



Association pour la santé environnementale du Québec
Environmental Health Association of Québec



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Report on

Gendered Perspectives

of

Multiple Chemical Sensitivity

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Multiple Chemical Sensitivity (MCS) is a condition characterized by heightened sensitivity to environmental toxins, at levels tolerated by most people [1]. Individuals with MCS may experience a range of symptoms that affect multiple bodily systems including respiratory, digestive, neurological, endocrine, muscular, or cardiovascular [2]. These effects, triggered by everyday substances like perfumes, cleaning products, and building materials, significantly disrupt daily life and compromise overall well-being [3]. There is a prevailing lack of awareness and societal stigma surrounding MCS, which significantly exacerbates the challenges experienced by individuals affected by the condition. This underscores the importance of not only addressing the physical symptoms, but also recognizing and mitigating the broader social and psychological implications of living with MCS.

Despite affecting individuals of all genders, MCS exhibits a pronounced prevalence among women [4,5,6]. In Canada, over 1.1 million people have a diagnosis of MCS, with 72% of diagnosed cases occurring in women [7]. This gender disparity prompts inquiry into potential biological mechanisms, such as female hormones impacting neural networks and the heightened sensitivity of the pituitary-adrenal system [8]. However, the lack of clinical biomarkers complicates MCS recognition and management, rendering it a contested illness [9,10]. Consequently, women with MCS encounter difficulties in accessing appropriate healthcare and support, exacerbating their challenges in navigating environments laden with pervasive environmental toxins.

The gender disparity in MCS prevalence rates raises important questions about the intersection of gender and environmental health, highlighting the need for a gender-sensitive approach to understanding and addressing the impacts of toxic exposures. We will explore the gender-based impact of MCS on women, examining how healthcare biases, societal norms, occupational exposures, and other factors contribute to the disproportionate burden faced by women with MCS. By shedding light on these issues, we aim to inform policy and advocacy efforts aimed at promoting gender equity in environmental health and ensuring that the needs of women with MCS are adequately addressed at local, national, and international levels.

Gendered experiences of stigma in healthcare

Women with MCS encounter gender-specific stigma within healthcare systems, characterized by skepticism, diagnostic disparities, and systemic barriers that impede access to appropriate care and support. Women seeking care frequently encounter healthcare professionals who lack understanding of their condition and tend to attribute their symptoms to psychological factors, resulting in referrals to mental health services instead of appropriate treatment. Women with MCS are less likely to receive a diagnosis, as evidenced by accounts of gender-biased care [11]. Even though a higher proportion of women report sensitivity to common chemicals associated with MCS, men are more likely to receive a diagnosis of MCS from healthcare



professionals [12]. This discrepancy raises questions about potential biases or shortcomings in the diagnostic process, as well as the possibility of gender-related factors influencing healthcare provider perceptions.

The disparity in diagnosis rates of MCS between genders has far-reaching consequences, leading to a cascade of challenges for affected women. Reduced access to timely treatment, worker's compensation, social support, and health insurance coverage exacerbates the already significant burden faced by women living with MCS. Furthermore, this disparity influences how affected women perceive themselves and how they are perceived by others. Many experience a profound loss of sense of self, feelings of insecurity, and self-doubt as a result of their struggles to obtain proper recognition of their condition [12]. Additionally, historical gender biases in healthcare perpetuate societal stereotypes and undermine the validity of women's health issues, further complicating the healthcare landscape for those with MCS [13]. This not only raises critical health equity issues but also contributes to delayed diagnosis, preventing access to appropriate care, and potentially subjecting affected individuals to harmful treatments in the interim [14]. Addressing these disparities is essential not only for ensuring equitable access to healthcare but also for validating the experiences and protecting the well-being of women living with MCS.

Risks in pregnancy and intergenerational impact

Pregnancy presents a unique set of challenges for women affected by MCS, as exposure to environmental toxins during this time can have significant implications for both maternal and fetal health. The intergenerational impact of MCS is a growing concern and a subject of ongoing research, with maternal exposure to environmental toxins potentially predisposing offspring to similar sensitivities and health issues. Research has identified a genetic predisposition in susceptibility to environmental sensitivities [15]. Additionally, maternal exposure to toxins during pregnancy can influence fetal development and increase sensitivity to environmental stimuli [15]. Research also suggests that women with chemical sensitivities are more likely to have a child with autism or ADHD, and these children are more likely to have allergies, infections, sensitivities, and reactions to drugs [16].

