



**orpheus**  
QUALITY IN DOCTORAL EDUCATION

# 2025

## BOOK OF ABSTRACTS



# ORPHEUS

## Conference

### ADAPTING ACADEMIA

Navigating PhD Programs Amidst World  
Crises and Changes

**10th - 12th April**  
Cavtat, Croatia

The Organisation for PhD Education in Biomedicine and Health Sciences  
in the European System

## **ORPHEUS CONFERENCE 2025**

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Navigating PhD Programs Amidst World Crises and Changes

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# WELCOME MESSAGE

## **Welcome Message**

On behalf of the Organizing Committee, it is my great pleasure to welcome you to the **ORPHEUS 2025 Conference**, held on 10<sup>th</sup> to 12<sup>th</sup> April 2025 in Cavtat, Croatia. This conference brings together a community of researchers, scholars, PhD students and professionals committed to advancing the quality of PhD education in the field of biomedicine and health.

University of Zagreb played a great role in establishing ORPHEUS organization 20 years ago so it is our privilege that **your host** this year is again **University of Zagreb** but with its other member institution, which is **Faculty of Kinesiology**. The inclusion of PhD program in Kinesiology within ORPHEUS, reflects its understanding of essential need to study human movement and its implications for health, rehabilitation, disease prevention, top level sport, physical education and physical activity literacy and overall well-being. In today's increasingly sedentary way of life, where physical inactivity is identified as an important predictor of morbidity and mortality the scientific study of movement has never been more relevant.

**The quality of PhD education** is fundamental to the strength and sustainability of all research communities and PhD programs are the most important factor which define the word University and distinguish it from other forms of education. We are particularly proud to highlight the contributions made by PhD students, whose research represents their understanding of importance of the quality of PhD education. Conferences like this build networks that will support the academic journeys of PhD candidates. The title of this year's conference is **Adapting Academia: Navigating PhD Programs amidst World Crises and Changes** and the need for researchers who will develop the skills, perspectives, and resilience needed to tackle complex global challenges is at its highest.

We extend our sincere gratitude to all contributors, mentors, reviewers, and sponsors who support this endeavour and especially ORPHEUS organization. Your dedication to supporting this project for already 20 years is impressive.

We warmly welcome you, and hope this event offers an enriching experience and results in more collaboration, and of course long-term future friendships.

Yours sincerely,

Prof. Lana Ružić Švegl, MD, PhD  
Representative of the Local Organizing Committee  
University of Zagreb Faculty of Kinesiology

# INVITED LECTURES

## INVITED LECTURES

### WORKSHOP: ORPHEUS LABELLING PROCEDURE- IS LABELLING A WAY TO ENSURE RECOGNITION AND QUALITY?

**Gül Akdoğan<sup>1</sup>, Joana Palha<sup>2</sup>**

<sup>1</sup>Chair, ORPHEUS Labelling Committee, IEU School of Medicine, Izmir, Turkey

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This workshop is designed to provide an in-depth understanding of the labelling process for PhD institutions. ORPHEUS Labels are awarded to institutions that comply with the Core Recommendations of the ORPHEUS Best Practices document. To apply, institutions should complete an application which will be reviewed. This may lead to interaction with the applicants, for any requested clarifications. Based on this, the institution might be invited for a site visit, for interaction among the various stakeholders (PhD candidates, supervisors, administration) with the evaluators. A report by the evaluators is reviewed by the Labelling Board, for a final decision on whether the Label should be awarded. In case the Institution still does not comply with some of the requirements, it may be awarded an 'ORPHEUS Evaluation Certificate', in recognition of the efforts for such accomplishment. The purpose of these tools and processes is to assist institutions to reflect on their doctoral training programmes, towards excellency in PhD training .

The workshop begins with a concise introduction, outlining the objectives and significance of the Labelling Procedure, including the award of Labels and Evaluation Certificates. Participants will then be introduced on how to effectively fill out the questionnaire used in the labelling process and the evaluation criteria used to assess responses. This is followed by a collaborative group work session, allowing attendees to actively engage with the content. Participants will also hear firsthand experiences from two institutions that have successfully navigated the labelling process, sharing insights and lessons learned. The workshop concludes with a general discussion in a round table format, facilitating open dialogue among all participants, synthesizing key takeaways, and addressing any remaining questions. This structured approach ensures a comprehensive understanding of the ORPHEUS labelling procedure.

#### References

1. Quality Assurance. The ORPHEUS Label. <https://orpheus-med.org/quality-assurance>
2. ORPHEUS Best Practices, <https://orpheus-med.org>
3. Joey V. Barnett, Robert A. Harris and Michael J. Mulvany. A comparison of best practices for doctoral training in Europe and North America. FEBS Open Bio 2017; 7 (10): 1444-1452.

## INVITED LECTURES

### ETHICS IN RESEARCH: DO WE ACTUALLY LOWER STANDARDS DURING CRISES?

**Ana Borovečki**

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In acute emergencies, researchers are under pressure to deliver results, fast but at what cost and do they have to for fit the ethical principles at hand? In this contribution issues regarding ethics of research during crisis situations will be discussed. The focus will be on the challenges of conducting research during crisis situations. In crisis contexts pressures, changed expectations, changed practices, and constantly shifting calculus about how risks and benefits ought to be assessed are at play. Pressures to generate benefits by way of developing new treatment approaches as quickly as possible can lead to increased risk and the relaxing of optimal ethical and methodological standards. New version of Helsinki declaration will be examined in this light as well as some other recommendations. The reflection on ethical considerations, particularly concerning risk, recruiting participants will be discussed. Furthermore, the ethics of studying humanitarian crises will be discussed. Key concepts within research settings such as beneficence, justice and respect for persons will be examined. The particular vulnerabilities of crisis-affected populations, the contextual challenges of working in humanitarian settings, and the need for ensuring strong community engagement at all levels that make research particularly challenging will be analysed.

### SUPERVISION IN A DIGITAL WORLD - HOW TO REALLY CONNECT

**Janet Carton**

University College Dublin, Dublin, Ireland, ORPHEUS Vice President

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Five technologies are frequently used to facilitate digital communication. During the global pandemic, we upskilled, communicated, and connected remotely and many still incorporate these technologies into supervisory practice.

How do we know if this works, does it make us better, worse, or just the same at supervision? Do our research students value and thrive using these forms of communication, or suffer through miscommunication and isolation without the in-person practices?

This presentation looks at effective use of digital communication in doctoral education, why best practices in supervision transcend technology and how we as supervisors can optimise digital communication in response to student needs.

#### References

1. The Making of Doctoral Supervisors. Editors - Taylor, S., Kiley M., Holley K. (2022) Routledge Press.
2. A Guide to Online Supervision. Kumar, S., Kumar, V., & Taylor, S. (2020). UK Council for Graduate Education
3. Establishing a Support Framework for Research Supervision. Carton J. (2020) - Education Matters - Higher Education.

## INVITED LECTURES

### RECOGNITION OF PHD DIPLOMAS IN THE EU FOR NON-EU COUNTRIES: CHALLENGES AND PERSPECTIVES

**Almira Hadžović-Džuvo**

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The recognition of PhD diplomas obtained in non-EU countries remains a crucial factor in fostering academic and professional mobility within the European Union. This process significantly influences research collaboration, talent acquisition, and the overall standardization of higher education. The existing regulatory framework, particularly Directive 2005/36/EC on Professional Qualifications, provides a structured approach to diploma recognition. However, despite these regulations, the implementation varies across EU member states, leading to inconsistencies in recognition outcomes.

This presentation explores key challenges associated with diploma recognition, including differences in national policies, varying standards between public and private sectors, cultural and linguistic barriers, and the complexity of diverse educational systems.

To address these disparities, multiple strategies have been proposed. Strengthening institutional collaboration through joint doctoral programs and academic exchange initiatives can enhance mutual recognition practices. Additionally, international organizations, such as the European University Association (EUA), play a pivotal role in advocating for standardized recognition criteria. Furthermore, leveraging technological advancements, including blockchain-based credential verification and AI-driven qualification assessments, presents promising solutions to streamline recognition processes.

A more harmonized approach to PhD diploma recognition across EU countries is essential to foster a dynamic, inclusive, and competitive academic landscape. By adopting transparent policies, encouraging cross-border cooperation, and embracing digital innovations, the EU can facilitate the seamless integration of non-EU PhD holders into its academic and professional spheres.

### SUPERVISOR AND PHD STUDENT SEPARATED BY WARS AND/OR POLITICS: AVOIDING THE ELEPHANT IN THE ROOM

**Robert A. Harris**

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Creating a safe, inclusive, and empowering learning space is a professional responsibility shared by the university, the PhD supervisor and the PhD student. In times of global unrest, physical safety and physical separation can represent significant challenges to their physical safety. Locally, several challenges to achieve this ideal currently exist due to the traditional power structures in universities and how national politics affect university operations. A particular point of vulnerability is the great perceived imbalance in the non-symmetric hierarchy of PhD students and their supervisors, which can adversely affect student learning outcomes.

