prof. Veronica developed a guideline for IAQ management for preschools in Malaysia under government funding. She has authored a number of books and published numerous articles in Scopus and ISI-indexed journals. She is also the proud recipient of the Best Paper Award at an International Conference in 2014.

Prof. Veronica is a HRDF-registered trainer and has conducted numerous training programmes for Environmental Health and Occupational Safety and Health in the region. She was also a

certified Safety and Health Officer under the Department of Occupational Safety and Health Malaysia (DOSH) and a Health & Safety advisor for a number of private companies.

Prof. Veronica's professional credentials, academic administration experience, industrial exposure and research track-record coupled with her energy and charisma makes her the ideal candidate to lead the faculty forward as the Dean of the Faculty of Health Sciences of MAHSA University.

All the staff at the Faculty of Health Sciences enthusiastically look forward to the leadership and guidance of Prof. Veronica Chua.

A WELCOME NOTE TO THE FACULTY MANAGER OF FHS,
DR. CHEAH WAI YAN

DR. CHEAH WAI YAN
BSc (UTM), MSc (UPM), PhD (UM)
Faculty Manager, Faculty of Health Sciences

It is a great pleasure and pride to announce, Dr. Cheah Wai Yan as the Faculty Manager of Faculty of Health Sciences, MAHSA University.

Dr. Cheah has more than 10 years of experience not only in the field of industrial biology, environmental health but also as an academician. In terms of academic background, Dr. Cheah is holding a Bachelor's Degree of Science (Industrial Biology) from Universiti Teknologi Malaysia and was a constant recipient of Dean's List. In 2011, Dr. Cheah completed her Master's Degree of Environment from Universiti Putra Malaysia and was the proud recipient of Best Student award for Master of Environment programme. Not only that, she further went on and completed her PhD study in 2019 from Universiti Malaya. Her outstanding research project of her PhD study has earned her the Outstanding Paper Award 2018 for Journal Clean Technologies and Environmental Policy by Springer Germany.

Speaking of research, Dr. Cheah has always been active in paper publication. Her research interests focused on waste to energy, solid waste management and environmental microbiology, aiming towards environmental sustainability. Dr. Cheah has numerous publications in several Q1-ranked journals such as *Applied Energy, Energy Conversion and Management, Bioresource Technology* to name a few. She has published 12 publications till date, with most of it with Q1 impact, Scopus ISI-indexed journals. Her current h-index is 8, with 489 citations since 2015.

During the early years of her employment history, Dr. Cheah has held several senior positions in private organizations such as senior executive in laboratory in Multi National Company as well as subject matter expert involved with the content development of curriculum for Biology subject. In order to further pursue her interest and passion in the educational field, Dr. Cheah has joined MAHSA University since 2013. She has great dedication in providing the best teaching to the students and devoted to ensure the best quality of education is constantly being delivered as well as to foster the Faculty credibility.

DEAN'S MESSAGE

Greetings!

I am honored and privileged to be addressing you as the new Dean of Faculty of Health Sciences, MAHSA University.

The last few weeks have brought tremendous change to the whole world, MAHSA University included. We have had to adjust the way we do things, from how we work, how we interact and also the way we teach-learn, based on the requirements necessitated by the COVID-19 pandemic and the resulting Movement Control Order (MCO) enforced by the Malaysian government.

Overall, we have done incredibly well as a nation and thanks to the discipline of fellow Malaysians, the dedication of our front-liners and the able leadership of our government it seems that the worst is behind us. I wish all our front-liners a big THANK YOU and I am proud to note that many of them are actually alumni of MAHSA University.

During the MCO period all teaching and learning has had to be conducted online. Thankfully MAHSA University's students are well-placed to face this transition. This is because MAHSA in has realized since some years back that conventional learning would be eventually replaced with a hybrid variant of education with increasingly more learning and teaching conducted online. Consequently, MAHSA has invested substantial resources in establishing a robust online platform, developing online learning modules and conducting special training for our lecturers to provide effective online teaching. We started this journey a few years back, and we are now at the forefront of online education in Malaysia especially in Health Sciences. As proof, we are the only education provider in Malaysia with MQA-approved online (ODL) Bachelor of Physiotherapy and Bachelor of Environmental Health programmes.

These are indeed trying times, but it is not necessary for students to put their future on hold. I hope prospective students realize that they do not need to halt their academic progress even if they are confined to their homes. MAHSA University provides a quality platform to pursue your education. FHS has all the tools, expertise and experience to provide quality education in the current circumstances.

The month of April is a special month for the faculty as we welcome new students to our April intake. I am pleased to see many of our diploma students progressing to our degrees. To the new students I wish you a warm welcome and those who are progressing to our degree/master programmes welcome back. The faculty is delighted to have you in our family. We hope you have a fulfilling and memorable student journey here at FHS.

Life as we know it pre- March 18th 2020 may never return. We will most probably be forced to accept a “new normal” for everything. There will be the need to make some adjustments in the months to come but I am confident we will be able to navigate through this successfully and emerge better off than before. When life gives us lemons, let’s make lemonade. In the meantime, stay safe and keep others safe by practicing social distancing and stringent hand hygiene.

ASSOCIATE PROFESSOR DR. VERONICA CHUA
DEAN
FACULTY OF HEALTH SCIENCES

EDITORIAL BOARD

Priya Kesar
Co-Chief Editor

Deborah Rajamanickam
Co-Chief Editor

Chew Wai Hoong
Editorial Member

Bavithra Krishnan
Editorial Member

Umysarah Zulkipli
Editorial Member

Nursalfarina Abd. Samat
Editorial Member

Aimee Choon Ming Ying
Editorial Member
(Student Rep)

Julian Christopher Richard
Editorial Member
(Student Rep)

FACULTY EVENTS

STUDY TOUR FOR ENVIRONMENTAL HEALTH STUDENTS

Department of Environmental Health of MAHSA University (MAHSA) has organized a tour which consists of several academic visits, in conjunction with the inbound mobility programme from 9th December to 23rd December 2019. A delegation of 10 students from Faculty of Public Health, Sriwijaya University (UNSRI), Palembang, Indonesia took part in this program. This program was part of the student's exchange program with University Sriwijaya in order to expose the students to the current practices and issues of Environmental Health in Malaysia. On top of that, this program provides the opportunity to the students of MAHSA University and Universitas Sriwijaya to exchange their knowledge, experience and in general open up their minds to the global issues.

