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Review Article

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Introduction to accreditation in pharmacy education in Türkiye: Association for evaluation and accreditation of pharmacy education programs

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Abstract

In Türkiye, the evolution of pharmacy education dates back to the Ottoman Empire, and it has progressed through various institutional reforms and educational models. From its inception in military medical schools to the establishment of dedicated faculties of pharmacy in the 1960s, the trajectory of pharmacy education has reflected a commitment to adapting to global standards while meeting local healthcare needs.

Accreditation of pharmacy education programs in Türkiye plays a pivotal role in ensuring quality and excellence. Led by the Association for Evaluation and Accreditation of Pharmacy Education Programs in Türkiye [AACPET (Eczacılık Eğitimi Programlarını Değerlendirme ve Akreditasyon Derneği, ECZAKDER)], this process involves rigorous self-assessment, on-site evaluations, and periodic interim assessments. Accreditation not only validates adherence to national standards but also encourages continuous improvement.

Through advocacy efforts and initiatives like the National Pharmacy Education Congress, ECZAKDER promotes the benefits of accreditation and fosters educational excellence and professional competence. This commitment underscores Türkiye's dedication to training pharmacy graduates that are proficient, ethically grounded, and equipped to address contemporary healthcare challenges.

Keywords Accreditation · Accrediting agency · ECZAKDER [AACPET] · Pharmacy education

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INTRODUCTION

Pharmacy education in Türkiye has undergone remarkable evolution since its inception in the early 19th century, reflecting broader transformations in the country's medical and educational landscape. From its origins during the Ottoman Empire, when pharmacy was taught within the confines of military medical schools to the establishment of independent faculties of pharmacy in the 20th century, the journey of pharmacy education in Türkiye is marked by continuous adaptation and reform. This evolution has been driven by both national needs and global trends, particularly the harmonization with European Union [EU (Avrupa Birliği, AB)] standards in recent decades. Today, Türkiye's pharmacy education system stands as a robust framework designed to produce competent professionals capable of meeting the diverse and complex needs of modern healthcare.

This document provides a comprehensive overview of the history, key developments, and current state of pharmacy education in Türkiye. It traces the roots of formal education from military origins, through the establishment of civil faculties, to its contemporary structure shaped by international standards and accreditation processes. The ongoing commitment to aligning with European directives and improving educational quality ensures that Türkiye remains at the forefront of pharmaceutical education, preparing graduates who are well-equipped to contribute to both national and global health sectors.

A Brief History of Pharmacy Education in Türkiye

Formal pharmacy education in Türkiye began during the Ottoman Empire Period, on May 14, 1839, with the establishment of a 'pharmacist class' at 'Mekteb-i Tıbbiye-i Adliye-i Şâhâne', a military medical school founded to meet the physician needs of the army. Pharmacists completing this theoretical pharmacy education received diplomas (Baytop, 1985, Dölen, 2020). Before that period, pharmacy education was based on an apprenticeship model. Between 1839 and 1909, pharmacy education was conducted within the scope of 'pharmacist class in medical schools', and graduates served in the army and military hospitals (Dölen, 2020). A civil medical school with a civil pharmacy class was opened in 1867, and pharmacists who graduated from this school worked in non-governmental organizations and community pharmacies (Baytop, 1985, Dölen, 2020). Between 1909 and 1933, pharmacy education was provided by the 'pharmacist school' affiliated with the faculty of medicine (Yurdun & Dölen, 2023).

Istanbul University was established through the 1933 University Reform conducted by Mustafa Kemal Atatürk, the revolutionary founding father and the first president of the modern Republic of Turkey. Following the establishment of this first university, pharmacy education was provided by the 'pharmacist school' initially affiliated with the faculty of science (1933-1944) and then with the faculty of medicine (1944-1962) (Yurdun & Dölen, 2023).

The first pharmacy faculties were established in the 1960s. The Ankara University Faculty of Pharmacy was founded in 1960, followed by the Istanbul University Faculty of Pharmacy in 1962. This was later followed by the Hacettepe University Faculty of Pharmacy in Ankara in 1971, among others. Until 1997, there were only seven pharmacy faculties in Türkiye. According to the Turkish Council of Higher Education [CoHE (Yükseköğretim Kurulu, YÖK)], there are currently 48 universities in Türkiye and four universities in the Turkish Republic of Northern Cyprus that offer pharmacy programs enrolling students (YÖKa, 2024). Of these, the pharmacy programs of 14 faculties have been awarded full accreditation, while eight have received conditional accreditation at the time of writing this article (ECZAKDER, 2024).

