



The British Student Doctor is an open access journal, which means that all content is available without charge to the user or their institution. You are allowed to read, download, copy, distribute, print, search, or link to the full texts of the articles in this journal without asking prior permission from either the publisher or the author.

bsdj.org.uk



/thebsdj



@thebsdj



@thebsdi

Journal DOI 10.18573/issn.2514-3174

Issue DOI 10.18573/bsdj.v8i1



The British Student Doctor is published by The Foundation for Medical Publishing, a charitable incorporated organisation registered in England and Wales (Charity No. 1189006), and a subsidary of The Academy of Medical Educators.

This journal is licensed under a Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International License. The copyright of the article text remains with the author, while **The Foundation for Medical Publishing** retains the right to publish the Version of Record. A citation should be made when any article is quoted, used or referred to in another work.



The **British Student Doctor** is an imprint of **Cardiff University Press**, an innovative open-access publisher of academic research, where 'open-access' means free for both readers and writers.

cardiffuniversitypress.org

Contents

DISCUSSION STARTERS

1

Rafat
The Looming Past of Lobotomies: A Dive into the Exploitation of Women

The Looming Past of Lobotomies: A Dive into the Exploitation of Women

DISCUSSION STARTERS

AUTHOR

Megan Rafat

King's College London

Address for correspondence: King's College London Strand London WC2R 2LS United Kingdom

Email: mrafaaat1212@gmail.com

No conflicts of interest to declare.

Accepted for publication: 13.10.2025

ABSTRACT

In the Edwardian era, psychiatrists birthed the "Lobotomy", a groundbreaking yet haunting medical intervention. This essay scrutinises the gender bias inherent in lobotomy procedures and its profound implications. Lobotomy, prevalent in the 1930s, involved severing brain lobe nerves. Despite male predominance in schizophrenia, the majority of lobotomies worldwide targeted women. This bias, rooted in societal perceptions and patriarchal influences, is evident in specific cases like Rosemary Kennedy and Helen Mortensen, showcasing the distressing consequences for women. Ethically, lobotomies raise concerns about informed consent, patient autonomy, and disregard of empirical evidence. Post-lobotomy, women faced enduring disabilities and societal stigmas and lacked vital support systems. The shift from lobotomies to psychopharmacology underscores the need for evidence-based, holistic mental healthcare. In conclusion, understanding lobotomy's historical legacy underscores the call for ethical oversight, evidence-based interventions, and gender-equitable healthcare. By embracing these principles, we pave the way for compassionate, evidence-driven healthcare.

INTRODUCTION

Even today, our health systems continue to struggle with the enigmatic legacy of psychiatry's past. Within the Edwardian landscape, neuropsychiatrists wield their scalpels, venturing into daring surgical procedures. It is in this context that the term "Lobotomy" was coined, marking a groundbreaking medical endeavour that still haunts the mental health field today.

Lobotomy, a psychosurgical procedure that became prevalent in the 1930s, involved severing connections in the frontal lobes of the brain to modify behaviour and emotional responses and was primarily used to treat severe psychiatric disorders such as schizophrenia, mania, and bipolar disorder. (1, 4) Psychosurgery included various techniques, such as topectomy, leucotomy, and injections of sclerosing agents, all based on the belief that the frontal lobe played a central role in mental illness. (2, 3) The frontal lobes are responsible for complex cognitive functions, including executive function, attention, memory, language, personality, and self-awareness, meaning disruptions in this area can profoundly affect behaviour and cognition. (5, 6)

Historically, psychosurgery evolved from early trephinations in prehistoric populations to the pioneering work of Gottlieb Burckhardt in 1888, who first attempted targeted brain lesions to alleviate mental illness. (9–13) Egas Moniz later refined the technique in the 1930s with frontal lobe ablation, and Walter Freeman popularised bilateral prefrontal lobotomy in the 1940s. U.S. Freeman believed the procedure alleviated pathological emotional content by severing connections between the frontal lobes and the thalamus. (14) By the early 1950s, tens of thousands of lobotomies had been performed, before the practice sharply declined with the introduction of antipsychotic medications. (11, 12)