Our tour involved visits to Port Dickson District Health Office, Kuala Lumpur City Council, Ministry of Housing and Local Government, Beryl's Chocolate and Confectionery, and Bukit Tagar Sanitary Landfill. The first stop was to the Port Dickson District Health Office on 10th December. This has exposed the students on the operation and activities done at the district health office. The briefing has been given by Assistant Environmental Health Officer, Mr. Zool Asmani. The visiting students engaged in Communication for Behavioural Impact (COMBI) project in Taman Bandar Baru Sunggala, Port Dickson.

Visit to COMBI

Visit to Beryl's Chocolate and Confectionery

On 12th December, a delegation from MAHSA and UNSRI has been visited Kuala Lumpur City Hall (DBKL) in Cheras, experiencing food premise inspection in Sunway Velocity Mall and getting to know more on urban farming, visited the City Neighbourhood Farm in Seri Perlis 2 residential. The visiting students also joined the resident students in an interactive lecture and practical delivered by the senior lecturers and experts from the Department of Environmental Health. The next day, delegates have visited the Ministry of Housing and Local Government. They have been briefed on the responsibilities and tasks of an Environmental Health Officer in the Ministry, for the health and well-being of the society.

Visit to Ministry of Housing and Local Government


Visit to City Neighbourhood Farm

On 17th December, the delegation has been brought for a visit to local chocolate and confectionary in Seri Kembangan. It was, foremost, expose the students the implementation of Hazard Analysis and Critical Control Point (HACCP), Good Manufacturing Practice (GMP), MeSTI (Makanan Selamat Tanggungjawab Industri) and quality control process. The journey continued further north to Bukit Tagar Sanitary Landfill, owned by KUB-Berjaya Enviro Sdn Bhd. (KBE). The delegation has been briefed on the operation and effective waste disposal by Deputy General Manager, Mr. Mohd. Fatimi Saad. One of the common praises from the students was the advanced technology and practices in the Department of Environmental Health and the sanitary landfill. We believe the tour is fruitful for all and the students learning experience is excellent!

Lecturers and students of UNSRI and MAHSA with Mr Mohd Fatimi Saad

SUMMARY OF JANUARY THEMATIC MONTH 2020

For the month of January, the Faculty of Health Sciences hosted multiple events in conjunction with the thematic month titled "Physical Fitness and Sports Month".

On 9th January 2020, the opening ceremony was held at Level 12, Unity block with the invitation of staff, lecturers and students from all faculties. The event started with an entertaining performance by the MAHSA Cheerleading Club, followed by the invitation of the attending Board of Governors and Faculty Deans onto stage for the event launch, where they danced with the cheerleaders. Next was a warm up led by Mr. Arun Nedunchezhiyan, succeeded by a dance-along led by physiotherapy students. Moving to the main event, a dance competition was held with teams from different faculties. The event ended with the announcement of the winner, "Foot Drop" team from the Faculty of Dentistry.

Swimming Meet

A few interfaculty events were organized by the MAPS in conjunction to this health month. The goal was to spread awareness of sports for health and wellness and promote interfaculty relationships and unity. Firstly, there was a Swimming Meet on 11th January. The events consisted of 50m Back Stroke, 50m Breast Stroke, and 50m Freestyle. With mighty efforts from more than 10 participants, the winners were Brexter Choo (Male category) and Heng Jia Wen (Female category) from the Physiotherapy Department.

CrossFit Competition

Second, there was a CrossFit competition the day after with 23 student applicants. It was a 4-event game consisting of side jumps, push-ups, jumping front lunges and farmers walk. After an intense full of sweat and vigour competition, the winners were announced, Darren Lim (male category) from Physio department and Heng Jia Wen (female category) from Physiotherapy Department.

3v3 Inter-Faculty Basketball Competition

Third, a 3v3 Inter-Faculty Basketball Competition was held on the 17th January. With more than 10 groups of three competing, it was an event to be remembered with multiple buzzer beaters that brought the audience to their feet! After exceptional feats from all teams, the winners were Ding Zhi Hao, Lean Wai Chin, and Denis Lee Yew Qi from Faculty of Dentistry for the male group; Thin Weng Zhi, Aya Obaid and Cheng Min Min from Foundation in Science for the female group.

Other ongoing events to promote health fitness were the "Staircase to Fitness" every Tuesday and Friday, “Walk for Fitness” around MAHSA University Campus with the honourable MAHSA Pro-Chancellor and Executive Chairman, Prof. Tan Sri Datuk Dr. Hj. Mohamed Haniffa bin Hj. Abdullah on the 15th January, E-Sports Games, Traditional Games and many more.

