



**THESIS REVIEW BY FOREIGN SCIENTIFIC ADVISOR**

**Candidate:** Kulman Nyssanbayeva

**Programme:** Doctor of Philosophy (PhD) in Public Health

**Title:** Scientific rationale for a program to prevent uncontrolled intake of anabolic-androgenic steroids among fitness industry consumers

Kulman Nyssanbayeva's thesis presents an important contribution to the field of public health, with a specific focus on the critical and increasingly prevalent phenomenon of anabolic-androgenic steroid (AAS) misuse.

The prevalence of AAS use has seen a significant rise globally, with misuse leading to a range of severe medical, social, and psychological consequences. Kulman highlights the alarming trend in the fitness industry, where the drive for enhanced physical appearance and performance often leads to unsafe, non-medical AAS consumption. The research fills a critical gap by providing insights specific to fitness industry consumers.

One of the thesis's strengths is its novel mixed-methods research design, combining quantitative data on the prevalence and health consequences of AAS use with qualitative insight into users' motivations. The analysis of AAS use in the context of the local fitness industry is a unique contribution, and the inclusion of a netnographic analysis of the online market for AAS in Central Asia, and Kazakhstan in particular, is especially innovative.

This comprehensive exploration offers not only an understanding of the scale of the problem but also actionable insights into how and why these substances are being accessed.

The mixed-methods approach, combining both qualitative interviews and quantitative surveys, provides a holistic view of the phenomenon. Moreover, Kulman's netnographic analysis of AAS availability along with the assessment of medical doctors' awareness regarding the issue, enhances the practical application of the study's findings.

The thesis has direct practical implications for public health interventions. The proposed prevention program, rooted in both scientific evidence and local context, is thoughtfully designed to address the specific needs of fitness industry consumers. The recommendations for improving public health messaging, regulating online AAS markets, and enhancing

healthcare professionals' knowledge are well-articulated and feasible. Nyssanbayeva's work provides a clear framework for policymakers, healthcare providers, and fitness professionals to tackle the problem effectively.

The dissertation is highly relevant and timely, tackling a significant public health issue with a well-rounded approach. One of its primary strengths is its ability to bridge the gap between theoretical research and practical application, making it highly valuable for public health policy and program development.

However, the scope could have been expanded to include more in-depth comparative analysis with other countries facing similar issues with AAS use, which might provide additional global context. Additionally, the long-term sustainability of the proposed intervention program could have been more deeply explored.

The dissertation showcases Kulman's academic excellence and commitment to improving public health outcomes through well-researched and practical interventions. Overall, this thesis is a commendable achievement, and it provides a strong foundation for future research and policymaking in AAS misuse prevention. I therefore recommend the thesis for official defence at the Dissertation Council for the degree of Doctor of Philosophy (PhD) in Public Health.

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