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**LEAPS of faith- exploring development and implementation of a longitudinal curriculum focusing on mental health, leadership, altruism, ethics, and EDI, professional identity formation for medical and dental students**

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**ABSTRACT**

In the ever-changing healthcare scenery of Pakistan, demands on health professionals extend far beyond clinical proficiency. These include ethical integrity, effective leadership, care for mental well-being, and respect for equity, diversity, and inclusion. The LEAPS (Leadership, Ethics, Altruism, Professionalism/Professional Identity, and Study Skills/Patient Safety) module is a pioneering educational framework designed for MBBS and BDS students in Pakistan. Structured in a longitudinal fashion, spanning four years, LEAPS boasts of culturally relevant best practices, Sustainable Development Goals (SDGs), and resilience-building strategies to nurture empathetic, culturally competent, and resilient healthcare practitioners. This article outlines the inception, innovative structure, and transformative impact of the LEAPS curriculum.

**KEYWORDS:** EDI, Mental well-being, Leadership, Ethics, Altruism, Study Skills.

**INTRODUCTION**

With the evolution of teaching and learning in health professionals' education, it is increasingly evident that medical and dental science cannot be taught as silos of clinical skills or textbook content but need integration with real-world issues and affective aspects of the field. Integrated curricula, Evidence-based models, and the SPICES model are all addressing this <sup>[1]</sup>.

The LEAPS module aims to mold students into healthcare leaders equipped to navigate the demands of modern medical and dental practice. This curriculum was conceptualized in 2018 keeping in mind the expectations of the Pakistan Medical and Dental Council for a more holistic undergraduate training and laying emphasis on mental health and well-being, adaptive coping strategies for combating burnout, and increasing resilience. It is also distinctively aligned with the SDGs(sustainable development goals) keeping in view our context as an emerging country to inculcate sustainability efforts in healthcare from the very start. Designed for Pakistan's unique healthcare context, LEAPS supports progressive learning through a spiral curriculum that deepens students' understanding year by year.

The 2016 Pakistan Medical and Dental Council (PMDC) curriculum review called for modernization <sup>[2]</sup>. While current efforts focus on teaching methods and curriculum structure (shifting from discipline-based to modular), this study advocates for a more significant change: incorporating leadership development, resilience, coping strategies, and patient safety skills along with a giving nature for future Pakistani healthcare leaders.

**Leadership**

Healthcare leadership is essential for driving positive change and delivering high-quality patient care. Effective leaders in medicine must possess strong communication and interpersonal skills to inspire and guide teams. Unfortunately, many medical schools still neglect to incorporate leadership training into their curricula. This oversight hinders the development of future healthcare leaders who are equipped to navigate complex healthcare systems and meet the evolving needs of patients. By prioritizing leadership development, we can empower physicians to become not only skilled clinicians but also visionary leaders who can shape the future of healthcare.

Effective leaders in medicine are essential for driving positive change, improving patient outcomes, and addressing the unique challenges faced by the Pakistani healthcare system [3].

However, traditional medical education in Pakistan often overlooks the importance of leadership development. This gap in training can hinder the growth of future healthcare leaders who are equipped to navigate complex systems, inspire teams, and make evidence-based decisions [4].

To address this issue, it is imperative to integrate leadership training into medical curricula. By developing strong communication, problem-solving, and interpersonal skills, medical students can become well-rounded healthcare professionals who are capable of leading and innovating in the Pakistani context.

### Ethics

The spirit of health professions education is ethical behaviour. Patient care must be guided by principles of beneficence, non-maleficence, autonomy, and justice [1]. Pakistan's healthcare landscape is highly diverse, leading to frequent ethical dilemmas. Issues ranging from informed consent to cultural sensitivities around end-of-life care are all part of this complex cultural context. Traditional curricula often include only a brief introduction to ethics, typically lacking the pragmatic solutions that students need to apply in real-world scenarios [2]. We addressed this gap by embedding ethics into the LEAPS module throughout the curriculum. By utilizing case-based discussions and narrative ethics, we aim to develop student's critical thinking and ethical decision-making skills [3].

### Altruism

Altruism means selflessness and prioritization of the well-being of others. As a global south culture and collective society, this quality is inherently ingrained into us and is believed to be an important trait in health professionals. It is an embodiment of the essence of medical care, promoting and caring for others, sometimes at the behest of your care [3]. Traditional medical curricula, however, tend to prioritize clinical skills and biomedical knowledge, while the cultivation of altruistic behavior is often overlooked or implicitly assumed [4]. This gap can lead to a generation of healthcare professionals who may excel technically but lack the compassionate and patient-centered approach necessary for high-quality care [5].

