



Article Menopause Futures

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Abstract

Women in menopause around the world and across cultures suffer from a lack of support during menopause and beyond. This exploratory study employs the Causal Layered Analysis to deconstruct the issue and create a deeper understanding of why women's health and menopause are still too little part of general knowledge both in the general population as well as among medical personnel. For that, findings are analyzed with understanding systemic causes as well as existing world views both held by women and society, factors who contribute to the continuation of those problems. Beyond the deconstruction of the issue, this study also delves into potential transformative changes essential for the future, shedding light on pathways that may change the landscape of support and understanding for women during and beyond the menopausal transition.

Keywords

Causal Layered Analysis, Women, Healthcare, Menopause

Introduction

Menopause is an integral facet of the human ageing process and represents a significant transition in a woman's life (WHO, 2022). While this biological shift brings an end to reproductive years, our understanding of its multifaceted impact remains limited. Societal narratives often emphasize limitations rather than the potential for personal growth and well-being that this phase can offer. The future of menopause demands a more holistic, empowering, and technologically driven approach.

I chose to write about menopause and connect it to future's methodology since menopause is a universal yet under-researched phenomenon that is affecting big parts of the world's population, which offers a rich landscape for future investigation. Its considerable impact on health and well-being, coupled with existing gaps in knowledge regarding its biological background, long-term effects both for individuals and societies, and optimal management strategies, highlights the need for further exploration. This research aims to shed light on these current complexities by employing causal layered analysis (CLA), a methodology that goes beyond surface-level observations to reveal the connection of factors that shape women's experiences of menopause.

CLA allows for a nuanced examination of menopause, considering not only biological and psychological dimensions but also socio-cultural and political influences. By emphasizing these interconnected factors, this research aims to contribute to a more comprehensive understanding of women's health across their lifespan, to empower women during menopause and explore future directions of the topic.

What We Need to Know About Menopause and Why

To give a biological and medical background, the changes associated with menopause come from a loss of the ovarian reproductive function, stemming from either a spontaneous, naturally occurring process or an iatrogenic manifestation denoted as secondary menopause. The latter may arise due to surgical interventions involving the removal of female ovaries or result from functional impairment of the ovaries induced by external factors, such as

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radiotherapy or chemotherapy (Davis et al., 2015).

The median age for a natural menopause among developed nations is between 48 and 52 years, with variations between regions. It is lower in Latin America, Africa and Middle Eastern countries (median: 47.2-48.4 years) while it is higher in Europe and Australia (50.5-51.2 years) (Schoenacker et al., 2014). However, it is crucial to acknowledge that individual experiences not only depend on the geographical location, but is additionally influenced by demographics, health and genetics (WHO, 2022).

Menopause can be structured in premenopause, perimenopause and postmenopause. Menopause is the point of time when a woman has not experienced a menstrual period for a consecutive 12-month period (NIA, 2021), Perimenopause is defined as the period, when first signs and symptoms of menopause are being experienced until one year after the last menstrual period, can last several years and impacts the social, physical, emotional and mental well-being of the person due to hormonal changes (WHO, 2022).

According to the World Health Organization (2022), symptoms linked to menopause encompass:

- hot flushes and night sweats. Hot flushes refer to a sudden feeling of heat in the face, neck and chest, often accompanied by flushing of the skin, perspiration (sweating), palpitations, and acute feelings of physical discomfort which can last several minutes;
- changes in the regularity and flow of the menstrual cycle, culminating in cessation of menstruation;
- vaginal dryness, pain during sexual intercourse and incontinence;
- difficulty sleeping/insomnia; and
- changes in mood, depression, and/or anxiety.

Women may experience one or several of the described symptoms, with varying intensities and characteristics (WHO, 2022). Moreover, due to declining estrogen levels after menopause, the cardiovascular risk for women increases and the decline in bone density gives rise to heightened incidences of fractures and osteoporosis (Snyam, 2014).