Significant Changes in Pharmacy Education

Duration of Pharmacy Education

In Türkiye, pharmacy education consisted of a two-year course of study between 1839 and 1861. After that period, until 1938, a three-year course of study plus a three-year mandatory internship in pharmacies was adopted as formal pharmacy education. By 1938, a four-year program became the standard pharmacy education (Yurdun & Dölen, 2023). Since 2005, pharmacy education has consisted of a five-year course of study plus at least six months of mandatory traineeship at community pharmacies or hospitals.

Efforts to harmonize pharmacy education programs in Türkiye with the EU directives began in the early 1990s. Deans of pharmacy faculties held many meetings on this issue, and the most important decision made during these meetings was that extending the duration of pharmacy education in Türkiye to five years was inevitable.

The proposal to extend pharmacy education to five years, made by the deans of pharmacy faculties, was accepted by the 'Council of Medical and Health Education' in 1994. The council's decision was then presented to the 'Interuniversity Board' of YÖK, where it was approved and forwarded to the YÖK presidency. After several years, in 2000, the issue of extending pharmacy education to five years was discussed at the 'Health Education Council', and the decision was adopted by the Ministry of Health [MoH (Sağlık Bakanlığı, SB)]. This decision was implemented as a result of the initiatives and intense work carried out under the leadership of Prof. Dr. M. Seçkin

Özden, the current president of the Association for Evaluation and Accreditation of Pharmacy Education Programs in Türkiye (ECZAKDER), who was the spokesperson for the deans of the faculties of pharmacy at that time (TEB, 2024).

Content of Pharmacy Education

As pharmacy education was extended to five years in 2005, several new compulsory and elective courses were added to the curriculum, while credits for some courses were reduced. The most significant development has been the inclusion of compulsory and elective patient-oriented courses. These include clinical pharmacy, pharmaceutical care, pharmacotherapy, rational drug use, clinical biochemistry, drug interactions, and patient education, which are added to enhance patient-oriented education within the existing curriculum.

Within the scope of the five-year pharmacy program, a core curriculum is implemented in the first four years. In the fifth year, students choose a field of study (e.g., community, hospital, or industrial pharmacy) and take elective courses relevant to that field. During their senior year, students prepare and defend graduation projects.

A six-month internship is mandatory during the five-year education period. Some internships take place during the summer months following the 2nd, 3rd, and 4th academic years, while the final part can be completed in community pharmacies, hospitals, pharmaceutical industry and R&D centers during the 5th academic year.

Development of a National Framework for Pharmacy Core Curriculum

In line with global and local developments in pharmacy practice, and in response to the recommendation by YÖK, the Council of Deans of Faculties of Pharmacy [CoD (Eczacılık Fakülteleri Dekanlar Konseyi, ECZDEK)] undertook intensive efforts to develop the 'Pharmacy Core Education Program' [PCEP (Ulusal Eczacılık Çekirdek Eğitim Programı, EczÇEP)], which establishes the national framework for pharmacy education and outlines its fundamental principles. The initial version, EczÇEP-2015, was approved by YÖK for implementation in faculties of pharmacy in Türkiye and the Turkish Republic of Northern Cyprus.

After the approval of EczÇEP-2015, faculties of pharmacy began assessing the alignment of their curricula with this framework. It is particularly aimed at each faculty to define their program competencies in accordance with their mission and vision and to develop their 'Extended Education Program' [EEP (Genişletilmiş Eğitim Programı, GEP)] alongside EczÇEP.

The importance of accreditation in pharmacy education is emphasized in the latest framework, EczÇEP-2019, highlighting the efforts of the National Pharmacy Education Accreditation Board [PEDAB (Ulusal Eczacılık Eğitimi Akreditasyon Kurulu, ECZAK)] and the ECZAKDER (YÖKb, 2024).

During the preparation of EczÇEP-2019, ECZDEK made efforts to enhance the standardization and quality of internships. At the ECZDEK meeting on November 1, 2018, it was decided that the 'Internship Core Education Program' [ICEP (Staj Çekirdek Eğitim Programı, StajÇEP)] studies would be conducted under the coordination of the Internship Commission of ECZDEK.

