

Bridging the Leadership Gap: Developing a Culturally Adapted Leadership Program for Healthcare Professionals in Oman

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Background: Effective leadership is essential for high-performing healthcare systems, yet many leadership training programs lack contextual and cultural adaptability. In Oman, leadership development has historically focused on clinical expertise rather than strategic competencies. This study describes the development and implementation of a culturally adapted leadership training program tailored to the needs of Omani healthcare professionals.

Methods: A multiphase project-based learning approach was used to design and assess the program. A needs assessment survey was conducted among healthcare leaders to identify competency gaps. The program was then developed based on international best practices and customized to the Omani healthcare system. A rigorous selection process involved psychometric testing, personal leadership statements, and structured interviews. The eight-month program incorporated evidence-based leadership training, mentorship, and project-based labs. Evaluation was guided by the Kirkpatrick model, assessing knowledge, skills, and behavioral change. Post-program qualitative interviews explored participant experience.

Results: The needs assessment (n = 16 senior hospital managers) identified gaps in strategic decision-making, crisis management, and interdisciplinary collaboration. The program addressed these needs through eight structured modules. Of 177 applicants, 38 were selected via a multilevel assessment process. Post-program interviews with a purposive sample revealed improvements in self-awareness, strategic capabilities, team collaboration, and leadership accountability. Participants emphasized the program's contextual relevance and its value in bridging theory and real-world practice.

Conclusion: This study demonstrates the feasibility and impact of a culturally tailored leadership development program in a healthcare setting. By integrating context-specific training with global leadership principles, the program addresses critical competency gaps and strengthens leadership capacity in Oman's healthcare system. Post-program feedback provided insights into the program's transformative potential. Future studies should examine the long-term impact of such programs on healthcare performance and patient outcomes.

Keywords: healthcare leadership, leadership training, competency development, healthcare workforce, Oman, culturally adapted training, healthcare management

Introduction

Leadership in healthcare is a multidimensional concept that encompasses strategic visioning, stakeholder engagement, emotional intelligence, and the ability to navigate complex systems. It plays a vital role in improving clinical outcomes, enhancing patient safety, and ensuring the resilience of healthcare systems.¹ Globally, the move toward patient-centered, team-based, and data-informed care models has necessitated leadership that is adaptive, culturally competent, and grounded in transformational practices.^{2,3} While some people may possess natural leadership abilities, formal training is necessary to enhance the differentiating competencies of others. This encompasses skills such as governance, laws, regulations, and personal competencies that are not inherent in everyone.⁴⁻⁸ Leadership education and training are among the three major opportunities for people to develop

their leadership skills and potential.⁹ The other two methods include trial and error and the observation of others. Leaders who assume that they do not require any formal training may thrive for a while but will eventually face challenging situations that they are not equipped to handle independently. The need to enroll in training programs to build and enhance the competencies of healthcare leaders is well supported.^{4-8,10,11} Furthermore, research indicates that providing leadership training prior to assuming formal leadership roles is essential for boosting healthcare professionals' motivation to pursue and excel in leadership positions.^{12,13} Several drawbacks in healthcare leadership training programs have been identified that can limit their effectiveness. One of the main drawbacks is a lack of diversity in leadership, with many programs failing to promote inclusivity and equity in their recruitment and selection processes. Additionally, many programs tend to focus on individual leadership skills rather than addressing the systemic issues that impact healthcare delivery and patient outcomes. Finally many programs are limited in scope and duration, with a focus on short-term gains rather than building long-term leadership capacity.^{4-8,10,11,14,15} Furthermore, some existing healthcare leadership programs are designed via a general approach that lacks customization to specific cultural or organizational contexts. This generalization can limit their effectiveness when applied to diverse healthcare settings.^{3,16} In the context of the Gulf Cooperation Council (GCC) countries, healthcare systems have undergone significant modernization, but leadership development remains inconsistent. Imported leadership models in gulf countries often fail due to misalignment with local culture, Islamic values, and governance systems. Studies show effective leadership in these contexts requires culturally rooted approaches tailored to national norms.^{17,18} Oman's healthcare system, under the Ministry of Health (MoH), has made commendable strides in clinical training and service expansion, yet a structured, competency-based leadership model remains underdeveloped.^{19,20} Western leadership frameworks often underperform in Gulf healthcare settings due to a lack of cultural adaptation; successful leadership in this region must align with local values, local governance, and communication norms. Several theoretical frameworks inform healthcare leadership training, notably Transformational Leadership Theory, which focuses on developing individuals' abilities to inspire, motivate, and lead change.²¹ Additionally, global models such as the World Health Organization's (WHO) Health Leadership Competency Framework and the National Healthcare System (NHS) Healthcare Leadership Model emphasize collaborative and values-driven leadership. However, studies suggest that without cultural adaptation, such models may be perceived as prescriptive and disconnected from frontline. In Oman, national stakeholders such as Ministry of Health, Royal Academy of Management and the WHO Office have expressed increasing interest in developing locally relevant training solutions. This interest aligns with the strategic objectives outlined in Oman Vision 2040, which emphasizes governance, accountability, and institutional efficiency in health sector reform.²² Despite these developments, limited empirical evidence exists on how to design and implement culturally adapted leadership programs for healthcare professionals. This study seeks to address this gap by presenting the development and implementation of a healthcare leadership program that is evidence-based, contextually grounded, and responsive to the needs of Omani healthcare institutions. It integrates global best practices with national stakeholder input and follows a structured, multi-phase design including needs assessment, stakeholder validation, and post-program qualitative feedback. The findings contribute practical insights into culturally relevant leadership development and serve as a reference for similar efforts in the region.

