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

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The Global Health Network Conference 2022, Enabling Health Research in Every Healthcare Setting, University of Cape Town, SA, 24 – 25 November 2022

Outline

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)**

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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.

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Regional overview

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

From: Mental health research in the Arab world

	Number of specific articles per year					Total number of articles in all four decades
	1st decade (1966–1975)	2nd decade (1976–1985)	3rd decade (1986–1995)	4th decade (1996–2005)	In all four decades	
Very high						
Egypt	2.4	5.6	9.6	12.8	7.6	304
Saudi Arabia	0.0	0.9	11.2	17.8	7.5	299
Kuwait	0.0	0.9	6.0	13.4	5.1	203
Lebanon	1.9	2.1	5.5	8.4	4.5	179
High						
United Arab Emirates	0.0	0.0	1.7	12.2	3.5	139
Tunisia	2.1	1.0	2.2	5.0	2.6	103
Jordan	0.0	0.9	3.1	6.0	2.5	100
Morocco	1.6	0.7	1.2	5.0	2.1	85
Low						
Bahrain	0.0	0.0	1.7	2.6	1.1	43
Palestine	0.0	0.1	1.2	2.8	1.0	41
Iraq	1.0	0.5	1.3	1.1	1.0	39
Algeria	0.6	0.8	1.7	0.6	0.9	37

- **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

- Sligh improvement in productivity but **poor quality, performance with deficits in stewardship, resources, training, data and translation** (Alkhaldi et al. 2021, Ismail, 2013, Loai et al. 2017, and El-Jardali 2015)

- The **first national study** addresses essential pillars targeting different sectors

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Demography and geography of Palestine

STATE OF PALESTINE

MEDITERRANEAN SEA

Haifa · Nazareth · Sea of Galilee · Golan Heights · SYRIA · Yarmouk · Irbid · Hadera · Janin · Netanya · Tulkarm · Jerash · Qalqilya · Nablus · Herzliya · Zarqa · TEL AVIV · West Bank · Bat Yam · Ramla · Ramallah · Latrun Salient · Jericho · JORDAN · AMMAN · Rehovot · Ashdod · JERUSALEM · EAST JERUSALEM · Ashkelon · Bethlehem · Dead Sea · Kiryat Gat · Gaza · Gaza Strip · Hebron · Deir al-Balah · 1950 Armistice Line · 1949 Armistice Line (Green Line) · Khan Yunis · Rafah · Beer Sheva · Kerak · EGYPT · Dimona · 1994 Treaty Line · Jordan

Pop. inside Palestine: West Bank and Gaza Strip

Rounded figures in millions

	2015	2030	2050
Palestine	2	3.1	4.5
West Bank	0.8	1.1	1.6
Gaza Strip	1.2	1.9	2.9

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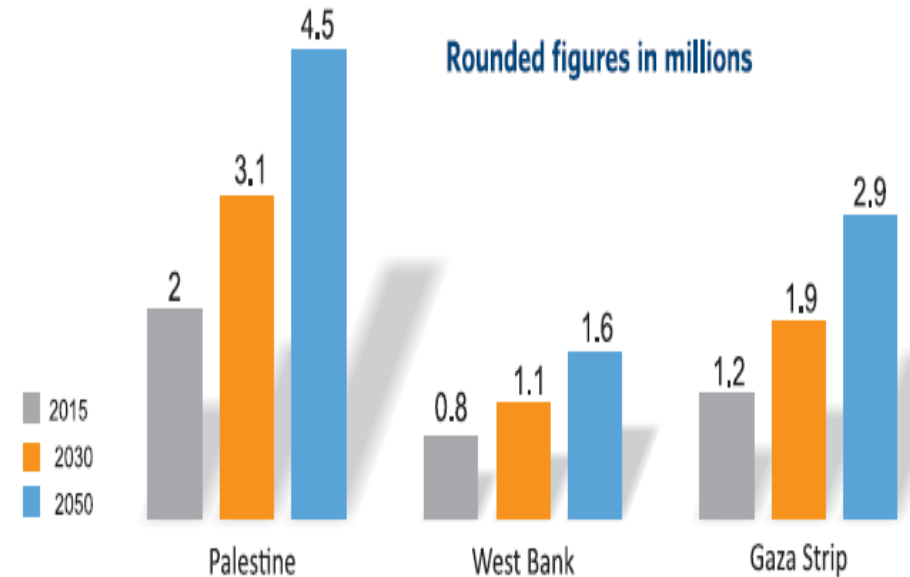
Geopolitics is a key determinant of health

