

Should menstrual cycle data be collected during suspected suicide autopsies?

Angie Hoskin, Sarah K McKenzie, Emily B Cooney, Gabrielle Jenkin

Suicide is a global health concern that necessitates comprehensive, critical, compassionate and evidence-based approaches.¹ Gender differences are stark in suicide trends in New Zealand and globally. While men die by suicide at greater rates, women have higher rates of non-fatal suicide attempts.² Despite these reported differences, research focussed on suicidal behaviours among women remains scarce. Considering the release of the New Zealand Government's *Women's Health Strategy* in 2023, it seems timely to reconsider potential contributions of female biology to key health outcomes such as suicidal behaviours.³

One area that lacks exploration is the relationship between menstruation and suicide. For many people, physical, psychological and social wellbeing are frequently, and for some, catastrophically, disrupted by menstrual cyclicality.⁴ Common symptomatic complaints include pain, dysmenorrhea, anxiety, depression and fatigue, which often signal conditions such as endometriosis, premenstrual syndrome and premenstrual dysphoric disorder (PMDD).⁵ PMDD has been associated with post-traumatic stress disorder,⁶ decreased quality of life and a significantly heightened risk of suicide.⁷

Menstrual health is under-studied, under-served and stigmatised in many countries, including New Zealand. The stigma related to menstruation varies by culture, and in many cultures can lead to shame, isolation and marginalisation, all of which are known risk factors for suicidal behavior.⁸ The lack of scientific literature on menstruation and suicide reflects the historical under-representation of research into issues that predominantly affect women. The relative dearth of such research leads to delays in diagnoses, inadequate pain management and insufficient treatment.⁹ This can result in scientific inaccuracies, adverse health outcomes and healthcare cost ineffectiveness,⁹ and compounds gender inequities in health outcomes and health service access.

Few studies explore the menstrual status of individuals who die by suicide. To our knowledge, with the exception of one study,¹⁰ all research in the past 30 years on this topic originates solely from India. A critical opportunity for focus is the nature of data collected by pathologists at autopsies. Autopsy findings, when analysed in aggregate, can offer an understanding of community healthcare needs, and can reveal disease patterns within specific populations, illness disparities and critical factors that may inform public health decisions and suicide prevention strategies.¹¹

During the scoping phase of a PhD, conversations had with pathologists nationally and internationally have revealed significant variability in the collection of menstrual cycle data during autopsies. Some pathologists reported routinely including menstrual cycle status in their autopsy practice, whereas others considered collection of this data irrelevant to the cause of death, and yet some other pathologists reported never considering it. Interestingly, several global pathologists noted they had observed a trend of menstruation present in suicide cases.

Such variability may reflect broader differences between countries in how deaths are investigated, and the role of a pathologist within disparate judicial health systems. In the New Zealand coronial system, all suspected suicide deaths are referred to the coroner, which retains information that the pathologist collects as part of the investigation to determine if the death was a suicide. As not all countries take this approach, differences in death examination may underlie the variability in menstruation status data collection practices. However, if this were the case, then practices within countries with coronial systems should be relatively homogenous regarding menstruation data collection. Anecdotally, this is not what we observed.

To understand this discrepancy in practice further we initiated an international survey of pathologists asking about their professional views

and practices, not limited to confirmed suicide cases but inclusive of all autopsy procedures where a menstrual cycle may be present. The survey has received over 100 responses from pathology professionals with experience in around 60 countries. Initial survey findings suggest that the intersection between menstruation and suicide is poorly understood. We believe that the diversity of pathology methods in investigating menstrual phase status reflects the systemic ambivalence present regarding menstruation in health research and in general.

As we invite discussion on this under-studied

topic, we emphasise the importance of empirical research. The absence of comprehensive, rigorous studies on the menstrual cycle and suicide warrants further exploration. We must inquire whether scientific research can confirm or disprove the potential role of the menstrual cycle in deaths by suicide. In a rapidly evolving healthcare landscape, research on the menstrual cycle and suicide can inform evidence-based healthcare and suicide prevention strategies. We call on thoughtful discourse on this vital yet under-examined subject.

COMPETING INTERESTS

Angie Hoskin received a doctoral scholarship from the University of Otago for the manuscript.

