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Posted Date: 2 September 2025

doi: 10.20944/preprints202509.0052.v1

Keywords: middle east; women's health; health policy; sustainable development



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Communication

# Beyond the Veil of Homogeneity: Addressing the Variability of Women's Health and Policy Gaps in the Middle East

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## Abstract

Women's health in the Middle East is often framed through a homogenous lens that overlooks deep variability shaped by economic status, migration, legal systems, and sociopolitical contexts. While the United Nations (UN) Sustainable Development Goals (SDGs) provide a blueprint for health equity and gender empowerment, implementation across the region is fragmented. While wealthier countries have made significant gains in maternal health and access to healthcare, substantial gaps remain in reproductive, mental, and chronic disease care, especially in conflict zones and under-resourced settings. Migrant women, who are vital for the functioning of key sectors of Gulf economies, face systemic exclusion under restrictive labour and immigration policies such as the kafala system. These women are denied basic health rights despite contributing to economic growth, which is often pursued at the expense of equitable healthcare access. Policy narratives promoting economic reform rarely align with gender-sensitive health system investment, creating a paradox where growth fails to translate into improved outcomes for all women. This critical summary calls for dismantling structural inequities, strengthening inclusive health systems, and embedding intersectional approaches into national policies. Without urgent reform, the SDGs risk reinforcing rather than reducing the disparities faced by diverse groups of women across the Middle East.

**Keywords:** middle east; women's health; health policy; sustainable development

## Background

Despite growing recognition of the unique challenges faced by women in global health, the diversity of women's health experiences in the Middle East remains poorly characterised and

inconsistently addressed in policy (Hussein et al., 2018, Zurayk et al., 1997, Abboud et al., 2022, Sholkamy, 2022). The tendency to treat Middle Eastern women as a monolithic group often filtered through orientalist or reductionist lenses obscures complex variations in their health needs, risks, and access to care. This variability is shaped by intersecting determinants such as nationality, ethnicity, religion, refugee status, socioeconomic position, and levels of autonomy, factors that demand more nuanced, context-sensitive health interventions and policies. The health experiences of women in the Middle East are far from uniform, with significant differences observed across countries such as Oman, Saudi Arabia, Jordan, Iran, Bahrain, the United Arab Emirates (UAE), and Lebanon (East and Jassim, 2023, Mousa et al., 2021, Wikan, 1991) underscoring the need for more nuanced and context-sensitive health interventions and policies. This diversity is evident in the prevalence of various health conditions, influenced by factors including nationality, socioeconomic status, and cultural practices (Table 01).

### *Obesity and Overweight*

Obesity rates among women in these countries are notably high but vary considerably. For instance, in Saudi Arabia, a 2014 survey reported that 33.5% of women aged 30–70 were overweight, and 60% were obese (Althumiri et al., 2021). In the UAE, obesity prevalence among women was approximately 39.81% between 2014 and 2020 (Okati-Aliabad et al., 2022). Lebanon also exhibits high obesity rates among women, with a prevalence of 29.53% (Mallat et al., 2016). These figures highlight the significant burden of obesity, which is a major risk factor for numerous non-communicable diseases. The current global obesity epidemic has been accompanied by an increase in the incidence of several types of cancer, with a notable increase in gynecological cancers. This trend is particularly alarming in Middle Eastern countries, where the shift towards a more Westernized lifestyle has contributed to the increased prevalence of both obesity and cancer (Daneshvar, 2025)

### *Type 2 Diabetes Mellitus (T2DM)*

The prevalence of T2DM is alarmingly high in the region. In Saudi Arabia, the prevalence reaches up to 31.6%, while in Oman, it stands at 29%, and in Bahrain, 25.5% (Mairghani, 2022, El-Kebbi et al., 2021, Fallatah, 2020). The UAE also reports a high prevalence of diabetes at 19.2%. These elevated rates are closely linked to the high prevalence of obesity and sedentary lifestyles.

### *Breast Cancer*

Breast cancer is the most common cancer among women in the Middle East. In 2019, the age-standardised incidence rate in the Middle East and North Africa (Casas) region was 37.5 per 100,000 women, with an age-standardised death rate of 15.2 per 100,000 (Azadnajafabad et al., 2023, Manzano et al., 2024, Zahedi et al., 2020). Notably, women in Arab countries tend to present with breast cancer at a younger age and more advanced stages compared to their Western counterparts (El Saghir et al., 2007, Najjar and Easson, 2010, Al-Shamsi et al., 2023).