Healthcare in Pakistan is a complex entity riddled with challenges stemming from resource constraints, cultural diversity, geopolitical issues, and socio-economic disparities. Patients in rural and underserved areas rely on physicians going beyond the call of duty and caring for them. Many patients in rural or underserved areas rely on physicians who are willing to go beyond the despite challenging circumstances [4]. Altruism enhances patient trust and satisfaction, strengthens the patient-physician

relationship, and is linked to greater professional fulfillment for healthcare providers [5].

Recognizing the importance of altruism, we included it as a key component of the LEAPS module. However, we also acknowledged that the physician's health, mental well-being, and resilience are crucial. This realization led us to enhance the module by incorporating layers of mental well-being, burnout prevention, and resilience promotion throughout, seamlessly blending these aspects with the spirit of empathy and care.

### Professional Identity/Professionalism

Societal expectations from doctors are high in Pakistan. In this context, the physician's role often extends beyond clinical duties, involving leadership, advocacy, and culturally sensitive patient care.

Professional identity formation (PIF) has been taken for granted as a part of the hidden or informal curriculum. Without a structured approach to PIF, students might struggle to truly embody the empathy, ethical integrity, and sense of accountability needed to handle the complexities of our healthcare settings and earn the trust of the communities they serve [6].

Incorporating PIF into the LEAPS module addressed this gap by fostering a reflective and values-driven approach to medical education. We started with small group discussions, and reflective exercises and then moved on to a structured mentoring program and peer-assisted learning to facilitate with professional identity development of our graduates.

### Study Skills

In vast disciplines like undergraduate medicine or undergraduate dentistry, the cognitive overload is such that knowing how to study is as crucial as knowing what to study [1]. As we start medical school right after intermediate education (Fsc/A levels), students tend to be wary of this sudden transition and need support in grasping evidence-based learning strategies. Making this a part of the formal curriculum ensures that our graduates are well-equipped to progress further.

### Well-being, burnout prevention, and EDI (Equity, Diversity and Inclusivity)

In Pakistan's demanding healthcare environment, professionals often face intense stress, long working hours, and limited mental health support, leading to high rates of burnout, depression, and anxiety among both medical students and practitioners [7]. Recognizing these challenges, the LEAPS module prioritizes well-being by embedding resilience training, adaptive coping mechanisms, mindfulness exercises, and peer support throughout the curriculum [8].

## Curriculum Structure and Implementation

After detailed research, nominal groups, and discussions, we developed the LEAPS module in 2018. The module is spread over four years (complete tenure of the BDS curriculum and the first four years of MBBS). It is a longitudinal spiral that starts from 1st year and moves up. The complexity of topics is arranged according to the year of study and clinical proximity. Traditionally first two years of medical school in Pakistan involve very less clinical interaction and clinical exposure increases from the third year to the final year.

Another innovation we brought is to include SDGs into the LEAPS curriculum. This decision was based on the need to align medical education with global health priorities and equip our graduates with skills to address upcoming healthcare challenges. Our framework aligns with SDGs 3 (Good Health and Well-being), 4 (Quality Education), 10 (reduced inequalities), and 16 (Peace, Justice, and Strong Institutions).

The Module is fashioned as a spiral over the four years, starting in year 1 and then moving up with themes of increased complexity as shown in Table-I.

**Table-I: Year wise themes for the LEAPS curriculum.**

Year	Theme
1	Establishing a strong foundation in professionalism, ethics, and self-care.
2	Building resilience, enhancing ethical competence, and integrating basic EDI principles.
3	Advancing professional identity formation and ensuring patient safety with deepened cultural competence.
4	Preparing for leadership, advanced ethical practice, and providing inclusive care with a focus on lifelong learning.

For every theme, we designed study guides with appropriate study strategies. Each year builds on the concepts from the previous one to improve student skills and deepen understanding.

### Year 1

In the first year, as students just transition to medical school, our focus is on initiating a professional identity, imparting basic study skills, and developing coping mechanisms for mental health stressors. Broadly first year includes recognizing self-care strategies and identifying burnout, defining the core principles of professionalism and the key components of professional identity formation, discuss the foundation concepts of ethics such as patient safety and informed consent <sup>[9]</sup>.

A variety of interactive strategies are used for implementation, including case-based scenarios, interactive workshops on

self-care techniques, and also role plays to simulate patient interactions to help students practice empathy and altruism <sup>[10]</sup>.