On December 6, 2018, at Istanbul University Faculty of Pharmacy, the ECZDEK meeting focused on the StajÇEP agenda, with participation from various stakeholders, including representatives of community pharmacists, hospital pharmacists, public pharmacists, the pharmaceutical industry, the Turkish Pharmacists' Association, and Chambers of Pharmacists. The Internship Commission of ECZDEK presented its work on internship durations and learning objectives, which was developed through an analysis of internship legislation and practices across all faculties of pharmacy. Stakeholders provided feedback on the learning objectives for internship training in community pharmacy, hospital pharmacy, and pharmaceutical industry settings. It was emphasized that the competencies outlined in EczÇEP-2019 should also be integrated into internship training.

Internationalization

The Bologna Declaration (i.e., The Joint Declaration of the European Ministers of Education Convened in Bologna on 19 June 1999) (EHEA, 2024) and the EU Directive 2005/36 (European Council, 2005) are two documents aimed at harmonizing pharmacy education within the EU.

The Bologna Declaration (EHEA, 2024), signed in 1999 and updated in 2003, aims to harmonize the academic system across the EU by establishing compatible degree structures, transferable credits and equal academic qualifications. This initiative will promote professional mobility and enhance academic cooperation throughout the EU. The Bologna Declaration outlines a three-level graduation system for all faculties: 1st cycle-bachelor (3 years), 2nd cycle-master (2 years), and 3rd cycle-doctorate (typically 3 years).

The EU Directive 2005/36 (The European Council, 2005), originally published in 2005 and amended by EU Directive 2013/55 in 2013, aims to facilitate the free movement of professionals within EU states and focuses on the recognition of professional qualifications. According to this directive, pharmacists must undergo formal training lasting at least five years, including a minimum of four years of full-time theoretical and practical education, along with at least six months of

traineeship in community pharmacies or hospitals under the supervision of a pharmacist.

In alignment with the EU directive, in 2005, following a decision by YÖK, pharmacy education in Türkiye was extended from four years to five years. The first four years encompass a core curriculum for professional education, while the fifth year is designated for graduation projects, elective courses, and practical training. Since Türkiye has been a full member of the Bologna Process since 2001, pharmacy education has been restructured to align with Bologna Process standards. Consequently, Türkiye adopted the European Credit Transfer System [ECTS (Avrupa Kredi Transfer Sistemi, AKTS)] as part of its educational reform.

Accreditation of Pharmacy Education

Accreditation is a voluntary process in which an institution or program is evaluated and recognized for its quality. This evaluation is carried out by an external accrediting agency to ensure that specific quality and excellence standards are met. An accrediting agency is an independent body that assesses and accredits institutions and programs. Accreditation offers numerous benefits to institutions and students. This ensures that the institutions and programs adhere to certain quality standards, thereby enhancing the value of the degrees or certificates that students earn.

Accreditation is an ongoing process. Institutions and programs must continually demonstrate compliance with the accrediting agency's standards and criteria to maintain their accreditation status. This requires regular reporting and monitoring by the relevant agency. In addition, it is recommended that accreditation focuses not only on adherence to standards (quality assurance) but also on continuous quality improvement.

Association for Evaluation and Accreditation of Pharmacy Education Programs in Türkiye (ECZAKDER)

A Brief History

Following its establishment in 2009, ECZDEK founded ECZAK in 2011 as an initial move towards an independent and participatory institutional framework. Prof. Dr. Sevim Rollas as President, Prof. Dr. Levent Üstünes as Vice President, Prof. Dr. Belma Gümüşel as Secretary, and Prof. Dr. M. Seçkin Özden, Prof. Dr. Nurettin Abacıoğlu, Prof. Dr. Afife Mat, Prof. Dr. Gülhan Turan, Assoc. Prof. Dr. Şule Apikoğlu, Vedat Eğilmez, PhD, Evren Algın Yapar, PhD, Alper A. Şahin, PhD, Pharm. Bahar Derinsu, Bilge Aydın, and M. Sait Ertuğrul as member were elected in the first meeting of ECZAK held at Ankara University in January 2012.

Currently, ECZAK comprises seven faculty members and practicing pharmacists representing key stakeholders such as the Turkish Pharmacists' Association, SB's Turkish Medicines and Medical Devices Institution, the SB's General Directorate of Turkish Public Hospitals, and the Turkish pharmaceutical industry. Additionally, the board includes the former president of ECZAK, a pharmacy student, and a community representative. (https://www.eczakder.org.tr/calisma-yonetmeligi-i-975.html)

To attain legal entity status, ECZAK established ECZAKDER in 2014, and the association's charter was approved by the Ankara Governorship in the same year.

