IJMS INTERNATIONAL JOURNAL of MEDICAL STUDENTS

Editorial

The IJMS World Conference of Medical Student Research and an Overview of the IJMS Volume 10 Issue 2

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Medical education has had a dependence on the foundation of scientific evidence in order to ensure the provision of the best patient care. Expectedly, physicians with a scientific background continually remain vital in contributing to the advancement of medicine.[1] With these in consideration, the inculturation of research in physicians at their very formative stages, while in training, significantly bridges the gap between research and clinical practice.[2] A recent survey among medical students found an overall poor scientific grasp but positive attitudes towards research. Some barriers identified in this survey included time-consuming school tasks and a lack of proper support for conducting studies.[3] Therefore, the observed positive attitude towards research holds little significance without an appropriate training system or platform where medical students can engage actively in research.

The International Journal of Medical Students (IJMS) has worked for a long uninterrupted time with a primary aim to serve as the main research-driven global facilitator for early-career scientists in medicine. This expands beyond the scope of manuscript publication to the empowerment of medical students in research while also providing a platform for them to display their work.[4]

Keeping the spirit of nurturing medical student research worldwide alive, the IJMS has decided to organize the first **IJMS World Conference of Medical Student Research** that will be held online on November 12th, 2022, where medical students and recent graduates (up to 3 years after graduation) can present their scientific production in front of an international audience.

The conference organizing committee strongly believes in the importance of medical students and recently graduated physicians in medical research. The IJMS aims to utilize the upcoming conference to provide opportunities and increase the visibility of early-career researchers through peer evaluation of their work.[4]

The primary target audience of the conference is medical students and early-career scientists. To pursue inclusivity, there will not be a specific conference topic. Instead, participants from all research areas are invited to submit their abstracts and showcase their work to a global and diverse audience.[5] A panel of experienced peer-reviewers will review all the abstracts and timely notify all applicants of the result of their submission. All participants whose abstracts get accepted will have the opportunity to present their work as an oral presentation, which will be evaluated by judges international. The organizing committee will award the top three highest-scoring authors among other special categories. All accepted conference abstracts will be featured in the Supplement of IJMS, to be published in December 2022.

As medical students gather together and share their research experiences, the hope is that there will be increased engagement in research among early-career scientists and a new step towards the global empowerment of medical students with research skills and competence. To the best of our knowledge, no medical student international research conferences are organized and run by a student-led international medical journal; the upcoming conference aims to change that narrative.

Some important information to keep in mind about the conference is listed below:

- Conference date: November 12th, 2022
- Abstract submission link: https://forms.gle/VweFhcH6UXjh3DFp9
- Abstract submissions deadline: October 15th, 2022
- Abstract submission fee: $10 USD
- Email to contact the Conference Team: conference@ijms.info
- Conference Website: https://ijms.info/IJMS/Conference

Funds from the conference will cover the Journal's running costs and help maintain our free open-access policies.

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With regards to this 2nd issue of our historic 10 years anniversary, it comprises 14 articles with 7 original research articles, 1 short communication, 3 reviews, and 3 experience reports. We are publishing topics ranging from COVID-19 aftermath and emerging mental health conditions to medical student perspectives regarding different topics of their medical training.

Post-COVID-19 pandemic

Even though in most countries, the peak of COVID-19 pandemic is behind us, it had unprecedented consequences on the entire globe, and we are still dealing with its aftermath. Yousef and Khandalavala reported one such instance in their investigation of the impact of COVID-19 pandemic on medical students' diet quality at one medical college in the United States of America.[6] Using a cut-off body mass index (BMI) value of 25 kg/m2, students with BMI values below the cut-off reported significantly better diet qualities when compared to those above the cut-off. Overall, during the early days of the pandemic, there was an overall reported decrease in diet quality and a higher-than-normal BMI, which could have potential long-term effects.

In addition to its deteriorating effects on physical health, the COVID-19 pandemic also caused psychological instability resulting in higher burnout rates and emotional exhaustion in medical students in Monterrey in Mexico. One study group suggested that medical faculties should promote easily accessible mental health programs for their students to curb this problem.[7] Using the Maslach Burnout Inventory-Student Survey, authors reported burnout rates of 15% and emotional exhaustion in more than half (53%) of their study participants, with male students being 4-times more likely to develop it when compared to their female colleagues. Authors suggest that medical faculties should promote easily accessible mental health programs for their students.

One review addressed the possible relation between multiple sclerosis (MS) relapse and COVID-19.[8] MS patients are a vulnerable population for severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), given the natural history of MS. This review sums findings of seven original studies published between 03/2020 – 07/2021 and highlights the effects of COVID-19 on the blood-brain barrier and how this interaction reflects the exacerbation of MS. Interestingly, there have even been reports on increased rates of MS in previously healthy patients during this period.