However, even though symptoms during menopause may heavily affect women's life in various aspects, there is limited knowledge, support and treatments provided (O'Reilly et al., 2022). In addition, menopause and women during menopause encounter a significant degree of societal stigma, symptoms and changes are often regarded as something to be ashamed of. But instead of seeing menopause as an inherent part of the human ageing process, rather often there is an emphasis on "curing" and reinstating a sense of "normality", hindering the ability of women to navigate this transition effectively (Cahn, 2021).

An example is the published book by gynecologist Robert Wilson with the title "Feminine Forever" which is describing menopause as a disease resulting from a deficiency of estrogen and hence the "problem" can be solved by a hormonal replacement therapy, to encounter the effects of ageing (Houck, 2003).

It is nowadays well established that hormone therapies can have severe adverse effects such as an increased risk for heart diseases, strokes, blood clots or breast cancer (Mayo Clinic, 2022) as well as that menopause is a natural process women experience. The therapeutic and supportive measures described in this article are not aimed at "re-establishing" femininity or altering women's societal roles. Instead, it explores the potential for transformative change in how we approach menopause. The focus lies on addressing symptoms to enhance women's well-being and overall enjoyment of life, and supporting a change in narrative, to see menopause as an opportunity. The aim of the article is to envision a future where women have access to the resources, knowledge and support they need to thrive during this significant life chapter, thereby contributing to the well-being of societies at large.

So why is it that menopause is still a topic of limited knowledge in general public as well as among medical personnel and what needs to change to improve that in the future and with it the support for women?

Understanding Women's Struggles Using The CLA

This exploratory study aims to explain the factors contributing to the limited knowledge and treatment options available for women experiencing life-constraining symptoms during menopause. To delve further into the underlying causes of the persistent issues surrounding menopause for women and provide a more nuanced exploration of desirable futures, the study systemically organized and complemented its findings through the application of Causal Layered Analysis (Inayatullah, 2019).

This CLA analysis is critical to understand the current discourses around menopause, as a starting point for further research. The field of gender medicine has only just started to develop and is increasingly becoming important in more and more areas; hence this article aims to put weight into the emerging discipline and support its academic relevance as well as its underlying opportunity to change the everyday life of 50% of humanity.

Discussion

Litany: Why women often feel alone and uninformed when entering menopause

On the litany level, women frequently experience a sense of isolation and solitude upon entering menopause, primarily attributable to a lack of information. Despite being an inevitable life stage for all women, there exists a general deficiency in knowledge within the broader public, spanning across all age groups (Tariq et al., 2023). This does not only affect the general population, but there is a lack of education also in medical schools regarding menopause, making it difficult for doctors to recognize menopause symptoms (Dintakurti et al., 2022). Consequently, numerous women find themselves feeling alone and scared during menopause, a sentiment often intertwined with notions of ageing, societal stigma, and negativity. That significantly impacts the overall well-being and daily lives of women. Nevertheless, studies have recorded strong global divergences and variations within countries, since the experience of women during this transitional phase is heavily influenced by sociocultural factors (O'Reilly et al., 2022).

In a western context, the perception of ageing tends to be pessimistic. Within the framework of a capitalist, performance-driven society, any decline in productivity and independence is often equated with becoming a societal burden (Wong, 2013).

But perceptions of menopause change between different cultures and regions, as for example a 2021 study about women in Sri Lanka shows. The view on ageing and menopause within Asian societies tends to be more optimistic and as a natural change, intertwining with notions of wisdom (Ilankoon et al., 2021).

Moreover, women encountering symptoms that detrimentally impact their well-being are often confronted with limited support options. The prevailing advice resolves around lifestyle adjustments tailored to the experienced symptoms. Furthermore, an array of hormonal and non-hormonal medications is available, with the goal to enhance the quality of life for women. However, the issue is that “there is limited evidence from randomised control trials on the safety and effectiveness of options such as non-hormonal treatments, ospemifene [or] local vaginal oestrogen for menopausal syndromes” (NICE, 2015).

Hormonal treatments are prescribed when women experience problematic vasomotor symptoms and help in addition to improve sleep, vaginal dryness and quality of life generally (Hickey et al., 2017). However, the efficacy of hormone therapy is tempered by a deficit in knowledge among medical practitioners for delivering comprehensive individualized support and the potential for significant adverse effects. A noteworthy MHRA safety alert by the UK government concerning hormone replacement therapy (HRT) has been published. This precautionary measure was prompted by a recent meta-analysis of more than 100.000 women with breast cancer, revealing an elevated risk of breast cancer associated with HRT. Importantly, this risk persisted even after the cessation of the treatment (Medicines and Healthcare products Regulatory Agency, 2019).