The ECZAKDER Board of Directors and Board of Auditors shall be elected by the General Assembly every three years. The inaugural Board of Directors included Prof. Dr. Sevim Rollas as President, Prof. Dr. Levent Üstünes as Vice President, Prof. Dr. Belma Gümüşel as General Secretary and Treasurer, and Prof. Dr. M. Seçkin Özden and Prof. Dr. Nurettin Abacıoğlu as members. The Board of Auditors comprised Prof. Dr. Serpil Nebioğlu, Prof. Dr. Sedef Kır, and Prof. Dr. Sema Burgaz.

ECZAKDER fulfills its mission through collaboration with ECZAK and its various commissions and working groups, such as the Standards Setting and Development Commission, Counselling and Education Commission, the Evaluator Working Group, the Legislation Working Group, and the Strategy Development Working Group, among others.

After being officially recognized by YÖK in 2014, ECZAKDER was awarded the 'Quality Evaluation Registry Certificate' and authorized by the Higher Education Quality Council [THEQC (Yükseköğretim Kalite Kurulu, YÖKAK)] in 2018. Through regular evaluations of its activities, ECZAKDER has maintained a 5-year authorization, currently the longest form of authorization granted by YÖKAK.

In 2018, ECZAKDER also established an economic enterprise following its foundation.

Mission, Vision, and Aims of ECZAKDER

With a vision to be an internationally recognized accreditation institution, ECZAKDER is dedicated to enhancing the quality of the pharmaceutical workforce by fostering qualified human resources in the field, advancing pharmacy education to align with current developments in pharmaceutical sciences and public health needs, and empowering faculties of pharmacy through competency building in education and related activities.

The main aims of ECZAKDER are accrediting and certifying pharmacy education programs, establishing and updating standards and guidelines for the accreditation of pharmacy education programs, promoting the sustainability and enhancement of quality in pharmacy education across accredited faculties, operating in accordance with the 'Standards and Guidelines for Quality Assurance in the European Higher Education Area [ESG (Avrupa Yükseköğrenim Alanında Kalite Güvencesi Standartları ve Yönergeleri, ASY)]', continuously improving itself, communicating its activities transparently to the public and managing its financial resources effectively.

ECZAKDER aims to enhance the quality of pharmacy education in Türkiye with the goal of providing high-quality education that prepares students to become competent pharmacists. This education equips students to effectively apply advanced professional knowledge and skills while upholding ethical values, thereby contributing to the improvement of patient and public health.

National Pharmaceutical Education Program Accreditation Standards of Türkiye

ECZAK established the Standards Setting and Development Commission to establish the first set of standards for the evaluation of pharmacy education programs and Prof. Dr. M. Seçkin Özden was assigned as the Chair of the Commission at the first meeting in 2012. Then, Prof. Dr. M. Seçkin Özden and Prof. Dr. Sedef Kır prepared a draft document based on the standards of the Canadian Council Accreditation Pharmacy Programs and presented it to the ECZAK Board of Directors. In 2013, the Turkish National Pharmacy Education Programme Accreditation Standards, version 1.0, were shared with all stakeholders. These standards were specifically designed to enhance the quality of education, aiming to ensure that assessed programs meet a predetermined level of quality, although not excessively high. They primarily establish minimum expectations.

Following their drafting, the standards were peer-reviewed by faculty members and various stakeholders, including practitioners, students, decision-makers, and public authorities. Feedback from these stakeholders was incorporated into the revisions of the standards to ensure relevance and effectiveness. Regular updates to the standards are conducted to stay current with changes in pharmacy education and practice. The most recent version, Version 6, published in 2024 comprises 20 standards classified under the following seven domains: goals and objectives, organization and management, undergraduate education program, standards regarding students, instructors, facilities and learning resources, and financial resources.

The standards serve as the foundational criteria guiding all decisions made by the visit teams, ECZAK and ECZAKDER. The Standards Setting and Development Commission is responsible for developing and continuously enhancing specific national standards. This includes aligning the measures with global benchmarks, addressing national requirements and incorporating stakeholder feedback into the process.

Annually, the commission reviews the existing set of standards and makes recommendations for updates and improvements to ECZAKDER.