### *Maternal Mortality*

Maternal mortality ratios (MMR) also vary across these countries. For example, the MMR in the UAE has shown improvement over the years, reflecting advancements in maternal healthcare. However, disparities persist, with some countries in the region still experiencing higher MMRs, underscoring the need for targeted maternal health interventions. For instance, In the United Arab Emirates, the maternal mortality ratio (per 100 000 live births) has improved by 17 deaths per 100 000 live births from 19 [12 - 31] in 1985 to 3 [2 - 4] in 2023 (Khorrami et al., 2019, Who, 2024). In Yemen, the maternal mortality rate increased from five deaths per day in 2013 to 12 deaths per day in 2019, one factor being the war that limited access to basic resources such as food and water (Haza'a et al., 2024).

### *Gestational Diabetes Mellitus (GDM)*

The prevalence of GDM has seen changes over the decades. Between 2000 and 2019, countries like Iran, Oman, and Saudi Arabia experienced an increase in GDM prevalence by 4% to 8%. Conversely, Bahrain, Qatar, and the UAE observed a decrease of 4% to 2% during the same period. These trends indicate shifting risk factors and the impact of healthcare interventions (Al-Rifai et al., 2021).

These epidemiological statistics underscore the heterogeneity of women's health issues in the Middle East. Addressing this variability requires nuanced, context-specific health policies that consider the unique sociocultural and economic factors influencing women's health in each country.

## **Intersecting Health Challenges**

Women in the Middle East face a unique health burden arising from both non-communicable and reproductive health challenges. High rates of obesity, diabetes, cardiovascular disease, and depression often coexist with underdiagnosed reproductive health conditions such as endometriosis, polycystic ovarian syndrome (PCOS), and menopause-related complications. Mental health remains deeply stigmatised and underfunded, especially for young women navigating restrictive gender norms or survivors of conflict-related trauma.

The prevalence of noncommunicable diseases (NCDs) among women in the Middle East is alarmingly high (Aggarwal et al., 2020). Obesity rates have surged due to lifestyle changes, including unhealthy eating habits and reduced physical activity. For instance, a study highlighted that the prevalence of obesity among adults in the Middle East has paralleled rises in diabetes, cardiovascular diseases (CVDs), and certain cancers (Okati-Aliabad et al., 2022). Specifically, young Middle Eastern women who are overweight or obese face a higher risk for developing atherosclerotic cardiovascular disease and its associated risk factors like hypertension and type 2 diabetes (Hammoudeh et al., 2024). Mental health disorders are prevalent yet significantly under-addressed. The region has experienced a steady increase in mental health disorders, with 33% of women reporting frequent stress, and anxiety disorders and depression being highly prevalent among girls aged 10-19 years. The stigma surrounding mental health, especially for young women contending with restrictive gender norms or those who have endured conflict-related trauma, exacerbates the situation. For example, in 2020, approximately 198,797 adults in Gaza were estimated to have moderate or severe mental health disorders, with trauma from violent incidents leading to a sense of despair and anxiety (Abudayya et al., 2023).

At the same time, maternal health metrics vary significantly. While countries like the United Arab Emirates and Qatar have made gains in maternal care, others, including war-affected Yemen and parts of Syria, struggle with extreme fragility in services (Ladadwa et al., 2024, Abdalla, 2018). In refugee-hosting countries like Jordan and Lebanon, displaced women often face profound barriers to accessing sexual and reproductive healthcare, compounded by legal, financial, and linguistic challenges. Addressing these intersecting health challenges necessitates a comprehensive approach that includes:

- **Public Health Campaigns:** Raising awareness about NCDs and reproductive health issues to promote early detection and lifestyle modifications.
- **Healthcare Access:** Improving access to healthcare services for timely diagnosis and management of both NCDs and reproductive health conditions.
- **Mental Health Services:** Expanding mental health services and integrating them into primary healthcare to reduce stigma and provide support, especially for vulnerable groups such as young women and conflict survivors.



- **Policy Interventions:** Implementing policies that promote healthy lifestyles, including regulations on food quality, urban planning that encourages physical activity, and education reforms that incorporate physical education for girls.

