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Flaws of the INSPQ Paper and Its Impact on Harm to the MCS Population

Background

Released in French in June 2021 by the National Public Health Institute of Quebec, the report on the pathophysiological mechanisms of Multiple Chemical Sensitivity (MCS) investigates the possible causes of MCS through a literature review. Despite the numerous methodological flaws, the report is today used as a reference by health professionals as well as families and friends of individuals with MCS, discrediting the reality of those affected by MCS.

Key Notable Flaws in the INSPQ Report:

Ethical Issues

The INSPQ report presents several limitations. The most significant is perhaps that the author of the report also served as the external reviewer of Chapter 11 (which explores the hypothesis of chronic anxiety as a causal factor of MCS). This conflict of interest can compromise the report's objectivity.

Lack of Inclusion of Expertise and Lived Experiences

The report does not include the expertise of specialists in MCS nor the lived experiences of individuals with MCS, which are key components of comprehensive research. Excluding these perspectives can lead to a lack of understanding and misrepresentation of the condition.

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Methodology:

Limited and outdated data: The report bases its conclusions on insufficient available data and fails to take into account the limitations and gaps in the research. Relying on limited and outdated data does not allow for the generalization of the conclusions.

Example: In Chapter 5, all studies reviewed were published before 2000 (*"Toutes les études réalisées en lien avec cette hypothèse ont été publiées avant 2000"*) and show a significant gap in scientific evidence. Here, the inability to draw firm conclusions about the neurological causes of MCS should not rule out this hypothesis (*"À l'époque, aucun mécanisme proposé pour soutenir cette hypothèse ne pouvait être validé ni invalidé"*). Additionally, Chapter 5 draws conclusions from animal studies, which may not fully reflect human physiology and MCS (*"Sur le plan neurologique, les différentes études animales réalisées avant 2000 et les données cliniques humaines disponibles pour la même période ont permis de proposer des mécanismes pouvant sous-tendre la SCM"*).

Study variability: Furthermore, the selected studies vary considerably in terms of design, methodologies, and populations. This variability is not taken into account, leading to inconsistent findings and conclusions.

A conclusion of the INSPQ: Chronic Anxiety as a Causal Factor of MCS

Contradictory conclusions

While the INSPQ recognizes chronic biological disturbances, it also denies the role of chemical exposures. This highlights an inconsistency in the report's conclusions.

Overemphasis on Anxiety

In conclusion, the INSPQ report puts too much emphasis on psychological factors. By overemphasizing these factors, it creates a bias in interpretation, thereby dismissing environmental (and/or other) factors that play a significant role.

Lack of specific evidence linking chronic anxiety to MCS

Chapter 12.2 discusses the relationship between chronic stress and mood and anxiety disorders. It describes the mammalian defense system to explain MCS reactions. However, the report makes a causal assumption that chronic anxiety is a primary cause of MCS without sufficient evidence.



Sociodemographic generalizations

By linking the higher prevalence of MCS in women to the higher prevalence of anxiety in women, the report draws oversimplified conclusions. *"Les femmes sont plus souvent atteintes de SCM, et ce dans tous les groupes d'âge, reflétant ainsi d'autres données publiées sur les maladies mentales."*

Though the INSPQ report highlights the significant research gaps and the complexity of MCS, its methodology and conclusions question its accuracy. This report is widely used as a reference by health professionals, researchers, and families and friends of individuals with MCS. By oversimplifying the condition as a mental health issue, it further complicates the struggles of individuals living with this condition.

Impacts of the INSPQ Report on the MCS Population

Since its publication, the MCS population has faced significant backlash and increased mental health decline:

Increased stigma

If individuals with MCS were already experiencing stigma due to a lack of awareness, it is even more prevalent today as some firmly believe mental health is the main cause. As such, individuals with MCS are often denied accommodation, experience retaliation, and face increased conflict.

Loss of social support

The psychological framing of the condition further increases the social isolation of individuals with MCS, as they often feel misunderstood and excluded from their social circle who refuse to believe the environmental causes of their symptoms.

Loss of access to adequate care

Misdiagnosis and inadequate treatment often occur as healthcare professionals reference the report to diagnose anxiety. This INSPQ conclusion about the etiology of MCS due to anxiety was made despite no increased prevalence of mental illness before patients became ill. However, anxiety generally occurs after they experience symptoms when exposed, and the anxiety improved when they were no longer exposed (Steinemann, 2003). Creating a chemical-free living space and chemical avoidance were rated as helpful: out of 101 treatments, by 95% of 917



patients who met the clinical case criteria of MCS. Psychotherapy for MCS, and particularly psychotherapeutic drugs, were rated as more harmful than helpful by the same sample (Gibson, 2003).

Loss of income

By qualifying the condition as a mental health issue, individuals with MCS cannot request accommodation at their workplace. Coupled with stigma, individuals are often forced to quit their jobs, resulting in poverty.

Onset of anxiety and depression

The accumulation of stigma, social exclusion, and loss of income contributes to the development of severe depression and a sense of hopelessness, leading individuals with MCS to consider suicide or medical assistance in dying.

Conclusion

Despite its initial intention to clarify the causes and mechanisms of MCS, the INSPQ report on MCS fails in several critical areas. The report's contradictory conclusions and oversimplified causal assumptions between chronic anxiety and MCS limit its credibility and scientific accuracy.

By framing MCS as a mental health issue, the report inadvertently amplifies the difficulties faced by individuals with MCS. This has led to increased stigma, social isolation, misdiagnosis, inadequate treatment, and significant economic and psychological distress. This is further exacerbated by the widespread use of the report among health professionals, researchers, and the general public, leading to real-world tragic consequences.

Three years after its publication, it is imperative that a rigorous multidisciplinary approach to research, integrating recent findings and including participants with MCS in Canada, be undertaken to truly reflect the complexity of the causes and mechanisms of MCS.



References

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