OR-48

Research Ethics Committees in Technical Universities: Challenges and Insights

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In contemporary scientific research, ethical assessment is crucial for maintaining societal trust and protecting human dignity, the environment, and scientific integrity. The scope of research requiring ethical review has expanded, and research ethics committees (RECs) at universities, also known as institutional review boards (IRBs), play a more important role than ever. However, studies indicate that IRBs face common challenges across institutions and countries [1,2,3]. Less attention has been given to how a university's research focus influences its ethics committee's composition, challenges, and responsibilities.

While ethical assessment of research projects is often conducted at the national level in many European countries, more universities are establishing their own RECs. Traditionally, ethics committees emerged to evaluate biomedical research, leading to their long-standing presence in universities conducting such studies. In contrast, technical universities have been slower in establishing RECs. The study in 2014 [4] found that most technical universities do not employ ethics committees for human studies, and IRBs have only recently been introduced in such institutions. This shift is driven by the expanding definition of human research and technological advancements, particularly in AI. Tallinn University of Technology added research ethics assessment to its academic ethics committee's responsibilities in 2019.

This presentation examines the challenges faced by a recently established ethics committee in a technology-focused university on an example of Tallinn University of Technology. The focus of the committee is on non-medical research and general research integrity, as biomedical projects are reviewed on the national level. Nevertheless, the number of IRB applications is increasing.

Institutional ethics committees in technology universities face multiple challenges. A key issue is defining their role within the national research ethics system. Ensuring interdisciplinary representation is difficult, as many fields have limited prior experience with ethics reviews. Methodological differences across disciplines further complicate processes. Creating foundational documents and support materials is necessary but requires ongoing adaptation. Additionally, because committee members are appointed by faculties for limited terms, knowledge transfer and ongoing training are essential. Emerging external factors, such as advancements in generative AI, add complexity to ethical considerations.

The presentation explores how Tallinn University of Technology's REC has addressed these challenges and what other universities can learn from this experience.

[1] Edwards, S. J. L., Stone, T., & Swift, T., Int. J. Technol. Assess. Health Care 23, 17 (2007).
[2] Abbott, L., & Grady, C., J. Empir. Res. Hum. Res. Ethics 6, 3 (2011).
[3] Li, D., Ethics Behav. 35, 1 (2024).
[4] Koepsell, D., Brinkman, W.-P., & Pont, S., J. Empir. Res. Hum. Res. Ethics 9, 67 (2014).