Accreditation Process

Before the On-Site Assessment and Monitoring Visits

The accreditation process begins when the dean of the pharmacy faculty applies to ECZAKDER for accreditation. Minimum requirements for the application are as follows:

- The faculty must have graduated students for at least two terms.
- The faculty must meet the minimum requirements set by YÖK for the initiation and continuation of pharmacy education and training. These requirements include the specifications and the minimum number of faculty members, minimum specifications of the laboratory and practice areas, and others (YÖKc).
- Each department included in the YÖK requirements (i.e. Analytical Chemistry, Biochemistry, Pharmaceutical Microbiology, Pharmaceutical Technology, Pharmaceutical Chemistry, Pharmacognosy, Pharmaceutical Toxicology, and Pharmacology departments) must have full-time faculty members holding doctoral degrees in their respective fields.

Upon acceptance of the faculty's application, the first step involves providing training to the faculty on the accreditation process.

The basis of assessment is a 'self-assessment report' [SAR (Öz Değerlendirme Raporu, ÖDR)]. The 'faculty self-assessment committee' [FSAC (Fakülte Öz Değerlendirme Kurulu, FÖDEK)] conducts a detailed, comprehensive study to evaluate its performance against the standards set by ECZAKDER.

FÖDEK is typically composed of at least 12 members, including the dean, vice deans, faculty secretary, self-assessment coordinator (an instructor experienced in education), at least five instructors with expertise in education planning, management, and assessment, a research assistant, and a student representative. ÖDR covers the past five years and must be prepared in accordance with the 'self-assessment preparation guide' and relevant rubric provided by ECZAKDER.

The faculty submits the ÖDR with its annexes to ECZAKDER within a maximum of five months from the acceptance of the

application. ECZAKDER reviews the report for compliance with the criteria and forwards it to ECZAK. ECZAK appoints a 'self-assessment report evaluation team' [SARET (Öz Değerlendirme Raporu Değerlendirme Ekibi, ÖDRE)], comprising both educators and practitioners, and then forwards the ÖDR to ÖDRE for evaluation. ÖDRE assesses the report and its annexes within a maximum of two months.

ECZAK evaluates the faculty's ÖDR in accordance with the ÖDRE evaluations, using the standard set and rubric. Each standard was assessed and rated on a scale as 'very insufficient (score: 1), insufficient (score: 2), acceptable (score: 3), good (score: 4) or excellent (score: 5)'.

ECZAK determines whether a visit is warranted based on whether critical standards (e.g., educational program goals and objectives, performance assessment, undergraduate education program, internships, graduation project, assessment of learning outcomes, instructors) are met and whether the faculty achieves a score of 65% or higher of the total score.

ECZAK informs the faculty of the evaluation result of ÖDR within one month. If the faculty is deemed suitable for a visit, ECZAK forms an 'assessment and monitoring visit team' [AMoVT (Değerlendirme ve İzleme Ziyareti Ekibi, DİZE)]. This team consists of six assessors (one of whom is from ECZAK): three lecturer assessors, one non-academic pharmacist assessor, and two student assessors.

DİZE Chairs are typically lecturers from ECZAK or other lecturers with prior experience in the role. An internal and/or external observer may also be appointed as required. ECZAK provides detailed information to the faculty about DİZE and specifies any documents or evidence that should be added or completed.

The faculty must submit the final version of the ÖDR and its annexes to DİZE members and ECZAK within one month. DİZE members and ECZAK must evaluate the final report and annexes within one month of receipt.

Ineligibility notification:

If the faculty is deemed ineligible for a visit, ECZAK notifies the faculty of a decision containing the report and justifications prepared based on the ÖDRE report.

On-Site Assessment and Monitoring Visits

DİZE conducts the on-site assessment and monitoring visits with participants, including university administration (president and vice presidents), pharmacy faculty administration (dean and vice deans), faculty staff, administrative staff, and students.

This process ensures comprehensive evaluations involving various stakeholders to assess compliance with accreditation standards and facilitate improvements in pharmacy education.

On-site visits aim to validate the information provided in the ÖDR, conduct a qualitative assessment of elements that cannot be fully documented or proven in the ÖDR, examine in detail the documents and evidence compiled by the faculty, and evaluate the educational and social environments of the faculty firsthand.

These visits provide an external evaluation intended to contribute to the continuous development of the faculty, ensure alignment with accreditation standards, and foster ongoing improvement in pharmacy education.