## The Impact of UN Sustainability Goals on Women's Health in the Middle East

The United Nations Sustainable Development Goals (SDGs), particularly SDG 3 (Good Health and Well-being), SDG 5 (Gender Equality), and SDG 8 (Decent Work and Economic Growth), aim to address the systemic inequalities that disproportionately affect women's health worldwide. In Middle Eastern countries however, the translation of these goals into tangible improvements in women's health is uneven and complicated by socio-political, economic, and cultural dynamics (United Nations, 2015).

## Progress and Gaps in Achieving Health Equity

While the SDGs have pushed several Middle Eastern countries to improve maternal health services, reduce fertility rates, and expand access to contraception, structural barriers remain. In countries such as Jordan, Lebanon, and the UAE, investments in women's healthcare have aligned with the SDGs to reduce maternal mortality and expand primary health access (Daher-Nashif and Bawadi, 2020). Yet, in conflict-affected or conservative settings like Yemen, Syria, and parts of Iraq, progress is stunted due to weakened health systems, political instability, and entrenched gender norms. Women's mental and reproductive health remains underfunded and understudied across much of the region. Taboo topics such as menopause, endometriosis, or sexual health receive minimal attention, resulting in delayed diagnoses and poor quality of life for affected women. While SDG 5 calls for an end to discrimination and violence against women, implementation often lacks the legal and institutional support needed to protect women's health rights.

SDG 8 (decent work and economic growth) promotes economic growth and decent work, which, in theory, can provide the financial resources and infrastructure necessary to improve women's health. In developing Arab countries, like Saudi Arabia and the UAE, economic diversification has created new employment opportunities for women, improved access to private health services, and led to lifestyle shifts that benefit women's health outcomes (Alzaaqi et al., 2025). However, economic growth alone does not guarantee equity. Furthermore, economic reforms focused on growth may not always prioritise investment in gender-sensitive health services, especially in patriarchal systems where women's needs are deprioritised.

Migrant labour forms the backbone of economic growth in the region, yet this growth is sustained by a health system that externalises responsibility for the well-being of these workers. While the private healthcare sector thrives, often subsidised or expanded as part of economic diversification efforts, this rarely benefits low-income migrant women, who remain structurally excluded or forced to pay out of pocket for even basic care. There is a fundamental tension between the SDG aim of inclusive economic growth (SDG 8) and the reality of exploitative labour practices. Economic gains are rarely reinvested in equitable health infrastructure or protections for the very workers fuelling this growth (Chigbu and Nekhwevha, 2023).

A critical gap remains in linking economic policy with health policy. For example, while economic liberalisation may increase employment opportunities, without robust social protection, maternity leave, or workplace safety regulations, these gains do not translate into better health outcomes for women. Women's unpaid care burden remains high, particularly in lower-income and rural areas, further limiting their ability to benefit from economic development.

## Cultural and Political Constraints

Efforts to implement the SDGs are often filtered through conservative socio-cultural lenses that restrict open discourse around women's health. In several Middle Eastern countries, legal restrictions

and societal norms continue to limit women's autonomy over their bodies, including decision-making about reproductive health (Alomair et al., 2020). These constraints are compounded by weak civil society engagement, limited data transparency, and political will that is often more rhetorical than action-oriented. This disparity is further compounded by limited gender-sensitive data, societal stigma, and restricted access to health services, particularly for older women.

#### *Limited Educational Opportunities for Women*

Access to education is a fundamental determinant of health, yet in many parts of the Middle East, women and girls still face systemic barriers to educational opportunities. Cultural norms, early marriage, economic constraints, and restrictive gender roles continue to hinder girls' education, particularly in rural or conflict-affected areas. This educational disadvantage extends far beyond the classroom, it significantly impacts women's health literacy, economic independence, and decision-making capacity. Without adequate education, women are less likely to access health information, recognize symptoms of conditions like menopause, cystocele, or chronic illnesses, and seek timely medical care. They may also lack the confidence or societal power to advocate for their own health needs, contributing to delayed diagnoses and poorer health outcomes. Educational gaps further reinforce the cycle of dependency and silence, particularly around stigmatized issues like urinary or sexual dysfunction during midlife.