Table 1 summarizes the current issues women face on the litany level when it comes to menopause with a list of suggested solutions.

Table 1: Litany level: Why women often feel alone and uninformed when entering menopause

Current Reality	Transformative Future: Information and Support for All
Women are often unprepared when entering menopause and lack knowledge.	Education regarding menopause in the general population from school-age on.
Women have difficulties accessing information about menopause.	Menopause as a health topic is included in public discourse and awareness is high for possible changes in a woman’s life.
There is no specific indication for menopause other than a stopped period.	Several support and medication options are offered.
Women with symptoms around the average age entering menopause with symptoms are often comforted with a “menopause diagnosis”, that discomfort is normal.	
There is a lack of functioning treatment and support options without severe side effects.	

Systemic causes: Why women don't receive more support

There are multifaceted reasons behind the scarcity of knowledge and the challenges women frequently encounter in obtaining comprehensive information and support during menopause. The structural issues extend beyond viewing menopause and its treatment options in isolation; hence it becomes imperative to explore the broader landscape of women’s health and the methodologies employed in medical research.

One big issue when it comes to women's health is that a big lack of data is existent in general, and “[t]he specific effect on women of a huge number of existing medications is simply unknown” (Criado Perez, 2019, p. 198). One reason for that is that female bodies are not the same as male bodies and have differences in every tissue of the body while undergoing hormonal fluctuations divergent from males. Establishing connections between data based on research on men and applying the findings to women’s bodies is often impossible (Bredella, 2017). Changes of hormones, the possibility of pregnancies and other variables may also make research on women more expensive. Hence when research is conducted and no governmental regulations are provided, women tend to be excluded from studies since time and money are pressuring factors (Criado Perez, 2019).

Despite these inherent differences, it is often still normal practice to apply research on male’s bodies to female’s bodies. According to a 2007 paper, 80 to 90% of pharmacological articles are using only-male studies (Hughes, 2007). That leads to a significantly higher rate of drug adverse reactions in women compared to men, as noted by Tharpe (2011).

Another issue is, that even when there is research done where women are included, data is often not published sex-disaggregated or studies are not published at all when undesired outcomes occur (Hsu, 2010). Hence these studies are not useful for a further analysis of treatment’s effects on women.

This phenomenon can be attributed to the prevailing dynamics of medical research. Notably, pharmaceutical companies often serve as the primary financiers, prioritizing projects with the highest profit potential (Hsu, 2010). Given the substantial risks and high investments associated with medical research, the pharmaceutical industry tends to allocate resources selectively, favoring issues that promise greater financial returns. This discrimination may stem from concerns of being the first-mover or for developing support for only a limited affected population (Criado Perez, 2019). That extends to the topic of menopause, where, despite its impact on around half the global population, the diverse symptoms requiring an individualized treatment approach. Even though around half the world population is affected, symptoms are very different and hence require an individual approach (WHO, 2022).

While issues such as internalized patriarchy persist, one big struggle to get women’s topics more on the agenda is, that especially women are needed in leading positions to fund projects and research topics that are primarily

focusing on female topics such as menopause. Men are more likely to push and support males’ topics, women on the other hand more women’s topics, since people tend to relate better to topics regarding their own sex (Criado Perez, 2019). But there is still a huge gender-imbalance when it comes to positions in medical research and in leading positions in general (Laurent et al., 2017) as well as in clinical medicine and education (McKimm et al., 2015).

That issue is not only existing in medical research, unfortunately. As Milojević argues in her article “De-masculization of the Future and of Future Studies” (1999), there is a big discrepancy in the way people think about for example future issues, depending on which gender they represent. “Women [who] ‘come out’ as feminist or try to discuss women’s own views on future, [...] usually come under vicious attack” (Milojević, 1999). Views from women are often discussed as naïve, while writings from men are seen as realistic. That issue leads to a situation where “women’s topics” such as menopause are getting less attention across science and may not be the focus of support.