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If students are scared to raise concerns about their supervisors for fear of negative recrimination, there is a chance that they will instead choose to suffer in silence and allow conflicts to remain unresolved. The elephants in the room – lack of actionable professional responsibility and the prevailing academic culture of silence – will be discussed.

### DUAL USE IN RESEARCH AND ITS IMPACT ON DOCTORAL EDUCATION

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The concept of dual use—where scientific discoveries and technologies can be applied for both civilian and military purposes—has become increasingly relevant in doctoral research. Geopolitical shifts, technological innovation, and concerns over research security and the potential misuse of research results are impacting global research collaboration and academic practices. These developments particularly affect early-career researchers, including research production and dissemination (including the doctoral thesis), mobility and career prospects, and individual and institutional funding. While often associated with fields like biotechnology, AI, and materials science, dual-use research concerns all disciplines. As a result, doctoral schools and programs must be prepared to address these challenges and equip their candidates with the necessary competences to deal with these current developments.

The presentation will explore the dual-use dimension of research and its impact on doctoral education. It will start with an introduction to the topic, the discussion of connected challenges for doctoral education and an overview of how various European actors respond to these challenges. It will be discussed how doctoral schools and programmes can address the issue of dual use research, and how they can advise and support doctoral candidates and supervisors in navigating within a complex context while maintaining the key principles and values of doctoral education.

### CAMPUS RESILIENCE: HOW TO SUPPORT THE PHD COMMUNITY IN TIMES OF CRISIS

**An Huts**

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The COVID-19 pandemic in 2020 forced universities worldwide to rapidly adapt, with significant effects on PhD education and research. Doctoral students faced disruptions in research activities, access to resources, and academic networking. In response, universities adopted online platforms, virtual seminars, and flexible research timelines to support students. These changes accelerated the integration of digital tools and interdisciplinary collaboration in doctoral programmes.

## INVITED LECTURES

Universities also took a variety of actions to address the mental health and well-being of their students, faculty, and staff. Recognizing the significant impact of isolation, uncertainty, and academic disruptions, many institutions expanded mental health services by offering virtual counseling, support groups, and workshops. They increased access to online resources such as self-help materials and stress management tools. To foster a sense of community, many organized virtual social events and peer support networks to combat feelings of loneliness. Mental health awareness campaigns and training for faculty and staff were also introduced to help identify students in need of support. These actions aimed to prioritize emotional well-being while adapting to the new realities of remote learning and living.

Post-pandemic, universities have maintained these innovations, emphasizing virtual learning, flexible supervision, and global collaboration, as well as an enhanced attention for mental well-being and support to doctoral students, marking lasting shifts in doctoral education and research organization.

In this session we will highlight some of those specific actions at KU Leuven (Belgium) and verify how much has survived five years further down the road.

### EXTERNAL COLLABORATION DURING DOCTORAL STUDIES. HOW? AND WHY?

**Pascal Madeleine<sup>1</sup>, Dean Korošak<sup>2</sup>, Martha Chekenya Enger<sup>3</sup>**

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The completion of a PhD study requires the involvement of many people ranging for administrative and research support units and involving both supervisors and colleagues. This workshop will set focus on collaboration through international/inter-sector mobility: how it is conducted at the present time in Slovenia, Norway and Denmark. The requirements for external collaboration in Europe differ a lot. It is such that adding an external collaborator including mobility to a PhD project is recommended in Slovenia and Norway while it is mandatory in Denmark. In a time where a new generation of young researchers, the so-called generation Z is being more focused on academic performance and job prospect, having an external collaboration is often seen as an extra burden as it takes time from the research to be conducted. Through this interactive workshop, we will explore barriers to international mobility and exchange knowledge of possible effective incentives to entice phd candidates to undertake research stays abroad.

However, external collaboration contributes to the professional and career development of the PhD students and enables them to grow as individuals and independent researchers as well as to pursue academic or non-academic career after completion of the PhD degree (1). External collaborations result also in the development of professional networks known to reduce loneliness, to help coping with the up and down related to the PhD study (2) and to possibly reduce the well-known "imposter syndrome" (3). Another positive aspect is related to the impact of the conducted research showing that publications issued from PhD with international co-authors are cited 54% more than publications with only national co-authors.

## INVITED LECTURES

The present workshop will showcase examples from Slovenia, Norway and Denmark to underline the importance of external or international collaboration during doctoral studies.

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3. Pilbeam, C., Lloyd-Jones, G., & Denyer, D. (2013). Leveraging value in doctoral student networks through social capital. *Studies in Higher Education*, 38(10), 1472–1489. <https://doi.org/10.1080/03075079.2011.636800>

### REMOTE PHD SUPERVISION: THREE DIFFERENT EXPERIENCES

#### Lana Ružić

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Supervising PhD students online presents challenge but also an opportunity and it is hard to understand the problems that they face locally. This lecture will reflect on three different experiences.

Despite remote supervision, those students travelled to Croatia several times for discussions, guidance, and meetings with senior researchers. Challenges remained, such as maintaining motivation, clear communication, and addressing lab issues.

First student was based in Beirut. Financially, his research depended mostly on him. I managed to visit by combining it with lecture at AUB so his lab work was checked and progress discussed and it strengthened connection and facilitated PhD completion. Seems content with outcome. The Hong Kong student has a local co-supervisor and local institutional support. Still, without direct lab oversight, monitoring experiments and providing feedback it is more difficult, and PhD work is still ongoing. Regarding his content, I am sincerely not sure. A visit is probably needed. Third student moved to Northern Europe, continued lab work in Croatia, received the most support in sense of project finances and lab help and finished PhD. He felt abandoned and became very discontent with me.

The remote supervision requires strict (agreed) workplan. Each student experience the collaboration with supervisor in a different way which does not have to be proportional to supervisors' efforts or vice versa. The need for in person meetings should be prioritized, and a supervisor with limited finances may try visiting students through various forms of unrelated possibilities. On site co-supervisor is a big advantage. Regular check-ins ensure that remote students receive support, but it is still questionable whether it is the same as for those who work locally.

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## INVITED LECTURES

2. Cullinane A, McGregor D, Frodsham S, Hillier J, Guilfoyle L. Transforming a doctoral summer school to an online experience: A response to the COVID-19 pandemic. *Br J Educ Technol*. 2022;53(3):558-576.

### LIVING IN THE WORLD FULL OF DATA: OPPORTUNITIES AND PITFALLS

**Maroje Sorić**

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Wearable devices have enabled access to vast amounts of big data, and it can be tempting to explore how this data might be used in research.

In this workshop, we will explore the potential of big data generated by wearable technologies such as smartwatches and smartphones, even smart rings and similar devices. It is important to consider the possible ways of harnessing this apparently readily available data for research purposes. The big data from these devices provides numerous research opportunities, but not without risks. In the workshop, we will highlight the opportunities it presents but also delve into the ethical considerations involved in its use.

In case you're planning to leverage wearable data for your research, or you just want to better understand the complexities of managing and handling such data, this session will offer valuable practical guidance tailored specifically to the needs of a PhD student. The students will learn how to responsibly navigate challenges around privacy and ethics. The workshop is limited to 25 PhD students on a first-come, first-served basis.

### PHD OR PODIUM? THE STRUGGLES AND STRENGTHS OF ELITE ATHLETES IN HIGHER EDUCATION AND PHD PROGRAMS

**Klara Šiljeg**

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Top level athletes entering PhD programs are confronted with challenges in balancing their trainings and competitions in high performance sports with their academic requirements. Usually, time management is the biggest problem while time for training and competition often conflict with university deadlines and laboratory availability. In high intensity training, the central and peripheral fatigue can impact in a negative way their ability to concentrate which makes academic success more distant and increases the chance of overall, sport and academic, burnout.

PhD program concepts cannot always accommodate the special need of an elite top level athlete. As they travel multiple time zones and spend limited on-site time they usually lack the contact not only with supervisors and professors but also with their peers. It can sometimes make them feel immensely isolated and alone on their academic path as in sport they are used to support from coaches, therapist, associations, and fellow athletes. At the end, the need to split time leads to many compromises in both academic and sport world.

Still, some are very aware of the fact that after the sport career there is a long after career time which some would like to spend actively working in community. Those with higher academic goals still decide to enter PhD program.

## INVITED LECTURES

During lecture we will also discuss a candidate who continued swimming career through her PhD journey and my experience with her as her supervisor. The strong aspect of an elite athlete personality brings perseverance, discipline and sometimes time management skills which university should recognize and flexible programs and the benefits of remote supervision in some cases might be of a special value and big help for these candidates.

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1. Stambulova, N., & Ryba, T. V. (2013). *Athletes' careers across cultures*. Routledge.
2. Pink, M., Saunders, P. U., & Dyer, N. (2020). Managing dual careers: Strategies for elite athletes balancing sport and education. *International Journal of Sport Psychology*, 51(3), 245-259.