### **Legal and Structural Exclusion from Health Systems**

Migrant women, many of whom are employed as domestic workers or in low-wage service roles, frequently operate outside the protections of national labour laws. Under the *kafala* (sponsorship) system still prevalent in many states, their legal residency and employment are tied to individual employers, severely restricting their autonomy and access to healthcare. Despite economic reliance on their labour, host countries often exclude them from universal health coverage frameworks or provide only minimal emergency services. This exclusion directly undermines SDG 3 (Health and Well-being) and SDG 5 (Gender Equality), reinforcing a tiered health system where nationality and class determine access. For example, migrant women report barriers in accessing sexual and reproductive health services, face routine surveillance, and may avoid healthcare altogether due to fear of deportation, job loss, or lack of privacy (Alraddadi et al., 2024, Lorenzini, 2021).

### **COVID-19 and the Visibility of Structural Injustice**

The pandemic exposed and amplified pre-existing inequalities across societies. Migrant women, particularly those in domestic roles, were often confined indoors without pay, care, or recourse. Reports of abuse and denial of medical care surged during lockdowns. Yet, despite international attention, many of these structural issues have resurfaced in post-pandemic recovery plans, which continue to prioritise economic recovery over rights-based health reform (Almasri, 2022).

### **Gendered Exploitation and Health Consequences**

Migrant women are exposed to gender-based violence, poor housing, long working hours, and limited legal recourse factors that have profound physical and mental health consequences (Tastsoglou, 2025). Studies have documented high levels of anxiety, depression, and post-traumatic stress disorder among female domestic workers in countries like Lebanon and Kuwait (El Hajj, 2021, Abuhadra et al., 2023). Many suffer in silence due to language barriers, social isolation, and the criminalisation of complaints against employers. Despite SDG commitments to reduce inequality (SDG 10), little progress has been made in dismantling systemic drivers of exploitation. Where protections exist, they are rarely enforced, and grievance mechanisms are weak or inaccessible.

## Moving Beyond Symbolism

A critical view of the SDGs in the Middle East reveals a pattern of selective adoption and symbolic compliance, where countries report progress without addressing root causes of gender-based health disparities. Achieving meaningful change requires moving beyond indicators to structural reform, ensuring that economic growth is inclusive, that health systems are gender-responsive, and that legal frameworks protect women's bodily autonomy and rights (Sweileh, 2024).

While the UN SDGs provide a valuable framework for improving women's health in the Middle East, progress is constrained by socio-political realities, economic disparities, and cultural resistance. Economic growth has supported some gains, particularly in urban and high-income settings, but without deliberate, gender-sensitive health and labour reforms, such growth risks widening rather than closing existing gaps. A more integrated approach linking sustainable development, equitable economic policy, and health system reform is essential for improving women's health outcomes across the region (Al Mokdad, 2025, Sweileh, 2024).

## Gaps in Policy and Practice

Current national policies rarely reflect the real diversity of Middle Eastern women's lived experiences. Many health systems operate under patriarchal norms that limit women's decision-making power regarding their own care. In some states, women require male consent to access certain services; in others, unmarried women are denied contraception or gynaecological screening due to moralistic policies (Alhosain, 2018).

Even where women's health strategies exist, they often frame health through a narrow biomedical or maternal lens, without addressing chronic conditions, ageing, or the broader determinants of health such as mobility restrictions, legal inequities, or gender-based violence. Additionally, data disaggregation by gender, ethnicity, and migration status is weak, impeding the development of targeted responses.

## Male Guardianship and Consent Requirements:

In several middle-eastern countries, male guardianship systems are institutionalised, necessitating that women obtain permission from a male guardian—such as a father, husband, or brother—to access various healthcare services (Alshahrani, 2018). For instance, in Qatar, unmarried women under the age of 25 require their male guardian's consent to travel abroad, which can indirectly affect their ability to seek medical care internationally (Al Khalifa et al., 2024). Similarly, in Afghanistan, stringent policies mandate that women must be accompanied by a male guardian when traveling, leading to delays and denials of critical maternal healthcare, resulting in preventable maternal and infant deaths.

## Access for Unmarried Women:

In Saudi society and other Muslim countries, modesty and purity are highly valued, especially for unmarried women. Asking about or seeking reproductive health services may be seen as inappropriate or shameful, reinforcing the idea that ignorance equals virtue (Alomair et al., 2021).