Method

Study Design

This study employed a multiphase approach to develop a culturally adapted leadership training program for healthcare professionals in Oman. The study included a needs assessment survey, a framework development phase, a cultural adaptation process, a structured participant selection process, and a program implementation and post program qualitative evaluation phase.

Phase I: Needs Assessment Survey

A self-administered online questionnaire was distributed to mid-level healthcare leaders at Oman's Ministry of Health to assess leadership training needs, ensuring representation across gender and regional demographics. Questionnaire was developed in collaboration with the World Health Organization (WHO) Office in Oman and included demographic characteristics, professional experience qualifications, management training experiences, and hospital characteristics. Training needs were assessed in five primary domains: leadership, personal and interpersonal qualities, business skills and knowledge,

professional and social responsibility, and healthcare environment knowledge. Participants self-assessed their leadership competencies using a five-point Likert scale ranging from “No Need for Training” to “High Need for Training” across 20 items encompassing the five core competency domains. To reduce response bias, the survey was administered anonymously through an online link. Furthermore, individuals who participated in the needs assessment were not part of the training program candidate pool to prevent inflated self-ratings. Eighteen senior hospital managers took part in the needs assessment survey. A descriptive statistical analysis was conducted to assess leadership competencies gaps. The analysis revealed moderate to high demand for leadership training in legal and ethical conduct, health system knowledge, and political knowledge management. Moreover, several leadership business skills were rated as moderate to high need, including systems thinking, evidence-informed decisions, problem-solving, coaching and mentoring, human resource management, and crisis management in healthcare.

Phase 2: Development of the Leadership Training Framework

The original generic leadership program was modeled after a training course designed a few years ago, including WHO components such as leadership, governance and strategic thinking, information management, quality improvement and patient safety, financial management, human resource management, emergency and disaster management, and supply chain management. However, a comparison between the needs assessment findings and the content of the generic course highlighted significant gaps. The generic course addressed only a limited number of moderate- to high-priority needs identified in the assessment, such as leadership styles, strategic thinking, and technical leadership skills. Traditional methods of leadership development, which have historically prioritized clinical acumen over strategic capability, have proven inadequate in equipping healthcare leaders with the requisite skills to maneuver through increasingly intricate institutional landscapes.

While healthcare professionals in Oman exhibit strong technical and clinical expertise, they require considerable development in terms of strategic foresight, crisis navigation, and multidisciplinary coordination, which are essential for contemporary healthcare leadership. However, with no existing local competency framework for healthcare leadership, the challenge was to create a program that balanced widely accepted leadership components with specific skills and qualities identified as moderate to high needs in the assessment. The leadership framework proposed for this program seeks to rectify these structural deficiencies by embedding evidence-based training methodologies, psychometric evaluations, and immersive experiential learning into a comprehensive development pipeline. To achieve this, a comprehensive review of the program’s content was initiated.

Phase 3: Cultural Adaptation of the Program

As part of the cultural adaptation stage, ensuring the validity and relevance of the developed leadership program was a critical step in guaranteeing its effectiveness and alignment with both international leadership standards and the unique contextual needs of the Omani healthcare system. To achieve this goal, a panel of local and international subject matter experts, including representatives from the Ministry of Health, the World Health Organization (WHO), and the Royal Academy of Management in Oman, conducted content validation of the program’s curriculum. The following program elements were refined: core modules, delivery modality (ToT vs Regular), duration of the program (days per month), selection criteria for the participants, number of participants per cohort (total number), need for preparation/prerequisite courses, balance of international and national facilitators, module evaluation method using Kirkpatrick model to assess knowledge, skills, attitudes, and behavior,²³ coach-led (mini) projects, cost of the program (funding), module facilitators, venues, logistics and integration of culturally relevant case studies, site visits, and experiential learning methods. This process ensured that all modules, learning objectives, and evaluation methods adhered to best practices in healthcare leadership development. Additionally, the program was benchmarked against globally recognized leadership competency frameworks, such as those established by the WHO and the Institute for Healthcare Improvement (IHI), to ensure its adherence to evidence-based leadership training methodologies.

Phase 4: Selection and Enrollment Process

Selection and Enrollment Criteria

The candidate pool comprised first- and second-level healthcare leaders from the Omani Ministry of Health, who underwent a rigorous, four-stage selection procedure.

Level I (Application Screening)

An open announcement by the Ministry of Health staff aimed to discover potential candidates for the program on the basis of their willingness and potential rather than direct selection of participants. This announcement included several eligibility criteria.

- Candidates must not have previously held the position of Director General or Assistant Director General.
- Candidates must have at least ten years of service.
- Must hold a minimum bachelor's degree.
- Preferably have prior leadership and project management experience (with documented proof).
- The minimum IELTS score is 6.5.

On the basis of the announcement, a total of 177 applications were received and screened for eligibility. A total of 91 of the applicants fulfilled the minimum eligibility criteria listed in the announcement. All 91 patients were enrolled in Level II of the selection process.

Level II (Assessment)

Level II included standardized psychometric testing, personal leadership statements, and video disruptor assessment. Level II assessments aimed to enhance the traditional selection process with a variety of more objective assessments that can measure various personality traits, cognitive abilities, and behavioral tendencies that are crucial for leadership roles in complex environments such as healthcare.

