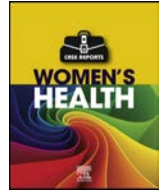




Contents lists available at ScienceDirect

Case Reports in Women's Health

journal homepage: www.elsevier.com/locate/crwh

Invited Editorial

Women's health: A revised global agenda in the COVID-19 era?



According to the World Health Organization (WHO) women live on average between 6 and 8 years longer than men [1]. The World Bank has estimated that the average life expectancy at birth for females born in 2018 will be 74.87 years [2]. This is a remarkable increase because when the records began in 1960, life expectancy for women was only 54.60 years. This means that life expectancy for women has increased by more than 20 years in the last six decades. However, in resource-poor settings and low-income countries, notably in parts of Asia and Africa, the advantages that females possess over males are overridden by gender-based discrimination. In some developing countries female life expectancy at birth is actually lower than or equal to that of males. At the other end of the spectrum, life expectancy for women is more than 80 years in at least 35 of the most advanced countries.

On 11 March 2020, the WHO declared the novel coronavirus, named 2019-nCoV or COVID-19, to be a pandemic [3–5]. COVID-19 has emerged as a new and deadly illness that affects the lungs and airways [6]. The COVID-19 pandemic is an emerging, rapidly evolving situation, but in the last ten months we have witnessed numerous challenges to our way of life and there is accumulating evidence that COVID-19 is having long-term adverse impacts on our health, both physical and mental [7]. The advent of COVID-19 is expected to impact on the current trends in life expectancy, as it continues to overshadow every fabric of life across the entire globe. Data modelling and computer simulation studies suggest that as long as the COVID-19 infection prevalence rate remains around 1 or 2% of the total world population, the pandemic should not substantially affect life expectancy [8]. However, these studies did not consider the new variants of COVID-19 and their differential impacts on healthcare systems in industrialized and developing nations. By the end of 2020 it was clear that many European countries were about to enter a second and potentially more deadly second wave of COVID-19 [9,10]. As lockdowns and curfews become established across many countries, the official health guidance is for everyone to stay at home, wear masks in public and maintain a safe distance from others. The “social distancing” that started in 2020 is set to continue into 2021 and probably beyond [11] and universal wearing of masks may be necessary to reduce the likelihood of the new variants of COVID-19 spreading and healthcare systems being totally overwhelmed [12–14].

COVID-19 does not respect gender, borders, or geography. However, there is increasing evidence of “gendering COVID-19” with increased mortality among men and increased morbidity among women [15]. COVID-19 has already had a devastating effect on women and girls [16]. We know that women have unique health issues and some of the health issues that affect both men and women can affect women differently and with undesirable outcomes. The issues that women have been facing in the developed and the developing world include

violence, conflict, poverty, discrimination, social isolation and psychological trauma. A very brief analysis of both gender and race in the context of the global pandemic highlight a number of issues that emerge as being significant, and worthy of further discussion and debate.

A higher proportion of women are deployed as “frontline” services in all professions [17]. This means that women play a disproportionate role in frontline health and social care roles and perform the majority of caregiving responsibilities and they are more exposed to COVID-19, and at a much higher viral load than men [17]. We do not yet know the long-term health consequences of this level of exposure, although we do know that women make up a smaller percentage of the severe COVID-19 cases presenting in hospitals [18]. There are also serious issues regarding the impact of COVID-19 on the Black, Asian and Minority Ethnic (BAME) community. A recent systematic review of the published literature on COVID-19 articles (including pre-prints) suggests that BAME individuals have an increased risk of infection with SARS-CoV-2 and may experience worse clinical outcomes, including higher intensive care unit (ICU) admission and mortality compared with White patients [19]. The experience of women during the COVID-19 lockdowns, curfews and quarantines will be determined by their socio-economic status, their religious and cultural affiliations, education, ethnic background, and employment and parental status, specifically the age of their children. Quarantine decisions by governments have had a direct impact on women's freedom and their ability to exercise and maintain their physical and mental health. The current school closures and pressures of home schooling, particularly of primary-age children, is impacting more on women, reducing their earnings and their financial independence. Maintaining work-life balance is much harder for women in the COVID-19 pandemic.