West Bank

Gaza Strip

Gaza Strip: Restricted areas and crossings

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

Gaza City
Deir al-Balah
Khan Younis

- ● Open crossing
- ⊗ Closed crossing
- ◍ Closed but open for exceptional cases
- ▬ No go zone
- ▬ Risk zone

Information: OCHA

MEE

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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

Total GDP	about 7.5 billion $
GDP per capita	1746.8, WB: 2.051$, GS: 1.103$
Unemployment rate	WB: 18.2%, GS: 47%
Poverty Rate	WB 18%; Gaza 38%

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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

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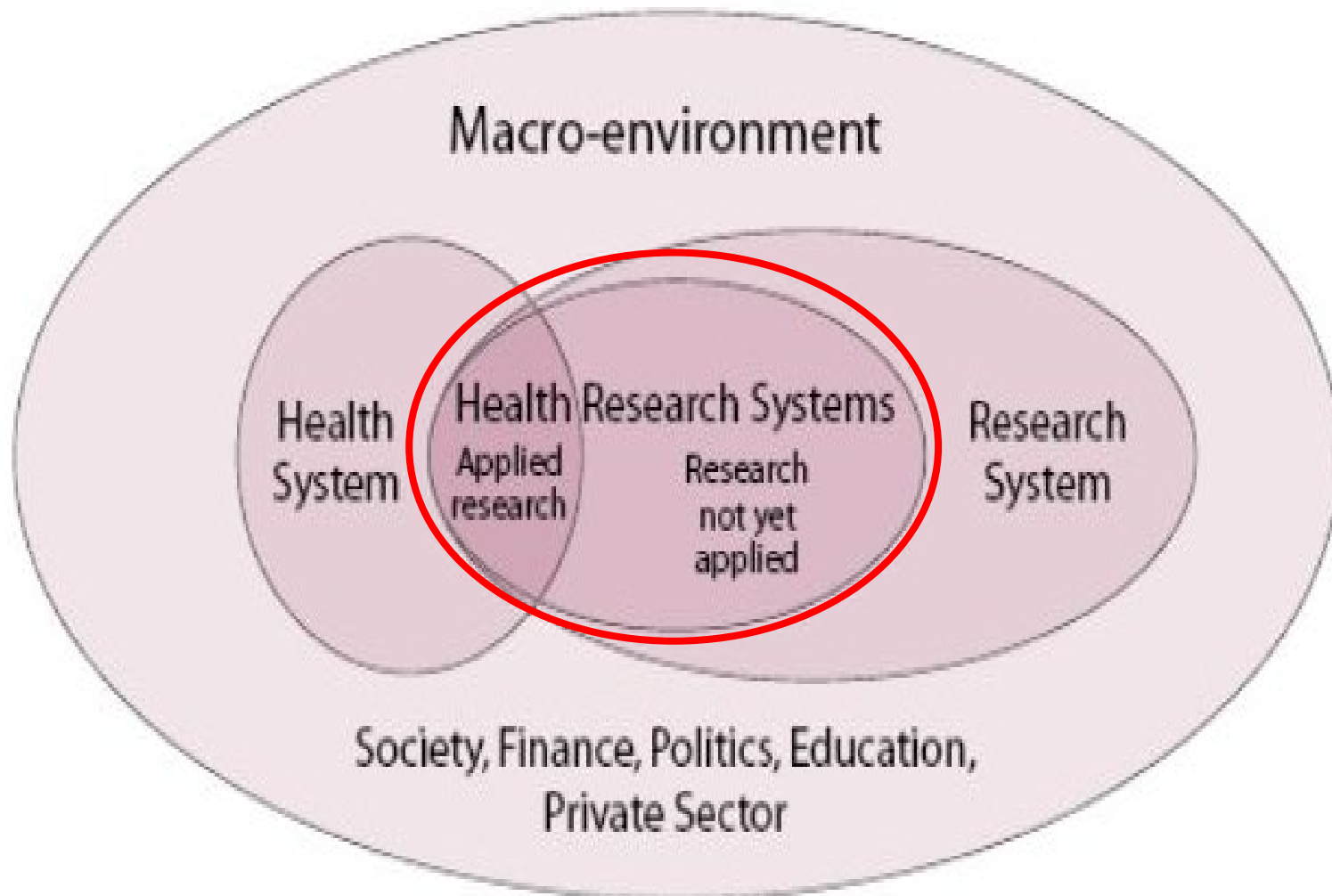
Significance of research