Walk for Fitness with MAHSA Pro-Chancellor and Executive Chairman, Prof. Tan Sri Datuk Dr. Hj. Mohamed Haniffa bin Hj. Abdullah (third from the left)

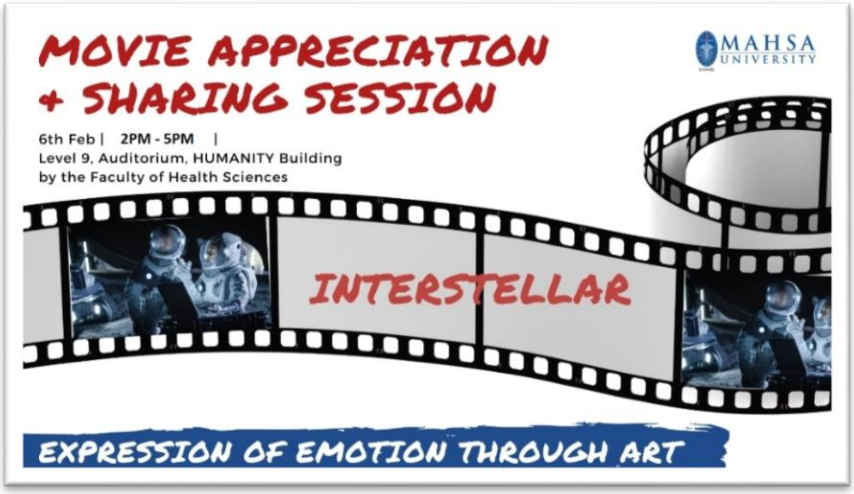
E-Sports Games

Traditional Game: Hopscotch

The closing ceremony was held on the 30th January. The award ceremony for all events was carried out followed by a captivating video summary made by the Faculty of Health Sciences. The ceremony ended with the former Dean of the Faculty of Health Sciences, Assoc. Prof Chan, passing the baton to the Dean of the Faculty of Dentistry, Prof. Dr. Roshnah, for February’s thematic month. In conclusion, the “Physical Fitness and Sports Month” was a great success that reflected the diligence and passion of the dean, lecturers, staff and students towards a healthier and more active lifestyle. It can be assured that invaluable lessons and impactful friendships were established during this period.

MOVIE APPRECIATION DAY

In conjunction with February Thematic Month - Emotional Wellness Month, Faculty of Health Sciences organized “Movie Appreciation Day and Sharing Session” activity.



The event was open for all MAHSA staff and students. The chosen movie was **Interstellar**, directed by Christopher Nolan. The storyline involves the adventure of a group of explorers in space who make use of a newly discovered wormhole to surpass the limitations on human space travel technology to conquer the vast distances involved in an interstellar voyage. This movie is one of the movies where it provided the audience with the roller-coaster emotional feelings and not forget to mention it was a visually resonant movie. The duration of the movie was more than two hours and it was indeed occupied with lots of interesting scene explaining about the family relationship, nature of science and many more.

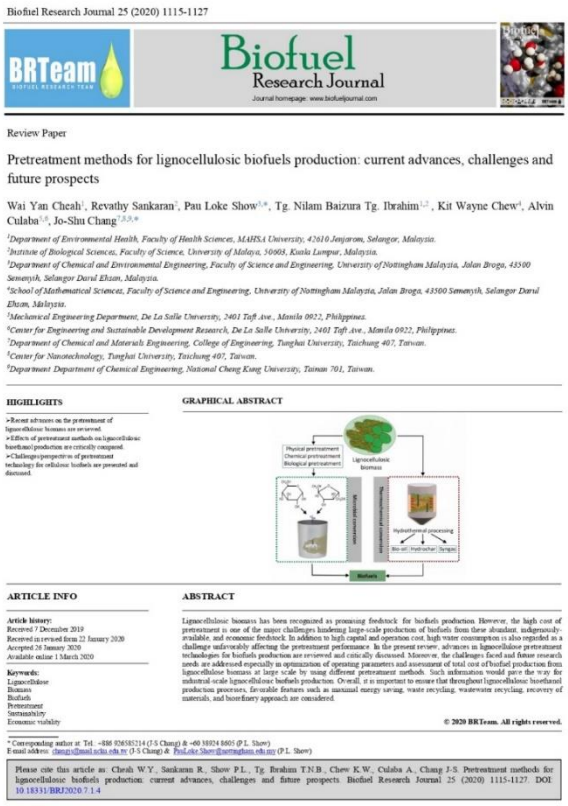
This activity was a success. Heartfelt thank you for all the support and participation from MAHSA staff and students from various faculties and centres. At the end of the movie, we conducted a sharing session with the audience about their favourite scene and the reason they chose it. Most of the audience agreed that this movie had stirred their emotion especially during the scene of separation between the father and his kids.

“We used to look up at the sky and wonder at our place in the stars, now we just look down and worry about our place in the dirt” – Interstellar, 2014

Movie Sharing Session

ACHIEVING THE EXTRAORDINARY

RESEARCH PUBLICATION IN Q1-RANKED JOURNAL BY ENVIRONMENTAL HEALTH DEPARTMENT ACADEMIC STAFF



Biofuel Research Journal 25 (2020) 1115-1127

BRTeam

Biofuel Research Journal

Review Paper

Pretreatment methods for lignocellulosic biofuels production: current advances, challenges and future prospects

Wai Yan Cheah[1], Revathy Sankaran[2], Pau Loke Show[3,4,*], Tg. Nilam Baizura Tg. Ibrahim[1,5], Kit Wayne Chew[4], Alvin Culaba[3,6], Jo-Shu Chang[7,8,9,*]

[1]Department of Environmental Health, Faculty of Health Sciences, MAHSA University, 42610 Jenjarom, Selangor, Malaysia.
[2]Institute of Biological Sciences, Faculty of Science, University of Malaya, 50603, Kuala Lumpur, Malaysia.
[3]Department of Chemical and Environmental Engineering, Faculty of Science and Engineering, University of Nottingham Malaysia, Jalan Broga, 43500 Semenyih, Selangor Darul Ehsan, Malaysia.
[4]School of Mathematical Sciences, Faculty of Science and Engineering, University of Nottingham Malaysia, Jalan Broga, 43500 Semenyih, Selangor Darul Ehsan, Malaysia.
[5]Mechanical Engineering Department, De La Salle University, 2401 Taft Ave., Manila 0922, Philippines.
[6]Center for Engineering and Sustainable Development Research, De La Salle University, 2401 Taft Ave., Manila 0922, Philippines.
[7]Department of Chemical and Materials Engineering, College of Engineering, Tunghai University, Taichung 407, Taiwan.
[8]Center for Nanotechnology, Tunghai University, Taichung 407, Taiwan.
[9]Department Department of Chemical Engineering, National Cheng Kung University, Tainan 701, Taiwan.