For the purpose of the assessment, the High Potential Trait Indicator (HPTI)²⁴ was selected on the basis of expert opinion. By using this psychometric test, course developers aimed to identify individuals with greater potential to excel in leadership roles and contribute positively to organizational goals. In particular, HPTI is designed to assess traits associated with leadership effectiveness, including emotional intelligence, resilience, and interpersonal skills. The HPTI is structurally and psychometrically sound, with strong indicators of its predictive validity to identify talented people in the workplace.²⁴

The personal leadership statement was assessed on the basis of a rubric including clarity and structure, vision and values, and self-reflection and development (see [Appendix A](#)). On the other hand, the video disruptor rubric included clarity and presentation skills, message structure and coherence, engagement and persuasiveness, and content relevance and responsiveness (see [Appendix B](#)). Each candidate was expected to submit these requirements to be eligible to proceed with their application.

Out of the 91 qualified candidates from Level I, 86 attended a leadership trait psychometric test, submitted their personal leadership statements and a video disruptor responding to certain criteria developed by the program team. Marks for this Level II were calculated on the basis of the following weights: 20% for the leadership traits test, 40% for the personal leadership statement, and 40% for the video disruptor. Candidates who achieved more than 60% of the total score were deemed eligible for Level III. Accordingly, 38 out of the 86 participants successfully progressed from Level II to Level III.

Level III (Behavioral-Based Interviews)

The 38 candidates were subsequently interviewed, and the highest-performing individuals were selected. The selection process consisted of behavioral-based interviews conducted by a panel of experienced healthcare leaders and subject-matter experts. These interviews were designed to assess candidates' leadership potential, decision-making ability, and capacity to handle real-world healthcare challenges through structured, situational questioning. An interview rubric was developed to assess key leadership competencies among the interviewees. The rubric included 7 essential competencies, including strategic thinking, communication, decision-making, change management, team collaboration, a growth mindset, and creativity and innovation ([Appendix C](#)).

To ensure assessment standardization and fairness, all the candidates followed the same structured rubric and interview guidelines. The use of a standardized approach ensured objective evaluation, minimized potential bias, and provided all

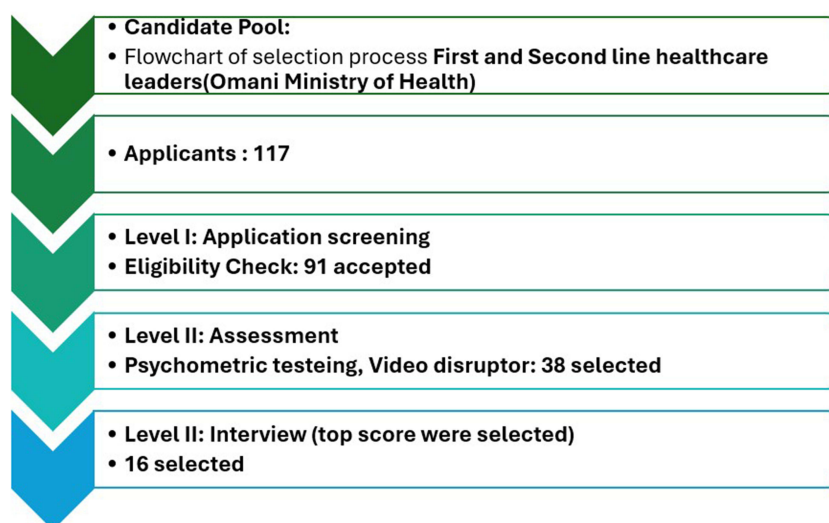


Figure 1 Flowchart of selection process.

candidates with a fair and equitable opportunity to demonstrate their leadership abilities. The panel's evaluation was based on evidence-based best practices in leadership selection, ensuring that only the most competent, adaptable, and strategically oriented candidates accepted in the program. Based on this assessment, the top 16 candidates with the highest scores in Level III were selected to participate in the program. The selection process is outlined in [Figure 1](#).

Phase 5: Program Implementation

The finalized training program used a blended and project-based learning approach, integrating interactive workshops, case studies, and real-world simulations. Each participant was required to develop a capstone leadership project relevant to Oman's healthcare system. The program was developed in a way that ensures the bridging of theoretical knowledge with practical application through a structured, project-based learning approach. The participants who had undergone extensive training in leadership theories, competencies, and strategic decision-making were divided into multidisciplinary teams, each tasked with developing a project aimed at enhancing a specific leadership domain within the healthcare system. These projects served as a capstone exercise, allowing participants to translate their acquired competencies into tangible, system-relevant initiatives that address pressing leadership challenges in healthcare.

Throughout the program, participants engaged in immersive experiential learning, wherein each module provided exposure to distinct leadership and project management skills essential for the successful conceptualization, execution, and evaluation of their projects. The training methodology integrated team-based leadership development with individual competency assessments, ensuring a comprehensive evaluation of participants' leadership growth. Each module incorporates interactive learning modalities, including case studies, real-world simulations, and expert-led discussions, facilitated by subject-matter experts from the Ministry of Health, the World Health Organization, and leading public and private sector entities.

To evaluate the program, a multifaceted program assessment framework was developed and included the following:

- **Team-based assessment:** Each team was systematically assessed for its ability to collaborate, solve problems, and apply leadership principles in executing their project. These evaluations were conducted by the program team and invited subject-matter experts, ensuring that projects met high standards of feasibility, innovation, and impact.
- **Individual reflection:** Every participant was required to submit structured module reflections after each module, demonstrating critical self-assessment of their learning journey.

