Health Research Systems in Developing Settings: From System Analysis, Understanding, to System Strengthening

Dr. Mohammed Alkhaldi, PhD
Assist. Prof., Canadian University Dubai, UAE
Postdoc. Researcher, McGill University, Canada
Scientist Collaborator, Swiss TPH, Switzerland

1. Landscape of Health Research (HR) at global, regional, and national levels
2. Background on HR system concepts, goals, functions, structure
3. Palestine Case Study
   - Significance of research, objectives and methods
   - Findings related to six HRS pillars:
     - Understanding of HRS
     - HRS performance
     - Stewardship and governance
     - Stakeholders’ roles and contributions
     - HRS resources and capacity, and
     - Quality of research and knowledge transfer and translation
4. Iran Case Study (summary and key findings)
5. Conclusion and recommendations (roadmap forward)
Global landscape

- HRS is major concern in LMIC, low-resourced states
- HRS is an important instrument for SDGs’ achievement and investment in health, research, and innovation.
- Globalization and Booming in Health Research (evidence-based policies, multi-interdisciplinarity, learning systems, research capacity)
- Bridging 10/90 gap (less than 10% of worldwide resources devoted to HR were put towards health in LMICs, where over 90% of all preventable deaths worldwide occurred)
- WHO strategy on research (capacity, standards, translation, and priorities)
- Universal Health Coverage (knowledge and research for health)
- WHA’s resolution to strengthening member states’ National HRS as a pathway to improve their overall health system
- New global shifts due to COVID-19: hot topics: big data and analytics, EBIP, AI, digitalization, healthcare revolutions, ..etc.
Regional overview

Table 1 Number of country-specific publications per year and in four decades

From: Mental health research in the Arab world

<table>
<thead>
<tr>
<th>Region</th>
<th>Number of specific articles per year</th>
<th>Total number of articles in all four decades</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very high</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Egypt</td>
<td>2.4</td>
<td>5.6</td>
</tr>
<tr>
<td>Saudi Arabia</td>
<td>0.0</td>
<td>0.9</td>
</tr>
<tr>
<td>Kuwait</td>
<td>0.0</td>
<td>0.9</td>
</tr>
<tr>
<td>Lebanon</td>
<td>1.9</td>
<td>2.1</td>
</tr>
<tr>
<td>High</td>
<td></td>
<td></td>
</tr>
<tr>
<td>United Arab Emirates</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Tunisia</td>
<td>2.1</td>
<td>1.0</td>
</tr>
<tr>
<td>Jordan</td>
<td>0.0</td>
<td>0.9</td>
</tr>
<tr>
<td>Morocco</td>
<td>1.6</td>
<td>0.7</td>
</tr>
<tr>
<td>Low</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bahrain</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Palestine</td>
<td>0.0</td>
<td>0.1</td>
</tr>
<tr>
<td>Iraq</td>
<td>1.0</td>
<td>0.5</td>
</tr>
<tr>
<td>Algeria</td>
<td>0.6</td>
<td>0.8</td>
</tr>
</tbody>
</table>
There is a lack of systematic health policy and system research conducted in humanitarian settings, inc. Palestine due to capacity and resource issues.

HR remains stepping slowly and needs effective and collective efforts by all stakeholders to be strengthened.

HR challenges are mostly not addressed, and its components are not sufficiently investigated due to a shortage of knowledge.


The first national study addresses essential pillars targeting different sectors.
Demography and geography of Palestine

Pop. inside Palestine: West Bank and Gaza Strip

Rounded figures in millions

- 2015: 0.8, 1.6, 1.2
- 2030: 1.1, 1.6, 1.9
- 2050: 2.9

HRS: from system analysis, understanding, and strengthening. GHNC, University of Cape Town, SA, 24 – 25 Nov. 2022
Geopolitics is a key determinant of health

West Bank

Gaza Strip

Gaza Strip: Restricted areas and crossings

- Erez crossing (Beit Hanoun)
- Nahal Oz crossing (Fuel pipeline)
- Karni crossing (Al-Montar)
- Deir al-Balah
- Khan Younis
- Rafah crossing (Al-Awda)
- Sufa crossing
- Kerem Shalom crossing (Karam Abu Salem)

- Open crossing
- Closed crossing
- Closed but open for exceptional cases
- No go zone
- Risk zone
Socioeconomic situations

• Socially: highest poverty and unemployment rates regionally and worldwide
• Humanitarian and emergencies
• Economy is dependent on external unsustainable sources
• Lack of control on borders and natural resources, water and air
• Fluctuating macroeconomic conditions, according to the political situation