# FREE COMMUNICATIONS

## FREE COMUNICATIONS

### IMPROVING DOCTORAL TRAINING: STUDENT PERCEPTION OF ORPHEUS STANDARDS

**Daniela Sofia Abreu<sup>1,2</sup>, Jorge H. Fernandes\*<sup>1,2</sup>, João L. Afonso\*<sup>1,2</sup>,  
Marta F. Lima\*<sup>1,2</sup>, Jaime Oliveira<sup>1,2</sup>**

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The School of Medicine at the University of Minho offers two PhD programs: the MD/PhD and the PhD in Biomedicine and Health Sciences. Ensuring high-quality doctoral education requires alignment with established standards, such as those set by ORPHEUS. This study aimed to evaluate the perception of PhD students on ORPHEUS standards in their doctoral experience. This survey was e-mailed to 95 PhD students, with 36 responses (51.85% dropout).

Of the 36 students, 74.3% know the ORPHEUS, but were not familiar with the guidelines (3.0/10.0, IQR: 4.0). Nonetheless, 54.3% perceived ORPHEUS standards as beneficial for doctoral education, 42.9% were unsure, and 2.8% deemed them unhelpful. Supervisory quality was rated 7.5/10.0 (IQR: 3.0), with weekly or biweekly meetings. Recent restrictions preventing co-authored publications between students/supervisors and jury members within five years raised concerns. On transversal competencies, 68.6% felt supported in career development, although access to transferable skills training was limited. Lack of funding and equipment accessibility, grant writing, and project management were identified as key gaps in professional development. Despite these challenges, the research environment was positively rated (7.0/10, IQR: 2.25). Despite a school support nucleus, 42.8% of students were unaware of available mental health resources, and nearly half felt career counseling was insufficient. Awareness of PhD legal rights was low, with over half feeling partially informed, whereas knowledge of PhD responsibilities was higher.

Our findings highlight the need for improvements in career planning, mental health support, research funding, and academic writing resources to enhance the doctoral experience.

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## FREE COMMUNICATIONS

### DOCTORAL TRAINING IN BIOMEDICINE AND HEALTH SCIENCES IN BELGIUM, CROATIA, PORTUGAL AND TURKEY: A COMPARATIVE ANALYSIS THROUGH THE IMPACT OF THE ORPHEUS LABEL PROCEDURE

**Gül Güner Akdoğan<sup>1</sup>, Feyza Aricioglu<sup>2</sup>, John Creemers<sup>3</sup>, Joana A. Palha<sup>4</sup>, Damir Sapunar<sup>5</sup>, Michael J. Mulvany<sup>6</sup>, Hakan S. Orer<sup>7</sup>**

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With over 130 members worldwide, ORPHEUS promotes best practices in PhD education in the health sciences. In 2014, it launched a voluntary labeling program recognizing institutions adhering to its Best Practice guidelines.

This study aims to compare ORPHEUS-labeled institutions across four geographically distinct European Higher Education Area (EHEA) regions—Belgium, Croatia, Portugal and Turkey. All countries participate in the Bologna Process, ensuring alignment with European higher education standards. However, the institutions examined vary significantly in size, historical background, institutional culture, research environment, and the number of active PhD programs.

Key doctoral education components—administrative structure, coursework, supervision, supervisor training, publication policy, thesis format, defense, and funding—were assessed based on similarities and minor or significant differences.

Our preliminary findings reveal that, despite differences in societal needs, institutional structures, and research traditions, doctoral training exhibits a high degree of similarity across these diverse settings. The results underscore the effectiveness of ORPHEUS Best Practices as a tool to foster highly versatile graduates who are well-prepared for academic and non-academic careers.

ORPHEUS was founded to bridge the gap in PhD training across diverse EHEA regions, and it has become a platform where members learn from each other. As a continuum to the previous publications aiming to know how PhD training is delivered in the UK and Scandinavian institutions (1) and across the Atlantic between Europe and the United States (2), such studies help foster mobility and cooperation across international research environments and offer insights into the impact of ORPHEUS-labeled programs on doctoral education.

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1. Williams, A., et. Al. A Comparison of Doctoral Training in Biomedicine and Medicine for Some UK and Scandinavian Graduate Programmes: Learning from Each Other. *FEBS Open Bio* 2019; 9:830-39.
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## FREE COMMUNICATIONS

### THE IMPACT OF GLOBAL CHANGES ON THE SUCCESS OF DOCTORAL STUDIES: A SURVEY ON DOCTORAL PROGRAM IN BIOMEDICAL SCIENCES IN INDONESIA

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Doctoral degree program requires students to make substantial contribution to knowledge while demonstrating advanced research skills, critical thinking, and the ability to conduct independent, high-quality research. To succeed in a demanding education, doctoral students must be resilient amid local and global crises, including geopolitical and socio-economic challenges.

We conducted a survey involving 70% of our students in Jakarta, Indonesia to evaluate the impact of the ongoing crisis. Approximately 47% of our students reported being significantly or severely impacted by global and geopolitical crises, while an equal proportion experienced only mild to moderate effects, only 6% stated they were unaffected. Meanwhile, For the question about the challenges students face in completing their doctoral studies amid the global crisis, 43% cited funding, 31% mentioned research materials and resources, 12% highlighted supervisory support, and 8% pointed to international mobility. Furthermore, in response to the question of whether institution provides adequate support to help doctoral students navigate global changes, 51% stated that the institution offers sufficient support, 31% considered it moderately adequate, while 18% indicated that the support was insufficient or inadequate.

To effectively support doctoral students in overcoming challenges to completing their education, especially in developing countries, stronger institutional and government-level policies are urgently required. This includes expanding scholarship programs, increasing research funding, and enhancing opportunities for international collaboration, ensuring that students have the necessary resources and support to thrive in a rapidly evolving academic landscape.

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### SUPERVISOR CHALLENGES IN GUIDING DOCTORAL STUDENTS IN A GLOBAL CRISIS SITUATION

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Doctoral education is an education that is loaded with the implementation of in-depth and extensive research to explore new knowledge or innovations that are beneficial to human welfare and health. Supervisors play an important role in the educational success of the doctoral students they supervise, especially in situations of global crisis.

We carried out an investigation with 21 supervisors from our academic program to assess the effects of the ongoing crisis. Around 43% of our supervisors indicated they were largely or severely affected by worldwide and geopolitical issues, while an equal percentage reported experiencing only mild to moderate consequences; only 14% claimed they were minimally impacted and unaffected. In relation to the difficulties supervisors face in assisting their students in completing their doctoral degrees during the global crisis, 47% pointed to funding as a primary concern, 31% referenced issues with laboratory access and resources, 14% mentioned international mobility challenges, and 8% also highlighted international mobility issues.

Some things that may be used by supervisors to deal with the above problems are establishing communication and collaboration with foreign and domestic researchers. Besides that, academic policies both at the university and national levels that support the advancement of doctoral education, diverse research funding support and research equipment assistance at universities also very instrumental for supervisors in guiding doctoral students in a global crisis situation.

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## FREE COMMUNICATIONS

### EXPERIENCE WITH THE MD-PHD EXCELLENCE PROGRAM AT SEMMELWEIS UNIVERSITY

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The number of medical PhD students has considerably decreased in Hungary, because the lengthy special medical training period interferes with a 4-year PhD study after graduation. Recently, educational facilities in Hungary and other countries have offered an opportunity for gradual students to start their PhD studies before graduation to reverse this unfavorable trend. This presentation describes the MD-PhD Excellence Program of Semmelweis University, including benefits and hazards, which program has offered gradual students a path to acquire a PhD degree 2 years after graduation.

This program was introduced at Semmelweis University in 2017, and it targets the most talented and motivated students who are involved in intensive research during their gradual years. Participants receive a scholarship, start their PhD studies parallel to their gradual studies in the 5<sup>th</sup> and 6<sup>th</sup> years of training, complete their complex PhD exam at the time of graduation, and prepare their PhD thesis within the next two years. Semmelweis University was able to enroll almost 40 gradual students into the MD-PhD Excellence Program between 2017 and 2021. More than 90% of these special PhD students have acquired their PhD degree or PhD absolutorium by the end of their 4-year studies.

Ever since 2021 the number of participants of the MD-PhD Excellence Program has been steadily increasing and the success of it is a clear indication of how the need of talented gradual students for a PhD title meets with the long-term goals of Semmelweis University to improve the standards of quality medical training.

### EVALUATING ADMISSION SCORE TRENDS AND DEMOGRAPHIC INFLUENCES IN PHD KINESIOLOGY CANDIDATES

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The success of PhD students in Kinesiology is multifactorial, with admission requirements being one of the contributing factors (1). This study examines trends and variations in admission scores of candidates entering the PhD program in Kinesiology of at University Zagreb in 2019, 2021 and 2023 (2).

A total of 154 students (mean age:  $32.16 \pm 8.15$  years) were analyzed. Significant differences in admission scores among three cohorts were shown. The 2021 cohort exhibited notably higher scores than the 2019 cohort ( $81.90 \pm 9.03$  vs.  $77.11 \pm 12.07$ ;  $p < 0.05$ ), suggesting improved academic preparedness.

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The 2023 cohort maintained similar scores to 2021, implying that the elevated standards persisted. This trend may reflect evolving academic expectations in prior education.

Older students had lower entry grades. Possible explanations include variations in grading practices over time, diverse educational trajectories, and challenges adapting to contemporary academic demands. Most students held a master's degree in kinesiology, while one-third had a medicine background. No significant differences in prior academic scores were found between these groups.