- Final leadership portfolio submission: Additionally, a comprehensive learning portfolio was submitted at the end of the program, synthesizing the participants' intellectual growth, leadership evolution, and application of key concepts.
- Attendance and Certification: To maintain rigor and accountability, participants were mandated to attend all modules, with a maximum allowable absence of one module throughout the program. This policy ensured that every graduate demonstrated sustained engagement and commitment to the leadership development process.

By leveraging a diverse pool of facilitators, including national and international experts, this phase ensured alignment with global best practices while remaining contextually tailored to Oman's healthcare leadership landscape. The integration of applied leadership training, structured assessments, and high-level mentorship resulted in a cohort of healthcare leaders equipped with the strategic acumen, collaborative mindset, and adaptive capabilities necessary to drive systemic transformation in the healthcare sector.

Phase 6: Evaluation: Qualitative Interviews

A descriptive qualitative design was employed to explore participants' experiences of a culturally adapted healthcare leadership intervention program in Oman. Seventeen participants were purposively selected from those who completed the program, ensuring variation in gender, institutional level, current leadership roles, and future leadership potential.

Data were collected through semi-structured interviews guided by a topic framework designed to capture key aspects of the program experience. Topics included the selection process, initial expectations, content relevance, peer relationships, skill development, implementation challenges, resource availability, and long-term impact (see [Appendix C](#)).

Interviews were conducted by independent researchers who were not involved in the design or delivery of the program, nor in the evaluation of participants using semi-structured questions (see [Appendix D](#)). Informed consent was obtained from all participants, including consent for the publication of anonymized responses and direct quotes. Participants were also assured of anonymity and confidentiality throughout the study. All interviews were audio-recorded and transcribed verbatim.

An inductive thematic analysis was conducted following Braun and Clarke's six-phase approach.²⁵ Initial coding was carried out by the first author, with themes subsequently developed and refined through collaborative discussions with the research team.

Measures to ensure trustworthiness were integrated throughout the process. Credibility was supported through member checking, dependability through maintaining an audit trail of analytic decisions, and confirmability through peer debriefing. Transferability was enhanced by the inclusion of rich, illustrative quotations in the reporting of findings.

Ethical Considerations

This study was reviewed and approved by the Health and Research Approval Committee (HSRAC) at the Ministry of Health, Oman (Approval ID: MoH/DGPS/CSR/PROPOSAL_APPROVED/42/2023). All participants provided informed consent before participation, and their responses were collected and analyzed anonymously to ensure confidentiality. The study was conducted in accordance with the ethical guidelines outlined in the Declaration of Helsinki, ensuring the protection of participants' rights, safety, and well-being throughout the research process.

Results

Needs Assessment Findings

Eighteen senior hospital managers participated in the needs assessment survey. The analysis revealed moderate to high demand for leadership training in legal and ethical conduct, health system knowledge, and political knowledge management. Moreover, several leadership business skills were rated as moderate to high need, including systems thinking, evidence-informed decisions, problem solving, coaching and mentoring, human resource management, and crisis management in healthcare.

These findings informed the customization of the leadership framework to better address gaps in decision-making, cross-disciplinary collaboration, and healthcare governance.

Participant Selection and Enrollment

Among the 177 applicants, 91 met the eligibility criteria. A total of 86 candidates completed the psychometric and leadership assessments. During the last phase of assessment, 38 candidates were selected on the basis of assessment performance and governorate representation. The final list included 16 candidates: 8 physicians and 8 allied health professionals.

Leadership Program and Its Modules

The final leadership program was designed to bridge identified competency gaps and develop well-rounded healthcare leaders capable of navigating the challenges of Oman's evolving healthcare system. The program followed an eight-month structured approach, combining theoretical foundations, interactive workshops, case-based learning, and experiential leadership training. The program was structured into eight core modules, covering essential leadership domains:

1. Leading for Leadership – Leadership styles, characteristics of effective leaders, strategic and systems thinking.
2. People Skills – Team leadership, stakeholder negotiation, delegation in healthcare, and managing diversity.
3. Decision-Making Framework – Political, economic, legal, and ethical aspects of healthcare leadership.
4. Human Resource Management – Talent planning, recruitment, retention, performance management, and organizational excellence.
5. Services and Supply Chain Management – Supply chain optimization, facility and equipment management, agile management, and project-based leadership training.
6. Administrative and Finance Management – Office and facility management, budget planning, financial regulations, and health economics.
7. Emergency, Risk, and Quality Management – Patient safety, risk management, and crisis leadership strategies.
8. Leading the Way Forward – Change management, innovation, and a capstone leadership project.

The finalized program included site visits to successful private entities and organizations in Oman as well as outdoor activities with targeted outcomes focusing on team building, growth mindset, problem solving, and project management skills. The program remained flexible, adjusting to emerging needs, and incorporating evaluations of each module, facilitator, and topic. To ensure relevance and practicality, local experts from healthcare and other relevant sectors were invited to deliver the program modules.

To reinforce continuous quality assurance, the program incorporated an evaluation mechanism to track participant progress, assess knowledge retention, and measure leadership competency development before and after the program. This approach ensured that the program remained adaptive, responsive, and aligned with evolving leadership challenges in Oman's healthcare sector. By integrating comprehensive expert validation, empirical benchmarking, and continuous quality monitoring, the program was solidified as a scientifically rigorous and culturally relevant leadership training initiative poised to develop strategic, resilient, and visionary healthcare leaders in Oman. The final program structure consisted of eight modules over eight months, covering essential leadership competencies and practical training. See [Table 1](#) for a detailed program schedule.