<table>
<thead>
<tr>
<th>Total GDP</th>
<th>about 7.5 billion $</th>
</tr>
</thead>
<tbody>
<tr>
<td>GDP per capita</td>
<td>1746.8, WB: 2.051$, GS: 1.103$</td>
</tr>
<tr>
<td>Unemployment rate</td>
<td>WB: 18.2%, GS: 47%</td>
</tr>
<tr>
<td>Poverty Rate</td>
<td>WB 18%; Gaza 38%</td>
</tr>
</tbody>
</table>
Health status and health system in Palestine

Health system challenges

1. Governance (fragmentation)
2. Resources (scarcity and donor-driven)
3. Lack of sustainable capacity
4. Environmental factors (political uncertainty and emergencies)
5. Demographic changes
6. Information, research, and technology

- Infectious diseases
- Cardiovascular disease
- Cancer
- Strokes
- Diabetes
- Respiratory diseases
- Perinatal mortality
- Accidents
- Renal failure
- Infectious diseases
The people, institutions, and activities whose primary purpose in relation to research is to generate high-quality knowledge that can be used to promote, restore, and/or maintain the health status of populations; it should include the mechanisms adopted to encourage the utilization of research.

Pang et al.

Definition

Health Research System

Values
- Equity, ethics, teamwork
- Decentralization, inclusiveness, transparency
- Relevance

Principles
- Vision & mission
- Research culture
- Awareness, orientation

Stewardship
- Vision
- Priorities
- Ethics
- Coordination and M&E

Financing
- Securing funds and good allocation

Creating & sustaining resources
- Human & physical

Producing & using HR
- Valid outputs
- Research-policy & strategies
- Interference
- HR for improvements

Ultimate goal

Operations and functionality

Foundation stone

Relationships of HRS with other systems (COHRED)
Significance of research

1. **First national study** (lays the foundation)

1. There is **local strategic demand** for this research

2. **Consistency with regional and global** strategic directions

3. **System analysis** is rarely conducted in the region

4. **Bridges the knowledge gap** about the understanding of local HRS
Overall objective

4 Objectives

1. Understand how stakeholders **conceptualize** HRS and **importance** they give to HRS

2. Assess stakeholders’ **satisfaction with overall performance** of HRS

3. Analyze **stewardship functions** of HRS: governance, policy, and priorities

4. Explore features of HRS **stakeholders** and **capacity of the system**

5. Propose avenues for HRS development in Palestine
Participants were selected purposively with mixed sampling:
1. Criterion sampling
2. Critical case
3. Snowball
4. Homogenous

Total participants: 111 (7 excluded)

52 In depth interviews
6 Focus group discussions (52 experts), 3 FGDs in WB & 3 FGDs in GS
Methods

Data management and analysis

- Audio-recorded
- Translated-transcribed
- Revised-checked
- Themed-coded (MAXQDA 12)
- Analysed (thematic & content)
- Manuscript drafted
- Data (IDIs & FGDs)
Finding 1: HRS conceptualization & importance

Problem / challenge

1. Stakeholders have limited understanding of HRS
2. Stakeholders’ conceptualization is inadequate for application.

Suggested actions/solutions

1. A central governance coordination body should promote awareness, culture and understanding of HRS concepts
2. Improved understanding of the concepts will strengthen the HRS
Problem / challenge

1. Stakeholders describe HRS as underperforming
2. Research is not on the leadership agenda

Suggested actions/solutions

1. Actively engage health decision makers
2. Enlighten them on performance assessment
3. Create an inclusive national body of governance and strategies
4. Plan a strategy to expand stakeholders’ awareness and abilities
5. Empower institutions’ research monitoring and evaluation capacities
### Comparison among three national HRPs setting exercises