The admission points awarded for previous scientific engagement and publications remained relatively stable, though a slight upward trend was noted. Biomedical students had significantly more publications ( $p < 0.001$ ) and were, on average, five years older ( $p < 0.01$ ), but overall number of publications was low in both groups, averaging less than one per student.

To enhance the number of publications among PhD applicants, Faculty of Kinesiology might consider organizing structured writing workshops during last year of the Master program, open also for ex-students and offer mentorship for potential students through the publication process.

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### ENHANCING RESEARCH INTEGRITY: A TRAINING PROGRAM FOR PhD STUDENTS

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Ethical research practices are fundamental to scientific integrity, yet many early-career researchers receive insufficient research and publication ethics training. To address this gap, our Institute has developed a 14-week/28-hour training program ("Scientific Research and Publication Ethics") in 2020 that gives PhD students a practical understanding of research ethics and fundamental ethical concepts. The curriculum, which is offered as a required third-cycle course, addresses important subjects like authorship, plagiarism, data management, and intellectual property rights:

- What is scientific research?
- How to plan for scientific research?
- Duties and responsibilities of researchers
- Design and methodology of scientific research (2 weeks)

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- Analysis of research data and transformation of results to a publication (3 weeks)
- Basic principles of science ethics
- Research and publication ethics
- Academic activities and ethics
- Plagiarism
- What can be done against unethical conduct in science?
- Property and patents of the intellectual and scientific findings

Our program combines academic training with real-world case studies to promote ethical decision-making. We aim to improve participants' capacity to handle challenging academic ethical quandaries by focusing on real-world applications. Feedback from 231 students who had completed the program indicates a high level of engagement and improved ethical awareness.

The curriculum, learning objectives, and initial assessment of our training program will be covered in this presentation. We argue that formal ethics education is essential to fostering ethical research practices, and we support its broader inclusion in PhD training programs across the globe.

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### PhD4Moz: CREATING A SUSTAINABLE PLATFORM TO SUPPORT PHD TRAINING IN HEALTH SCIENCES IN MOZAMBIQUE

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Mozambique urgently needs capacity building to enhance doctoral education. The country has made remarkable efforts to create the conditions necessary to train and retain highly qualified professionals capable of generating knowledge to address its pressing challenges.

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The PhD4Moz initiative was created to strengthen doctoral education in key Mozambican institutions, with a primary, though not exclusive, focus on Health Sciences. This consortium of six institutions, three in Mozambique and three in Europe, is funded by Erasmus+ Capacity Building (<https://phd4moz.ins.gov.mz/>). PhD4Moz is structured around four key activities: 1) training PhD students in transferable skills; 2) training PhD students in specific disciplines; 3) mentoring PhD students; 4) training PhD supervisors.

During the first year, PhD4Moz delivered 20 courses; 17 covering transferable skills and 3 discipline-focused. Most courses were conducted online, combining synchronous and asynchronous activities, while a few took place in person in Maputo. All training materials were made available on an online platform (<https://phd4moz.labdigital-tecminho.net/>), allowing students to revisit them anytime.

The program reached up to now nearly 100 PhD students, who provided excellent positive feedback and valuable suggestions. To further strengthen doctoral supervision, a seminar series for supervisors was also conducted online, enhancing mentorship skills and fostering a more supportive academic environment. The PhD4Moz initiative has created a dynamic and interactive community of PhD students, supervisors, and other professionals committed to continuous improvement of the PhD training in Mozambique. This growing network actively seeks feedback and new collaborations to further enrich the program and ensure its long-term sustainability.

### THE ROLE OF HEALTH DEVELOPMENT OFFICES IN PHD TRAINING AND NAVIGATING CRISES IN TRANSLATIONAL RESEARCH

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Global health challenges, such as rising healthcare costs and an aging population, underscore the need for prevention and interdisciplinary research. In Hungary, doctoral colleges can collaborate with Health Development Offices (HDOs) to bridge theoretical research with practical health promotion. Our study evaluates the potential of HDOs as platforms for PhD training and translational research.

We analyzed the spatial distribution of all 108 HDOs at the county level to assess accessibility. The Gini index quantified inequalities in coverage, while a Kernel Density heatmap visualized regional distribution. Shannon Entropy measured heterogeneity, highlighting areas of concentration and underrepresentation. Findings reveal that HDOs collectively serve approximately 9 million people. The Gini Index (0.25) indicates moderate inequality, with rural areas better served than urban regions—an unexpected trend warranting further study. The Shannon Entropy value (1.24) reflects moderate heterogeneity, with disparities in regions such as the Great Plain and Northern Hungary.

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As part of Hungary's national health framework, HDOs offer a unique setting for integrating prevention-focused research into PhD training. Localized collaborations, such as scholarship programs, strengthen partnerships between HDOs and doctoral colleges. These initiatives foster innovative solutions, enhancing the adaptability and resilience of health systems. Ensuring equitable geographical coverage is crucial for maximizing the role of HDOs as research and training hubs.

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### NAVIGATING MY PHD JOURNEY: PERSONAL INSIGHTS ON STRUCTURED ONLINE SUPERVISION IN CLINICAL RESEARCH

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Modern PhD training in clinical research increasingly incorporates digital tools and interdisciplinary collaboration. Adequate supervision is key to ensuring research quality and professional development. Accordingly, I have implemented structured online supervision as part of my PhD training.

My PhD project, ROB'N'SAFE, investigates outpatient robot-assisted radical nephrectomy using clinical, technological, and qualitative methodologies. It integrates data from wearable devices, CT-derived body composition analysis, and AI-driven predictive models to optimize patient selection and perioperative care. The project spans multiple institutions, demonstrating both the benefits and challenges of digital tools in the interdisciplinary setting. Being a medical doctor pursuing a PhD in clinical research, gaining valuable experience in project management, interdisciplinary collaboration, and leadership are crucial skills for navigating the complexity.

I have structured remote supervision to enhance mentorship and problem-solving. A detailed plan for regular meetings over the coming year supports this. The meetings are guided by a clear agenda followed by a written summary to ensure continuity and focus throughout. This approach strengthens supervision and fosters collaboration across disciplines.

Managing remote supervision in a clinical PhD program requires careful coordination between surgeons, anesthesiologists, and nursing staff. Online meetings support my research progression and logistical challenges in daily work. My project workflow aims to demonstrate how structured online supervision can improve PhD research efficiency, mentorship quality, and professional development by leveraging interdisciplinary teamwork.

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### PHD EDUCATION IN BIOMEDICINE DURING THE WAR IN UKRAINE: FROM CHALLENGES TO SOLUTIONS

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The war in Ukraine has greatly affected research and education, particularly for PhD students, who have struggled to continue their studies and acquire practical skills. This study highlights the main challenges faced by PhD students and supervisors during the conflict and presents the solutions discovered.

Here we summarize the experiences of two key biomedical institutions in Kyiv: Taras Shevchenko National University of Kyiv and Bogomolets National Medical University. The analysis focuses on three questions: 1) How to diversify risks from war threats; 2) How to manage limited resources during wartime; and 3) How to reorganize the research environment and supervision for enhanced productivity.

Several obstacles hindered scientific research, such as unexpected safety regulations and air raid sirens that paused experiments. Limited power availability slowed progress. In response, institutions created emergency plans with energy backups and offered optional courses in tactical medicine and mental health to support PhD students in managing physical and psychological threats.

Insufficient and unstable funding has hindered research, leading to increased collaboration with private healthcare institutions. Partnering with the CSD medical laboratory has provided advanced facilities and high-throughput technologies, enhancing research initiatives. A joined PhD program with double mentorship has diversified risks and fostered a supportive research environment. Improved international cooperation has further elevated the quality of research, leading to more publications in peer-reviewed journals indexed in Scopus and Web of Science (Q1-Q2).

Despite wartime challenges, the analysis of PhD students' work highlights their resilience and adaptability, showcasing their significant potential and achievements.

### GEORGIAN EDUCATOR'S PERSPECTIVES ON PANDEMIC PREPAREDNESS INDICATORS: LESSONS FROM COVID-19

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The COVID-19 pandemic exposed deficiencies in Georgia's healthcare preparedness, particularly in crisis response, emergency management, and interdisciplinary coordination. Limited training and resource constraints left healthcare professionals unprepared to respond effectively. This qualitative study explores strategies to enhance undergraduate biomedical and health sciences education to improve pandemic readiness.

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Semi-structured interviews with Georgian and international educators identified key indicators for strengthening preparedness. Findings highlight the necessity to integrate epidemiology, preventive medicine, and vaccine advocacy into undergraduate curricula. Simulation-based learning and telemedicine emerged as essential tools for bridging theoretical knowledge with practical application. Participants also emphasized the significance of interdisciplinary and international collaboration, advocating for shared learning experiences and cross-border knowledge exchange to strengthen pandemic preparedness. By embedding these elements into curricula, this study, part of a broader doctoral research, provides recommendations to strengthen pandemic preparedness and equip future healthcare professionals with essential crisis management skills. As global crises redefine academic priorities, doctoral programs, PhD educators, and supervisors play a vital role in shaping biomedical and health sciences education through innovative research and interdisciplinary collaboration, bridging undergraduate and postgraduate education to ensure seamless knowledge transfer and enhance preparedness for emerging healthcare challenges.