Moreover, the intergenerational implications of MCS weigh heavily on women, as they often assume disproportionate caregiving responsibilities within families. Balancing caregiving duties with managing MCS symptoms can be physically and emotionally taxing, leading to heightened levels of stress, fatigue, and feelings of social isolation. Additionally, women with MCS frequently encounter challenges in accessing reproductive health services from healthcare providers who understand their condition, which not only undermines their autonomy and informed decision-making, but perpetuates disparities in healthcare access and outcomes.



Intersectionality of SES and gender

The intersectionality of socioeconomic status and gender underscores the heightened vulnerability of women from lower socioeconomic backgrounds to the detrimental impacts of environmental toxins, particularly evident in the context of MCS. Research indicates a notable trend towards decreased MCS prevalence with increasing household income, highlighting the impact of socioeconomic status on the manifestation of MCS [17]. As a result, women from low-income backgrounds are disproportionately affected by the adverse effects of environmental toxins, perpetuating their marginalization and limiting their opportunities for economic mobility.

Women from lower-income backgrounds face disproportionate challenges when dealing with MCS due to their limited access to resources and healthcare. The financial constraints associated with poverty often hinder their ability to afford MCS-friendly products, such as chemical-free personal care items or air purifiers. Additionally, women from low-income households may struggle to access private healthcare services or alternative treatments, further exacerbating their difficulties in managing MCS. Furthermore, poverty may compel these women to reside in housing environments with heightened levels of chemical exposure. Substandard housing with poor ventilation, mould, chemical contaminants, and other environmental triggers can significantly worsen MCS symptoms. This perpetuates a cycle of poverty and ill health, as these individuals continue to struggle with managing their condition in inadequate living environments.

Influence of gendered marketing and occupational exposure

Women with MCS face unique challenges due to disproportionate exposure to environmental toxins and gender-specific marketing practices. Gendered marketing strategies and targeted advertising for personal care products pose significant risks for women with MCS, as fragrances, preservatives, and other chemicals prevalent in these items can trigger debilitating symptoms. The lack of transparency regarding ingredient disclosure further compounds these risks, making it challenging for women with MCS to identify safe and suitable products in a market saturated with potentially harmful chemicals.

Conforming to cultural standards of beauty often involves wearing conventional makeup, which can have harmful effects on health and exacerbate symptoms for women with MCS [12]. The presence of endocrine-disrupting chemicals (EDCs) in cosmetics presents a substantial threat to women, especially those with MCS. Phthalates, parabens, and other EDCs commonly found in beauty products can worsen symptoms and contribute to chronic health issues [18]. Given the heightened sensitivity of individuals with MCS to chemical exposures, regulatory measures must be strengthened to restrict the use of EDCs in cosmetics and ensure comprehensive labeling to empower informed consumer choices.



Moreover, women with MCS are disproportionately represented in industries with high chemical exposure, such as cleaning, beauty, and healthcare. Regular contact with hazardous chemicals in these occupations exacerbates their vulnerability to environmental toxins. To protect the health and well-being of women with MCS in these industries, addressing occupational disparities and implementing robust workplace accommodations are essential steps.

Legal and Policy Gaps

Despite legal recognition as a disability in some jurisdictions [19], women with MCS continue to encounter systemic barriers to accommodations and protections. These barriers stem from a combination of factors, including limited research on MCS and a lack of awareness among policymakers and the general public. As a result, policy responses to MCS-related issues are often inadequate, leaving women with MCS marginalized and without access to essential resources and support services.

To address these challenges, it is crucial to implement gender-specific policy reforms tailored to the unique needs of women with MCS. These reforms should prioritize improving access to accommodations, healthcare services, and social support networks. Additionally, increased funding for research on MCS is essential to better understand its causes, symptoms, and effective treatment options. By addressing these legal and policy gaps, society can work towards ensuring the full inclusion and participation of women with MCS, ultimately promoting their health, well-being, and overall quality of life.