HIGHLIGHTS

GRAPHICAL ABSTRACT

ARTICLE INFO

ABSTRACT

© 2020 BRTeam. All rights reserved.

Please cite this article as: Cheah W.Y., Sankaran R., Show P.L., Tg. Ibrahim T.N.B., Chew K.W., Culaba A., Chang J-S. Pretreatment methods for lignocellulosic biofuels production: current advances, challenges and future prospects. Biofuel Research Journal 25 (2020) 1115-1127. DOI: 10.18331/BRJ2020.7.1.4

It was an exciting news from the Environmental Health Department, Faculty of Health Sciences, MAHSA University! We are proudly announcing that our academic staff, Dr. Cheah Wai Yan and Ms. Tengku Nilam Baizura, along with few other researchers from University of Malaya, University of Nottingham Malaysia, De La Salle University (Philippines) and National Cheng Kung University (Taiwan), published their astounding research paper in a Q1-ranked journal, Biofuel Research Journal, titled 'Pretreatment methods for lignocellulosic biofuel production: current advances, challenges and future prospects'.

Biofuel Research Journal is a renowned journal launched in March 2014, publishing articles, review papers, book reviews and communications related to biofuel research in all diversity. Biofuel Research Journal is now indexed by Thomson Reuters Web of Science Emerging Sources Citation Index, Scopus, CrossRef, Directory of Open Access Journals and other databases. The journal focused on applications, processing, management of biofuel and technologies related to biodiesel, bioalcohols, biogas, biomass valorization, biorefineries and bioresource technologies. It is therefore a great pleasure that our staff were part of the team invited to write a review paper on 'Pretreatment methods for lignocellulosic biofuels production'.

Their review paper has covered comprehensively on the advances in lignocellulose pretreatment technologies for biofuels production as well as the challenges confronted and future research needs, especially in optimization of operating parameters and assessment of total cost of biofuel production from lignocellulose biomass at a larger scale. This paper also critically discussed the importance of maximal energy saving, waste recycling, wastewater recycling, recovery of materials and also biorefinery approaches in lignocellulosic bioethanol production process. These aspects are essential towards biofuel production in the near future, enhancing environmental sustainability and society well-being.

A little information about our staff. Dr. Cheah has been actively involved with research activity since 2018 under MAHSA University. Her research interests focused on waste to energy, solid waste management and environmental microbiology, aiming towards environmental sustainability. On the other hand, Ms. Tengku Nilam's research interests is more towards solid waste management, material flow analysis and river water quality monitoring as well as water modelling. She is currently pursuing her PhD with her research paper titled 'Quantification of leachate flow using material flow analysis and transport of leachate using water modelling'.

Excellent achievement by Dr. Cheah and Ms. Tengku Nilam! Their paper not only contributed to the knowledge on biofuel production for environmental sustainability, but also important for improving the quality of education delivered by MAHSA University.

Congratulations again to Dr. Cheah and Ms. Tengku Nilam!

Ms. Tengku Nilam (left) and Dr. Cheah Wai Yan

MAHSA GRADUATES SOARING UP HIGH IN MINISTRY OF HEALTH

"Congratulations on Your Promotions to the Post of Environmental Health Officer U41"

We would like to take this opportunity to congratulate our Alumni of Bachelor of Environmental Health & Safety (Hons) programme on their promotions to Environmental Health Officer grade U41. We are incredibly proud of all of the hard work that our students have put forward to achieve this milestone and of all the hard work and support provided by everybody to make this possible.

With total number of application about 21,000, 313 interview candidates, 15 were promoted to Environmental Health Officer grade U41 and **FOUR** are our MAHSA Alumni of Bachelor of Environmental Health & Safety (Hons) programme.

1. Fadzlie Effendy bin Mohd Alias, JKN Pulau Pinang – Cohort 1 (2010/01) Intake
2. Nik Zulkifli bin Amin Hashim, JKN Negeri Sembilan – Cohort 1 (2010/01) Intake
3. Muhammad Hasnul Hadi bin Nordin, JKN Selangor – Cohort 7 (2015/09) Intake
4. Mohd Azlan Hanif bin Mohd Fadzillah, JKN Selangor – Cohort 7 (2015/09) Intake

Fadzlie Effendy bin Mohd Alias

Nik Zulkifli bin Amin Hashim

Muhammad Hasnul Hadi bin Nordin

Mohd Azlan Hanif bin Mohd Fadzillah

Congratulation to all of you, everything you have done and accomplished has led to this point and you truly deserve it. You have worked so hard on yourself and created the necessary advantage to convince others of your potential and abilities and it all paid off in the end. We wish you the best of luck in your new post. We have no doubt that you all will excel in this role and make everyone proud. We look forward to even more success news about you. Your achievements will inspire others to dream more, learn more, do more and become more. Your success will shine as a light of hope and inspire numbers you cannot total.

Once again congratulations!

SEA GAMES: FHS STUDENT WINS MEDAL IN FLOORBALL

Benedict Yeoh Chun Keat, batch 51 student from the Faculty of Health Science, Diploma in Physiotherapy, represented the Malaysia Floorball Association national team. From 23rd November until 1st December 2019, Benedict Yeoh was among the selected floorball players to represent Malaysia to participate in the 30th SEA Games held in Philippines. From that sports event, both the Malaysia Men's and Women's Teams emerged as second runner up.