### Year 2

In the second year, as students are now moving up the continuum of medical and dental education, we introduce resilience-building activities and also start the integration of basic principles of EDI (Equity, Diversity, Inclusion). The focus shifts to strengthening ethical reasoning and adaptive coping skills. Here we focus more on activities for developing communication skills, particularly in difficult situations, adaptive coping strategies for clinical stress and academic pressure, and structuring discussions around the identification and impact of implicit biases on patient care.

Healthcare practitioners who consistently recorded positive events regarding their work life in a diary over a period of one month had significantly less symptoms of stress and depression than their counterparts who didn't engage in this activity <sup>[11]</sup>.

Likewise, practitioners who kept a record of productive work occurrences were much happier and less exhausted by work <sup>[12]</sup>.

Writing about your thoughts and feelings can be a helpful way to deal with a traumatic or stressful event <sup>[13]</sup>. For e.g. a writing program was added by the Hunter-Bellevue School of Nursing in New York for their nursing students enabling them to voice and listen to other's experiences <sup>[14]</sup>.

Hence we introduced reflective journaling to make it easier for students to understand complex psychosocial concepts. In the second year, we also introduce peer mentoring and support groups that are student-led and longitudinally run so they can share their experiences and learn coping strategies from one another.

Peer support groups include regular meetings where students who share similar experiences or challenges come together to talk and support each other, providing a friendly and safe space for everyone to voice their opinions. These groups provide a way for people to connect, understand, and support one another and have resulted in reducing burnout <sup>[15]</sup>.

Structured workshops focusing on matters such as the Imposter Syndrome, handling diverse patient populations, and focusing on cultural competence and implicit bias are initiated.

### Year 3

The third year focuses on deepening students' professional identity and cultural competence while emphasizing patient safety. Through simulation exercises, mentorship programs, and cultural competence training, students learn to apply patient safety protocols in simulated clinical scenarios, reflect on their professional growth, and demonstrate an understanding of cultural humility for effective patient interactions.

#### Year 4

In the final year, the curriculum culminates with advanced training in leadership, ethical decision-making, and providing inclusive, patient-centered care. The emphasis is on lifelong learning and preparing students for real-world challenges. Here we introduce more advanced concepts of leadership training like adaptive leadership, effectively directing a healthcare team, and analysis of more complex ethical cases such as resource allocation and patient advocacy, they are encouraged to chart out a personal development plan for Continuous Professional development and self-improvement.

Table-II illustrates some excerpts from year-wise study guides, showing learning objectives and teaching strategies employed.

**Table-II: Year wise themes for the LEAPS curriculum.**

Topics	Learning Objectives	Teaching Techniques	Assessment Strategies	SDG Alignment
<b>Year 1</b>				
Introduction to Professionalism	Define professionalism and describe its key attributes.	Lecture, Case-based Discussions	MCQs, Role-Play Evaluation	SDG 16
Burnout: Recognizing Symptoms	Identify the signs and symptoms of burnout in healthcare.	Interactive Lecture, Reflective Journaling	Reflective Essay, Formative Quiz	SDG 3
Cultural Sensitivity and Empathy	Discuss the importance of cultural sensitivity and empathy in patient care.	Lecture, Role-Play	Formative Quiz, Group Discussion	SDG 10
Communication Skills	Develop effective verbal and non-verbal communication skills.	Role-Play, Group Activities	Role-Play Assessment, Peer Feedback	SDG 4
Altruism and Community Service	Explore the role of altruism in healthcare and ways to contribute to the community.	Community Service Project, Group Discussion	Community Project Report, Presentation	SDG 10
Introduction to Ethics in Healthcare	Describe the basic principles of ethics and how they apply to dental/medical practice.	Lecture, Group Discussion	MCQs, Ethical Scenarios	SDG 16
Reflective Writing and Journaling	Practice reflective writing to explore personal responses to professional experiences.	Reflective Writing, Peer Feedback	Reflective Essay, Peer Feedback	SDG 3
<b>Year 2</b>				
Leadership Styles in Healthcare	Explore various leadership styles and their application in dental practice.	Case Studies, Group Discussion	Leadership Scenario Evaluation, Group Presentation	SDG 8
Stress and Burnout Prevention	Review burnout signs and preventive strategies, including adaptive coping mechanisms.	Role-Play, Group Discussions	Reflective Essay, Peer Feedback	SDG 3
Cultural Sensitivity	Discuss the role of cultural sensitivity in dental practice and its impact on patient care.	Interactive Lecture, Case-Based Discussions	Group Discussion, Cultural Sensitivity Assessment	SDG 10
Cultural Sensitivity	Discuss the role of cultural sensitivity in dental practice and its impact on patient care.	Interactive Lecture, Case-Based Discussions	Group Discussion, Cultural Sensitivity Assessment	SDG 10
Peer Support Systems	Explore the benefits of peer support in mitigating burnout and promoting well-being.	Peer Support Groups, Reflective Writing	Peer Support Assessment, Reflective Essay	SDG 3
Professionalism and Conflict Resolution	Develop conflict resolution skills within professional settings.	Role-Play, Scenario-Based Learning	Role-Play Evaluation, Peer Review	SDG 4