Psychosurgery remained in practice for decades, with an estimated 414 procedures annually in the US, compared to 200 to 250 in the UK and 83 in Australia – adjusted for population, the UK had twice the US rate, and Australia three times. (7)

This discussion primarily draws on US examples, such as Stockton State Hospital, due to the greater availability of detailed case documentation in the published literature. Although individual, gender-specific case reports are limited in the scientific record, early British series, such as those conducted at the Burden Neurological Institute and by McKissock at Atkinson Morley Hospital, demonstrate that lobotomy was similarly employed as a treatment for severe psychiatric illness. (8)

Psychiatrists have often been negatively portrayed in the media, (15) namely in movies such as "One Who Flew Over The Cuckoo's Nest" or psychologist Rosenhans' "Thud Experiment", depicted as reckless and selfish

scientists corrupted by their need for knowledge, disregarding and compromising patient care. However, it is crucial to consider the social contexts in which these perceptions developed. During the 19th century, the issue of an increasing number of mentally ill patients in Britain (and worldwide) without effective treatments became evident. With the absence of psychotropic drugs until the 1950s, long-term hospitalisation was the primary option, often accompanied by physical restraints such as strait jackets and isolation in padded cells. (16, 17) According to a 1937 study in the United States, over 450,000 people were confined in 477 asylums with nearly half remaining in hospital for five years or more. (13) The prevalence of tertiary syphilis, as well as the influx of World War I victims with psychological trauma, added to the burden of mental illness, creating a backdrop in which any treatment that promised the possibility of a cure, irrespective of the means, could find approval. (12)

With treatments like insulin shock therapy and premature ECT similarly being controversial (18, 19) but later refined to be more effective and humane procedures, Psychiatrists at the time were predisposed to believe other radical interventions like lobotomy could be a potential solution.

Notably, lobotomies' portrayal in media, both in fictional (Plaths' "The Bell Jar" or Woodruffs' "The Lobotomist's Wife") and educational contexts (2008 documentary "The Lobotomist"), has exhibited a disproportionate focus on one specific demographic: women. Even noted by a neurosurgeon at the time who sought to justify the gap: "One of the criteria for surgery on patients has been disturbed behaviour, and female patients are generally more disturbed on a behaviour level." (20, 21)

Gender

To explore the gender bias evident in lobotomy procedures, it is necessary to dissect the concept of gender. Gender encompasses social relationships, roles, behaviours, attributes, and opportunities based on power differentials. (21) In medical procedures, gender bias refers to unequal treatment and gender-based outcomes within healthcare settings. (20) Such discrepancies not only pose significant obstacles but also have detrimental effects on patients' overall healthcare.

Gender bias in medical research and clinical practice can manifest in two significant ways. Firstly, clinicians and researchers often assume that disease risks and clinical outcomes are uniform in both sexes, overlooking substantial sex differences. (22) Certain diseases, such as stroke and urinary incontinence, disproportionately affect women, resulting in a more significant disease burden for them. (23, 24) Women who smoke the same number of cigarettes as men are 20% to 70% more likely

to develop lung cancer. (23, 25) Moreover, diseases may present differently in men and women, leading to varied signs, symptoms, and outcomes. Cardiovascular disease may exhibit dissimilarities between genders, influencing how it is diagnosed and treated. (23, 26, 27) Secondly, gender bias influences how physicians appraise and treat patients' complaints. (22)

Gender disparities in the mental health field can start early, in the process of research, leading to significant gaps in understanding and providing appropriate care for women. Women of childbearing age often face exclusion from biomarker studies and drug trials due to concerns about potential harm to the foetus. (28) A review of 51 drug trials revealed that 18% excluded fertile women, 51% excluded pregnant women, and 35% excluded breastfeeding women (29). Consequently, there is a minimal evidence base for pregnant women and those considering pregnancy, despite 5% of pregnant women using selective serotonin reuptake inhibitor (SSRI) antidepressants. (29) This exclusion results in leaving women and healthcare providers with inadequate guidance for managing mental health conditions during this critical life stage.