During the interview with Benedict, he expressed that:

"It was my first time representing Malaysia in the South East Asian Games. From that competition, I gained lots of experience. It was indeed a hard time as I had to balance my schedule between study and training, which was very packed at that moment but all turned out well."

We wish you the very best of luck in your upcoming competitions as well as in your study. Not forgetting also, we would like to congratulate Malaysia Floorball Association national teams for their excellent achievement in the 30th SEA Games.

Benedict Yeoh Chun Keat

Benedict Yeoh (front row, second from the right) and the Malaysia Floorball Association National Team

STUDENT ACTIVITIES

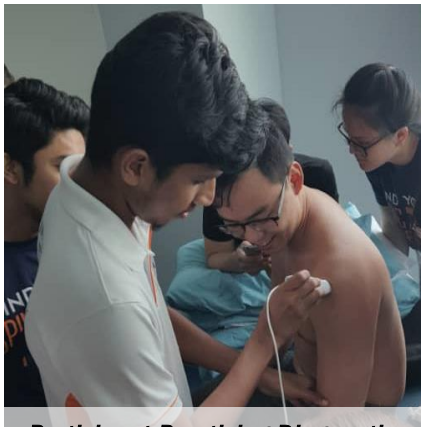
ELECTROPHYSICAL AGENTS SEMINAR AND WORKSHOP

by: Hannah Tan, Bachelor of Physiotherapy (Hons)

On the 11th of February 2020, the MAHSA Association of Physiotherapy Students (MAPS) had the honour of welcoming **Professor Goh Ah Cheng – Dean and Professor of the Faculty of Health Sciences, Iryo Sosei University, Japan**; President of the International Society for Electrophysical Agents in Physical Therapy (ISEAPT) – to MAHSA University to give a seminar and workshop on the use of electrophysical agents in physiotherapy practice.

Physiotherapy students gathered bright and early at 9am to attend the seminar in which Professor Goh spoke about the use of electrophysical agents in physiotherapy as well as the importance of an evidence-based model in both theory and practice. Professor Goh explained to his rapt audience how the use of electrophysical agents has evolved over time as well as how thermotherapy has been incorporated into the modern interventions we see today. Students were then able to see the concepts discussed in the seminar put into practice in the workshop that followed. Professor Goh demonstrated and explained to students how ultrasound imaging could be used in physiotherapy practice and even allowed students to try it out for themselves, which made for a new and exciting experience for the students.

Prof. Goh Ah Cheng



Participant Practicing Diagnostic Ultrasound

When asked how they felt about the day's seminar and workshop, students reported that they had thoroughly enjoyed it and had gleaned valuable knowledge from Professor Goh's excellent explanation and demonstration of electrophysical agents, saying that they would look forward to attending more workshops like this in the future. Meanwhile Professor Goh himself came away rather impressed by the students who attended the event, citing their enthusiasm to learn and willingness to take initiative in trying the machines out for themselves among the things that he was pleasantly surprised by.

Group Photo of Prof. Goh Ah Cheng and Participants of Seminar

REDUCE, REUSE, RECYCLE: TRIPLE "R" YARD SALE

by: Lorraine Dube, Diploma in Environmental Health

Reduce, Reuse and Recycle are among the most effective ways to conserve natural resources and protect the environment. To apply the knowledge learned in class, a yard sale was held by the students from Environmental Health programme on 19&20 February 2020 to promote the importance of the Triple "R" Concept (Reduce, Reuse & Recycle).

This program aimed to promote the Triple "R" Concept among MAHSA University students through selling unwanted and unused goods that are still in pristine condition. This Yard Sale was being planned with the notion "another man's trash is another man's treasure" in mind.

This activity was a success. Not only did the Triple "R" Concept was being spread among MAHSA population, but the students also successfully generated some income through the yard sale to fund future activities.

Environmental Health students and the Yard Sale Counter

Environmental Health academic staff and the students

Reflection: This activity was a great practical learning experience. The recommendation for the next activity was to start promoting the event earlier through social media as well as attractive poster so that to attract more crowd. A survey should also be conducted beforehand to have better idea about the goods to be sold, so that hoping to be able to generate more sale.

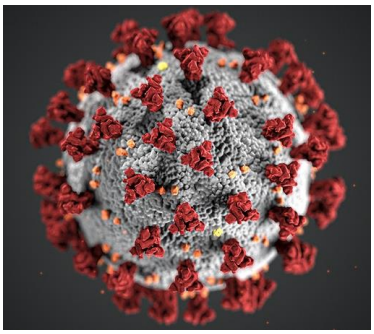
KNOWLEDGE SHARING CORNER

CORONAVIRUS: FACTS AND FEARS

by: Tengku Nilam Baizura, Lecturer of Department of Environmental Health

WHAT YOU NEED TO KNOW ABOUT COVID-19

What Causes Coronaviruses?



Coronaviruses are a large group of viruses that cause diseases in animals and humans. They often circulate among camels, cats, and bats, and can be transmitted to humans. In animals like cows' and pigs' coronaviruses causes diarrhea and in chickens, u pper respiratory tract disease. In humans, the viruses can cause mild respiratory infection, like the common cold, but as the virus multiply it invades the lung tissues and causes pneumonia like illnesses, if severe enough it may lead to death. Coronaviruses are named for the crown-like spikes on their surface. Human coronaviruses were first identified in the mid-1960s.

A novel coronavirus, COVID-19 (previously referred to as 2019-nCoV) was believed to have emerged from a seafood and poultry market in the Chinese city of Wuhan in the late 2019. Subsequently, through close contact, Human to Human transmission of the viruses took place and in a duration of several months, positive COVID-19 cases were detected in most countries worldwide. The World Health Organization characterized the outbreak as a pandemic on the 11th of March 2020.

What Are the Symptoms?