AUTHOR INFORMATION

Ms Angie Hoskin: PhD Student, Suicide and Mental Health Research Group, Psychological Medicine, University of Otago, Wellington, New Zealand.

Dr Sarah K McKenzie: Senior Research Fellow, Suicide and Mental Health Research Group, Psychological Medicine, University of Otago, Wellington, New Zealand.

Dr Emily B Cooney: Senior Lecturer, Psychological Medicine, University of Otago, Wellington, New Zealand.

Dr Gabrielle Jenkin: Associate Professor, Suicide and Mental Health Research Group, Psychological Medicine, University of Otago, Wellington, New Zealand.

CORRESPONDING AUTHOR INFORMATION

Ms Angie Hoskin: PhD Student, Suicide and Mental Health Research Group, Psychological Medicine, University of Otago, Wellington, New Zealand.
E: angie.hoskin@postgrad.otago.ac.nz

URL

<https://nzmj.org.nz/journal/vol-137-no-1592/should-menstrual-cycle-data-be-collected-during-suspected-suicide-autopsies>

REFERENCES

- World Health Organization. Suicide worldwide in 2019: Global Health Estimates [Internet]. Geneva: World Health Organization; 2013 [cited 2023 Dec 6]. Available from: <https://iris.who.int/bitstream/handle/10665/341728/9789240026643-eng.pdf>.
- Saunders KE, Hawton K. Suicidal behaviour and the menstrual cycle. *Psychol Med*. 2006 Jul;36(7):901-12. doi:10.1017/S003291706007392.
- Minister of Health. Women's Health Strategy [Internet]. Wellington: Ministry of Health; 2023 [cited 2023 Nov 20]. Available from: <https://www.health.govt.nz/system/files/documents/publications/womens-health-strategy-oct23.pdf>.
- Critchley HOD, Babayev E, Bulun SE, et al. Menstruation: science and society. *Am J Obstet Gynecol*. 2020 Nov;223(5):624-664. doi:10.1016/j.ajog.2020.06.004.
- Gopalan P, Albertini E, Amin P, Curley M, Glance J, Kalia S. Chapter 18: Trauma and Reproductive Health. In: Hutner LA, Catapano LA, Nagle-Yang SM, Williams KE, Osborne LM, editors. *Textbook of Women's Reproductive Mental Health*. 1st ed. Washington, DC: American Psychiatric Association Publishing; 2022. p.483-518.
- Pilver CE, Levy BR, Libby DJ, Desai RA. Posttraumatic stress disorder and trauma characteristics are correlates of premenstrual dysphoric disorder. *Arch Womens Ment Health*. 2011 Oct;14(5):383-93. doi: 10.1007/s00737-011-0232-4.
- Prasad D, Wollenhaupt-Aguiar B, Kidd KN, et al. Suicidal Risk in Women with Premenstrual Syndrome and Premenstrual Dysphoric Disorder: A Systematic Review and Meta-Analysis. *J Womens Health (Larchmt)*. 2021;30(12):1693-1707. doi: 10.1089/jwh.2021.0185.
- Chapple A, Ziebland S, Hawton K. Taboo and the different death? Perceptions of those bereaved by suicide or other traumatic death. *Sociol Health Illn*. 2015;37(4):610-625. doi:10.1111/1467-9566.12224.
- Merone L, Tsey K, Russell D, Nagle C. Mind the Gap: Reporting and Analysis of Sex and Gender in Health Research in Australia, a Cross-Sectional Study. *Womens Health Rep (New Rochelle)*. 2022 Sep 12;3(1):759-767. doi:10.1089/whr.2022.0033.
- Vanezis P. Deaths in women of reproductive age and relationship with menstrual cycle phase. An autopsy study of cases reported to the coroner. *Forensic Sci Int*. 1990 Aug;47(1):39-57. [https://doi.org/10.1016/0379-0738\(90\)90284-6](https://doi.org/10.1016/0379-0738(90)90284-6).
- Warner M, Braun PA, Brown PA. Public Health Impact: How Medicolegal Death Investigation Data Help the Living. *Acad Forensic Pathol*. 2017 Dec;7(4):xiv-xvi. doi: 10.1177/192536211700700405.