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### BEYOND THE NUMBERS: THE IMPACT OF ORPHEUS BEST PRACTICES ON THE QUALITY OF RESEARCH AND DOCTORAL TRAINING AT ACIBADEM UNIVERSITY

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Established in 2010, the Institute of Health Sciences (IHS) at Acibadem University (ACU) is a leader in health sciences education, integrating advanced academic programs with a robust research infrastructure. This leadership is further reinforced by the significant contributions of the Acibadem Health Group, whose expertise and resources underpin the delivery of exemplary healthcare services both locally and internationally. IHS, offering 24 master's and 12 doctoral programs across 24 departments with 162 enrolled Ph.D. students, is dedicated to cultivating independent researchers equipped with rigorous scientific knowledge and research skills. Since joining the ORPHEUS program in 2017 and implementing its standards in Fall 2019, IHS has progressively aligned its doctoral training with international best practices.

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The establishment of the student-led Orpheus Committee (stuORPHEUS) in 2023 further underscores the institution's commitment to enhancing interdisciplinary collaboration, open science practices, and active student involvement in shaping their educational experiences.

This descriptive study evaluates the structure of doctoral education at IHS in the context of ORPHEUS Best Practices, with a particular focus on research and publication quality. Utilizing student demographics and research outcomes data collected since 2012, the analysis indicates a marked improvement in both research and publication quality following the implementation of ORPHEUS standards. While these enhancements underscore the efficacy of the best practices, the findings also reveal a clear need for stronger support mechanisms, especially regarding international engagement.

### RELATIONSHIP BETWEEN DOCTORAL STUDENTS' MOTIVATION, RESILIENCE, AND WELLBEING: THE ROLE OF ACADEMIC SUCCESS EXPECTATIONS AND SUPPORTIVE FACTORS

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Doctoral education is a critical phase where students develop academic independence while facing stress, uncertainty, and isolation. Motivation, resilience, and wellbeing significantly influence academic success and persistence, yet the interaction between these factors and key institutional and personal support mechanisms remains underexplored.

This study employs a mixed-methods approach to examine doctoral students' motivation levels, resilience, wellbeing, and academic success expectations. In the first phase, a survey was conducted among doctoral students at Acibadem University using validated scales. Findings indicate that identified motivation was the most prominent type, while external motivation had the lowest average score. The average wellbeing score was 11.7/25, and resilience averaged 17.9/30, suggesting moderate wellbeing and resilience. For academic success expectancy, factors such as satisfaction (3.4/5), progress (3/4), and intention to quit (2/4) were assessed, indicating that while students are generally satisfied and progressing as expected, a notable proportion have considered leaving their programs.

The second phase will involve qualitative interviews to explore the underlying causes and contextual factors shaping these relationships. Insights gained will guide the development of institutional and individual strategies to enhance doctoral student support. Initial survey results will be presented at the conference, along with preliminary qualitative findings, offering a comprehensive perspective on doctoral education.

## FREE COMMUNICATIONS

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### ASSESSMENT OF GRADUATE STUDENT SATISFACTION IN HEALTH SCIENCES AT KOCAELI UNIVERSITY: A SURVEY-BASED STUDY

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Assessing student satisfaction is essential in graduate education to identifying strengths and areas for improvement in graduate programs. Ensuring the satisfaction of graduate students is crucial, as their positive academic and research experiences foster a trust in the institution, increasing the likelihood that they will choose to continue their education at the same university. This study aimed to evaluate the satisfaction levels of graduate students at the Health Sciences Institute of Kocaeli University focusing on academic support, research opportunities, and institutional resources.

A structured questionnaire with 73 questions was distributed among graduate students enrolled in the Health Sciences Institute at Kocaeli University. The survey collected demographic data, academic satisfaction levels, perceived research opportunities, advisor support, and opinions on academic requirements and language proficiency exams. Quantitative data were analyzed using descriptive statistics, while qualitative responses were categorized thematically. A total of 65 students participated in the survey. The majority of respondents were female (75%) and enrolled in master's (63%) and doctoral (34%) programs.

Qualitative responses highlighted concerns regarding access to research facilities, insufficient funding for conference participation, and the need for structured mentorship programs. This study provided valuable insights into our graduate students' perspectives on their academic and research environment. Addressing identified gaps, such as increasing research funding and enhancing mentorship opportunities, could significantly improve the overall graduate education experience. We believe that graduate student satisfaction serves as a strong foundation for students to choose our institution for their PhD studies. Other Institutions should also consider these findings when developing policies to support and retain graduate students in health sciences.

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### A TEACHING MODULE FOR PHD CANDIDATES IN PHARMACOLOGY: AN UPDATE

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In 2022, we described a new module (Teaching Perspectives in Pharmacology, 5 ECTS) to support our PhD candidates with their teaching skills as a component of their structured PhD programme. This module was formally introduced in 2022, and we describe our experience with the module since then. Candidates engage with the module typically for the first 3 years of their studies, and consists of 4 on campus sessions each year, in which there is an opportunity to share their teaching practice. The module is assessed by means of a log of teaching hours and a report where the candidate reflects on their teaching journey. We have 10 candidates who have successfully completed the module, who we recently surveyed regarding their experience (80% response rate). All respondents agreed that the module supported their teaching duties and provided an opportunity for reflection, as well as being exposed to developing best practice; 7/8 respondents felt that the mentoring sessions were beneficial. With the open-ended questions, candidates enjoyed the opportunities to develop critical thinking and reflection skills that enhanced their teaching effectiveness and confidence. The regular sessions provided a fertile learning environment where facilitators and candidates from all years of the programme share their experiences. Candidates suggested some minor improvements by making some refinements to the mentorship sessions to provide more training ("teach the teacher"). In conclusion, we have successfully developed a structured teaching opportunity that enables PhD candidates to develop teaching skills that complement those of their research project.

### INVESTIGATION OF KNOWLEDGE AND AWARENESS LEVELS OF PHD STUDENTS IN THE INSTITUTE OF HEALTH SCIENCES REGARDING THE USE OF ARTIFICIAL INTELLIGENCE

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Artificial intelligence (AI) has created a significant transformation in the field of health sciences, offering innovations in many areas from early diagnosis of diseases to personalized treatment planning [1]. Beyond clinical applications, it has also transformed education and research processes, making it necessary to increase the level of knowledge and awareness for PhD students. However, existing studies provide limited information on students' effective use of AI in academic and professional processes [2].

In this study, data were collected through a survey administered to PhD students from various fields at Bezmialem Vakif University Institute of Health Sciences, and the obtained results were statistically evaluated.

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Four basic factors were analyzed in the study: knowledge level, frequency of use, ethical concerns and professional integration. The findings show that there is a high positive correlation between knowledge level and frequency of use ( $r = .68$ ,  $p < 0.05$ ), and a moderate positive correlation between professional integration and knowledge level ( $r = .46$ ,  $p < 0.05$ ) and frequency of use ( $r = .39$ ,  $p < 0.05$ ). Ethical concerns, on the other hand, did not show a significant relationship with other variables, indicating that they remain theoretical or that AI is being used without ethical awareness. In addition, AI education during the PhD process had no effect on the survey factors, indicating a gap in formal education. Although AI use is moderate, the number of students receiving structured training is low, and most rely on self-learning. Expanding academic AI education is essential to ensure both effective and ethical use in professional fields.

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### ENHANCING THE QUALITY OF DOCTORAL EDUCATION THROUGH INTERDISCIPLINARY INITIATIVES: THE ANNUAL CONFERENCE OF DOCTORAL STUDENTS AT THE DOCTORAL SCHOOL OF MEDICAL AND HEALTH SCIENCES, JAGIELLONIAN UNIVERSITY MEDICAL COLLEGE

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To address challenges in doctoral education within an interdisciplinary scientific environment, the Doctoral School of Medical and Health Sciences at Jagiellonian University Medical College in Kraków, PL organizes an annual doctoral students' conference. This initiative fosters knowledge exchange, academic integration, and the development of key competencies essential for scientific careers. The conference follows an open format, welcoming doctoral students from various Doctoral Schools, faculties, and universities, as well as outstanding students from related disciplines who may be prospective PhD candidates.

A unique feature of the conference is the active involvement of doctoral students in its organization, ensuring the program meets their needs. The event includes:

- Plenary sessions led by experts in medical and health sciences,
- Doctoral presentations, allowing participants to showcase research, exchange perspectives, and receive feedback.

A key element is the competition for the best presentations, evaluated based on scientific merit, innovation, and presentation quality.

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The moderators of the sessions, recognized experts in science and didactics, constitute the competition committee, which, together with the evaluations of the abstract reviewers, determines the final outcome of the scientific competition of doctoral students. Winners receive awards, encouraging excellence in scientific communication.

As a recurring annual event, the conference ensures continuous support for doctoral development, tracks evolving educational needs, and identifies key challenges in doctoral training. It also generates recommendations for improving curricula.