COVID-19 symptoms range from mild to severe. It takes 2-14 days after exposure for symptoms to develop. Symptoms may include:

- ✓ fever (The CDC considers a person to have fever when the measured temperature >38^{o}C)
- ✓ cough
- ✓ shortness of breath

Those with weakened immune system may develop more serious symptoms, like pneumonia or bronchitis. Although most confirmed cases are seen amongst the adult's population, it has been reported that children were also infected by the virus.

What to Do If You Have the Symptoms?

- ✓ Stay at home except for when you need to get medical care
- ✓ Call ahead before visiting your doctor and stay in touch with your doctor
- ✓ Isolate yourself from the others at home, this is known as home isolation
- ✓ Wear a facemask or cover when you cough or sneeze
- ✓ Clean your hands often

- ✓ Avoid sharing personal household items
- ✓ Clean all “highly-touchable” surfaces frequently
- ✓ Monitor your symptoms and stay calm

How Are Coronaviruses Diagnosed?

The U.S. CDC has developed criteria for patient under investigation (PUI). If a person is deemed a PUI, immediate prevention and infection control measures are taken. Epidemiological factors are used in the investigation of the patient’s case. These includes close contact with a laboratory-confirmed patient within 14 days of symptoms or travel history to an infected area within 14 days of symptom onset.

The WHO recommends collecting samples from both the upper and lower respiratory tracts. This can be achieved through expectorated sputum, bronchoalveolar lavage, or endotracheal aspirate. These samples are then assessed for viral RNA using polymerase chain reaction (PCR). If a positive test result is achieved, it is recommended to repeat the test for re-verification purposes. A negative test with a strong clinical suspicion also warrants repeat testing.

Who’s at Increased Risk

The virus that causes COVID-19 infects people of all ages. However, evidence to date suggests that two groups of people are at a higher risk of getting severe COVID-19 disease. These are older people (that is people over 60 years old); and those with underlying medical conditions (such as cardiovascular disease, diabetes, chronic respiratory disease, and cancer). The risk of severe disease gradually increases with age starting from around 40 years. It’s important that adults in this age range protect themselves and in turn protect others that may be more vulnerable. WHO has issued special advice for these two groups and urged the community for their support to ensure that the affected are protected from COVID-19 without being isolated, stigmatized, left in a position of increased vulnerability or unable to access basic provisions and social care. This advice covers the subject of receiving visitors, planning for supplies of medication and food, going out safely in public and staying connected with others through phone calls or other means. It is essential that these groups are supported by their communities during the COVID-19 outbreak. WHO emphasizes that all people must protect themselves from COVID-19, which will also protect others (WHO, 2020).

COVID-19 MYTHS

COVID-19 versus the Flu

So far, it appears that the coronavirus is deadlier than the flu. However, there's still a lot of uncertainty around the mortality rate of the virus. The annual flu typically has a mortality rate of around 0.1% in the U.S. So far, there's a 0.05% mortality rate among those who caught the flu virus in the U.S. this year, according to the CDC. In comparison, recent data suggests that COVID-19 has a mortality rate of more than 20 times higher, which is around 2.3%, according to a study published in Feb.18 by the China CDC Weekly. The death rate varied by different factors

such as location and an individual's age, according to a previous Live Science report. However, these
numbers are continuously evolving and may not represent the actual mortality rate. It's not clear if the case counts in China are accurately documented, especially since they shifted the way they defined their cases midway through this outbreak, according to STAT News. There could be many mild or asymptomatic cases that weren't counted in the total sample size, they wrote.

COVID-19 versus SARS versus MERS

The current COVID-19 outbreak is both similar and different to the prior severe acute respiratory syndrome (SARS; 2002-2003) and Middle East respiratory syndrome (MERS; 2012-ongoing) outbreaks. SARS was initiated by zoonotic transmission of a novel coronavirus (likely from bats via palm civets) in markets in Guangdong Province, China. MERS was also traced to zoonotic transmission of a novel coronavirus (likely from bats via dromedary camels) in Saudi Arabia. All 3 viral infections commonly present with fever and cough, which frequently lead to lower respiratory tract disease with poor clinical outcomes associated with older age and underlying health conditions. Confirmation of infection requires nucleic acid testing of respiratory tract samples (eg, throat swabs), but clinical diagnosis may be made based on symptoms, exposures, and chest imaging. Supportive care for patients is typically the standard protocol because no specific effective antiviral therapies have been identified (Wu & McGoogan 2020).

Dog Myths

At present, there is no evidence that companion animals/pets such as dogs or cats can be infected with COVID-19. However, it is always a good idea to wash your hands with soap and water after contact with pets. This protects you against various common bacteria such as E.coli and salmonella that can be passed from pets and humans.

The New Coronavirus Cannot Be Transmitted Through Mosquito Bites

To date there has been no information nor evidence to suggest that the new coronavirus could be transmitted by mosquitoes. The new coronavirus is a respiratory virus which spreads primarily through droplets generated when an infected person coughs or sneezes, or through droplets of saliva or discharge from the nose. To protect yourself, clean your hands frequently with an alcohol-based hand rub or wash them with soap and water. Also, avoid close contact with anyone who is coughing and sneezing.

COVID-19 Virus Can Be Transmitted in Areas With Hot And Humid Climates

From the evidences so far, the COVID-19 virus can be transmitted in ALL AREAS, including areas with hot and humid weather. Regardless of climate, adopt protective measures if you live in, or travel to an area reporting COVID-19. The best way to protect yourself against COVID-19 is by frequently cleaning your hands. By doing this you eliminate viruses that may be on your hands and avoid infection that could occur by touching your eyes, mouth, and nose. Taking a hot bath will not prevent you from catching COVID-19. Your normal body temperature remains around 36.5 °C to 37 °C, regardless of the temperature of your bath or shower. Actually,

taking a hot bath with extremely hot water can be harmful, as it can burn you. The best way to protect yourself against COVID-19 is by frequently cleaning your hands.