Table 2: Systemic causes explaining why women don't receive more support

Current Reality	Transformative Future: Information and Support for All
Lack of women in leading positions generally, as well as in the area of (medical) research.	More women work in STEM and medical research area, have the same chances to get into leading positions and hence push female topics as much as there are already male topics to balance the disequilibrium.
Limited and generally too little research has been done about women's health issues. Lack of governmental influence in health areas and women's health affairs.	Governments have an interest in supporting research regarding menopause, since it affects a big share of countries’ workforces and hence it is important for governments to care for all genders equally.
Women are generally often excluded from medical research.	Women need to be included in research and medical research, regardless of if it means more effort in the short-term, since it will pay off for individuals as well as societies in the longer run.

Worldviews on Women's Health and Menopause

What are values attached to women's health in general and menopause in particular?

One underlying worldview of menopause is connected to ageing. The hormonal changes and with it the loss of fertility is often regarded as the point where women “are getting old” with a decline of femininity (Sakdiah et al., 2015). Especially in a western socio-economic background, ageing is often seen as something negative, it might even be regarded as a collective burden due to a possible decrease in productivity (Inayatullah, 2003).

As already described on the litany level, there are diverse perspectives when it comes to ageing, depending on the region and socio-economic contexts. Western societies often depict ageing in a predominantly negative light, whereas Eastern societies tend to regard elderly in a more positive vein, connecting them to knowledge and wisdom (Wong, 2013).

The phenomenon of population ageing assumes paramount significance since it leads to global socio-economic transformations, particularly in Western societies and in Eastern and South-Eastern Asia (UN, 2020). As of 2020, the demographic cohort aged 60 years and above surpassed the population of children under the age of 5 (UN, 2020). Projections for 2050 anticipate a substantial augmentation, with the number of elderlies over 60 years constituting nearly 22% of the population, and with it, the number of women undergoing menopause and postmenopause.

Given the international dimensions of this demographic evolution, an analysis of the underlying worldviews is

imperative. It is essential to recognize that even when not all contributions of elderly can be measured in economic terms, their societal value remains inestimable, exemplified through roles in caregiving, voluntary endeavors, and the transmission of knowledge and cultural legacies to the younger generations (UNFPA, 2015). Therefore, it is an opportunity to see an ageing population not as a weakness, but simply as a chance to reflect upon patterns and pressures of society, and how we want to live together in future years.

This is especially important since otherwise a vicious circle begins, where everyone is getting frustrated. Older generations due to loneliness and exclusion as well as companies and younger generations, since former working patterns are not suitable anymore. Capitalist-based views on productivity may not be most suitable to apply anymore. Furthermore, Nosek et al. (2010) demonstrated that a heightened negativity in attitudes toward ageing and a correspondingly more favorable perspective regarding menopause exert an influence on the manifestation of menopausal symptoms. And on the other hand, the absence of provisions to support workers during menopause incurs an economic cost, in the United States for example exceeding 25 billion US dollars annually (Butler and Bloomberg, 2023). It would be beneficial for all to think about future adaptations such as better support options and more flexible working hours.

Additionally, gender equality remains elusive, a fact further underscored in the realm of health topics, as previously discussed. The stigma within healthcare exacerbates these disparities, and affects women as well as sexual minorities such as lesbians, gay men and bisexual women and men (Herek et al., 2007). This leads to a situation, where people of the named groups are more hesitant to ask for medical support, for example due to the chance of not being believed and not taken seriously while often being told, that physical pain is in their own mind. Often referred to as “Gender Pain Gap” describes a phenomenon, where pain and discomfort from women is often not taken seriously. Additionally, women get in comparison to men lesser examinations, and it takes more time for women to receive a diagnosis (Nurofen, 2023). On social media, women share their experiences on social media, for example under the hashtag #medicalmisogyny and form support groups to balance the lack of support options from the healthcare system offered.