## Legal Constraints on Reproductive Rights:

Legal restrictions further complicate women's access to reproductive healthcare. In the United Arab Emirates and most middle Eastern or Gulf countries, abortion is permitted only under specific circumstances, such as when the pregnancy poses a risk to the woman's life or in cases of lethal fetal abnormalities. Even in these situations, the procedure must be approved by a medical committee and performed within the first 120 days of pregnancy. Such stringent regulations can lead women to seek unsafe abortions, jeopardizing their health and well-being (Abdelbaqy, 2021). In Iran, access to abortion has become more restricted in recent years due to concerns about population decline and

pressure from hardliners. In many cases, such as those involving severe fetal anomalies, a judge's approval is required in addition to the consent of a Muslim doctor. Furthermore, contraceptive medications have become less accessible than they were in the past (Haddadi et al., 2025b). Moreover, many reproductive methods, such as fertilisation using egg or sperm donors and surrogacy, are restricted or even prohibited in several countries, including the UAE and Turkey (Haddadi et al., 2025a).

### Impact of Patriarchal Norms on Policy Implementation:

Patriarchal norms deeply influence the formulation and execution of health policies in the MENA region. These norms often result in limitations on women's physical mobility and autonomy, obstructing their effective access to and utilisation of healthcare services. Additionally, societal expectations and gender roles can deter women from seeking necessary care, particularly in areas related to sexual and reproductive health.

### Gaps in Policy and Practice:

Despite international commitments to gender equality and women's health rights, national policies in many middle-eastern countries frequently fail to address the diverse experiences and needs of women (Al-Ali, 2003, Dalacoura, 2019). The lack of dedicated mental health legislation in 50% of the countries within the region, and the absence of national policies and plans in 30%, exemplify these gaps. Moreover, existing policies often do not adequately tackle the barriers posed by male guardianship and societal stigmas, leaving many women without access to essential health services.

### Considerations for Policy Reform:

To bridge these gaps, it is imperative to:

- **Ensure Inclusive Access:** Develop and implement policies that guarantee all women, regardless of marital status, have access to comprehensive sexual and reproductive health services.
- **Enact Protective Legislation:** Introduce and enforce laws that protect women's health rights, including access to safe abortion services and protection against gender-based violence.
- **Address Societal Norms:** Implement public awareness campaigns to challenge and change harmful societal norms and stigmas that hinder women's access to healthcare.

#### *Towards Equitable and Responsive Health Policy*

A shift toward resilience-based, equity-driven healthcare is urgently needed. This must begin with inclusive policy development processes that involve women from diverse background including refugee communities, rural populations, and religious minorities. Investment in community-based health education, digital health tools, and gender-equity programs or initiatives (I think this is a better word) could amplify health-seeking behaviour and reduce stigma around reproductive and mental health.

Women's healthcare policies should be grounded in robust data systems that capture the heterogeneity of women's health profiles. Regional collaboration, for instance, through a Middle East women's health observatory or research network could enable the development of culturally congruent, evidence-based interventions and accountability mechanisms.



## Conclusion

The variability in Middle Eastern women's health experiences is not a challenge to be simplified, it is a reality to be embraced, studied, and acted upon. Effective policy must acknowledge the plurality of needs and center women's voices, particularly those marginalized within already fragile systems. Bridging the gap between policy rhetoric and lived reality is not just a matter of health equity it is an ethical imperative.

**Supplementary Materials:** The following supporting information can be downloaded at the website of this paper posted on Preprints.org.

**Author contributions:** GD developed the ELEMI program and conceptualised this paper. GD wrote the first draft and furthered by all other authors. All authors critically appraised, reviewed and commented on all versions of the manuscript. All authors read and approved the final manuscript.

**Funding:** Not funded

**Ethics approval:** Not applicable

**Consent to participate:** No participants were involved within this paper

**Consent for publication:** All authors consented to publish this manuscript

**Acknowledgements:** Not applicable

**Availability of data and material:** The data shared within this manuscript is publicly available.

**Conflicts of interest:** All authors report no conflict of interest. The views expressed are those of the authors and not necessarily those of the NHS, the National Institute for Health Research, the Department of Health and Social Care or the Academic institutions.