PROTECT YOURSELF AND OTHERS FROM CORONAVIRUS

WHEN AND HOW TO USE MASKS

- Being a healthy person, you will need to wear a mask if you are taking care of a person with suspected COVID-19.
- Wear a mask if you are coughing or sneezing.
- Masks are effective only when used in combination with frequent hand-cleaning with alcohol-based hand rub, or soap and water.
- If you wear a mask, then you must know how to use it and dispose of it properly.
- Before putting on a mask, clean hands with alcohol-based hand rub or soap and water.
- Cover mouth and nose with mask and make sure there are no gaps between your face and the mask.
- Avoid touching the mask while using it; if you do, clean your hands with alcohol-based hand rub or soap and water.
- Replace the mask with a new one as soon as it is damp and do not re-use single-use masks.
- To remove the mask: remove it from behind (do not touch the front of mask); discard immediately in a closed bin; clean hands with alcohol-based hand rub or soap and water.

WASH YOUR HANDS

Regularly and thoroughly clean your hands with an alcohol-based hand rub or wash them with soap and water. Why? Washing your hands with soap and water or using alcohol-based hand rub kills viruses that may be on your hands.

SOCIAL DISTANCING

Maintain at least 2-meters distance between yourself and anyone who is coughing or sneezing. Why? When someone coughs or sneezes they spray small liquid droplets from their nose or mouth which may contain virus. If you are too close, you can breathe in the droplets, including the COVID-19 virus if the person coughing has the disease.

AVOID TOUCHING EYES, NOSE AND MOUTH

Subconsciously our hands come in contact with many surfaces and the viruses can be picked up very easily. Once contaminated, hands can transfer the virus to your eyes, nose or mouth. From there, the virus can enter your body and can make you sick.

PRACTICE RESPITORY HYGIENE

Make sure you, and the people around you, follow good respiratory hygiene. This means covering your mouth and nose with your elbow bent or using a tissue paper when you cough or sneeze. Then dispose the used tissue paper immediately. Droplets spread virus. By following good respiratory hygiene, you protect the people around you from viruses such as flu and COVID-19.

HAVE SYMPTOM: SEEK MEDICAL CARE EARLY

Stay home if you feel unwell. If you have fever, cough and difficulty in breathing, seek medical attention and call a healthcare provider in advance. Follow the directions of your local health authority. Calling in advance will allow your health care provider to quickly direct you to the right health facility. This will also protect you and help prevent the spread of viruses and other infections.

STAY INFORMED AND FOLLOW ADVICE GIVEN BY HEALTHCARE PROVIDER

Stay informed on the latest developments about COVID-19. Follow advice given by your healthcare provider, your national and local public health authority or your employer on how to protect yourself and others from COVID-19. National and local authorities will have the most up to date information on whether COVID-19 is spreading in your area. They are best placed to advise on what people in your area should be doing to protect themselves.

REFERENCE

CASCELLA, M., RAJNIK, M., CUOMO, A., DULEBOHN, S. C., and DI NAPOLI, R. (2020). Features, Evaluation and Treatment Coronavirus (COVID-19). In *StatPearls [Internet]*. StatPearls Publishing.

GUAN, W. J., NI, Z. Y., HU, Y., LIANG, W. H., OU, C. Q., HE, J. X., ... and DU, B. (2020). Clinical characteristics of coronavirus disease 2019 in China. *New England Journal of Medicine*.

WORLD HEALTH ORGANIZATION. (2020). *Coronavirus disease 2019 (COVID-19): situation report*. 51.

WU, Z., and MCGOOGAN, J. M. (2020) Characteristics of and important lessons from the coronavirus disease 2019 (COVID-19) outbreak in China: summary of a report of 72 314 cases from the Chinese Center for Disease Control and Prevention. *Jama*.

RADIOGRAPHER AS FRONTLINER FOR COVID-19 BATTLE

by: Umysarah Zulkipli, Lecturer of Department of Medical Imaging

On 31 December 2019, WHO made an announcement of a cluster of cases of pneumonia of unknown cause detected in Wuhan City, Hubei Province of China. The coronavirus disease (COVID-2019) was identified as the causative virus by Chinese authorities on 7 January. As part of WHO's response to the outbreak, the R&D Blueprint has been activated to accelerate diagnostics, vaccines and therapeutics for this novel coronavirus, but still it has not yet found.

Malaysia started to develop this COVID-19 out-break starting January 2020 where the first case was recorded. Due too many cases keep on arising, the government has announced Movement Control Order from 18 March until 14 April 2020, in order to help flatten the curve of COVID-19. WHO has declared COVID-19 as pandemic to the whole world and to deal with this disease outbreak, team of healthcare workers or we can call them as frontliner put themselves as the first line to treat this COVID-19 patients. Frontliners are sacrificing their life and put their family at risk too. Most of the front liner isolate themselves and not seeing their family to protect them from this disease.

"As a frontliner for COVID-19, the most challenging part is to be separated from your family, especially your child, not knowing when this will end so you can safely go home to them. But I know this is my duty and responsibility to take care of COVID-19 patients. Taking care of people in their most vulnerable state and seeing them get well is the most rewarding thing." (source from FB)

As we all know, frontliners at hospital are people such as Doctor, Nurse, Pharmacist, Physiotherapist, Radiographer, Medical Assistant and so many more are the hero for this battle. Radiographers are also one of the front liner that help to provide images so that the doctor can diagnose patient with covid-19. They need to wear PPE (Protective Personal Equipment) to do their procedure.