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

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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

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Methods

➤ 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

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Methods

> Data management and analysis

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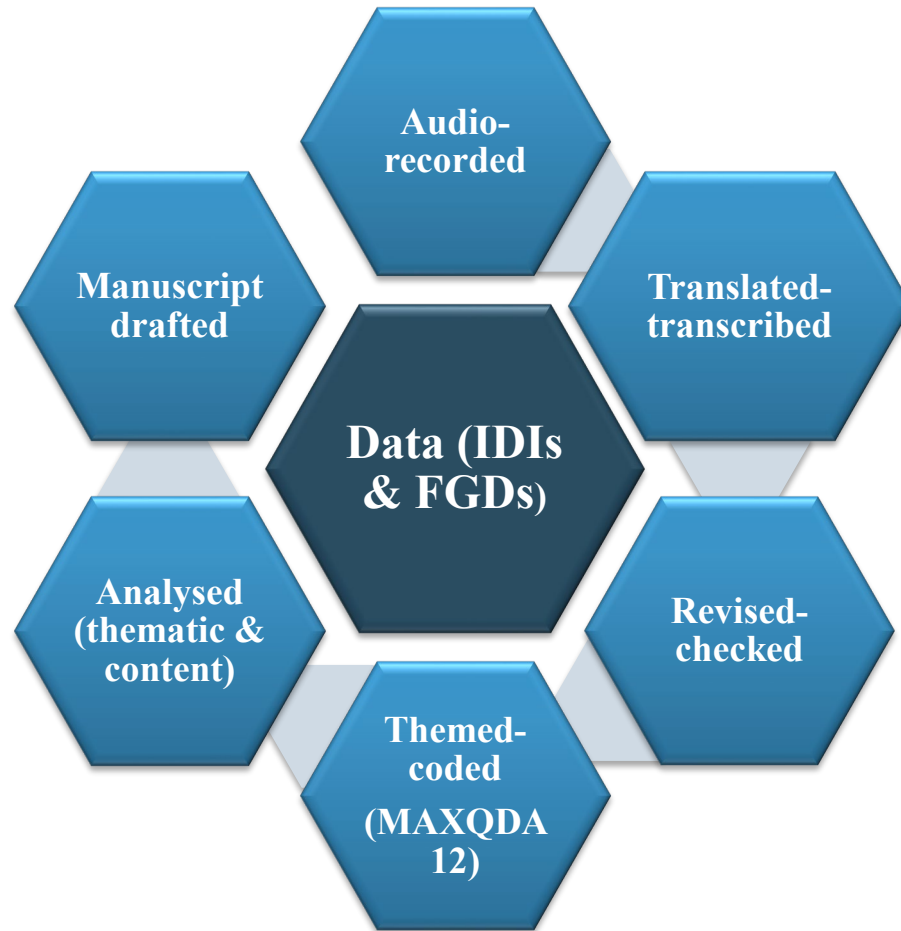
Finding 1: HRS conceptualization & importance