**Code availability:** Not applicable

## References

1. Abboud, S., Veldhuis, C., Ballout, S., Nadeem, F., Nyhan, K. & Hughes, T. 2022. Sexual and gender minority health in the Middle East and North Africa Region: A scoping review. *International journal of nursing studies advances*, 4, 100085.
2. Abdalla, D. 2018. Utilization of maternal health services in war affected Yemen.
3. Abdelbaqy, M. A. 2021. Reproductive Health in Arab Countries. *Handbook of Healthcare in the Arab World*, 3-40.
4. Abudayya, A., Bruaset, G. T. F., Nyhus, H. B., Aburukba, R. & Tofthagen, R. 2023. Consequences of war-related traumatic stress among Palestinian young people in the Gaza Strip: A scoping review. *Mental Health & Prevention*, 32, 200305.
5. Abuhadra, B. D., Doi, S. & Fujiwara, T. 2023. The prevalence of post-traumatic stress disorder, depression, and anxiety in Libya: a systematic review. *Middle east current psychiatry*, 30, 49.
6. Aggarwal, A., Patel, P., Lewison, G., Ekzayez, A., Coutts, A., Fouad, F. M., Shamieh, O., Giacaman, R., Kutluk, T. & Khalek, R. A. 2020. The Profile of Non-Communicable Disease (NCD) research in the Middle East and North Africa (MENA) region: Analyzing the NCD burden, research outputs and international research collaboration. *PloS one*, 15, e0232077.
7. Al-Ali, N. 2003. Gender and civil society in the Middle East. *International Feminist Journal of Politics*, 5, 216-232.

8. Al-Rifai, R. H., Abdo, N. M., Paulo, M. S., Saha, S. & Ahmed, L. A. 2021. Prevalence of gestational diabetes mellitus in the middle east and North Africa, 2000–2019: A Systematic Review, Meta-Analysis, and Meta-Regression. *Frontiers in endocrinology*, 12, 668447.
9. Al-Shamsi, H. O., Abdelwahed, N., Abyad, A., Abu-Gheida, I., Afrit, M., Abu Elfuol, T., Alasas, R., Lababidi, B., Dash, P. & Ahmad, M. 2023. Breast cancer in the Arabian gulf countries. *Cancers*, 15, 5398.
10. Al Khalifa, A. B. H., Al Saleh, A. & Al Kubaisi, F. 2024. The State of Marriage in the Arab Gulf States: The UAE, Bahrain, Saudi Arabia, Oman, Qatar, and Kuwait. *The Handbook of Marriage in the Arab World*. Springer Nature Singapore Singapore.
11. Al Mokdad, A. 2025. Role of Civil Society and Non-Governmental Organizations in Addressing Developmental Disparities in the Middle East: Empowering Communities for Sustainable Development. *Unveiling Developmental Disparities in the Middle East*. IGI Global.
12. Alhosain, A. 2018. Premarital screening programs in the Middle East, from a human right's perspective. *Diversity Equality Health Care*, 15, 41-45.
13. Almasri, S. 2022. Power, protection and policy: Domestic workers in Arab States during COVID-19. *The impacts of COVID-19 on migration and migrants from a gender perspective*, 33-45.
14. Alomair, N., Alageel, S., Davies, N. & Bailey, J. V. 2020. Factors influencing sexual and reproductive health of Muslim women: a systematic review. *Reproductive health*, 17, 1-15.
15. Alomair, N., Alageel, S., Davies, N. & Bailey, J. V. 2021. Barriers to sexual and reproductive wellbeing among Saudi women: a qualitative study. *Sexuality research and social policy*, 1-10.
16. Alraddadi, R., Alqahtani, S. & Almubarak, N. 2024. Empowering the disadvantaged: a perspective on Saudi Arabia's low-skilled female workers. *Journal of Gender Studies*, 33, 902-916.
17. Alshahrani, B. N. S. 2018. *Male guardianship over women under Islamic Shariah, Saudi Arabia's Domestic Law and International Human Rights Law*. Brunel University London.
18. Althumiri, N. A., Basyouni, M. H., Almousa, N., Aljuwaysim, M. F., Almubark, R. A., Bindhim, N. F., Alkhamaali, Z. & Alqahtani, S. A. Obesity in Saudi Arabia in 2020: prevalence, distribution, and its current association with various health conditions. *Healthcare*, 2021. MDPI, 311.
19. Alzaaqi, S. M., Sheerah, H. A., Arafa, A., Alqahtani, D. M., Alqadi, S. A., Alsalamah, H. A., Ismail, E. H., Nouh, M. A. & Alsalamah, S. A. 2025. Empowering Women in the Saudi Health Sector: Challenges, Opportunities, and Policy Interventions. *Journal of Epidemiology and Global Health*, 15, 22.
20. Azadnajafabad, S., Saeedi Moghaddam, S., Mohammadi, E., Rezaei, N., Rashidi, M.-M., Rezaei, N., Mokdad, A. H., Naghavi, M., Murray, C. J. & Larijani, B. 2023. Burden of breast cancer and attributable risk factors in the North Africa and Middle East region, 1990–2019: a systematic analysis for the Global Burden of Disease Study 2019. *Frontiers in Oncology*, 13, 1132816.
21. Casas, X. 2021. How the 'Green Wave' Movement Did the Unthinkable in Latin America. *International New York Times*, NA-NA.
22. Chigbu, B. I. & Nekhwevha, F. 2023. Exploring the concepts of decent work through the lens of SDG 8: addressing challenges and inadequacies. *Frontiers in Sociology*, 8, 1266141.
23. Daher-Nashif, S. & Bawadi, H. 2020. Women's health and well-being in the united nations sustainable development goals: A narrative review of achievements and gaps in the gulf states. *International journal of environmental research and public health*, 17, 1059.
24. Dalacoura, K. 2019. Women and gender in the Middle East and North Africa: mapping the field and addressing policy dilemmas at the post-2011 juncture.
25. Daneshvar, M. 2025. Dataset of obesity in relation to female-specific cancers in middle eastern countries, 1990 to 2016. *BMC Research Notes*, 18, 124.