The diverse responses of different governments to COVID-19 affects different demographic groups in the short, medium and long term and this is crucial for understanding the immediate and long-term socio-economic impacts of the 2020 pandemic [20–24]. Health outcomes are directly linked to socio-economic factors. Poverty, poor education, tobacco use, unhealthy diets, physical inactivity and excessive consumption of alcohol are factors that determine poor health outcomes [25].

One of the biggest challenges facing women under the present COVID-19 lockdown is the ability to seek medical advice from a primary healthcare practitioner. Telephone interviews are certainly possible, and more serious health complications may be dealt with, but for the majority of women the unique issues that they face, including pregnancy, menopause, and maintaining healthy female organs, are far more awkward and complex to deal with in a pandemic through consultation with health care practitioners on the telephone.

The real concern is the rise in morbidity among women. Before the pandemic women were already more likely to die following a heart attack than men [26]. Women are more likely to show signs of depression and anxiety compared with men [27] and they are also more susceptible to developing osteoarthritis than men after menopause [28]. Global efforts to improve women's health have largely focused on improving sexual and reproductive health. However, the global burden of disease has changed significantly over the past few decades and the greatest burden of death and disability among women is now attributable to non-communicable diseases (NCDs), such as cardiovascular diseases, cancers, respiratory diseases, diabetes, dementia, depression and musculoskeletal disorders [29]. The sustained increase in women's life expectancy over the last few decades has created the challenge of making those extra years of life healthy, happy and productive. However, the current pandemic is disrupting all the ongoing efforts to improve women's health, exacerbating existing health inequalities. In summary, the pandemic is setting us back in every previously established initiative to improve the health and welfare of women, highlighting the need for a revised global health agenda in the COVID-19 era. Outlining the key priorities in such an initiative is clearly beyond the scope of this editorial and the efforts of a single author. The need for urgent action and providing additional physical and mental health support to women in the COVID-19 era has already been highlighted [30]. Nevertheless, this concise editorial is intended to add to the collective ongoing efforts.

Contributors

Ali Mobasheri contributed exclusively to the preparation of this editorial.

Conflict of Interest

The author is President of the Osteoarthritis Research Society International (OARSI). He has no conflict of interest regarding the publication of this editorial.

Funding

No specific funding was sought or secured in relation to this editorial.

Provenance and Peer Review

This editorial was commissioned and not externally peer reviewed.

References

- [1] The World Health Organization, Global Health Observatory (GHO) data; women and health; female mortality and causes of death, Female Life Expectancy at, 2021. https://www.who.int/gho/women_and_health/mortality/life_expectancy_text/en/.
- [2] The World Bank, Life expectancy at birth, female (years), Life Expectancy at Birth, Female (Years) at, 2021. <https://data.worldbank.org/indicator/SP.DYN.LE00.FE.IN?locations=US>.
- [3] D. Cucinotta, M. Vanelli, WHO declares COVID-19 a pandemic, *Acta Biomed* 91 (2020) 157–160.
- [4] T. Lupia, et al., 2019 novel coronavirus (2019-nCoV) outbreak: a new challenge, *J. Glob. Antimicrob. Resist.* 21 (2020) 22–27.
- [5] M. Ciotti, et al., The COVID-19 pandemic, *Crit. Rev. Clin. Lab. Sci.* 57 (2020) 365–388.
- [6] C. Huang, et al., Clinical features of patients infected with 2019 novel coronavirus in Wuhan, China, *Lancet* 395 (2020) 497–506.
- [7] V. Giallonardo, et al., The impact of quarantine and physical distancing following COVID-19 on mental health: study protocol of a multicentric Italian population trial, *Front. Psych.* 11 (2020) 533.