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

RESEARCH   **Open Access**

Understanding the concept and importance of the health research system in Palestine: a qualitative study

Mohammed AlKhaldi[1,2,5], Yehia Abed[3], Constanze Pfeiffer[1,2], Saleem Haj-Yahia[4,5,6], Abdulsalam Alkaiyat[1,2,5] and Marcel Tanner[1,2]

Abstract

Background: The importance of a health research system (HRS), namely an instrument for developing and enabling health systems, is increasing, particularly in developing countries. Assessing the perceptions of system performers is a necessary part of system analysis, which seeks to recognize a system's strengths and limitations aiming towards improvement. This study assesses the perceptions of policy-makers, academicians and experts regarding the HRS concept and its importance to generate insights for system strengthening. In Palestine, HRS is just emerging, helping to address the many public health-related challenges faced by the country.

Methods: The study was implemented from January until July 2016, targeting three sectors, namely relevant government institutions, schools of public health, and major local and international health agencies. Data was collected through 52 in-depth interviews and six focus group discussions (FGDs) with policy-makers, academics, directors and experts. Participants and institutions were selected based on stated criteria and peer review. Data were translated, transcribed, checked and then imported to a software program (MAXQDA 12) for thematic and content analysis.

Results: A total of 104 experts participated, wherein 52 were interviewed and 52 participated in the six FGDs. The HRS concept, as defined by WHO, was conceptualized differently among participants with unclear delineations between various components. Inconsistencies appeared when participants attempted to conceptualize HRS in broader contexts, though HRS goals and functions were sufficiently delineated. The majority of participants agreed that HRS correlates with notions of 'improvement' and recognized HRS 'as a significant gain'. Neglect of HRS was perceived as a big loss.

Conclusions: The study revealed that the level of understanding of HRS among health experts in Palestine is inadequate and not sufficiently conceptualized for its application. Findings also underlined the need to establish a central governance coordination body that promotes HRS understanding, awareness and culture as an enabler for HRS strengthening.

Keywords: Health experts, Understanding, Health research system, Palestine

Background

The development of health research systems (HRS) has become an international concern in recent years, particularly in low- and middle-income countries. HRS is considered a key pillar of healthcare systems (HCSs) for better health policies and equitable care [1, 2]. Research is defined in WHO's strategy on research as "the development of knowledge to understand health challenges" [3] through an effective and efficient HRS to address society's needs [4]. Further, health research (HR) is defined as "the process for systematic collection, description, analysis, and interpretation of data that can be used to improve health" [1]. The concept has undergone numerous refinements, including the development of a conceptual framework for National Health Research Systems (NHRSs) [5] in an attempt to correct the 10/90 gap, whereby less than 10% of global research funds are

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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**

Health Research Policy and Systems

RESEARCH — Open Access

Assessing policy-makers', academics' and experts' satisfaction with the performance of the Palestinian health research system: a qualitative study

Mohammed AlKhaldi[1,2,5*], Yehia Abed[3], Constanze Pfeiffer[1,2], Saleem Haj-Yahia[4,5,6], Abdulsalam Alkaiyat[1,2,5] and Marcel Tanner[1,2]

Abstract

Background: There is a growing demand within international health agencies to ensure health research systems (HRSs) are strengthened and well-functioning to support healthcare systems (HCSs). Understanding HRS performance through system actors is an indispensable move in analysing this system. This study aims to examine policy-makers', academics' and experts' satisfaction with overall HRS performance, while also investigating their perceptions about political will and attention towards health research. Ultimately, we want to identify gaps related to performance and generate insights on how to move forward for HRS performance strengthening.

Methods: This study was carried out in Palestine, targeting three sectors, namely government institutions, public health universities, and major local and international health non-governmental organisations (NGOs). Semi-structured, in-depth interviews (IDIs) and focus group discussions (FGDs) were conducted with participants. The institutions from the three sectors were selected based on stated criteria and peer reviews. Data were translated from Arabic into English, transcribed, content checked by the principal investigator, imported to a software programme (MAXQDA 12), and then coded. Thematic content analysis was used.