Overcoming the challenges inherent in our current reality requires improvement in several key areas to pave the way for a transformative future with accessible medical support and closed knowledge gaps for all. Primarily, breaking free from the constraints of taboo topics is crucial. Research has shown the significance of open communication, emphasising the importance of being able to discuss health concerns with partners or friends for valuable support. Houston (2022) points out how relationships can thrive when people feel seen, heard, and valued. This is of great importance for women during menopause, to understand that nothing is wrong and that they simply are undergoing a natural process. The possibility to connect with other women who experience menopausal symptoms themselves may play an important role to cope with the changes (Yazdkhasti et al., 2015).

However, the influence of close relatives and friends is just the tip of the iceberg; the crux lies in ensuring that the healthcare system gives the same importance to female issues and pain as they do to male concerns. This necessitates a substantial boost in education, specifically addressing gender equality and women’s health. A revealing 2008 study brought to light a striking imbalance in medical textbooks, where male bodies were depicted three times more often than female bodies to illustrate universal body parts (Plataforma SINC, 2008). Additionally, a Canadian study from 2021 showed that medical schools are not sufficiently integrating women’s health topics in the curriculum and that “future physicians may not be consistently exposed to the full breadth of WH [Women’s Health]” (Anderson & Gagliardi, 2021). A promising initiative would involve better educating school children and university students about women’s health and menopause, serving as a foundational step towards fostering a more inclusive and informed health care system.

Furthermore, COVID-19 has not only shown the importance of health care for a society, but also of education being the basis for a transformative future. Hence why not using technological advancements such as AI to improve education (Mairal, 2022), as well as to make the analysis of data more efficient, maybe even to reduce gender-biases?

Table 3: Worldviews on Menopause

Current Reality	Transformative Future: Information and Support for All
Health issues are often not shared due to shame and pressure to function	Less taboo topics and a more public discussion regarding menopausal symptoms.
Ageing is often seen as a collective burden.	Equal access to health care. The use of technology for example for telehealth is a good option to reach more people.
Health issues are something everyone needs to take care of themselves, many tend to be taboo topics, especially when it comes to gynecological issues.	Seeing ageing as a natural development of the body. Educated social networks for support.
Male thinking dominates.	Seeing menopause and post-menopause as a chance to change the role of women in society and take new roles and responsibilities (e.g. knowledge sharing). Changing the narrative to seeing menopause as a stage of empowerment, wisdom and potential for personal growth.
Women's experience of pain or other unpleasant issues is often regarded as psychological.	Support from women for women.
	Women's health education is as important as males' health education.
	Gender equality regarding health topics.
	The world learned from COVID-19 and focuses more on improvement of health care systems, more financial resources and research.
	Doctors take women seriously.

Metaphors for Women in Menopause

A possible metaphor for women in today's medical knowledge and public discussion is a Russian matryoshka doll. The doll consists of several smaller dolls, each one a little tinier and hidden inside the larger one. Every doll looks slightly less like the other ones.

Currently, the doll – menopause – is known and explored superficially, but there is so much more to learn with each layer that is taken of, therefore in each study in medical research and each shared experience. It is such a wide topic, with so many individual experiences, hence depicted as the doll in its different shapes.

A transformative future, including support for women during menopause, could in the medium term be described as “autumn of womanhood”. This refers to seeing menopause more as a transitional period, a new phase that is not the end at all, but rather a new beginning. A chance to focus on and support oneself, as well as the people around in new ways. To become a new and very valuable member of society. And also, to start doing things one always wanted to do but haven't had the time or means to do. Hence another way of describing a transformative medium term is “harvest of wisdom”. During and after menopause is a time where women have gathered a lot of knowledge, which may support themselves, but also those around them.

With a change of mindset, this treasure of knowledge can be better used to support societies and give visibility

to women, their needs and hence improve both their well-being and transition into that new phase. Especially in ageing societies, it is particularly important not to ignore these valuable resources, but to support them. It is a process which leads to changes and opportunities - but only if society and the health care system together provide sufficient support.

That leads to the desired future, which could be described as “blossoming gardens of well-being” or an “egalitarian health landscape”. They represent a future, in which individual health care support is provided with a balanced distribution for all genders and sexual orientations alike. Everyone is taken seriously, since we need every single plant and flower in the garden - the society - to bloom, since it is benefitting everyone in the end.