### FOREIGN LANGUAGES IN THE CURRICULUM OF PHD STUDENTS IN UKRAINE

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Proficiency in English as a foreign language is a fundamental requirement for admission to medical PhD programs in Ukraine. Many medical PhD students demonstrate limited proficiency in English during their studies. Medical PhD students rarely choose to study alternative foreign languages, such as German or Polish.

This study analyzed 344 medical PhD students enrolled in 2023 and 2024. The objective of the study was to identify factors associated with high academic performance in English. Variables examined included gender, age, initial proficiency in English, and academic performance.

Out of the 244 students analyzed (mean age: 30.1 years; range: 24–56 years; 64% male and 36% female), the average initial English grade was 4.1 on a 5-point scale. Among the 179 students enrolled in 2024, all scored at least 130 out of 200 points on the Common Entrance Examination. The overall academic performance revealed the following outcomes: 20 students (5.8%) failed (grades D or F); 80 students (23.2%) achieved a satisfactory grade (C); 110 students (32%) earned a good grade (B); and 104 students (30.2%) attained an excellent grade (A). A plausible positive correlation was observed between initial English proficiency (average score: 4.1) and final academic success. Over 29% of medical PhD students exhibited suboptimal proficiency in academic and medical English. These challenges could stem from the decreased motivation, as well as a persistent misconception of poor English knowledge significance.

To enhance the curriculum, in 2024, Bogomolets NMU will introduce an additional English course for medical PhD students—the B2 examination course.

## FREE COMMUNICATIONS

### STRENGTHENING MENTORING CAPACITIES AS A CORNERSTONE OF A SUSTAINABLE AND SUCCESSFUL PhD PROGRAM

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Being aware of the significance of successful mentoring relationships for the PhD program and following best practices in PhD education, the Faculty of Medicine Osijek has held an annual Workshop for Mentors since the academic year 2015/2016. The aim of this study was to evaluate the influence of the number of prospective mentors who attended the annual Workshop for Mentors and the number of defended PhD theses from the academic year 2016/2017 until the academic year 2023/2024.

During the observed period, 153 prospective mentors completed the Workshop for Mentors, and 210 PhD students defended their PhD theses. After dividing the results into two groups—the first group covering the first four observed academic years and the second covering the last four—no statistically significant differences were found in the attendance of the Workshops for Mentors ( $p=0.059$ ) or the number of completed PhDs ( $p=0.661$ ). According to faculty statistics, there are 300 scientists who meet the requirements for becoming a mentor, meaning that around 50% of prospective mentors still do not have formal training for mentoring PhD students.

Our results suggest that attending the Workshops for Mentors failed to provide a significant increase in the number of completed PhDs. However, it should be noted that annually, a total of 25 new students enroll in the PhD program, and the median number of doctorates awarded per year is 24. A longer study period with more variables should be observed in order to determine the effectiveness of the Workshops for Mentors.

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## FREE COMUNICATIONS

### SCIENTIFIC EXCELLENCE OF THESIS SUPERVISORS IN THE PHARMACEUTICAL AND BIOCHEMICAL SCIENCES PROGRAM AT THE UNIVERSITY OF ZAGREB FACULTY OF PHARMACY AND BIOCHEMISTRY

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The PhD program Pharmaceutical and Biochemical Sciences at the Faculty of Pharmacy and Biochemistry in Zagreb is organized into two fields: Pharmacy and Medical Biochemistry, each comprising 15 different modules grouped under five thematic areas, along with an extensive list of elective courses. Thesis supervisors in this program are primarily professors from the institution, occasionally co-supervising with external associates.

The aim of this study was to provide an overview of the scientific excellence of supervisors who mentored PhD students who obtained their PhD degrees during the academic years 2022/2023 and 2023/2024. We analyzed the number of original research articles, review articles, and book chapters indexed in the Web of Science Core Collection throughout their careers.

During aforementioned academic years, a total of 29 PhD students obtained their degrees under the supervision of 33 mentors. Collectively, these supervisors published 2,102 scientific publications, including 1,925 original research articles, 147 review articles, and 21 book chapters. These publications received a total of 55,825 citations. The median number of original research papers per supervisor was 43 (range: 7-349), of review articles 3 (1-35), and of book chapters 2 (1-9). The median number of citations per supervisor was 1,233 (18-12,397), and the h-index was 16 (3-60).

These findings highlight the exceptional scientific activity of supervisors in the doctoral program. In addition to their research contributions, it is also essential to develop their teaching competencies. Therefore, in the upcoming period, workshops focusing on this aspect will be organized more frequently.

## FREE COMUNICATIONS

### PILOT SURVEY ON PHD STUDENTS' PERCEPTION ABOUT THE DOCTORAL PROGRAM IN MEDICAL SCIENCES OF THE SCHOOL OF MEDICINE AND BIOMEDICAL SCIENCES AT THE UNIVERSITY OF PORTO

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Started in 2009, the ICBAS's PhD program in Medical Sciences admits graduates in Human Medicine (admission criteria). This study cycle has no mandatory curricular units fostering curriculum flexibility and considering that enrolled students are medical residents and/or specialists of various medical specialties.<sup>1</sup> Here, we report a pilot online survey applied to PhD students to evaluate their specific needs and improvement suggestions concerning the PhD program.

The online survey designed by the PhD program accompanying commission was applied to all PhD students enrolled in the program from December to January 2024.

From 107 registered students, only 11 (10.3%) responded to the survey. The mean age of the responders was 38.3 (6.0) years old and most of them were in their second year (45.5%). The mean satisfaction with the program was 7.9 (1.6, range 5 to 10) on a scale from 1 to 10. The most frequently raised positive aspect was the curricular flexibility (36.4%). Students complain the most about the lack of funding available to afford open access publication fees and unattended difficulties in statistics. All the responders agreed that the inclusion of optional curricular units would be beneficial, including in data management and statistics, communication skills and scientific writing. Given the part-time involvement of the students, they consider the program should offer these courses virtually.

This descriptive study shows that the PhD program in Medical Sciences is overall satisfactory, with its flexibility being one of the most relevant factors. To comply with students' expectations following this pilot survey, optional curriculum focusing on students complains were promptly implemented in the second semester of the current academic year.

## FREE COMUNICATIONS

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### PERCEPTION OF ORPHEUS IN DOCTORAL STUDIES: A QUALITATIVE ANALYSIS

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This qualitative study aimed to explore the perceived importance of ORPHEUS among PhD students, focusing on identifying factors that could contribute to the development and improvement of the doctoral plan. Drawing on the methodological principles of Braun & Clarke<sup>1</sup>, an inductive thematic analysis was applied to semi-structured interviews conducted at the School of Medicine, University of Minho. Participants were selected to provide an in-depth understanding of the challenges and opportunities present in the doctoral journey, particularly regarding the supervisor-student relationship, access to institutional resources, and the development of transferable skills.

Additionally, discussions addressed the level of awareness regarding ORPHEUS and the impact the organisation had on PhD training, with particular reference to the inclusion in evaluation committees of members who did not have prior collaborations with the supervisor or the student. Strategies were also explored to enhance the visibility and integration of ORPHEUS within the university, aiming at the continuous improvement of the doctoral plan.

The research intended to provide insights for the implementation of strategies that would strengthen support mechanisms and enhance the transparency of academic processes, thereby optimising the doctoral plan. The integration of ORPHEUS initiatives was presented as a key element in enhancing the academic autonomy of PhD students, promoting a more structured and enriching academic experience. By emphasising the importance of effective communication and coherent coordination of support services, this study provided a valuable perspective for the evolution and continuous improvement of the doctoral journey.

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## FREE COMMUNICATIONS

### CAREER SPEED DATING: CONNECTING PHD STUDENTS AND SCIENTISTS

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The Swiss School of Public Health (SSPH+) supports a range of academic activities across universities in Switzerland. The aim of this initiative is to share the experience of organizing and promoting career mentorship as Career Speed Dating (CSD) events among PhD students of SSPH+, along with their benefits and the lessons we have learned.

The SSPH+ event Career Speed Dating, organized by the Inter-university Graduate Campus (IGC) student representatives, offers a unique experience where participants are encouraged to connect, discuss their careers plans, ask questions, share tips, and explore about their challenges in an interactive online setting. We organized two CSD events in April and November 2024, with approximately 30 PhD students from seven universities in Switzerland participating. The participants took part in multiple rounds of “speed dating” sessions, where they discussed their careers plans with fellow members of the SSPH+ community. These sessions also included one-to-one meetings with a senior career advisor (or “business angel”), who was either a professor from the SPPH+ board, or a senior health scientist from the private sector. Through these interactions, the participants gained insights and feedback on their academic and research paths. The main benefits of the CSD events were the opportunity to meet, share experiences, pitch their research, receive advice and network with other PhD students, professors and scientists.

The CSD events facilitated networking and support among PhD students and scientists’ community. The participants felt comfortable discussing their most challenging experiences and received guidance to better prepare for future career opportunities.