Results: A total of 104 experts participated in 52 IDIs and 52 experts participated in 6 FGDs. Findings revealed three principal domains. First, the HRS in Palestine is remarkably underperforming, and the majority of experts were unsatisfied. Participants perceived the system as ineffective and inefficient, poorly managed and lacking systematic assessment. Second, the factors behind system underperformance were (1) an unstructured system and the lack of a research culture as well as of a governing body or policies; (2) health research was seen as individualistic, non-development driven and unutilised in policy decisions; and (3) considerably deficient coordination and essential resources. The third finding showed inadequate political support and engagement, which then also related to system underperformance.

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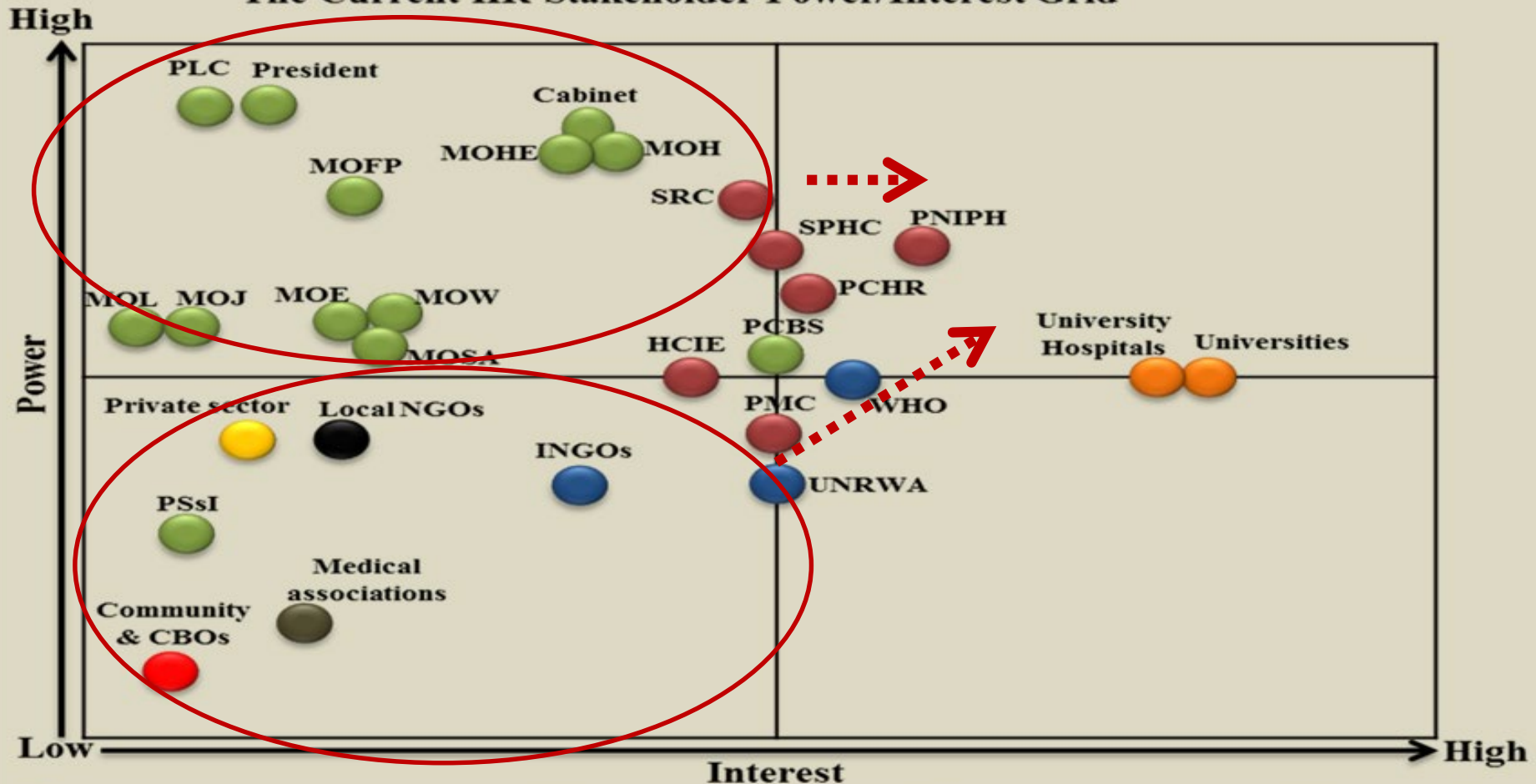Full list of author information is available at the end of the article