The on-site visit process spans four days. At the outset, DİZE and the dean convene for a preliminary meeting to discuss the operational aspects of the faculty. During this meeting, the dean delivers a presentation outlining the faculty's initiatives to meet the National Pharmaceutical Education Program Accreditation Standards, covering both structural and procedural aspects; notable achievements resulting from these initiatives; and ongoing efforts towards continuous improvement. This presentation provides context and insight into faculty commitment to accreditation standards and their dedication to enhancing pharmacy education.

During the on-site visit, DİZE conducts scheduled meetings with various stakeholders, including the dean, president, FÖDEK, faculty executive board, faculty board, education commission, internship commission, faculty staff, research assistants, students, administrative staff, and student affairs staff.

DİZE focuses on clarifying and discussing specific points identified in the ÖDR that require further explanation or elaboration. DİZE also uses a list of standard questions relevant to the accreditation process, selected as applicable to the context.

During the on-site visit, DİZE inspects the faculty's physical facilities, including classrooms, laboratories, offices for students, faculty, and administrative staff, the library, simulation pharmacy (if available), research units, and areas designated for social interactions.

At the conclusion of the on-site visit, DİZE Chair presents a 'declaration' to the dean and FÖDEK. This declaration includes recognition of the faculty's strengths, areas for improvement, and recommendations aimed at enhancing the faculty's performance and adherence to accreditation standards.

This final step consolidates the assessment process by providing constructive feedback to support ongoing improvement efforts within the faculty of pharmacy.

Following the on-site visit, DİZE prepares a draft evaluation report and submits it to the dean for review. During this stage, any identified factual errors or omissions can be corrected. After incorporating feedback from the dean, DİZE finalizes the 'final report' and submits it to ECZAK. ECZAK then forwards the final report to the consistency committee.

The consistency committee reviews the report for intra-team, inter-team, and inter-annual consistency. Once the review is complete, the committee submits its findings and recommendations to ECZAK. This process ensures thorough evaluation and validation of the accreditation assessment, contributing to the credibility and reliability of accreditation outcomes for the pharmacy faculty.

Accreditation Decisions

After reviewing the final report from DİZE and the consistency report, ECZAK makes its accreditation decision and prepares the 'ECZAK accreditation evaluation report'.

The ECZAKDER Board of Directors evaluates ECZAK's decision and report, prepares the 'accreditation evaluation report', and notifies the faculty of the report along with the decision of the ECZAKDER Board of Directors.

ECZAK determines the accreditation status of the program as

- Full accreditation: Full accreditation is granted when the program meets all standards at an acceptable level and achieves a score of at least 80% of the total score. Full accreditation is valid for six years, with an interim evaluation in the third year. To maintain uninterrupted full accreditation status, the faculty must reapply for accreditation in the year preceding the expiration date, ensuring ongoing compliance with accreditation standards and continuous improvement in pharmacy education.
- Conditional accreditation: Conditional accreditation is granted when critical standards are met at least at an acceptable level and a score of at least 70% of the total score is achieved, while at most two of the other standards are found inadequate. It is valid for three years. After 30 months, faculty may apply for re-accreditation to maintain their accreditation status. A faculty cannot receive conditional accreditation for more than two consecutive terms.
- Re-application: This occurs when a faculty fails to meet significant accreditation standards, preventing the initial granting of accreditation. Re-application allows the faculty an opportunity to address deficiencies, make necessary improvements, and subsequently reapply for accreditation to meet the required standards.

Interim Evaluation

The interim evaluation involves a visit to the faculty three years after the initial accreditation. This evaluation typically lasts 2-3 days and follows a process similar to a standard evaluation visit.

In cases in which an on-site visit cannot be conducted due to compelling reasons, such as unforeseen circumstances, ECZAKDER determines alternative methods for program evaluation. This may include conducting evaluations online or through hybrid methods to ensure thorough assessment despite logistical challenges.

Advocacy

In Türkiye, accreditation of pharmacy education programs is voluntary for faculties of pharmacy. Therefore, ECZAKDER organizes advocacy activities to encourage faculties to apply for accreditation. These activities include hosting live and online seminars focused on emerging topics in pharmacy education, and organizing the National Pharmacy Education Congress biannually in collaboration with pharmacy faculties that have accredited pharmacy education programs.

These initiatives aim to promote the benefits of accreditation, foster continuous improvement in pharmacy education, and encourage faculties to meet established standards for enhanced quality and recognition in the field.