The program emphasized active engagement through team-based projects, leadership development activities, and strategic initiatives. Participants were required to work on real-world healthcare challenges, applying theoretical knowledge to practical problem-solving. This experiential learning approach ensured that graduates of the program were not only equipped with leadership knowledge but also had hands-on experience in healthcare leadership implementation.

Results for Qualitative Interviews

The demographic characteristics of the participants are presented in [Table 2](#).

A thematic analysis of the 16 interviews identified 10 significant themes that reflect the participants' experience of the healthcare leadership program in depth. These themes demonstrate participants' felt strengths and growth opportunities of the program from the lens of their professional and cultural contexts.

Table 1 Leadership Preparation Program in the Management of MOH Health Institutions

Day Modules	1.1	1.2	2.1	2.2	3.1	3.2 (Practical)
1. Leading for Leadership	Leadership styles in Healthcare	Characteristics of Healthcare Leaders	Major Functions of Healthcare Leaders	Strategic Thinking	Systems Thinking	Visit to 2040 Unit
2. People skills	Leading self	Leading Teams	Stakeholder Negotiation and persuasion	Delegation in Healthcare	Managing Diversity	Team building activities
3. Decision Making Framework	Political and Economic Framework	Data, Information, and Technology Framework	Quality Improvement	Ethical and Legal Framework Medical/ Admin Laws	Health Policy	Policy Development
4. Human Resource Management	Workforce Planning and Talent Management	Selection, Recruitment, and Retention	Competencies in Healthcare	Performance Management	Organizational Excellence	Site Visit OQ/Nama
5. Services and Supply Chain Management	Models of Care	Supply Chain Optimization	Facility and Equipment Management	Agile Management and Dynamics in Healthcare	Project Management (Identify a project: 1. Healthcare strategic initiatives, 2. Innovation in healthcare, 3. Solving an issue in current health system)	
6. Administrative and Finance Management	Office Management	Facility Administration	Budget Management	Finance Regulations	Health Economics	
7. Emergency, Risk and Quality Management	High Reliability Organizations - Safer Healthcare	Patient Safety Management	Risk Management	Emergency and Crisis Management	Visit to Civil Defense Authority	
8. Leading the Way Forward	Change Management		TEAM PROJECT			
TEAM PROJECT PRESENTATIONS						
Program Evaluation						

Table 2 Demographic Characteristics of the Participants

No	Gender Male/Female	Specialty	Current Position	Level of the Hospital
1	M	Nursing	Assistant Manager	Secondary
2	F	Clinical pharmacist	Hospital manager	Secondary
3	F	MD	Assistant Manager	Tertiary
4	F	MD	Head of department	Tertiary
5	M	Nutrition	Hospital Manager	Secondary
6	F	Healthcare Management	Hospital Manager	Secondary
7	F	MD	Head of department	Tertiary
8	F	MD	Manager	Tertiary
9	F	MD	Head of department	Tertiary
10	M	MD	Hospital Manager	Secondary
11	M	Pharmacy	Director of Department	N/A

(Continued)

Table 2 (Continued).

No	Gender Male/Female	Specialty	Current Position	Level of the Hospital
12	M	Pharmacy	Director of Department	N/A
13	F	MD	Assistant Manager	Tertiary
14	F	MD	Assistant Manager	Tertiary
15	M	Lap technician	Head of Department	Secondary
16	M	MD	Head of Department	Tertiary
17	M	MD	Head of Department	Secondary

Process of Participant Selection: Openness and Merit-Based

Participants expressed the credibility, transparency, and fairness of the selection process several times. They also reported that the program's organized and multi-staged intervention supported its credibility:

The selection method was very clear, fair, and equitable. (A-N)

This transparency raised the program's perceived status. Some participants described the selection process as:

The stages are not easy at all. It's a rigorous process. (R-B)

Very high standards, very precise criteria. (B-B)

This rigorously merit-based process appeared to enhance participants' motivation and sense of pride, reinforcing their dedication to the program through challenge and achievement. It also ensured that participants were well-suited to handle diverse challenges and work effectively within any system.

Program Evaluation: Excellence, Relevance, and Impact

Participants were asked to evaluate the program out of 5 where 1 is very bad and 5 is excellent and they rated the program in average (mean = 4.2/5), with multiple individuals calling it the best professional experience of their career:

This is the best course I've ever taken in my life, honestly. (S-D)

Participants praised the alignment with Oman Vision 2040 and appreciated the inclusion of both theoretical knowledge and practical mentorship:

They brought knowledge and mentorship at the same time. (S-S)

It get you out of your comfort zone... read and reflect. (S-S)

The presence of a third-party evaluator was seen as critical for ensuring objectivity and future improvement:

I'm glad with the inclusion of a third-party evaluator... ensures sustainability. (S-S)

This depth of engagement suggests that participants saw the program as transformative, not just informative.

Interaction with Trainers and Peers: Culture of Respect and Support

A major strength cited was the positive, accessible, and supportive relationship between participants and the program facilitators:

The trainers were inspiring and made us think out of the box. (M-M)

They treat you... as if you are an integral part of the team. (A-B)

This approach fostered a sense of inclusion and co-ownership. The constant availability and emotional responsiveness of trainers enhanced psychological safety and engagement:

They are available 24 hours a day. (D-A)

Their constant smiles... made us feel happy and motivated. (S-T)

These findings highlight the role of relational dynamics in program success, especially in collectivist cultures like Oman's.