Table 4: Metaphors for Women in Menopause
Transformative Future: Information and Support for All

Current Reality	Medium Term	Desired Future
Russian matryoshka doll with its different shapes and layers.	Autumn of womanhood.	Blossoming gardens of well-being.
	Harvest of wisdom.	Egalitarian health landscape.

Conclusion

In conclusion, women experiencing menopause often experience a variety of symptoms, showing its multifaceted nature and hence its complexity. However, societal attitudes and limited support contribute to the stigmatization of menopause, hindering women’s well-being as well as societies development in the longer run. Additionally, the current medical landscape, dominated by a lack of knowledge and effective treatment and support options, poses challenges for women experiencing menopausal symptoms.

Exploring the systematic causes with a causal layered analysis revealed a big issue when it comes to gender-inclusive medical research due to arguments such as women being too difficult to do research on and a lack of governmental regulations. That perpetuates challenges such as the gender pain gap or generally medical health support for women. The absence of women in leadership positions further hampers progress, since people tend to relate better to topics regarding their own sex, hence with a lack of women in leading roles, there is a lack of women's topics across the health care system.

Furthermore, worldviews on menopause vary globally with Western societies having a tendency to portray ageing negatively, while some Asian cultures associate it with knowledge and wisdom. Using culture and reflecting internationally upon patterns may help to reflect upon and change worldviews towards a transformative future with both more knowledge and understanding towards menopause and women.

But applying the CLA to the multifaceted issues around menopause not only revealed the complex interplay of biological, social, and cultural factors that shape this life stage, but also showed a path forward for transformative change. By diving into the deeper systemic causes of the challenges women face, CLA has highlighted the potential for innovative solutions that extend beyond medical approaches.

The analysis highlighted the need for a paradigm shift in how we perceive and address menopause. It reveals the urgent need to dismantle the stigma surrounding women's health and to foster a more inclusive and equitable medical landscape. By acknowledging the cultural variations in attitudes towards menopause, we can work towards a future where this natural transition is viewed as a source of wisdom and empowerment, rather than a decline.

Addressing the named issues require more than one action, starting with deconstructing taboos around women's health and menopause, fostering education, and promoting gender equality. Improved support structures and flexible working arrangements may enhance the well-being of women during menopause. Technological advancements, such as AI, offer opportunities such as more effective data-collection and analysis and improved education while reducing gender biases.

Utilizing CLA in this research was a transformative experience for me. The methodology’s ability to dismantle

the layers of an issue, revealing hidden complexities and interconnections, was both challenging and enlightening. It forced me to consider the broader systemic factors that contribute to the status quo as well as to think about future options regarding change. This deeper understanding has shifted my thought process from a focus on individual solutions to a wider consideration of societal structures and cultural norms. But it as well led to a renewed sense of optimism, since it revealed the potential for transformative change through analyzing and acting upon the root causes.

In summary, addressing the challenges of menopause and with it using the resource of healthy women for society requires a comprehensive approach encompassing societal attitudes and gender-biases, medical research, education, and support systems to create a transformative future that prioritizes the well-being of women experiencing this natural life transition. With that, menopause can also be seen as an opportunity: for women's empowerment, wisdom and potential for personal growth, which benefits whole societies in the long-term.