- [8] G. Marois, R. Muttarak, S. Scherbov, Assessing the potential impact of COVID-19 on life expectancy, *PLoS One* 15 (2020), e0238678.
- [9] G. Cacciapaglia, C. Cot, F. Sannino, Second wave COVID-19 pandemics in Europe: a temporal playbook, *Sci. Rep.* 10 (2020) 15514.
- [10] D.H. Glass, European and US lockdowns and second waves during the COVID-19 pandemic, *Math. Biosci.* 330 (2020) 108472.
- [11] R.A. Stein, COVID-19 and rationally layered social distancing, *Int. J. Clin. Pract.* 74 (2020), e13501.
- [12] A. Shander, et al., Essential role of patient blood management in a pandemic: a call for action, *Anesth. Analg.* 131 (2020) 74–85.
- [13] S. Kwon, et al., Association of social distancing and masking with risk of COVID-19, *medRxiv* (2020) <https://doi.org/10.1101/2020.11.11.20229500>.
- [14] T. Mitze, R. Kosfeld, J. Rode, K. Wälde, Face masks considerably reduce COVID-19 cases in Germany, *Proc. Natl. Acad. Sci. U. S. A.* 117 (2020) 32293–32301.
- [15] C. Bamba, V. Albani, P. Franklin, COVID-19 and the gender health paradox, *Scand J Public Health* (2020) <https://doi.org/10.1177/1403494820975604> (1403494820975604).
- [16] S. Cousins, COVID-19 has “devastating” effect on women and girls, *Lancet* 396 (2020) 301–302.
- [17] R. Penfold, L. Magee, Gender balance in an unprecedented time, *Future Healthc. J.* 7 (2020) 212–213.
- [18] K.G. Keller, C. Reangsing, J.K. Schneider, Clinical presentation and outcomes of hospitalized adults with COVID-19: a systematic review, *J. Adv. Nurs.* 76 (2020) 3235–3257.
- [19] D. Pan, et al., The impact of ethnicity on clinical outcomes in COVID-19: a systematic review, *EClinicalMedicine* 23 (2020) 100404.
- [20] Y. Hu, Intersecting ethnic and native-migrant inequalities in the economic impact of the COVID-19 pandemic in the UK, *Res Soc Stratif Mobil* 68 (2020) 100528.
- [21] R. Jaspal, G.M. Breakwell, Socio-economic inequalities in social network, loneliness and mental health during the COVID-19 pandemic, *Int. J. Soc. Psych.* (2020) <https://doi.org/10.1177/0020764020976694>.
- [22] V. Arthi, J. Parman, Disease, downturns, and wellbeing: economic history and the long-run impacts of COVID-19, *Explor. Econ. Hist.* (2020) 101381, <https://doi.org/10.1016/j.eeh.2020.101381>.
- [23] T.Y.M. Leung, et al., Short- and potential long-term adverse health outcomes of COVID-19: a rapid review, *Emerg. Microbes Infect.* 9 (2020) 2190–2199.
- [24] K. Gombos, et al., Translating scientific knowledge to government decision makers has crucial importance in the management of the COVID-19 pandemic, *Popul. Health Manag.* (2020) <https://doi.org/10.1089/pop.2020.0159>.
- [25] T. McFadyen, et al., Strategies to improve the implementation of policies, practices or programmes in sporting organisations targeting poor diet, physical inactivity, obesity, risky alcohol use or tobacco use: a systematic review, *BMJ Open* 8 (2018), e019151.
- [26] E.S. Lau, M.L. O'Donoghue, M.A. Hamilton, S.Z. Goldhaber, Women and heart attacks, *Circulation* 133 (2016) e428–e429.
- [27] D.J. Taylor, K.L. Lichstein, H.H. Durrence, B.W. Reidel, A.J. Bush, Epidemiology of insomnia, depression, and anxiety, *Sleep* 28 (2005) 1457–1464.
- [28] R.F. Loeser, Aging processes and the development of osteoarthritis, *Curr. Opin. Rheumatol.* 25 (2013) 108–113.
- [29] S.A.E. Peters, M. Woodward, V. Jha, S. Kennedy, R. Norton, Women's health: a new global agenda, *BMJ Glob. Health* 1 (2016), e000080.
- [30] A. Semaan, et al., Voices from the frontline: findings from a thematic analysis of a rapid online global survey of maternal and newborn health professionals facing the COVID-19 pandemic, *BMJ Glob. Health* 5 (2020).

Ali Mobasheri

^aResearch Unit of Medical Imaging, Physics and Technology, Faculty of Medicine, University of Oulu, FI-90014 Oulu, Finland

^bDepartment of Regenerative Medicine, State Research Institute Centre for Innovative Medicine, LT-08406 Vilnius, Lithuania

^cUniversity Medical Center Utrecht, Departments of Orthopedics, Rheumatology and Clinical Immunology, 3508 GA Utrecht, the Netherlands

*Corresponding author at: Research Unit of Medical Imaging, Physics and Technology, Faculty of Medicine, University of Oulu, FI-90014 Oulu, Finland.

E-mail address: ali.mobasheri@oulu.fi

Available online xxxx