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Comparison among three national HRPs setting exercises

National setting exercises	SRC's manual on HRPs, 2014	PNIPH workshop on HRPs, 2017	HRPs identified by study's experts		
Areas			Gov.	Acd.	NGOs
HCS	Health financing, HIS, workforce capacities, education and medical accreditation, coordination, management system	Access, coverage, workforce, PHC, health financing, HIS	Cost of referral abroad	Governance, resources allocation, health economic, care quality	Financing and policy, accesses, workforce, care quality, efficiency
MCH	Healthcare and protocols evaluation, school health, nutrition, anemia, child obesity, FP, early detection of genetic disease	Maternal, PNC, FP, women's' health, vaccination, nutrition	Child Behaviour	MCH	MCH and youth
NCDs	Causes and risk factors, assessing prevention-promotion, diag... care quality	Preventive care, tobacco...	NCDs, cancer	NCDs	NCDs, cancer, social determinants
Nutrition	Anaemia, pro... NCDs, food toxicity and pesticides, obesity	...cy, obesity	Nutrition, anemia	Nutrition, thalassemia	
Mental health	Causes, addiction, suicide, prisoners, wounded and wars victims, care quality	Psychosis, stress-related, disability		Mental illnesses	Mental illnesses, disability
Environmental health	Water, air and soil, and diseases, wars remnants, industrial effects, medical waste management	Water quality, waterborne diseases, toxins, safety, traffic safety, buildings	Water and environmental health, RTA		Water and environmental health
Infectious diseases	Risk factors and causes, assessing of prevention-promotion programs and protocols, surveillance	Meningitis, leishmaniosis, foodborne diseases		Infectious diseases, NTDs	Infectious diseases
Research policy	Interdisciplin... community s... evidence-based... ethic...	HR...		Medical education	
Others	Dental care, advancement of medical diagnostic methods, genetics and molecular biology, pharmaceuticals and natural plants use, medications financing and supplying		Mortality causes, antibiotic resistance	Osteoporosis, Genetics diseases, molecular biology, medical diagnoses	Socio-economic and political determinants

Agreed research priorities

Dispersed research priorities

Current HR stakeholder's involvement

The Current HR Stakeholder Power/Interest Grid

Legend:
- State institutions (green)
- Academic institutions (orange)
- National bodies (red/maroon)
- NGOs (black)
- INGOs, WHO, UNRWA (blue)
- Private (yellow)
- Associations (dark grey)
- Community & CBOs (red)

Abbreviations: PCL: Palestinian Legislative Council, MOHE: Ministry of Higher Education, MOH: Ministry of Health, MOFP: Ministry of Finance and Planning, MOL: Ministry of Labour, MOJ: Ministry of Justice, MOE: Ministry of Environment, MOW: Ministry of Water, MOSA: Ministry of Social Affair, PCBS: Palestinian Central Bureau of Statistics, PSsI: Palestinian Standards Institution, SRC: Scientific Research Council, SPHC: The Supreme Palestinian Health Council, PCHR: Palestinian Council for Health research, HCIE: Higher Council for Innovation & Excellence, PNIPH: Palestinian National Institute of Public Health, PMC: Palestine Medical Council, NGOs: Non-governmental Organizations, CBOs: Community Based Organizations, INGOs: International NGOs, WHO: World Health Organization, UNRWA: The United Nations Relief and Works Agency for Palestine Refugees in the Near East

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*

Abstract

Background: The World Health Organization has proposed a global strategy to build a robust Health Research System Resources and Infrastructural Capacity (HRSRIC). Despite the growing research productivity, HRSRIC in Palestine has rarely been investigated.

