The Use of Virtual Dissection Tables: A Promising Tool for Studying Human Anatomy

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Abstract

Introduction: In the recent years, the anatomical field at our University has experienced positive advancements in academic infrastructure. These include the creation and enhancement of digital-electronic demonstrations through the use of digital atlases integrated into interactive computer systems, implemented as a solution to the lack of cadaveric dissection opportunities. Despite these improvements, the need for a three-dimensional (3D) demonstration of anatomical structures remained unaddressed. As part of a contemporary reform in didactic infrastructure, our laboratories were recently equipped with virtual anatomy dissection tables. These innovative tools offer a digitized anatomical system that projects gross anatomical structures from human cadavers onto a life-sized touchscreen table, enabling students to perform virtual dissections.

Aim: To evaluate the effectiveness of virtual anatomy tables in studying human anatomy.

Subjects and method: A cross-sectional survey was conducted based on student feedback. The survey compared two methods: the traditional digital-electronic atlas system and the virtual anatomy tables. The aim was to evaluate and compare their experiences in teaching and learning anatomy during a three-month period (October 2024–December 2024). First- and second-year medical students from the Faculty of Medicine, along with first-year students from the Faculty of Dentistry at the University of

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Medicine, Tirana, were invited to complete a questionnaire.

Results: A total of 412 students completed the survey. The results were compelling, with 94% of students recognizing the value of virtual anatomy tables as a teaching and learning tool; 30% preferring virtual anatomy tables exclusively and 64% endorsing an integrated approach. Students highlighted several advantages of virtual dissection, including enhanced perception and memorization of anatomical structures, superior 3D visualization, the ability to perform cuts in different planes (facilitating cross-sectional anatomy learning) and improved interaction and focus during laboratory sessions.

Conclusion: These findings position the virtual dissection as a promising and transformative method for studying human anatomy.

Keywords: virtual dissection table, digital atlases, anatomy