## FREE COMMUNICATIONS

### A PHD COMPASS: THE IMPACT OF AN INFORMATION BOOKLET ON DOCTORAL STUDENTS' PROGRESS AND ADAPTATION

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The PhD Information Booklet, developed by the Doctoral Students' Association (DSA) at Karolinska Institute, is an essential resource guiding PhD candidate—many of whom are international students—through both academic and non-academic challenges. Covering educational and administrative procedures, funding opportunities, student rights, and practical aspects of living in Sweden, it provides indispensable support. Notably, it includes a step-by-step guide on reporting harassment/discrimination and raising awareness of work environment issues, fostering a safer and more supportive academic climate.

Unlike general institutional guides, this booklet is created by PhD students for PhD students, making it a concise, relevant, up-to-date and accessible tool. Freely available through the DSA website (1), its latest edition received 585 engagements within 24 hours of release (09/01/2025) and continues to be accessed 10-50 times weekly. Awareness is further strengthened through newsletters, campus screens, and the doctoral student representative network.

Research underscores the importance of structured informational resources on students' success. These types of comprehensive materials enhance academic performance and integration, particularly among international students (2). Moreover, adequate administrative and peer support has been linked to lower stress levels and better well-being among doctoral students (3).

In an increasingly complex academic environment, the PhD Information Booklet improves efficiency and clarity, allowing students to focus navigating their doctoral journey, while balancing other work and personal demands. Regular updates increase the booklet's relevance in relation to the evolving needs of doctoral students. Given its impact, this easily replicable, student-led model could be adopted by other universities to better support PhD candidates.

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## FREE COMMUNICATIONS

### WHAT DID THE SUPERVISORS ADVISED FOR ASSESSING PHD THESIS? A DESCRIPTIVE QUALITATIVE STUDY ON THE DISCUSSION RESULT OF GOOD SUPERVISOR TRAINING

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Every year the PhD Program at the Faculty of Medicine, Public Health and Nursing Universitas Gadjah Mada (FM PHN UGM) conducts a particular training for Ph.D supervisor candidates. One of the sessions is about PhD thesis assessment. The session is delivered by short interactive lecture, asynchronous session, discussion and presentation. This paper describes the participant discussion result on how to assess Ph.D. thesis in the 2024 training program.

Five groups that consisted of 5-6 supervisors in a group indicated that assessment on PhD thesis should be comprehensive. PhD thesis assessment should include originality, literature review writing, rigor methodology, contribution to research, the relevance toward the broader scientific or societal issues, stringency, clarity of the stage of research, structure of argument as well as the way of communicating the idea, presentation, and submitting to the journal. The way students presented and quality of the discussion were also added for the Ph.D thesis assessment.

Assessment of PhD thesis is one aspect of doctorate study that should be planned and developed carefully. The assessment factors should have rubric to make the form user friendly.

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## FREE COMMUNICATIONS

### NAVIGATING SUCCESS: ENHANCING PHD COMPLETION RATES IN BIOLOGY OF NEOPLASMS PROGRAM

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The competitive landscape of academia underscores the importance of enhancing PhD graduation success rates. We aim to identify efficiency of implementing targeted interventions on graduation success of our PhD program and to compare to previously analyzed period.

We analyzed two groups of students: those enrolled from 2006 to 2017 and those enrolled from 2018 to 2022. Students' performance was assessed based on several criteria, including current academic status, age at enrollment, time taken to obtain a degree, number of publications, and the impact factor of the journals in which they were published.

In total, 167 students were enrolled (37% male), with average age 32.64 (25-59), 43(25.7%) of them discontinued the study program. Average time to doctoral degree was 73.8±46 months. The first group had average age at enrolment 32.51 (25-59) and 72.5% publication rate, while second group had average age 33.48 (25-47) and 53.2% publication rate. Graduation rate correlated to publication rate. Introduction of stricter graduation criteria reduced time to degree for students in the second period group. They had average time to doctoral degree of 32.3±10.7 months contrary to first period group (89.8±44.32 months) (t test, P<0.0001). Significant change in publications' number and impact factor was observed.

In conclusion, the enhanced graduation rates in our PhD program are a direct result of the implementation of our improved strategies that prioritize a personalized approach and foster a student-friendly environment. These initiatives have proven effective in supporting students throughout their doctoral journey, ultimately leading to greater academic success.

### EVALUATION OF THE PHD PROGRAMME IN KINESIOLOGY: INSIGHTS FROM STUDENTS AND PROFESSORS ON PROGRAM EFFECTIVENESS AND DEVELOPMENT OPPORTUNITIES

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The paper examines the evaluation of the doctoral program in Kinesiology at the Faculty of Sport, University of Ljubljana, from the perspectives of doctoral students and professors involved in the PhD program during the academic year 2023/2024. The methodological approach included qualitative and quantitative data analysis collected through online questionnaires distributed electronically among students and faculty members. Student questionnaires encompassed six domains: administrative support, infrastructure and scheduling, mentoring support, co-mentoring support, satisfaction with program implementation, and research opportunities including international collaboration.

## FREE COMMUNICATIONS

Faculty members provided insights through self-assessments, reflecting primarily on teaching methods, research integration, and the effectiveness of seminars and research assignments. Results indicated high student satisfaction with mentoring support and faculty accessibility. Nonetheless, the evaluation identified areas needing improvement, such as enhancing research infrastructure/technology, providing more practical research experiences, improving interactions with professors, and supporting greater international collaboration and research involvement. The professor's feedback emphasized the need for students to be more responsive and for doctoral candidates to participate in ongoing research projects. Addressing these findings by expanding practical training opportunities, involving students more actively in faculty-led research projects, and upgrading research facilities could significantly enhance the program's effectiveness. Implementing these measures will enhance the doctoral program's ability to achieve its core educational and research objectives, ultimately improving the quality of PhD education in Kinesiology.

### SUPPORTING AND MONITORING DOCTORAL DISSERTATION WORK WITH THESSA

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In 2014, the University of Helsinki introduced the online tool Thessa to support doctoral researchers, supervisors and the doctoral education advisors in their work.

Thessa functions as an online diary for doctoral researchers, which allows them to monitor the progress they make on their dissertations. They also sign supervision agreements with their supervisors in Thessa. Moreover, they keep a record of the work done on their dissertation as well as of related activities like teaching or conference presentations in Thessa.

At the same time, Thessa makes it possible for supervisors to get an easy and quick overview of the status of the dissertation projects of their doctoral researchers. Thessa also facilitates the organization of the annual meetings that doctoral researchers have with their thesis committees. In addition, Thessa is also a registry of supervision relationships for the administration of the doctoral school.

Thessa is continuously being developed to meet the evolving needs of doctoral education at the University of Helsinki and new features are constantly added.

## FREE COMMUNICATIONS

### THE IMPACT OF INSTITUTIONAL PROJECTS ON THE VOLUME OF FUNDED DOCTORAL THESES IN MEDICINE AND BIOMEDICAL RESEARCH - A CASE STUDY OF FACULTY OF MEDICINE OSIJEK, CROATIA

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Institutional projects play a critical role in shaping research output and training in the fields of medicine and biomedical research.

This study examines the impact of institutional research projects on the number of successfully defended doctoral theses funded by these initiatives. A comprehensive analysis of funding data, dissertation completion rates, published articles and project-based outcomes at the Faculty of Medicine Osijek, Osijek, Croatia, from 2017 to 2025 was conducted. Key metrics include the number of projects, the number of doctoral students per project, the number of published articles and the number of defended doctoral theses. The results show a positive correlation between the amount of institutional funding and the number of defended doctoral theses ( $r = 0.147$ ), which confirms the stimulating effect on the effectiveness of the doctoral programme. Research focused on clinical topics showed the strongest correlation with the success of the doctoral thesis. In addition, the number of projects involving doctoral students correlates highly with the total number of approved projects ( $r = 0.997$ ), confirming student participation and the increase in the total number of theses ( $r = 0.984$ ). However, the number of papers per student decreases when the total number of papers increases ( $r = -0.979$ ), indicating a dilution effect.

These results emphasize the need for a policy framework that supports institutional research funding as a mechanism to promote academic and research excellence in biomedical disciplines.

### SATISFACTION LEVELS OF GRADUATES RECEIVING POSTGRADUATE EDUCATION IN THE FIELD OF HEALTH SCIENCES

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In this study, it was aimed to evaluate the levels of satisfaction of graduates who received education in the institute of health sciences (IHS).

In this descriptive study, the universe consisted of all students who agreed to participate in the study (N=511). The "Graduate Satisfaction Survey" form was used to collect the data.

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The study results showed that there is a high level of satisfaction indicator. It was found that 88.4% of the graduates, 92.3 % of the graduates were satisfied with the program and school. 43.4% of the graduates were satisfied with the teaching staff. 62.2% of graduate students reported that graduate education allows them to continue their academic careers. It was determined that 69.2% of the graduate students were working in the field in which they received their education. Frequency and percentage analyses were performed in order to show the demographic variables of the participants in the study and the distribution of satisfaction levels in graduate education.

Although the satisfaction of postgraduate education in the field of health sciences is at a good level, it has been determined that there are aspects that need to be improved in order to provide an effective postgraduate education. Although graduate students do not state these aspects negatively, it is necessary to act jointly with decision makers.