Coverage of Leadership Skills: Breadth vs Depth

While the majority acknowledged the program's attempt to cover essential leadership domains, several participants pointed to notable gaps:

There were some missing topics like communication skills, anger management... (Z-S)

Others felt that the leadership component was dominated by a management-heavy focus:

Much of the content... focused on management, not leadership. (Y-D)

Participants suggested that while the program provided a strong foundation, additional depth and practical exercises would improve long-term retention and effectiveness.

Alignment with the Health Sector's Needs: Contextual Adaptation

There was consensus that the program was well-aligned with the needs of Oman's healthcare system. Participants appreciated the responsiveness of program developers to local input:

They asked us what things we needed before the course. (A-N)

They actually design the module based on assessment and feedback. (D-A)

This reflects an effective cultural and contextual adaptation process, aligning with participatory design principles and ensuring relevance.

Transformative Learning and Applied Leadership Development

Participants consistently described the program as life-changing experience which dramatically improved both their leadership orientation and their management capabilities. A major outcome cited was the development of strong professional networks. Off-site activities played a pivotal role in strengthening interpersonal bonds:

The experience of the trip to Badiyah was different... this isolation gave us a greater opportunity to get to know each other. (Z-S)

We ended up having shared goals in our yearly evaluation system: EJADA. (M-M)

The program was also praised for causing profound personal growth. A majority of participants described this internal shift in mindset toward more deliberate, analytical, and strategic thinking:

Subconsciously we are doing the change. (A-N)

In management, there were things I used to do randomly... Now, we understand that a more methodical approach is better for decision-making. (A-S)

This mental shift extended beyond the workplace, with participants reporting a broader influence on their social and personal lives:

Personal change and the mindset... have a positive impact on my family, my children, my relatives, and my social environment. (S-D)

Participants highlighted improvements across a wide range of leadership and management skills, including decision-making, communication, negotiation, risk management, time management, and teamwork. Many reported applying specific tools introduced in the program within their organizations to address real-world healthcare challenges:

We can apply the fishbone diagram to reduce waiting times. (J-N)

I started to implement whatever I learned, especially in decision-making. (S-S)

Several participants described an increase in their organizational visibility and leadership credibility, noting positive feedback from peers and senior leaders:

My standing has improved, my confidence has grown... I now contribute to a lot of things. (S-S)

They said that even my entire style has changed... the leadership program made a big impact. (B-B)

Soft skills development, such as emotional intelligence and handling diverse personalities, was also emphasized:

Dealing with different personalities. (M-M)

People around me have started mentioning that my way of interacting with them has changed. (A-N)

Participants found the legal and administrative modules to be particularly eye-opening, with some using their new knowledge to educate others:

I even found myself explaining it to my et al. I kind of felt like I was the expert. (J-S)

Importantly, several reported immediate implementation of acquired skills in their workplace:

After attending that session... I went and gave a presentation on the topic. (R-B)

The program's credibility was further reinforced by the presence of high-level figures and reputable organizations, which participants felt added value and vision:

The presence of His Excellency the Minister of Health... provided us with foresight and vision. (A-N)

The module on law and professional practice left a lasting impression. (A-N)

In sum, the program was personally transformative and professionally actionable. It provided participants with integrated leadership concepts, to practice them in their daily life in healthcare and to create connections that inspired sustained change and system development.

Sustaining Leadership Growth: Perceived Long-Term Value

Participants widely expressed that the leadership skills learned through the program have both immediate application and anticipated future impact. Many participants suggested learning was additive and absorbed, with those skills working their way into the subconscious:

Knowledge accumulates over time unconsciously. It's as if a person uses that information without realizing it until later. (Y-D)

Repeated benefits in the longer term were however considered to rely to a large extent on post-programme opportunity. These respondents feared that their talents might be underused if structures for leadership involvement did not exist:

Once I return to my workplace, the question is whether I will be needed... Will I be given the chance to succeed and play a specific role to help improve the system? (S-D)

A few participants emphasized that setting up leadership positions for second and third-tier leaders to ensure that the leadership pipeline does not become stagnant:

The value of continuing the program might lie in giving confidence to second- and third-tier individuals to step up and take on leadership positions. (Z-S)

To keep learning reinforced and maintain momentum, participants recommended ongoing methods such as committee engagement, project work, and follow-up:

Having periodic follow-ups and involving participants in committees or leadership roles... helps them feel that the program has made a real difference. (S-D)

Proactive application examples were also exchanged between participants, showing that some were already applying their skills in real settings:

I've already implemented many changes in the hospital... related to human resources and finance. (D-I)

Peer-to-peer and informal knowledge sharing were identified as relevant bottom-up approaches to addressing engagement. Another mention was made of a WhatsApp group created for continual engagement and resource sharing:

Whenever someone reads something about leadership, they share it in the group. (Z-G)

These peer networks were considered a mechanism for continued learning, community formation and leadership support:

Some et al applied what they learned by giving lectures and conducting sessions...it enhances your own skills if you practice continuously. (B-B)

Personal initiative emerged as a critical driver for sustaining the program's impact:

Personal initiative can make a big difference... even informal communication with et al can drive this change. (Z-G)

Participants also expressed confidence in their readiness to assume greater leadership responsibilities, crediting the program with equipping them for future challenges across healthcare settings:

I think I've become a leader ready to handle any sector in healthcare with calmness and ease. (R-B)

Finally, participants viewed the program as a strategic investment by the Ministry of Health, with the potential to produce leaders who can serve beyond their immediate roles:

We could be leaders of leaders... providing guidance and support to those in need. (R-B)

In conclusion, the perceived lasting benefits of the program were deeply seated in the internalization of learning, practical application, peer-driven support, and the opportunity to interact with policy makers in the health systems on multiple levels—that is, if institutional support could continue.