26. East, G. M. & Jassim, G. 2023. WOMEN'S HEALTH IN. *Healthcare in the Arabian Gulf and Greater Middle East: A Guide for Healthcare Professionals-E-Book*, 64.
27. El-Kebbi, I. M., Bidikian, N. H., Hneiny, L. & Nasrallah, M. P. 2021. Epidemiology of type 2 diabetes in the Middle East and North Africa: Challenges and call for action. *World journal of diabetes*, 12, 1401.
28. El Hajj, M. 2021. Prevalence and associated factors of post-traumatic stress disorder in Lebanon: A literature review. *Asian journal of psychiatry*, 63, 102800.
29. El Saghir, N. S., Khalil, M. K., Eid, T., El Kinge, A. R., Charafeddine, M., Geara, F., Seoud, M. & Shamseddine, A. I. 2007. Trends in epidemiology and management of breast cancer in developing Arab countries: a literature and registry analysis. *International journal of surgery*, 5, 225-233.
30. Fallatah, A. H. I. 2020. *Exploring Type Two Diabetes Mellitus in the Kingdom of Saudi Arabia: Studying the Socio-economic Environment*. University of Southampton.
31. Haddadi, M., Hantoushzadeh, S., Hajari, P., Pouraie, R. R., Hadiani, M. Y., Habibi, G. R., Eshraghi, N. & Ghaemi, M. 2025a. Challenges and Prospects for Surrogacy in Iran as a Pioneer Islamic Country in this Field. *Arch Iran Med*.
32. Haddadi, M., Sahebi, L., Hedayati, F., Shah, I. H., Parsaei, M., Shariat, M., Dashtkoohi, M. & Hantoushzadeh, S. 2025b. Induced abortion in Iran, Tehran University of Medical Sciences, the law and the diverging attitude of medical and health science students. *PloS one*, 20, e0320302.
33. Hammoudeh, A. J., Jallad, M., Khader, Y., Badaine, Y., Tabbalat, R. A., Zammar, H., Al-Makhamreh, H., Basha, A., Alatteili, L. & Abuhlimeh, R. 2024. Atherosclerotic cardiovascular disease novel and traditional risk factors in Middle Eastern young women. The ANCORS-YW study. *Global Heart*, 19, 59.
34. Haza'a, A. A., Odhah, M. A., Al-Ahdal, S. A., Abol-Gaith, F. M., Ismail, N. A., Al-Awar, M. S., Al-Jaradi, A. S., Eidah, W. S. & Kaid, M. M. 2024. Utilisation of postnatal care services among maternal in Maeen District-Sana'a City, Yemen. *BMC Pregnancy and Childbirth*, 24, 422.
35. Hussein, S. a. a. A., Dahlen, H. G., Ogunsiji, O. & Schmied, V. 2018. Women's experiences of childbirth in Middle Eastern countries: a narrative review. *Midwifery*, 59, 100-111.
36. Khorrami, N., Stone, J., Small, M. J., Stringer, E. M. & Ahmadzia, H. K. 2019. An overview of advances in global maternal health: From broad to specific improvements. *International Journal of Gynecology & Obstetrics*, 146, 126-131.
37. Ladadwa, R., Hariri, M., Alatrass, M. M., Elferruh, Y., Ramadan, A., Dowah, M., Bawaneh, Y. M., Aljerk, W., Patel, P. & Ekzayez, A. 2024. Health information management systems and practices in conflict-affected settings: the case of northwest Syria. *Globalization and Health*, 20, 45.
38. Lorenzini, A. 2021. From Informal Economy to Decent Work: Analysis and Observations. The Case of Female Migrant Domestic Workers in Jordan and United Arab Emirates.
39. Mairghani, M. 2022. *Diabetic foot ulcers (DFU) in Bahrain; an epidemiological profile of the prevalence, clinical care, economic cost and impact on quality of life*. Royal College of Surgeons in Ireland.
40. Mallat, S., Geagea, A. G., Jurjus, R., Rizkallah, A., Oueidat, D., Matar, M., Tawilah, J., Berbari, A. & Jurjus, A. 2016. Obesity in Lebanon: a national problem. *World Journal of Cardiovascular Diseases*, 6, 166.
41. Manzano, A., Gralén, K., Wilking, N. & Hofmarcher, T. 2024. Improving Breast Cancer Care in the Middle East and Africa. IHE-The Swedish Institute for Health Economics.
42. Mousa, M., Al-Jefout, M., Alsafar, H., Kirtley, S., Lindgren, C. M., Missmer, S. A., Becker, C. M., Zondervan, K. T. & Rahmioglu, N. 2021. Prevalence of common gynecological conditions in the middle east: systematic review and meta-analysis. *Frontiers in Reproductive Health*, 3, 661360.
43. Najjar, H. & Easson, A. 2010. Age at diagnosis of breast cancer in Arab nations. *International journal of surgery*, 8, 448-452.