Gender disparities in the use of lobotomy were strikingly consistent across countries. In the United States, Stockton State Hospital's lobotomy programme reported that 205 of 245 procedures (84%) performed from 1947 onwards were on women, despite more men being institutionalised and diagnosed with schizophrenia one of the key indications for the surgery (14). Similar trends were evident internationally. Across France, Switzerland, and Belgium between 1935 and 1985, 84% of 1,340 patients who underwent the procedure were women (30). In Sweden's Umedalen State Mental Hospital, women accounted for 61.2% of 771 lobotomies performed between 1947 and 1952 (31). In Brazil, medical records from 1941 to 1956 at the Juquery Hospital Complex showed that over 95% of lobotomised patients were women, even though men represented the majority of admissions (32).

Gender bias in lobotomies

The examination of the disproportionate number of women who underwent lobotomies sheds light on a troubling aspect of medical history marked by gender bias and societal attitudes towards women's mental health. During the peak of lobotomy's popularity, statistics revealed a significant overrepresentation of women among patients subjected to this invasive procedure, evidenced by Stockton Hospital, where they lobotomised six women for every one man, yet this cannot be attributed to the gender distribution, as men slightly outnumbered women. (33). Although Stockton may be a somewhat extreme case of physicians' tendency to lobotomise more women than men, this tendency was

nonetheless widespread as showcased above. (34)

Women's emotions and behaviours were often misunderstood and pathologised, leading to an increase in medical interventions to address what was considered 'abnormal'. The need for doctors to 'maintain order' in the hospital was found to be a frequent justification for lobotomies; according to one patient's record, her 'strange behaviour', primarily her conflicted feelings about childcare, had a role in her doctors' choice to lobotomise her. (14)

It is interesting to note that these gender disparities were not discernible for other interventional psychiatric treatments. Women and men received electroconvulsive therapy at the same rate throughout the same period. (14) This could be due to the after-effects of lobotomy which include behaviours more in keeping with traditional subservient female gender roles. Prevailing gender norms played a role, as women were expected to conform to specific standards, and any deviation from these norms was met with suspicion. The medical profession, dominated by male practitioners, may have further perpetuated this bias, as male doctors held significant authority in diagnosing and treating mental health issues, leading to a preference for lobotomies as a seemingly convenient solution. Doctors' disinclination to lobotomise men arose out of contradictions between their conceptions of proper male gender roles and the biological consequences of the intervention itself consequences that were unique to lobotomy and thus led to a unique role for gender in the context of this treatment. (33)

One such consequence was the mental state dubbed by Freeman as a "Surgically induced childhood". Stockton physicians viewed this return to childhood as relatively consistent with femininity and, thus, as a restoration of how things should be. (33) This childlike quality was a desirable outcome in female patients, dubbed 'naïve and friendly' by Stockton physicians, but a frustrating finding in male patients who were noted to be 'childish and juvenile'. (33)

Apathy was also a positive finding in the aftermath of lobotomy in women, resonating well with family members. A satisfied husband stated about his lobotomised wife: "I think it is for the best really because she does not worry at all about anything." (33)

Case studies

The analysis of specific cases, see table 1, where women were subjected to lobotomies sheds light on the profoundly distressing and gender-biased medical practices prevalent during the peak of lobotomy's popularity. Several historical cases illustrate that the targeting of women is often driven by societal attitudes

and misunderstandings about women's mental health. The lasting impact of these cases highlights the importance of critically examining historical medical practices and striving for gender-equitable and ethical approaches to mental healthcare.