References

- Anderson, N.N. & Gagliardi, A.R. (2021). Medical student exposure to womens health concepts and practices: a content analysis of curriculum at Canadian medical schools. *BMC Medical Education* 21, 435. <https://doi.org/10.1186/s12909-021-02873-8>
- Bredella, M.A. (2017). Sex Differences in Body Composition. Mauvais-Jarvis, F. (eds) *Sex and Gender Factors Affecting Metabolic Homeostasis, Diabetes and Obesity*. *Advances in Experimental Medicine and Biology*, vol 1043. Springer, Cham. https://doi.org/10.1007/978-3-319-70178-3_2
- Butler, K. & Bloomberg. (2023). Failing to accommodate worker menopause costs the U.S. economy more than \$25 billion a year. *Fortune*. <https://fortune.com/2023/04/26/failing-accommodate-worker-menopause-costs-us-economy-25-billion-mayo-clinic/>
- Cahn, N. (2021). Justice for the menopause: a research agenda. *Columbia Journal of Gender and Law*
- Criado Perez, C. (2019). *Invisible Women Exposing Data Bias In A World Designed For Men*. Penguin Random House UK
- Davis, S.R., Lambrinoudaki, I., Lumsden, M., Mishra, G.D., Pal, L., Rees, M., Santoro, N. & Simoncini, T. (2015). Menopause. *Nature Reviews Disease Primers*. DOI: 10.1038/nrdp.2015.4
- Dintakurti, N., Kalyanasundaram, S., Jha, P. & Talaulikar, V. (2022). An online survey and interview of GPs in the UK for assessing their satisfaction regarding the medical training curriculum and NICE guidelines for the management of menopause. *Post Reproductive Health*. 2022;28(3):137–41. <https://doi.org/10.1177/20533691221106011>
- Herek, G.M., Chopp, R., Strohl, D. (2007). Sexual Stigma: Putting Sexual Minority Health Issues in Context. Meyer, I.H., Northridge, M.E. (eds) *The Health of Sexual Minorities*. Springer, Boston, MA. https://doi.org/10.1007/978-0-387-31334-4_8
- Hickey, M., Szabo, R. A. & Hunter, M. S. (2017). Non-hormonal treatments for menopausal symptoms. *BMJ* 2017; 359 :j5101 doi:10.1136/bmj.j5101
- Houck, J.A.A. (2003). "What Do These Women Want?" Feminist Responses to *Feminine Forever*, 1963-1980. *Bulletin of the History of Medicine* 77(1), 103-132. <https://doi.org/10.1353/bhm.2003.0023>
- Houston, C. (2022). Futures with Friends: The Birthing of Change. *Journal of Futures Studies*. <https://jfsdigital.org/2022-2/vol-27-no-2-december-2022/futures-with-friends-the-birthing-of-change/>
- Hsu, J. (2010). Dark Side of Medical Research: Widespread Bias and Omissions. <https://www.livescience.com/8365-dark-side-medical-research-widespread-bias-omissions.html>
- Hughes, R. N. (2007). Sex does matter: comments on the prevalence of male-only investigations of drug effects on rodent behaviour. *Behavioural Pharmacology* 18(7):p 583-589, November 2007. | DOI: 10.1097/FBP.0b013e3282eff0e8
- Ilankoon, I. M. P.S., Samarasinghe, K., Elgán, C. (2021). Menopause is a natural stage of aging: a qualitative study. *BMC Women's Health* (2021) 21:47, <https://doi.org/10.1186/s12905-020-01164-6>
- Inayatullah, S. (2019). Causal Layered Analysis A Four-Level Approach to Alternative Futures Relevance and use