Chest X-ray is one of the screening method in COVID-19 test. It is compulsory to see if there is any infection spread throughout the respiratory system especially in the lungs. Therefore, the radiographers are also will have a direct contact with all high-risk patient which require them to wear such PPE to protect themselves. Not only the radiographer needs to be protected, the machine also needs to be seal so that it will not be transmitted to the radiographer or other healthcare worker during the procedure. Up to date, there are many radiographers who need to quarantine themselves for 14 days as they have been contacted with the patient who hide their travel history or did not inform their symptoms. This is among the scarification done by all the medical practitioners to ensure that this virus could be eliminated.

Let us help together to fight COVID-19 by staying at home so the we could break the transmission chain to help fighting this life-threatening virus.

Radiographer and Portable X-Ray Machine

Radiographer and CT-Scan Machine

EVIDENCE-BASED PRACTICE IN PHYSIOTHERAPY

by: Samuvel Prem Kumar, Lecturer of School of Physiotherapy

As the saying goes “change is the only constant”. The field of physiotherapy has been undergoing a phase of tremendous change and has been encouraged in to demonstrate the effectiveness of clinical interventions based on the solid footing of scientific evidence. This has been a blessing in disguise as it has spurred research activities in the field of physiotherapy, contributing to evidence-based practice (EBP), which has become the cornerstone for every clinical discipline.

This emphasis on EBP in the field of physiotherapy has been a result of pressure from different health professional groups in recent times. To meet this challenge, physiotherapists have been invigorated to prove the effectiveness of their interventions through scientific evidence. EBP is the meticulous, unequivocal and astute use of current best evidences to make decisions about the treatment of the individual patient. It is the amalgamation of the best available clinical research evidences combined with clinical experience and patient value. There is wider acceptance of EBP within the international physiotherapy community and it is termed evidence-based Physiotherapy.

Evidence-based physiotherapy has been greatly helped by the surge in volume and accessibility of high-quality clinical research in recent years. The need and the keen interest for practicing evidence-based physiotherapy has been spurred in the past decade. This can be gauged by the surge in publications of articles related to physiotherapy practice. Various studies have highlighted that clinically relevant research as well as clinical expertise are vital components of EBP and should be integrated with patient's preferences as a component of clinical decision making. The concept of EBP has heralded a new era of clinical decision making based on data from clinically relevant research. We should also remember that EBP is still a relatively recent phenomenon in the physiotherapy profession, even though its importance was identified decades ago.

The aim of EBP is to apply the knowledge gleaned from research papers in clinical practice. It must be taken into account that much of what PTs do needs definitive research to establish its effectiveness. In many cases there is little evidence to support or disprove current practices. The negative attitude of clinicians towards research exacerbate the difficulties and implementation of EBP. Additionally, there are a number of challenges for physiotherapists who are attempting to use research to aid clinical decision-making, and most of these challenges have been grouped into three areas: research methods, clinician's skill, and administrative factors. The much-needed shift to EBP may not happen efficiently if clinicians do not know about the evidence, do not understand it, believe it, or know it.

At the 13th general meeting of the World Confederation for Physiotherapy (WCPT) in 1995, several "Declarations of Principle" were adopted in regards to EBP. One of the core principles adopted encompassed the fact that physiotherapists have a duty and obligation to use techniques and technologies that have been scientifically evaluated and validated.

Though there has been a continuous call for a shift towards the use of research and scientific evidence to guide practice, most physiotherapists continue to base their practice decisions largely on subjective evidence, perception, and trial and error and utilize treatment techniques with little scientific support. There still persists a trend among physiotherapists to rely more heavily on initial education and training when using treatment techniques or modalities instead of using scientific evidence to guide their treatment choices, it's quite clear that clinical decision making had been channeled by personal experience and expert opinion.

It is so vividly clear that EBP is very crucial for validating and providing scientifically proven treatment techniques and modalities in order to provide better treatment outcomes whilst living up to the challenges posed by other professions towards the efficacy of physiotherapy treatment.

PERSONAL EXPERIENCE IN PHYSIOTHERAPY

by: S, Balamurugan, Lecturer of School of Physiotherapy

When I was still a physiotherapy student, back in 1993-1994, I had an experience treating urinary incontinence in paraplegic patients that has stuck with me through the years. One of my seniors had decided to study this population as part of his final year project and I had the privilege of working closely with him on it.

The idea behind the project was to identify the acupuncture points associated with urinary bladder control with the help of an acupuncture doctor and a few acupuncture reference books. The doctor managed to find between 15–20 acupuncture points with the help of a pen LASER and accurately marked the points on the patient's body. We then applied electrical stimulation to the marked points using a Galvanic current of 30–60Hz almost every day for two months.

To our astonishment, the patients slowly gained bladder sensation and some degree of control. They were able to sense when their bladder was full and were even able to control their urine for some time.

As students, we were thrilled with this achievement and continued to work to see the project through. My senior eventually presented his work in a local conference in India and received the gold medal for his paper.

This was quite a stunning accomplishment as, at the time, we did not have the facilities that we do now such as easily accessible books, equipment, research articles and references. Yet, despite these challenges we managed to make this meaningful contribution to the field of physiotherapy.

Unfortunately, however, we do not yet understand the physiology behind the results we achieved in this project. Nevertheless, it was a memorable experience and I hope that, in sharing it, it can serve as inspiration for physiotherapy students to try new, integrated approaches such as this in their own work.

UPCOMING EVENTS

by: MAHSA Association of Physiotherapy Students (MAPS)

JUNE 2020

MAHSA ASSOCIATION OF PHYSIOTHERAPY STUDENTS ANNUAL GRAND MEETING 2020/2021

JUNE 2020

MAHSA ASSOCIATION OF PHYSIOTHERAPY STUDENTS COMMUNITY SERVICE

by: MAHSA University KESPER Society (MUKS)

JUNE 2020

EDUCATIONAL FIELD TRIP

JUNE 2020

CLUB FUNDRAISING SALE

by: MAHSA Medical Imaging Student Society (MMISS)

JUNE 2020

PLANT A TREE DAY