conducted at research institutions and the community's and decision-makers' needs.

## **Conclusions**

Despite the encouraging increase in the research output from Palestine over the last decades, there remains a weak association between research output and burden of disease. NCDs (e.g. CVD and cancer) receive much less attention by researchers despite accounting for most of the disease burden in Palestine. National research priority-setting should be developed to meet the Palestinian community's need for quality evidence to establish independent and informed health policies.

#### Acknowledgements

Not applicable.

#### **Funding**

This research received no specific grant from any funding agency in the public, commercial or not-for-profit sectors.

#### Availability of data and materials

The datasets used and/or analysed during the current study are available from the corresponding author on reasonable request.

#### Authors' contributions

LA, KE, and NA conceived the idea. LA searched the literature from electronic databases. LA, KE, and NA participated in data screening, extraction and quality assessment. LA analysed the data and drafted the manuscript. All authors provided critical comments and contributed to the interpretation of analysed results. All authors read and approved the draft. LA is the quarantor of the study.

## Ethics approval and consent to participate

Not applicable

## Consent for publication

Not applicable.

#### Competing interests

The authors declare that they have no competing interests.

#### **Publisher's Note**

Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

### **Author details**

<sup>1</sup>Centre for Research in Evidence Based Practice (CREBP), Faculty of Health Science and Medicine, Bond University, Robina, QLD, Australia.

<sup>2</sup>Evidence-Based Medicine Unit, Faculty of Medicine, Islamic University, Gaza, Palestine.

<sup>3</sup>Institute of Community and Public Health, Birzeit University, Ramallah, West Bank, Palestine.

# Received: 5 September 2017 Accepted: 28 February 2018 Published online: 15 March 2018

#### References

- World Bank Definition of MENA: Middle East and North Africa. http://www. worldbank.org/en/region/mena. Accessed 9 Mar 2018.
- Palestinian Central Bureau of Statistics: Main Statistical Indicators in the West Bank and Gaza Strip. 2015. http://www.pcbs.gov.ps/Portals/\_Rainbow/ StatInd/StatisticalMainIndicators\_E.htm. Accessed 9 Mar 2018.
- 3. Husseini A, Abu-Rmeileh NM, Mikki N, Ramahi TM, Ghosh HA, Barghuthi N, Khalili M, Bjertness E, Holmboe-Ottesen G, Jervell J. Cardiovascular diseases,

- diabetes mellitus, and cancer in the occupied Palestinian territory. Lancet. 2009:373:1041–9.
- Maziak W. The crisis of health in a crisis ridden region. Int J Public Health. 2009:54:349–55.
- Rottingen JA, Regmi S, Eide M, Young AJ, Viergever RF, Ardal C, Guzman J, Edwards D, Matlin SA, Terry RF. Mapping of available health research and development data: what's there, what's missing, and what role is there for a global observatory? Lancet. 2013;382:1286–307.
- Chalmers I, Glasziou P. Avoidable waste in the production and reporting of research evidence. Lancet. 2009;374:86–9.
- Rudan I, Kapiriri L, Tomlinson M, Balliet M, Cohen B, Chopra M. Evidence-based priority setting for health care and research: tools to support policy in maternal, neonatal, and child health in Africa. PLoS Med. 2010;7:e1000308.
- Viergever RF. The mismatch between the health research and development (R&D) that is needed and the R&D that is undertaken: an overview of the problem, the causes, and solutions. Glob Health Action. 2013;6:22450.
- Emdin CA, Odutayo A, Hsiao AJ, Shakir M, Hopewell S, Rahimi K, Altman DG. Association between randomised trial evidence and global burden of disease: cross sectional study (Epidemiological Study of Randomized Trials–ESORT). BMJ. 2015;350:h117.
- Albarqouni L, Abu-Rmeileh NM, Elessi K, Obeidallah M, Bjertness E, Chalmers I. The quality of reports of medical and public health research from Palestinian institutions: a systematic review. BMJ Open. 2017;7:e016455.
- Global Burden of Disease Study 2013 Collaborators. Global, regional, and national incidence, prevalence, and years lived with disability for 301 acute and chronic diseases and injuries in 188 countries, 1990-2013: a systematic analysis for the Global Burden of Disease Study 2013. Lancet. 2015;386:743–800.
- 12. Study designs. http://www.cebm.net/study-designs/. Accessed 9 Mar 2018.
- GBD Compare Data Visualization. https://vizhub.healthdata.org/gbdcompare/. Accessed 9 Mar 2018.
- Perel P, Miranda JJ, Ortiz Z, Casas JP. Relation between the global burden of disease and randomized clinical trials conducted in Latin America published in the five leading medical journals. PLoS One. 2008:3:e1696.
- Viergever RF, Terry RF, Karam G. Use of data from registered clinical trials to identify gaps in health research and development. Bull World Health Organ. 2013;91:416–425C.
- Isaakidis P, Swingler GH, Pienaar E, Volmink J, Ioannidis JP. Relation between burden of disease and randomised evidence in sub-Saharan Africa: survey of research. BMJ. 2002;324:702.
- Maher D, Smeeth L, Sekajugo J. Health transition in Africa: practical policy proposals for primary care. Bull World Health Organ. 2010;88:943–8.
- Maher D, Sekajugo J. Research on health transition in Africa: time for action. Health Res Policy Syst. 2011;9:5.
- Sibai AM, Singh NV, Jabbour S, Saleh S, Abdulrahim S, Naja F, Yazbek S. Does published research on non-communicable disease (NCD) in Arab countries reflect NCD disease burden? PLoS One. 2017;12:e0178401.
- 20. Stuckler D, King L, Robinson H, McKee M. WHO's budgetary allocations and burden of disease: a comparative analysis. Lancet. 2008;372:1563–9.
- Gross CP, Anderson GF, Powe NR. The relation between funding by the National Institutes of Health and the burden of disease. N Engl J Med. 1999;340:1881–7.
- Sridhar D. Who sets the global health research agenda? The challenge of multi-bi financing. PLoS Med. 2012;9:e1001312.
- 23. Ijsselmuiden C, Jacobs M. Health research for development: making health research work... for everyone. Scand J Public Health. 2005;33:329–33.
- 24. Gonzalez-Block MA. Health policy and systems research agendas in developing countries. Health Res Policy Syst. 2004;2:6.
- McGregor S, Henderson KJ, Kaldor JM. How are health research priorities set in low and middle income countries? A systematic review of published reports. PLoS One. 2014;9:e108787.
- Hanney SR, Grant J, Wooding S, Buxton MJ. Proposed methods for reviewing the outcomes of health research: the impact of funding by the UK's 'Arthritis Research Campaign'. Health Res Policy Syst. 2004;2:4.
- 27. Crowe S, Fenton M, Hall M, Cowan K, Chalmers I. Patients', clinicians' and the research communities' priorities for treatment research: there is an important mismatch. Res Involv Engagem. 2015;1:2.