- in foresight. *Futuribles*. <https://www.researchgate.net/publication/332706079>
- Inayatullah, S. (2003). Ageing: alternative futures and policy choices. *Foresight* 5,6 2003, pp. 8-17. MCB UP Limited. ISSN: 1463-6689
- Laurent, L. et al. (2017). Exploring equality in leadership roles. *Physician Leadership Journal* 4(3): 36-40
- Mairal, R. (2023). "What should the university of the future look like?". *On the Horizon*, Vol. 31 No. 1, pp. 62-70. <https://doi.org/10.1108/OTH-08-2022-0050>
- Mayo Clinic. (2022). Hormone therapy: Is it right for you? Mayo Clinic. <https://www.mayoclinic.org/diseases-conditions/menopause/in-depth/hormone-therapy/art-20046372>
- McKimm, J., Da Silva, A. S., Edwards, S., Greenhill, J. & Taylor, C. (2015). Women and leadership in medicine and medical education: International perspectives. *International Perspectives on Equality, Diversity and Inclusion*, Volume 2, 69-98. Emerald Group Publishing Limited. ISSN: 2051-2333/doi:10.1108/S2051-233320150000002005
- Medicines and Healthcare products Regulatory Agency. (2019). Hormone replacement therapy (HRT): further information on the known increased risk of breast cancer with HRT and its persistence after stopping. <https://www.gov.uk/drug-safety-update/hormone-replacement-therapy-hrt-further-information-on-the-known-increased-risk-of-breast-cancer-with-hrt-and-its-persistence-after-stopping>
- Memon, F., Jonker, L., & Qazi, A. (2014). Knowledge, attitudes and perceptions towards menopause among highly educated Asian women in their midlife. *Post Reproduction Health*, 20(4), 138–142. <https://doi.org/10.1177/2053369114557510>
- Milojević, I. (1999). De-masculization of the Future and of Futures Studies. *Metafuture*. <https://www.metafuture.org/the-de-masculization-of-the-future-and-of-futures-studies/>
- National Institute for Health and Care Excellence. (2015). Menopause: diagnosis and management. NICE guideline. <https://www.nice.org.uk/guidance/ng23>.
- National Institute on Aging. (2021). What Is Menopause? <https://www.nia.nih.gov/health/what-menopause>
- Nosek, M., et al. (2010). The effects of perceived stress and attitudes toward menopause and aging on symptoms of menopause. *Journal Midwifery Womens Health* 2010;55(4):328–34
- Nurofen. (2023). Gender Pain Gap Index Report Year 2. <https://www.nurofen.co.uk/static/nurofen-gender-pain-gap-index-report-2023-94a5039e65c1051240cc359d8bc2787a.pdf>
- O'Reilly, K., McDermid, F., McInnes, S. & Peters, K. (2022). An exploration of women's knowledge and experience of perimenopause and menopause: An integrative literature review. *Journal of Clinical Nursing* Wiley. DOI: 10.1111/jocn.16568
- Plataforma SINC (2008). Medical Textbooks Use White, Heterosexual Men As A 'Universal Model'. <https://www.sciencedaily.com/releases/2008/10/081015132108.htm>
- Sakdiah, M. H., Sulaiman, H. & Zulkefli, N.A.M. (2015). Views on ageing: a qualitative study among Malay middle-aged women in urban setting in Malaysia. *IJHSR*. 2015;5(4):248–56
- Schoenaker, D. A., Jackson, C. A., Rowlands, J. V. & Mishra, G. D. (2014). Socioeconomic position, lifestyle factors and age at natural menopause: a systematic review and meta-analyses of studies across six continents. *International Journal of Epidemiology* 43, 1542–1562
- Snyam, L. (2014). Menopause-related osteoporosis. *South African Family Practice* 56(3), 174–177. <https://doi.org/10.1080/20786204.2014.932549>
- Tariq, B., Phillips, S., Biswakarma, R., Talaulikar, V. & Harper, J. C. (2023). Women's knowledge and attitudes to the menopause: a comparison of women over 40 who were in the perimenopause, post menopause and those not in the peri or post menopause. *BMC Women's Health* 23:460 <https://doi.org/10.1186/s12905-023-02424-x>
- Tharpe, N. (2011). Adverse Drug Reactions in Women's Health Care. *Journal of Midwifery & Women's Health* 56, 205-13
- UNFPA. (2015). An ageing world. <https://www.unfpa.org/ageing#readmore-expand>
- United Nations. (2020). Government policies to address population ageing. United Nations Department of

- Economic and Social Affairs. Population Facts, No. 2020/1
https://www.un.org/development/desa/pd/sites/www.un.org.development.desa.pd/files/files/documents/2020/Oct/undesa_pd_2020_pf_government_policies_population_ageing.pdf
- United Nations. (2020). World Population Ageing 2020 Highlights. United Nations Population Division.
<https://www.un.org/development/desa/pd/news/world-population-ageing-2020-highlights>
- Wong, K. W. (2013). Futures of Ageing in Singapore. *Journal of Futures Studies*, March 2013, 17(3): 81-102.
<https://jfsdigital.org/wp-content/uploads/2013/10/173-A05.pdf>
- World Health Organization. (2022). Menopause. <https://www.who.int/news-room/fact-sheets/detail/menopause>
- Yazdkhasti, M., Simbar, M. & Abdi, F. (2015). Empowerment and coping strategies in menopause women: a review. *Iran Red Crescent Med Journal* 2015;17(3):e18944