<table>
<thead>
<tr>
<th>National setting exercises</th>
<th>SRC’s manual on HRPs, 2014</th>
<th>PNIPH workshop on HRPs, 2017</th>
<th>HRP identified by study’s experts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Areas</td>
<td></td>
<td></td>
<td>Gov.</td>
</tr>
<tr>
<td>HCS</td>
<td>Health financing, HIS, workforce capacities, education and medical accreditation, coordination, management system</td>
<td>Access, coverage, workforce, PHC, health financing, HIS</td>
<td>Cost of referral abroad</td>
</tr>
<tr>
<td>MCH</td>
<td>Healthcare and protocols evaluation, school health, nutrition, anemia, child obesity, FP, early detection of genetic disease</td>
<td>Maternal, PNC, FP, women’s’ health, vaccination, nutrition</td>
<td>Governance, resources allocation, health economic, care quality</td>
</tr>
<tr>
<td>NCDs</td>
<td>Causes and risk factors, assessing prevention-promotion, diagnosis, care quality</td>
<td>Preventive care, tobacco control, nutrition, care quality, early detection of genetic disease</td>
<td>Cost of referral abroad</td>
</tr>
<tr>
<td>Nutrition</td>
<td>Anemia, prospective, NGOs, food toxicity and pesticides, obesity</td>
<td>Nutrition, anemia</td>
<td>Financing and policy, accesses, workforce, care quality, efficiency</td>
</tr>
<tr>
<td>Mental health</td>
<td>Causes, addiction, suicide, prisoners, wounded and wars victims, care quality</td>
<td>Psychosis, stress-related, disability, anemia</td>
<td>Financing and policy, accesses, workforce, care quality, efficiency</td>
</tr>
<tr>
<td>Environmental health</td>
<td>Water, air and soil, and diseases, wars remnants, industrial effects, medical waste management</td>
<td>Water quality, waterborne diseases, toxins, safety, traffic safety, buildings</td>
<td>Child Behaviour</td>
</tr>
<tr>
<td>Infectious diseases</td>
<td>Risk factors and causes, assessing of prevention-promotion programs and protocols, surveillance</td>
<td>Meningitis, leishmaniosis, foodborne diseases</td>
<td>MCH</td>
</tr>
<tr>
<td>Research policy</td>
<td>Interdisciplinarity in basic, clinical and community sciences, excellence centers, evidence-based medicine, medical education, ethical</td>
<td>Medical education</td>
<td>MCH</td>
</tr>
<tr>
<td>Others</td>
<td>Dental care, advancement of medical diagnostic methods, genetics and molecular biology, pharmaceuticals and natural plants use, medications financing and supplying</td>
<td>Mortality causes, antibiotic resistance, NCDs, cancer, social determinants</td>
<td>Socio-economic and political determinants</td>
</tr>
</tbody>
</table>

**Agreed research priorities**

**Dispersed research priorities**
Finding 4: HRS

HRS stakeholders (EMHJ, WHO)

Problem with HR

1. Low stakeholder involvement
2. Undefined roles
3. International contribution is weak
4. Limited and unsustainable resources
5. Mainly funded externally and individually
6. Constrained by donor conditionalities

Suggested actions/solutions

1. Political commitment, consolidated leadership structure, capacity building strategy, resources mobilization, strategic dialogue with donors, database improvement, effective communication
2. Restore sovereignty over national resources and protect health from political rebounds

Current HR stakeholder’s involvement

Finding 5: Research resources & capacity

The overall HRSRIC in Palestine is still lacking due to major challenges

1. Despite the availability of skilled personnel, human and financial resources, and facilities are a central challenge.

2. HR financing (public & private) is limited, unsustainable, and flows from external and individual sources.

3. Resources misallocation and donors’ conditionality.

4. Lack of governance, coordination, capacity strengthening strategy, resource allocation, and evidence-informed culture

Suggested actions/solutions

1. Capacity strengthening is imperative and an investment opportunity for building a successful HRS.

2. Political commitment, consolidated leadership, capacity strengthening strategy, resources mobilization
Finding 6: HR quality & KTT (IJPH)

Despite the improved HR growth, HR capacity in Palestine is constrained and performance inadequate due to:

1. HRQS is at an average level and quality guidelines are not followed
2. KTT is not well conceptualized and inappropriately performed
3. HR quality is moderate and its evidence is not considered an essential decision-making

Suggested actions/solutions

1. Strong operational HR capacity strengthening strategy
2. Tackling the lack of quality research and inappropriate KTT
3. Political commitment and a consolidated leadership and governance structure are needed
Main conclusions

1. No structured system and **stewardship functions** of HRS

2. HR is **underperforming** and is **not on leaders’ agendas**

3. **Limited understanding** of HR-associated concepts and application

4. Stakeholder **involvement** is **low** and **roles undefined**

5. Lack of HR **capacity**, quality, knowledge transfer and translation

6. Cultural, environmental and political **barriers**
Policy insights and actions for impactful HR and Mental Health Research

1. National and policy-level
   - Strategic dialogue
   - Solid political commitment
   - Give top priority to strengthening the system
   - National consensus on a system building & strengthening roadmap

2. Health system and institutional-level
   - Expand understanding and awareness levels of HR
   - Promote the importance, use, and performance assessment of HR
   - Founding and strengthening HRS stewardship structure (body of governance and strategic plan)
   - Inclusive stakeholders' involvement and strengthen HR capacities
   - Further empirical and policy research to investigate pertinent pitfalls of health research in Palestine
A framework/roadmap for HRS analysis, understanding towards strengthening
Thanks for your attention
Pleased to address all audience’s questions and thoughts

“As a power, producing, processing, and putting knowledge into practice with better methodological trajectories is the central move towards deconstructing our social dilemmas, and that is could not be made happen without having a trustful stewardship which holds the independent decision to lead the change”

An opening quote: Mohammed Alkhaldi