Accreditation of Pharmacy Education in the United States and the European Union

Accreditation in the United States

In the United States, pharmacy education programs must be accredited by the Accreditation Council for Pharmacy Education (ACPE). The ACPE is an accrediting body by both the U.S. Department of Education and the Council for Higher Education Accreditation (CHEA). The accreditation process is rigorous, focusing on curriculum content, teaching methodologies, faculty qualifications, and facilities. The process involves several stages, including a self-study report submitted by the institution, site visits by ACPE evaluation teams, and periodic reviews to ensure ongoing compliance with ACPE standards. Programs must demonstrate that they meet the required educational outcomes and provide adequate resources to support student learning.

The accreditation process also emphasizes the importance of experiential education, ensuring that students have ample opportunities for hands-on learning in various pharmacy practice settings, particularly at hospital clinics. The goal of ACPE accreditation is to ensure that graduates of pharmacy

programs are well-prepared to enter the profession and provide high-quality patient care.

Accreditation in the European Union

In the EU, pharmacy education accreditation is not as centralized as in the United States. Instead, each member state has its own regulatory bodies and processes for accrediting pharmacy programs. However, the Bologna Process has influenced the standardization of higher education across Europe, including pharmacy education. Accreditation processes typically involve national agencies that assess the quality of pharmacy education programs based on criteria such as curriculum, faculty, infrastructure, and alignment with EU directives on professional qualifications.

Although there is no single accrediting body for pharmacy education across the EU, the European Association of Faculties of Pharmacy (EAFP) and other organizations work to promote harmonization and quality assurance across member states.

Comparison with Accreditation in Türkiye

In Türkiye, the accreditation process for pharmacy education involves assessing the curriculum, faculty qualifications, infrastructure, and compliance with national standards. However, the process in Türkiye is relatively newer compared to the well-established system in the US. Türkiye's accreditation process is similar in the aspects of centralization, as it is executed by a single accrediting body (ECZAKDER) and standardization as it applies uniform standards across all pharmacy programs. On the other hand, it differs from the US accreditation system in some aspects which can also be considered as possible areas for improvement in the accreditation process for pharmacy education in Türkiye. These areas can be listed as follows:

1. **Experiential learning requirements:** The emphasis on experiential learning in the US accreditation process is a significant strength that should be incorporated more fully into the Turkish system. Enhancing hands-on training opportunities for students in real-world settings, particularly at hospital clinics, would improve their professional readiness.
2. **Ongoing quality assurance:** While periodic reviews are a key part of the US and EU systems, Türkiye's accreditation process could be improved by implementing more frequent and rigorous quality assurance checks to ensure continuous compliance with evolving educational and professional standards. In the current practice, ECZAKDER schedules an interim evaluation 3 years after the initial accreditation, which is valid for 6 years.
3. **International collaboration:** Türkiye could also enhance its accreditation process by increasing its collaboration with international accrediting bodies and organizations, which would not only help in adopting best practices but also in gaining international recognition for its pharmacy education programs.

By addressing these areas, Türkiye could strengthen its pharmacy education system, ensuring that its graduates are well-prepared to meet both national and international professional standards.

On the other hand, pharmacy education accreditation in Turkey faces several national and international limitations. One national limitation is related to resources and infrastructure; the availability of ECZAKDER's resources for accreditation, including trained volunteer evaluators and funding, can affect the accreditation capacity of the association. Another national limitation concerns changes in national policies or regulations regarding education and practice; these can impact the accreditation process, potentially leading to delays. In addition, an international limitation concerns global recognition. Despite efforts to achieve global recognition, Turkish pharmacy programs might face challenges in gaining international recognition or equivalency. Different countries have varying standards for pharmacy education, and Turkish programs might not always align with these standards.

Efforts such as the development of the Turkish Qualifications Framework [TQF (Türkiye Yeterlilikler Çerçevesi, TYÇ)] are being made to improve the country's alignment with international standards and enhance global recognition. The adoption of lifelong learning as a policy across Europe in the late 1990s marked a turning point for the creation of National Qualifications Frameworks (NQF), which refers to structured systems of levels designed to define, categorize, and compare qualifications within a country based on specific criteria. An NQF enhances the transparency and recognition of qualifications within a quality assurance structure, enabling the seamless movement of learners across various levels of education and training, both horizontally and vertically. TYÇ is Turkey's version of the NQF, encompassing all quality-assured qualifications (diplomas, certificates, etc.) from the country's education and training systems as well as other learning environments. One of the necessary conditions for the inclusion of qualifications in the TYÇ is ensuring the quality assurance of the qualification. Therefore, only higher education qualifications with program accreditation are included in the TYÇ. In this case, the inclusion of an accredited pharmacy diploma program in the TYÇ contributes to the international recognition of the program (MYK, 2024).