44. Okati-Aliabad, H., Ansari-Moghaddam, A., Kargar, S. & Jabbari, N. 2022. Prevalence of obesity and overweight among adults in the Middle East countries from 2000 to 2020: a systematic review and meta-analysis. *Journal of obesity*, 2022, 8074837.
45. Sholkamy, H. 2022. Middle East Women's Health in the Context of Patriarchy and Social Change. *Routledge Handbook on Women in the Middle East*. Routledge.
46. Sweileh, W. 2024. Gender equality and women's empowerment in Arab countries: a bibliometric review of the literature on SDG 5. *Global Knowledge, Memory and Communication*.
47. Tastsoglou, E. 2025. Gender-Based Violence in a Migration Context: Health Impacts and Barriers to Healthcare Access and Help Seeking for Migrant and Refugee Women in Canada. *Societies*, 15, 68.
48. United Nations. 2015. *Sustainable Development Goals* [Online]. Available: <http://www.un.org/sustainabledevelopment/> [Accessed 3/4/2025].
49. Who. 2024. *Maternal mortality* [Online]. Available: <https://data.who.int/indicators/i/C071DCB/AC597B1?m49=784> [Accessed].
50. Wikan, U. 1991. *Behind the veil in Arabia: Women in Oman*, University of Chicago Press.
51. Zahedi, R., Molavi Vardanjani, H., Baneshi, M. R., Haghdoost, A. A., Malekpour Afshar, R., Ershad Sarabi, R., Tavakoli, F. & Zolala, F. 2020. Incidence trend of breast Cancer in women of eastern Mediterranean region countries from 1998 to 2019: A systematic review and meta-analysis. *BMC women's health*, 20, 1-10.
52. Zurayk, H., Sholkamy, H., Younis, N. & Khattab, H. 1997. Women's health problems in the Arab World: a holistic policy perspective. *International Journal of Gynecology & Obstetrics*, 58, 13-21.

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