Implementation Barriers and Participation Challenges

Despite the overall success of the program, there were a number of barriers which affected participants engagement and the implementation of acquired skills. The most often reported barrier was the absence of time release during work:

Your mind might be a bit distracted by work... sometimes we leave the lectures briefly just to complete a specific task or take an important call. (A-A)

This still-exiting work obligation would have disrupted full engagement in learning experiences and constrained participants' potential for in-depth reflection and sustained engagement with program assignments. The lack of protected

time was considered a structural constraint that, if not challenged, could undermine the effectiveness of the program as a whole.

Others also suggested that there were also discrepancies between the lecture content and healthcare in situ locally: suitable when presentations were given by lecturers who were unfamiliar with the situation in Oman:

One of the challenges was balancing the lecture given by someone from outside the organization... they try to align the lecture with our needs, but it's a new experience for both sides. (A-N)

Finally, logistical factors such as last-minute scheduling and limited pre-program information were cited as barriers to effective preparation and planning:

If the location had been announced from the start... and the program details were shared earlier, we could have prepared further. (D-D)

In conclusion, the time constraints, lack of post-program support, mismatches in content-context and logistical difficulties were the main hurdles identified during the program. Overcoming these obstacles will be critical to realizing engagement and sustained impact.

Necessary Resources: Empowerment and Infrastructure

Participants highlighted the importance of having resources for the workplace to actually put the programme's teachings into practice, and empowerment, as the single most important enabler. Empowerment was defined not only as the transfer of power, but also as a cultural and structural resource that allows leaders to act:

If empowerment occurs, there will indeed be positive changes in institutions. Yes, this program should support that. (Y-D)

As compared to power, human and financial resources were also identified as significant for maintaining leadership practices:

With this small number, I cannot burden my employees more. I can't push them any further. (S-S)

Others noted systemic financial constraints that could hinder implementation, especially when aspiring to apply ambitious ideas like AI integration or digital transformation:

We talked a lot about digital transformation... but we need to be realistic. In the finance sector, we have some issues. (A-N)

Some respondents took a more positive stance and asserted that resource adequacy is determined more by proper management than simply by the availability of resources:

Resources are available and abundant. The key is how you manage these resources... and direct them toward your goals. (B-B)

Taken together, participants emphasized that successful application of leadership practices centers on both resource availability and the organizational empowerment to use them effectively.

Enhancing Program Effectiveness: Participant-Driven Recommendations

Participants provided thoughtful suggestions for enhancing the structure, content, and continuity of the leadership program. A key message was the importance of structured post-program engagement, such as follow-up mechanisms like alumni forums, mentor programs, conferences or leadership attachments to provide continuity and further embed learning:

There needs to be something complementary to this course in the future. (Y-D)

Having periodic follow-ups and involving participants in leadership roles... would reinforce the benefits of the training. (S-D)

Several participants called for more experiential learning suggesting site visits, real-world case discussions, and the inclusion of guest speakers from within the healthcare system to provide *practical, context-specific insights*:

Invite another person from the Sultanate to provide more comparisons with the international level... they would address the challenges we face. (S-D)

I want practical examples of the issues faced in administrative affairs with hospital managers. (Z-S)

There was strong interest in expanding the program's reach and inclusivity:

This program needs to be implemented at the ministry level and extended to the governorates. (R-B)

Proposed curriculum modifications also were suggested, including adding components on AI, strategic planning, legal aspects of health, and more robust cultural contextualization for the theory of leadership.

There is a heavy reliance on information coming from the West... there could be a focus on integrating local cultural context. (Y-D)

Additional practical suggestions included:

Give participants full release from the work for the three days. (B-B)

Involving them as trainers in future courses would be beneficial. (D-I)

Overall, the vision of participants was of a more flexible, locally situated and future- focused program that also provided sustainable professional pathways and real-life application.

Discussion

The development of an effective and culturally adapted healthcare leadership program is an essential endeavor to address the evolving complexities of the healthcare landscape in Oman. This study explored the design, delivery, and perceived impact of a culturally adapted leadership development program for healthcare professionals in Oman. The findings reveal that leadership development in Oman requires a structured, competency-based approach that aligns with both global best practices and the unique cultural and organizational contexts of the Omani healthcare system. The needs assessment phase identified key leadership gaps, particularly in strategic decision-making, crisis management, and interdisciplinary collaboration, necessitating tailored educational intervention. While existing international leadership programs offer valuable frameworks, their lack of contextual adaptation limits their applicability to Oman's specific healthcare landscape.^{3,16} The rigorously structured multiphase selection process, coupled with competency-driven training modules and the process described in this program, aims to bridge this gap by integrating theoretical knowledge with practical application, ensuring that healthcare professionals develop leadership competencies that are both evidence-based and contextually relevant. One of the program's most notable strengths was its responsiveness to local healthcare needs and national policy goals, especially Oman Vision 2040. The program's integration of cultural elements made it highly relevant and applicable to the Omani healthcare system, addressing local leadership challenges while aligning with global best practices. In the current study, results indicated that the program was successful in addressing core leadership gaps through a model based on local relevance, experiential learning, and a relational dynamic. Findings from the qualitative phase showed that participants praised the participatory design approach, in which pre-program assessments and contextual feedback were used to shape the content.