Conclusion

The gendered effects of environmental toxins on individuals with MCS underscore the urgent need for comprehensive and inclusive approaches to address the unique challenges of women. The disparities faced by women with MCS, from heightened vulnerability to limited access to resources and healthcare, demand targeted interventions and systemic reforms. By recognizing and addressing the intersectional factors that contribute to gender disparities in MCS experiences, policymakers, healthcare providers, and advocacy organizations can work collaboratively to promote gender-sensitive policies, enhance public awareness, and empower women with MCS to lead healthier lives. It is imperative to prioritize gender-specific approaches to achieve equity and justice for women with MCS, fostering a society that values and accommodates diverse needs and experiences. Only through concerted efforts and inclusive strategies can we effectively address the gendered impacts of environmental toxins on individuals with MCS and create a more just and equitable future for all.



References

1. Dantoft TM, Andersson L, Nordin S, Skovbjerg S. Chemical intolerance. *Curr Rheumatol Rev.* 2015;11(2):167–84.
2. Gibson PR. Multiple Chemical Sensitivity, Culture and Delegitimization: A Feminist Analysis. *Feminism & Psychology.* 1997 Nov 1;7(4):475–93.
3. Driesen L, Patton R, John M. The impact of multiple chemical sensitivity on people's social and occupational functioning; a systematic review of qualitative research studies. *J Psychosom Res.* 2020 May;132:109964.
4. Fitzgerald DJ. Studies on Self-Reported Multiple Chemical Sensitivity in South Australia.
5. Steinemann A. National Prevalence and Effects of Multiple Chemical Sensitivities. *Journal of Occupational and Environmental Medicine.* 2018 Mar;60(3):e152.
6. Nadeau G, Lippel K. From individual coping strategies to illness codification: the reflection of gender in social science research on Multiple Chemical Sensitivities (MCS). *International Journal for Equity in Health.* 2014 Sep 10;13(1):78.
7. Statistics Canada, Canadian Community Health Survey, 2020, online: Statistics Canada
8. Hojo S, Mizukoshi A, Azuma K, Okumura J, Mizuki M, Miyata M. New criteria for multiple chemical sensitivity based on the Quick Environmental Exposure and Sensitivity Inventory developed in response to rapid changes in ongoing chemical exposures among Japanese. *PLoS One.* 2019 Apr 26;14(4):e0215144.
9. De Luca C, Raskovic D, Pacifico V, Thai JCS, Korkina L. The Search for Reliable Biomarkers of Disease in Multiple Chemical Sensitivity and Other Environmental Intolerances. *Int J Environ Res Public Health.* 2011 Jul;8(7):2770–97.
10. Labarge X, McCaffrey R. Multiple Chemical Sensitivity: A Review of Theoretical and Research Literature. *Neuropsychology review.* 2001 Jan 1;10:183–211.
11. Briones-Vozmediano E, Espinar-Ruiz E. How do women suffering from multiple chemical sensitivity experience the medical encounter? a qualitative study in Spain. *Disabil Rehabil.* 2021 Apr;43(8):1110–20.
12. Gibson PR, Placek E, Lane J, Brohimer SO, Lovelace ACE. Disability-Induced Identity Changes in Persons With Multiple Chemical Sensitivity. *Qual Health Res.* 2005 Apr 1;15(4):502–24.
13. Gibson PR. Multiple Chemical Sensitivity, Culture and Delegitimization: A Feminist Analysis. *Feminism & Psychology.* 1997 Nov 1;7(4):475–93.



14. Murphy M. The “Elsewhere within Here” and Environmental Illness; or, How to Build Yourself a Body in a Safe Space. *Configurations*. 2000;8(1):87–120.
15. Cui X, Lu X, Hiura M, Oda M, Miyazaki W, Kato T. Evaluation of Genetic Polymorphisms in Patients with Multiple Chemical Sensitivity. *PLoS One*. 2013 Aug 13;8(8):e73708.
16. Heilbrun LP, Palmer RF, Jaen CR, Svoboda MD, Perkins J, Miller CS. Maternal Chemical and Drug Intolerances: Potential Risk Factors for Autism and Attention Deficit Hyperactivity Disorder (ADHD). *The Journal of the American Board of Family Medicine*. 2015 Jul 1;28(4):461–70.
17. Fitzgerald DJ. Studies on Self-Reported Multiple Chemical Sensitivity in South Australia. *Environ Health*. 2008;8(3):33.
18. Ripamonti E, Alliffranchini E, Todeschi S, Bocchietto E. Endocrine Disruption by Mixtures in Topical Consumer Products. *Cosmetics*. 2018 Dec;5(4):61.
19. Canadian Human Rights Commission, Policy on Environmental Sensitivities, online: Canadian Human Rights Commission