More interesting and diverse teaching strategies like “Leadership labs” are utilized in the final year where students take leadership roles in simulated healthcare teams and manage resources and decision-making in high-pressure scenarios.

By this time, students also compile their complete portfolio demonstrating growth, learning, and reflection through the LEAPS module.

Throughout the years we have revised strategies multiple times for instance 2019-2022 empathy was taught through excerpts from Harry Potter books, inculcating art into this module.

**Table to be continue**

Year 3				
Resilience Building	Identify strategies to build resilience and manage stress effectively.	Workshops, Scenario-Based Learning	Resilience Workshop Evaluation, Self-Reflection	SDG 3
Professional Identity Formation	Explore the importance of forming a strong professional identity.	Reflective Writing, Group Discussion	Professional Identity Portfolio, Peer Feedback	SDG 4
Altruism in Patient Interactions	Examine the role of altruism in effective patient interactions.	Community Service, Group Discussion	Community Service Reflection, Peer Review	SDG 10
Burnout Prevention and Self-Efficacy	Develop self-efficacy to manage stress and prevent burnout.	Self-Efficacy Exercises, Reflective Writing	Self-Efficacy Journal, Reflective Essay	SDG 3
Effective Communication in Patient Care	Utilize effective communication strategies with patients, especially in delivering difficult news.	Role-Play, Scenario-Based Learning	Role-Play Evaluation, Communication Skills Assessment	SDG 4
Year 4				
Healthcare Innovation and Sustainable Practices	Explore the role of innovation in healthcare and its application to dental practice.	Workshops, Innovation Labs	Innovation Project, Group Presentation	SDG 9
Workplace Resilience and Peer Support	Develop strategies for building resilience and supporting peers in clinical settings.	Peer Support Sessions, Reflective Writing	Peer Support Journal, Self-Assessment	SDG 3
Adaptive Coping Strategies	Apply adaptive coping strategies to manage professional stress.	Workshops, Self-Reflection Exercises	Coping Strategy Portfolio, Peer Review	SDG 3
Ethics in Complex Clinical Situations	Navigate complex ethical situations in clinical practice.	Role-Play, Case-Based Discussions	OSCE, Ethical Scenario Evaluation	SDG 16
Continuous Professional Development	Understand the importance of lifelong learning and professional development.	Workshops, Mentorship Sessions	Professional Development Plan, Self-Assessment	SDG 4

## Assessment

At the time of inception, this module was not a part of the UHS curriculum so assessment was mainly kept formative with judging of a portfolio developed at the end of five years and feedback given on role play sessions and presentations throughout the program [6]. We faced issues with the attendance of students in the initial few months but with the development of innovative teaching strategies and a longitudinal mentorship program, that problem was covered soon.

## CONCLUSION

The LEAPS curriculum marks a significant evolution in medical education by addressing essential non-clinical competencies that are often neglected in traditional curricula. By embedding leadership, ethics, altruism, professional identity formation, and study skills throughout the educational continuum, LEAPS ensures that students develop into well-rounded healthcare providers. The focus on mental well-being, burnout prevention, and Equity, Diversity, and Inclusion (EDI) is particularly critical in the context of Pakistan, where high levels of stress, cultural complexities, and socio-economic disparities pose significant challenges to healthcare professionals.

The integration of these elements not only prepares students to handle complex clinical scenarios but also cultivates a strong sense of empathy, resilience, and cultural competence. Through a longitudinal, spiral design, the LEAPS module supports progressive learning and equips graduates with the tools they need for lifelong professional growth and patient-centered care. Ultimately, LEAPS aims to produce healthcare leaders who are not only clinically adept but also ethically grounded, socially accountable, and committed to improving health outcomes across diverse populations.

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