Case	Patient details	Procedure	Reason for surgery	Outcome
Rosemary Kennedy (11)	23F, Develop- mental delays	Prefrontal lobotomy (1941)	Behaviou- ral issues, emotional difficulties	Severe intellectual and physical disability, institutiona -lised, estranged from family
Helen Mortensen (11)	19F, Schizophre -nia	Lobotomy (1949)	Family pressure, societal expecta- tions	Emotional flattening, loss of personality, death after the third lobotomy (1967)
Freeman's Case 121 (14)	F	Lobotomy (1942)	"March 23, 1942, before operation. 'Forever fighting the meanest woman."	Smiling, wearing contempo- rary ladies' clothing
Ana (alias) (33)	26F, Schizophre -nia	Lobotomy (1945)	"Exaggera- ted vanity, combined with a striking tendency to chatter and exhibi- tionism"	undocu- mented

Table 1: Case studies highlighting multiple women undergoing lobotomies for sociocultural reasons.

Ethical considerations

The ethical examination of lobotomies reveals a dark period in medical history marked by a lack of informed consent, a disdain for autonomy, and ignorance of patient welfare. The use of lobotomies, especially among women, brings to light critical moral dilemmas that resonate deeply.

Foremost among these concerns is the stark aftermath experienced by women who underwent lobotomies. Intended to alleviate their mental health symptoms, these procedures often led to severe cognitive impairments, emotional detachment, and a loss of perso-

nal identity, leaving them with enduring disabilities, obstructing their ability to lead autonomous and fulfilling lives. (36) When complications were reported, seizures represented the most common sequelae (1% - 23%), followed by chronic headache (15%). Frontal syndrome, although not clearly defined and evaluated, was often described, with the death ratepotentially reaching up to 5%. (37)

The aftermath of lobotomies rippled through women's social circles, leaving them ostracised by families and communities due to the prevailing stigma around mental health, as seen in Rosemary Kennedy's life. (11) The comprehension and compassion surrounding mental health during that era exacerbated the isolation these women felt, depriving them of the vital support systems they needed to cope with the aftermath of the procedure.

Another troubling ethical facet is the disregard for informed consent among those undergoing lobotomies. Many patients, including women, were inadequately informed about the procedure's potential risks, benefits, and lasting consequences. (11) Often, familial or medical pressures left them undergoing surgery without comprehending the procedure's irreversibility. The absence of patient autonomy was equally concerning, as decisions regarding lobotomies were frequently made without their input. This approach denied individuals the right to make informed choices about their bodies and mental health treatments, exemplifying a paternalistic model of medical decision-making.

Equally disconcerting is the historical backdrop of lobotomies, introduced without robust empirical support and founded on speculative theories rather than rigorous scientific evidence. This absence of empirical validation raises profound ethical concerns, particularly when considering the vulnerability of patients, including women, subjected to a procedure with uncertain benefits and potentially dire repercussions.

The scrutiny of ethical issues linked to lobotomies is an unambiguous reminder of the necessity for ethical oversight within medical research and practice. It underscores the significance of preserving principles such as informed consent, patient autonomy, and evidence-based interventions to ensure that medical practices align with patients' well-being, dignity, and agency.

CONCLUSION

The abandonment of lobotomies swiftly followed the emergence of psychopharmacology; the use of medication to alleviate the symptoms of mental illnesses. The widespread adoption of antipsychotics, tranquillisers, and antidepressants as treatment options for individuals grappling with mental health conditions

marked a significant advancement. (14) While these pharmaceutical breakthroughs offered considerable benefits to mental health, they also introduced a dichotomy. Medications assumed the role of definitive solutions, sometimes rendering psychotherapy seemingly redundant despite its' potential complementary advantages for many patients. Concurrently, medications provided an avenue to address mental health concerns discreetly. Swallowing a pill was inconspicuous, while seeking therapy was often viewed as a more direct form of mental health intervention. Given the lingering stigma around mental health, individuals felt a sense of shame associated with therapy attendance, often preferring the more private route of medication. (14)

Whilst lobotomies are no longer practised, it is worthwhile to ponder on the gender bias dominating past medical practices, as this highlights the importance of recognising and addressing bias in contemporary healthcare. Informed consent, patient-orientated goals, and autonomy need to be central in healthcare. It is essential to understand the broader societal and cultural factors that can influence medical decisions made by professionals, in order to ensure that these do not overshadow the well-being and dignity of patients.