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### MENTAL HEALTH SUPPORT FOR PHD STUDENTS AT MEDICAL UNIVERSITY (Med Uni) OF GRAZ

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The impact of doctoral studies on mental health is a significant concern. Several studies have shown that stress, anxiety and uncertainty increase during this period<sup>1</sup>. It has also been shown that doctoral students are more likely to experience stress than the general population, highly educated adults in the general population and undergraduate students<sup>2</sup>.

The drop-out rate of doctoral students at Med Uni Graz is rather high with about 40-50%, particularly for those students who pursue their studies in addition to a full-time job. Based on this observation, interviews were conducted with active and dropped-out students to investigate their satisfaction within the program. The ad person interviews (n=21) revealed that many students were confronted with abuse of power. This, coupled with fear and the feeling of helplessness, led to health problems and even suicidal thoughts.

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In order to address this problem, a conflict management concept has been developed to support doctoral students in situations of (mental) stress. The “10-point-plan” for a constructive conflict culture in doctoral training includes measures for conflict prevention, conflict awareness, conflict resolution and the establishment of a conflict culture.

As a point of contact for counselling, the “DocCare” initiative has been implemented in 2024 to help doctoral students who encounter conflicts during their dissertation, with special focus on supervision.

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### HOW DO CHANGES IN THE WORLD NAVIGATE DOCTORAL STUDENTS' EXPECTATIONS FROM DOCTORAL EDUCATION - ARE SKILLS TRANSFERABLE?

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Changes occurring globally impact doctoral education. The COVID-19 has led to major changes in the educational process for PhD students and their supervisors. Nevertheless, in the disciplines of biomedicine and medicine, the majority of research is conducted through 'lab' experiments that demand a physical presence at the university. Similarly, artificial intelligence applications have brought a new perspective to research processes. The aim of the 'Transferable Skills' course, PhD students attend in the first semester of their PhD program, is to provide lifelong learning skills. For this purpose, 21st-century 4C skills were the focus of the content prepared throughout the process. The topics covered in the course are revised and updated every semester according to feedback from students, changing technology and conditions, and the environment of the country. Therefore, there is a dynamic syllabus. The aim of this study is to show that in the changing and transforming world conditions, success, and skills develop more in courses where students can direct the course content, are allowed to present their ideas and suggestions, and are updated accordingly.

This study was conducted with a course evaluation questionnaire consisting of weekly open-ended questions directed to PhD students attending the 'Transferable Skills' at GSHS, BUU, Turkey. The second part of the study consists of a course evaluation questionnaire answered by the students. Numerical and frequency values were determined. The overall percentage of satisfaction was evaluated by comparing the answers based on faculties and departments. The overall satisfaction rate was found to be higher than 90%.

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### THE CURRENT STATUS AND FUTURE OF THE MD-PHD PROGRAMS IN TÜRKİYE

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Medical faculties do not provide instruction on research processes; their primary objective is to position students highly on the path toward becoming a competent clinician. To bridge this gap, MD-PhD programs were first introduced in the United States in the 1950s to train physician-scientists. As of 2024, these programs are more than 90 in number and have about 5,000 graduates each year. The total number of graduates is more than 15,000.

The first MD-PhD program in Türkiye was established at Hacettepe University in 2003 and has graduated 14 students and 26 students are continuing. In 2022 a regulation allowed 13 medical faculties to launch MD- PhD programs. In 2022, Istanbul University, with the decision of the senate, started the MD-PhD program that meets the Orpheus criteria under the roof of the Institute of Health Sciences. Currently, 4 students are training in this program. The aim of this program, which extends medical education from six to eight years, is to train physician-scientists who can integrate their clinical knowledge with research and contribute to translational studies.

However, interest in MD-PhD programs is decreasing worldwide and the gap between clinics and research continues to grow. Addressing preventive policies against these problems is essential to maintain this trained workforce. Better funding and strengthening career opportunities will ensure that the expected efficiency of MD-PhD programs is achieved. This study seeks to establish an interactive forum for discussing current issues and solutions identified by MD-PhD programs at other universities involved in the Orpheus Conference.

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### EDUCATIONAL OUTCOMES AND SELF-PERCEIVED SUCCESS AMONG PHD STUDENTS ARE INFLUENCED BY VARIOUS MOTIVATION TYPES

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Work ethic and commitment to various tasks are determined by a person's motivation, a distinct and subjective state of mind. Different types of motivation are often used as predictors of educational success, as research has shown that they differ in quality and outcomes.

The aim of this study was to determine whether the most common motivational type among PhD candidates with different backgrounds, goals, and expectations is associated with their perception of their own abilities and the objective outcome of successfully completing the program. Five types of regulation (intrinsic, integrated, identified, introjected, and external) toward PhD studies were assessed among 43 PhD students from the PhD programme "Molecular Biosciences" at the University of Osijek, Croatia, using a self-administered anonymous questionnaire based on self-determination theory.

No significant differences were observed with respect to gender and scientific field in relation to the assessment of progress in the doctoral study from enrollment to completion, in comparison to the progress of peers with whom they had enrolled, and in the assessment of motivation to successfully complete the doctoral study. Respondents who had not yet decided on a dissertation topic had a significantly lower score on progress in their doctoral study compared to others (Mann-Whitney U test,  $P = 0.04$ ). Interestingly, those with stronger intrinsic motivation rated their progress from enrollment to graduation significantly better ( $Rho = 0.647$ ), as well as their progress compared to peers ( $Rho = 0.320$ ), and their motivation to complete the PhD ( $Rho = 0.531$ ).

The findings of this study provide valuable insights for postgraduate schools in understanding the needs and expectations of their student body, offering important information regarding doctoral students' motivation and persistence during their program

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### A COMPARATIVE ANALYSIS OF RESEARCH AREAS IN DOCTORAL DISSERTATIONS AT THE FACULTY OF KINESIOLOGY (2015-2024)

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The doctoral program at the Faculty of Kinesiology has been offered since 2015 and is attended by graduates from kinesiology but also other related academic backgrounds. Although Kinesiology is classified under Social Sciences according to the Croatian nomenclature of scientific fields, it encompasses multiple interdisciplinary areas related to kinesiology. While all dissertation topics are in a way connected to the field of kinesiology, some lean more towards medical sciences, others towards 'pure kinesiology,' and some towards other social sciences like psychology, depending on supervisors and candidates institutional and field-specific preferences.

The aim of this study was to examine the difference in the distribution of BM (Biomedicine), K (Kinesiology), and SS (Social Sciences) oriented doctoral dissertation topics between the periods 2015-2019 and 2020-2024.

Descriptive statistics show a decrease in the number of defended dissertations across all areas between the two periods 2015-2019 and 2020-2024. In BM, K, and SS the number of dissertations decreased from 56 to 23, from 44 to 29, and from 15 to 9, respectively. A  $\chi^2$  test was conducted using Statistica 14.0, and the results showed that there was no statistically significant difference between the periods in distribution of PhD fields ( $\chi^2 = 1.99$ ,  $p = 0.37$ ). Individual tests for each field (BM, K, SS) also showed no significant differences.

Based on these results, we can conclude that the distribution of doctoral dissertation topics in Biomedicine (BM), Kinesiology (K), and Social Sciences (SS) has remained stable across the two periods. This indicates that the interdisciplinary nature of the doctoral program at the Faculty of Kinesiology continues to uphold a consistent approach to research topics, despite the diverse academic backgrounds of its students.

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### AN EXAMINATION OF LANGUAGE DISTRIBUTION IN DOCTORAL DISSERTATIONS AT THE FACULTY OF KINESIOLOGY: 2015-2025

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Given the increasing internationalization of doctoral studies, understanding the challenges faced by doctoral students whose native language is not English is crucial for ensuring the relevance of their research, as English remains the dominant language in the academic community. Dissertations are no longer limited to monographs; they now include article-based theses, where the use of English is often unavoidable. However, in more traditional academic settings, there is ongoing concern about the potential loss of native scientific languages.

The aim of this study is to analyze the trend of writing doctoral dissertations in a foreign language within the doctoral program at the Faculty of Kinesiology. This study compared two time periods (2015-2020 and 2020-early 2025) to assess whether there has been a significant change in the proportion of dissertations written in English.

Descriptive analysis showed an increase in the proportion of English-language dissertations from 2 (2.7%) in the first period to 6 (7.5%) in the second. Since the number of dissertations written in Croatian remained relatively stable in raw values, this suggests an overall increase in dissertations written in English. To statistically examine this trend, a chi-square test of independence was conducted ( $\chi^2 = 0.92$ ,  $p = 0.34$ ,  $df = 1$ ). The results indicated no statistically significant difference in language distribution between the two periods, suggesting that while the proportion of English-language dissertations has increased, this change is not yet statistically meaningful.

These findings suggest that while there is a slight increase in the number of dissertations written in English, Croatian remains the dominant language for academic writing in this program. The trend of research internationalization is present, but not pronounced, and this could potentially be achieved through the provision of appropriate language support and training programs for both students and their mentors, which may indicate gradual changes in policies and preferences.

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