Mental Health

Health disparities are present among many underrepresented populations. One of them is populations belong to the Globally, Neurodivergent, Disability, and Chronic Illness (NDCI) specter.[9] A group from the University of California performed a cross-sectional study to check medical students' perceptions, knowledge, and competence regarding NDCI. 1 in 10 participants reported that their medical school included the NDCI population in their curriculum, but also that most of their knowledge on this cohort comes from their personal experience and media outlets and not from academical setting. Even though this was a single-institution study, the authors commented on alarmingly low knowledge and awareness rates of NDCI. They suggested that informed efforts should be undertaken to tackle disparities in the knowledge of future physicians regarding NDCI.[9]

Mental health is often stigmatized when compared to its physical counterpart. Addictive diseases, with their severe impact on mental health, are no exception to this rule. Fusillo from the United States shares his experience as a third-year medical student and showcases how his personal experience and thoughts on mental health changed during his inpatient psychiatric rotation.[10]

Another rising problem in the mental health sphere is the internet gaming disorders (IGD). This can be predominantly ascribed to increased access to technology availability among adolescents, but the circumstances created by the pandemic and lockdowns could have increased its prevalence. A cross-sectional study covering four schools in the Colombo Educational Zone in Sri Lanka assessed gaming habits among 412 students.[11] They found high a prevalence of IGD in their study group and were more frequently associated with low involvement in extracurricular activities and poor family relationships. The wave of IGD after the pandemic should be included in medical education efforts.

When talking about mental health, it is essential to mention empathy in patient contact. During the course of students' academic advancement, there is a recurring trend of emphasizing clinical and practical skills while empathy and social skills, tend to be left behind. A multi-center study encompassing 304 students from 12 medical schools in the United Kingdom reported that almost half of the respondents (45.7%) had never heard of the human factor as an important aspect of evaluating fitness to practice.[12] Respondents agreed that learning the value of the human factor should occur early on in their education. Authors suggest that new strategies are needed to ensure that future medical providers are equipped with the necessary social and human skills to help them deliver a safer, patient-oriented, care.

Medical Students and Education

The journey into the medical career often starts with the preparations for admission into medical school. As this is an important step, it is also quite stressful, but stress levels vary between future medical students in different countries, as admission criteria are different. Matriculates from different medical schools in Australia and the United States share their joint experiences on this topic and provide a comparative overview.[13] This study reports the biggest differences in admission exam criteria and applicants' profiles (e.g., high school vs. college students).

Medical College Admission Test (MCAT) is one example of an admission test used in the United States and parts of Canada. Liu

et al. investigated the stress levels of those from the Underrepresented in Medicine (URM) backgrounds who were taking the MCAT.[14] Through their near-peer coaching program, this single-institution study has found decreased anxiety levels in URM students after several coaching sessions, concluding that these types of interventions are warranted and well-received among URM students.

Aside from different educational system models, it is also important for medical students to stay up to date with administrative changes in the healthcare system. Value-Based-Health-Care (VBHC) model will soon be implemented in Brazil, and Hirt et al evaluated VBHC model awareness among Brazilian medical students.[15] This cross-sectional study collected 3030 responses across 148 medical schools in Brazil and reported a low number of students who understood the VBHC concept. The authors suggested that medical schools use their resources to prepare future physicians for working in the VBHC model, as it will help their everyday practice and increase patient management.

As medical students move towards the end of their medical school journey, they face many uncertainties, one of them being their final clinical year. Most medical students would prefer to spend their final clinical year in a tertiary-level university hospital, which offers a wider array of residency and fellowship options. But what happens when students have to do their final year in a secondary level or small rural hospital? Delgado Sanchez sheds light on this subject and reflects on his personal experience in this journey.[16]

Future Perspectives

Srinivas et al presented a current literature summary on the use of animal models in the endovascular treatment of ascending aortic dissection.[17] An overview of twenty-three published papers revealed that porcine and ovine species are the most suitable animal models for the examination of endovascular stent-graft feasibility. Increasing rates of Vancomycin-Resistant Enterococci (VRE) infections have provided ideal conditions for this opportunistic pathogen to develop antibiotic resistance.[18] Recently reported additional resistance to linezolid has resulted in urgent appeals from the World Health Organization and Center for Disease Control in antimicrobial therapy management. The current state of evidence reviewed by Beale and Durward-Diioia proposed a multifactorial approach to dealing with VRE, including preventive, diagnostic, and therapeutic measures.

Lastly, with summer around the corner, it is important to be aware of conditions associated with increasing temperatures, such as heat strokes. Alebaji et al. assessed awareness levels of heat stroke among residents of the United Arab Emirates with an original questionnaire with 37 questions.[19] A third of the total sample size of 402 participants did not think that severe heat stroke might lead to fatal outcomes. Males and older participants were also less likely to know what a heat stroke is. Authors proposed that governmental institutions should implement adequate informative measures for the general population, especially in regions/areas where heat strokes occur more often. The 2022 FIFA world cup to be held in Qatar is around the corner. The country is under scrutiny due to recent concern for under-reporting deaths caused by the high temperatures reaching over 50° Celsius (120° Fahrenheit), especially in vulnerable populations such as migrant workers.[20]

Finally, diversity, equity, and inclusion (DEI) are core values of healthcare research and practice. However, inequities remain attached to healthcare provision, research, journal editorial teams, and publication practices. In an effort to tackle this issue, the IJMS has aimed to have an inclusive editorial process and an editorial team that includes a global population of students and researchers. The Journal has taken a step toward an equitable environment by publishing a policy statement on DEI.[5] We recognize the complexity of implementing comprehensive DEI practices, but we are committed to its continuous development based on iterative processes and clear internal and publicly available regulations (https://ijms.info/IJMS/Diversity_statement).[21]

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