Findings also revealed the role of relational dynamics and psychological safety in leadership development of health professionals. The program's culture of respect, mentorship, and emotional support was frequently cited by current study participants as a key driver of learning. These findings align with studies showing that psychological safety and inclusive facilitation are crucial for leadership development, especially in healthcare complex work environments.^{26,27} Leadership programs aiming to have a long-term impact must intentionally create emotionally safe and inclusive learning environments to unlock the full potential of participants. In this way, they not only support the development of individuals but also enhance team performance and the quality of patient care provided.

Another strength of this leadership program was its comprehensive, multiphase selection process, which ensures that only high-quality candidates with demonstrated leadership potential are chosen. There was strong consensus among study

participants that the selection process was transparent, rigorous, and merit-based, which significantly enhanced the program's legitimacy and participants' commitment.

Moreover, the inclusion of rigorous psychometric assessments, competency-based training modules, and interactive experiential learning strategies ensures that selected participants are equipped with the necessary skills to lead effectively in high-pressure environments.^{13,28} Furthermore, the project-based learning approach provided participants with opportunities for the hands-on application of leadership concepts, bridging the gap between theoretical knowledge and real-world healthcare leadership scenarios. However, even the most meticulously designed leadership programs are not immune to limitations. One of the principal challenges inherent in leadership development lies in sustainability and longitudinal impact. Leadership, unlike technical proficiency, is not a static skill but an evolving discipline, necessitating continuous reinforcement, mentorship, and recalibration in response to emerging healthcare exigencies.^{13,28} A critical insight from this study is the recognition that leadership development should be a continuous and adaptive process rather than a one-time intervention. The long-term impact of a program was found to be heavily dependent on institutional structures and opportunities to practice the skills post-program. Participants expressed concern regarding the underutilization of their skills unless formal leadership pathways and post-program engagement mechanisms were formalized. To influence systemic change, alumni networks, mentorship, and follow-up roles are crucial to maintaining momentum. In addition, future iterations of this program must therefore incorporate longitudinal assessment mechanisms, ensuring that leadership competencies are not merely acquired but are effectively operationalized in real-world healthcare settings. Furthermore, as digital transformation, artificial intelligence, and regulatory reforms continue to redefine the global healthcare landscape, leadership programs must remain adaptive and anticipatory, integrating contemporary advancements into their training paradigms.^{29,30}

This study serves as an intellectual and operational foundation for future research in healthcare leadership, calling for continuous empirical inquiry into the evolving dynamics of healthcare governance, policy innovation, and leadership transformation. The next frontier lies in evaluating the real-world translational impact of such leadership programs, ensuring that they serve not merely as academic constructs but also as catalytic mechanisms for systemic healthcare excellence.

In summary, this study advances a critical discourse on the future of healthcare leadership in Oman, presenting a model that is not merely theoretical but also operational, not merely prescriptive but pragmatic. By bridging the leadership gap through a rigorously structured, empirically substantiated, and culturally embedded training framework, this initiative is poised to redefine leadership trajectories in Oman's healthcare sector. If sustained and iteratively refined, this model has the potential not only to enhance institutional performance but also to foster a more resilient and effective healthcare workforce and fundamentally reshape the leadership ethos of Oman's healthcare system, aligning it with national health strategies and Oman Vision 2040.

Limitations

Despite its strengths, this study has several limitations. First, the initial needs assessment relied on a small sample size ($n = 16$), limiting the generalizability of findings. Second, while post-program interviews provided rich qualitative insights, the absence of long-term follow-up restricts our understanding of sustained behavioral and institutional impact. Third, the exclusion of director generals and policy-level leaders may have narrowed the broader systemic influence of the program. Fourth, the selection criteria, particularly the requirement for a minimum of 10 years of service, may have introduced selection bias, potentially limiting the diversity of viewpoints and experiences. Finally, the lack of advanced statistical analysis and absence of national-level data or benchmarks on leadership effectiveness in the Omani healthcare system posed challenges in measuring broader outcomes and in comparing our findings against systemic indicators.

Future Directions and Recommendations

In the future, several directions can enhance the program's effectiveness and long-term impact. Longitudinal studies should be conducted to evaluate the sustained impact of leadership training on organizational performance and patient outcomes. Expanding the programme to include policymakers would ensure leadership alignment at all levels of healthcare governance, promoting system-wide improvements. Additionally, incorporating digital and AI-driven

leadership training tools could increase accessibility, engagement, and scalability, allowing for more dynamic and data-driven leadership development strategies in healthcare.

Conclusion

The program has great value by having international benchmarks stand alongside national objectives, as indicated in Oman Vision 2040, because it provides a clear pathway for addressing essential issues, such as decision-making, crises, and inter-departmental working and collaboration. A significant strength of the course is its ability to localize to Omani hospitals and clinics, establishing a trust-based culture that fosters people's readiness to use voice, engage mentors and simply learn through relationships, which all contribute to effective leadership in more challenging circumstances. However, the program's sustainability and long-term effectiveness of the program requires formal post-program engagement pathways, dedicated institutional ownership, and continuous incremental improvements that are based on long-term impact evaluation. Program's systemic impact is limited by excluding decision-makers at the top; future iterations should include considerations of both senior leadership and junior workforce alignment given the importance of governance in any intervention. There are also opportunities to augment the program with present day digital innovations and AI-enabled learning tools, especially given the current pace of change in the global health environment.

Ultimately, this research builds on the growing body of evidence that promotes regional leadership development models in global health. It not only reflects one model of training but also serves as a strategic lever for changing entire systems, and improving local performance of institutions, building resilience and rethinking leadership.

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