Aims: To analyse perceptions of health research system performers to understand the status of HRSRIC, identify its gaps, and propose policy solutions to strengthen HRSRIC.

Methods: This qualitative study targeted 3 health sectors: government, academia, and local and international organizations. Fifty-two in-depth interviews and 6 focus group discussions were conducted with key informants who were selected purposely. Data were analysed using MAXQDA 12.

Results: Despite the availability of competent personnel, the overall HRSRIC, such as human and financial resources, and facilities, forms a central challenge. HR financing is limited, unsustainable, and flows from external and individual sources. The public and private funds are largely in shortage with resources misallocation and donors' conditionality. HR quality is moderate while knowledge transfer and translation are not well conceptualized and inappropriately performed. Lack of governance, coordination, HRSRIC strategy, resource allocation, systematic and reliable data, evidence-informed culture, and environmental impacts are the main common gaps.

Conclusions: The overall status of HRSRIC in Palestine is still lacking and major challenges persist where the pace of strengthening efforts is steady. There is an emphasis that strengthening HRSRIC is an imperative step and real investment opportunity for building a successful health research system. Political commitment, consolidated leadership structure, operational capacity building strengthening strategy, resources mobilization, and sovereignty are key requirements.

Keywords: health policy, health research system, health recources, health system, Palestine

Citation: AlKhaldi M; Meghari H; Alkaiyat A; Abed Y; Pfeiffer C, Marie M; et al. A vision to strengthen resources and capacity of the Palestinian health research system: a qualitative assessment. East Mediterr Health J. 2020;26(10):1262–1272. https://doi.org/10.26719/emhj.19.096

Received: 16/04/19; accepted: 18/09/19

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

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Main conclusions

1. No structured system and s**tewardship 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**

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Policy insights and actions for impactful HR and Mental Health Research

1. National and policy-level

➤ Strategic dialogue   ➤ Solid political commitment   ➤ Collective sectorial involvement

➤ 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

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A framework/roadmap for HRS analysis, understanding towards strengthening

Global HR landscape

Regional HRSs

Palestinian HRS landscape

HRS analysis focused on:
1. HRS concepts & importance
2. Satisfaction on HRS performance
3. HRS stewardship functions
4. HRS stakeholders and capacities

Evidence outputs
Strengths, weaknesses, challenges, opportunities, prospects

Concrete plans & actions

Driven by

- **Political will-decision**
- **National consensus**

Assessing & mapping

Fulfilling the global decrees (WHO, COHRED)

Meeting the regional strategic directions (EMRO)

Responding the country's needs & goals

- Palestinian HCS
- National health needs

The overall research system (a comprehensive human development)

well-built in
well-integrated
well-linked

Dynamic, responsive, & successful Palestinian HRS

to be taken by Cabinet & MOH
reinforced by non-state actors

Pillar of system actors
Involved stakeholders & identified roles

State actors
Cabinate, MOH, MOHE, national councils and bodies

Local and external non-state actors
Academia, associations, NGOs, private sector

Operational pillar
Sustainable HR capacities & resources for:

Physical and financial capacity

HRSQ

HRKTD

HRTUDP

Organizational-structural pillar
Good stewardship functions

Governance, leadership

Ethics process

Strategies & policies

Priorities setting

HR performance M&E

Foundations

1. Core values
(inclusiveness, innovativeness, creativity, equity, ethics, responsibility, accountability, synergy)

2. Guiding principles
- Vision: a dynamic & responsive HRS for attaining the national & global health goals.
- Mission: to generate & use knowledge, innovation, & technology in promoting the well-being of every Palestinian by a sustainable system & environment for HR

3. HR & HRS culture, orientation, awareness

Institutionalizing & internalizing

Ingraining, founding & building

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

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