CONCLUSION

The landscape of pharmacy education in Türkiye reflects a dynamic evolution shaped by national frameworks and international standards. The establishment of ECZAKDER and its affiliated bodies, such as ECZAK, has been pivotal in setting and maintaining rigorous accreditation standards. These standards ensure that pharmacy faculties adhere to quality benchmarks and foster continuous improvement and alignment with global educational practices.

The accreditation process, which encompasses self-assessment, on-site visits, and interim evaluations, serves as a cornerstone for evaluating and enhancing educational programs. This not only validates the quality of education provided but also supports faculties in addressing areas for improvement to meet evolving healthcare needs.

Advocacy efforts by ECZAKDER, through seminars and national congresses, further underscore the importance of accreditation in enhancing educational outcomes and promoting professional excellence in pharmacy. These initiatives encourage faculties to voluntarily seek accreditation, thereby contributing to the advancement of pharmaceutical education and practice in Türkiye.

Graduating from an accredited pharmacy faculty offers several benefits to students. Accreditation ensures that the educational program meets certain quality standards and can enhance the reputation of the institution and the value of the degree, leading to improved educational outcomes. Furthermore, accreditation often involves rigorous curriculum standards and clinical training that can better prepare students for patient care practices, students graduating from an accredited pharmacy faculty are likely to receive a quality education that prepares them for direct patient care (Khadambi-Morokane et al., 2021; Wilby et al., 2019). Accreditation can also serve as a marker of competency, which may be advantageous in the job market soon when newly graduated individuals may find it challenging to start their own businesses.

Overall, the commitment to accreditation reflects Türkiye's dedication to ensuring that pharmacy graduates are well-prepared, ethically grounded, and capable of meeting the healthcare challenges.

Abbreviations:

To familiarize the reader with the relevant Turkish names and phrases, abbreviated and full forms are also listed.

AACPET (ECZAKDER): Association for Evaluation and Accreditation of Pharmacy Education Programs in Türkiye (Eczacılık Eğitimi Programlarını Değerlendirme ve Akreditasyon Derneği)

AMoVT (DİZE): Assessment and Monitoring Visit Team (Değerlendirme ve İzleme Ziyareti Ekibi)

CoD (ECZDEK): Council of Deans of Faculties of Pharmacy (Eczacılık Fakülteleri Dekanlar Konseyi)

CoHE (YÖK): Council of Higher Education (Yükseköğretim Kurulu)

ECTS (AKTS): European Credit Transfer System (Avrupa Kredi Transfer Sistemi)

EEP (GEP): Extended Education Program (Genişletilmiş Eğitim Programı)

ESG (ASY): Standards and Guidelines for Quality Assurance in the European Higher Education Area (Avrupa Yükseköğrenim Alanında Kalite Güvencesi Standartları ve Yönergeleri)

EU (AB): European Union (Avrupa Birliği)

FSAC (FÖDEK): Faculty Self-Assessment Committee (Fakülte Öz Degerlendirme Komitesi)

ICEP (StajÇEP): Internship Core Education Program (Staj Çekirdek Eğitim Programı)

MoH (SB): Ministry of Health (Sağlık Bakanlığı)

PCEP (EczÇEP): Pharmacy Core Education Program (Ulusal Eczacılık Çekirdek Eğitim Programı)

PEDAB (ECZAK): National Pharmacy Education Accreditation Board (Ulusal Eczacılık Eğitimi Akreditasyon Kurulu)

SAR (ÖDR): Self-Assessment Report (Öz Değerlendirme Raporu)

SARET (ÖDRE): Self-Assessment Report Evaluation Team (Öz Değerlendirme Raporu Değerlendirme Ekibi)

THEQC (YÖKAK): Higher Education Quality Council (Yükseköğretim Kalite Kurulu)

TQF (TYÇ): Turkish Qualifications Framework (Türkiye Yeterlilikler Çerçevesi)

VQA (MYK): Vocational Qualifications Authority (Mesleki Yeterlilik Kurumu)

Peer Review: Externally peer-reviewed.
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