



HUMAN ANATOMICAL DISSECTION IN THE GENERATION Z'S MEDICAL SYLLABUS

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ABSTRACT

Today's entrance-level medical students were born around the early 2000s and so are of Generation Z so called, being the first generation to grow up digitally hyper-connected. In the medical syllabus, human anatomical dissection has been the cornerstone for properly grasping the inter-relationships between different parts of the human body and improving practical skills along with gaining a three-dimensional appreciation of anatomical structures. Generation Z's medical students have diverse approaches to dealing with human anatomical dissection so, to teach human anatomy, Faculty need to devote both time and creativity in order to be comfortable using available social-media platforms for that purpose. In these covid-19's pandemic times these new approaches to teaching may be a matching method to help to fight the pandemic.

Keywords: Generation Z, human anatomical dissection, human anatomy, medical education, medical syllabus.

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INTRODUCTION

Each generation of medical students has distinctive attributes that set them apart from previous cohorts. Understanding this generational diversity is paramount for anatomists as they search for adequate instructional approaches to mesh with students' learning behaviors. Today's new medical students belong to Generation Z, also known as Centennial generation, ZGen, IGen, Plurals, Piyotals, Founders and the Homeland Generation (Plochocki, 2019). Members of Generation Z are those born around the early 2000s (mostly between 1995 and 2010) at the same time as the explosive world-wide spread of mobile devices and social media. Generation Z represents a significant percentage of the world population and is the most digital one to date. For Generation Z, creativity should be the norm, with hands-on participation, reflection, and discussion (Estai and Bunt, 2016). Generation Z's medical students have diverse approaches to dealing with human anatomical dissection and so they have different learning experiences resulting in differences in the kind and amount of their grasp of human anatomy. In those circumstances, it should be no surprise that a combination of methods for learning human

anatomy gives the best results (Pawlina and Drake, 2016, Barmaki et al, 2019, Brok et al, 2019).

Generation Z is the first generation to grow up in a world of widespread access to computers, the internet, mobile devices, smartphones and social media and, as a result, are hyper-connected, confident with technology, and choose self-study using electronic resources in preference to traditional teaching methods (Boysen et al., 2016). Members of Generation Z are accustomed to getting information on demand, so its members may delay until the last minute to complete assignments not to speak of expecting professors to be available 24 hours /7 days per week for questions. Although they are adept at finding information, they may not be so adept at checking it for validity. Because Generation Z has spent so much time with electronic communication, this aspect may affect inter-person communication skills. Members of Generation Z expect a customized approach to their medical education and may view some courses as impractical or irrelevant to their ultimate aspirations. In other words, they expect customized experiences in order to optimize the use of their time and resources (Seemillr and

Grace, 2016). Generation Z students also prefer more hands-on experience and on-the-job learning, as well as the aforementioned customized feedback. They prefer not to spend long periods of time listening to lectures but rather, to find out what is needed to succeed on the spot, mirroring their experiences with social media (Stillman D and Stillman J., 2017). Human anatomy education is foundational to Medicine and, as for previous generations, is a rite of passage for Generation Z's medical students but unlike previous generations, Generation Z learners demand connectivity, resonance, and innovation in their education. The history of human anatomy, from the earliest examinations of dead bodies to the sophisticated analyses of the human body carried out by modern anatomists is characterized by a continually developing understanding of the functions of organs and structures in the human body. Tools based on evolving technologies for improving Generation Z's medical students' learning of human anatomy, are being actively sought and evaluated (Barmaki et al, 2019, Brok et al, 2019) and anatomists are leading the way in teaching the most recent generation of medical learners of today (Ruzycki et al, 2018). Nevertheless, in today's world, there is no consensus on the best methods for teaching human anatomy (Patel et.al, 2015). Some researchers emphasize the importance of human anatomical dissection sessions despite the emerging innovations in teaching anatomy such as the use of the computer-assisted construction and virtual reality.

Human anatomical dissection in the medical syllabus

Human anatomy has historically been a cornerstone of medical education regardless of nation or medical school system. By learning gross anatomy, medical students get a first

approach about the structure of the human body which is the basis for understanding pathologic and clinical problems. Human anatomical dissection is employed as a major tool in the teaching and learning of human

anatomy, owing to its perceived usefulness for understanding classifications and inter-relationships of different parts of human body, integration of theory and practice of human anatomy, improvement of physicians' manual dexterity and practical skills, tactile perception, humanistic care, three-dimensional perspectives of structures, and the explanation of problems encountered in medicine and surgery and also for improving physicians' expertise in physical examinations, which cannot be carried out correctly without a thorough knowledge of gross and topographical human anatomy (Vorstenbosch et al, 2016). Human anatomical dissection is also important in the medical syllabus because it is here that students learn the essential language of medicine, namely, anatomical nomenclature, and how to develop understanding through experimentation and acquire expertise in solving problems in a three-dimensional space (Heptonstall et al, 2016). Some researchers confirm surgeons' ongoing concern about diminished learning and knowledge of human anatomy among junior medical doctors and this could significantly bolster the case for emphasizing the importance of keeping human anatomical dissection in the medical syllabus (Dissabandara et. al, 2015, Patel et. al, 2015, Sheikh et. al, 2015, Yilmaz et. al, 2015, Romero-Reverón, 2017). There is much debate about suitable methods of delivering anatomical knowledge but there are no doubts that dissection of human cadavers is still entrenched as the fundamental method for teaching and learning human anatomy in many countries. In today's world, however, most of Generation Z's medical students have little chance

to develop the manual skills (during human anatomical dissection) that is essential to almost every medical specialty and specially in all surgery specialties. Competent physicians, particularly surgeons, need a deep understanding of human anatomy for safe clinical and surgical procedures (Cilliers, 2017).

DISCUSSION

Among the advantages of integrating human anatomical dissection and imaging are

improved clinical application of human anatomy and an increase in Generation Z's

medical student's interest in human anatomy. In the medical syllabus, human anatomical dissection has to be complemented by the use of electronic resources in teaching Generation Z. Therefore, although the effectiveness of human anatomical dissection is essential to medical learning, it is not the only tool for Generation Z's human anatomy learning. Faculty should be willing to develop strategies to transform the anatomical education landscape in response to the ingrained traits of the incoming Generation Z students. Anatomists need to be comfortable using available platforms in social media to disseminate knowledge and facilitate chats. Faculty of Generation Z students have to

move beyond giving instructions, advice or suggesting what to do, striking out in new directions, possibly even risky ones and standing behind those decisions, thus, to find new paths of human anatomy learning.

The emergence of Generation Z-associated educational issues requires significant faculty time and creativity on an ongoing basis. In these covid-19's pandemic times these new approaches to teaching may be a matching method to help to fight the pandemic. Perhaps this is one of the biggest future challenges in anatomical science, given that faculty have clinical responsibilities that increasingly compete with educational ones.

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