REFERENCES

- 1. Encyclopaedia Britannica. Lobotomy [Internet]. 2020. Available from: https://www.britannica.com/summary/lobotomy
- 2. Lichterman, B., Schulder, M., Liu, B., Yang, X. and Taira, T. A comparative history of psychosurgery. Prog Brain Res. 2022;273:1-31. https://doi.org/10.1016/bs.pbr.2021.12.003.
- 3. Joseph R. Frontal lobe psychopathology: mania, depression, confabulation, catatonia, perseveration, obsessive compulsions, and schizophrenia. Psychiatry. 1999;62(2):138-72. https://doi.org/10.1080/00332747.1999.11024862. PMid:10420428
- 4. Poppen J.L. Technic of Prefrontal Lobotomy. J Neurosurg. 1948;5(6):514-520. https://doi.org/10.3171/jns.1948.5.6.0514. PMid:18122117
- 5. Chayer C, Freedman M. Frontal lobe functions. Curr Neurol Neurosci Rep. 2001;1(6):547-552. https://doi.org/10.1007/s11910-001-0060-4. PMid:11898568
- 6. Miller BL, Cummings JL, eds. The Human Frontal Lobes: Functions and Disorders. Third edition. New York: The Guilford Press; 2018.
- 7. Ryan JK. Recommendations psychosurgery: the National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research [Internet]. Available from: https://videocast.nih.gov/pdf/ohrp.psychosurgery.pdf
- https://videocast.nih.gov/pdf/ohrp_psychosurgery.pdf.

 8. Knight GC, Tredgold RF. Orbital leucotomy: a review of 52 cases. Lancet. 1955;268(6872):981-986. https://doi.org/10.1016/S0140-6736(55)91963-2 PMid:14368930
- 9. Gallea, M. A brief reflection on the not-so-brief history of the lobotomy [Internet]. Br Columbia Med J. 2017. Available from: https://bcmj.org/mds-be/brief-reflection-not-so-brief-history-lobotomy.
- 10. Robison RA, Taghva A, Liu CY, Apuzzo MLJ. Surgery of the mind, mood, and conscious state: an idea in evolution. World Neurosurg. 2013;80(3-4):S2-S26. https://doi.org/10.1016/j.wneu.2013.01.006 PMid:23295631
- 11. Caruso JP, Sheehan JP. Psychosurgery, ethics, and media: a history of Walter Freeman and the lobotomy. Neurosurg Focus. 2017;43(3):E6. https://doi.org/10.3171/2017.6.FOCUS17257 PMid:28859561
- 12. Stone JL. Dr Gottlieb Burckhardt, the pioneer of psychosurgery. J Hist Neurosci. 2001;10(1):79-92. https://doi.org/10.1076/jhin.10.1.79.5634. PMid:11446267
- 13. Faria MA Jr. Violence, mental illness, and the brain a brief history of psychosurgery: Part 1 From trephination to lobotomy. Surg Neurol Int. 2013;4:49. https://doi.org/10.4103/2152-7806.110146. PMid:23646259 PMCid:PMC3640229
- 14. Garnett, C. When Faces Made the Case for Lobotomy [Internet]. NIH Record. 2019. Available from: https://nihrecord.nih.gov/2019/11/01/when-faces-made-case-lobotomy.
- 15. Till B, Arendt F, Niederkrotenthaler T. Effects of media portrayals of alleged malpractice in psychiatry and response strategies to mitigate reputational damage: randomised controlled trial. J Psychiatr Res. 2021;138:456-462. https://doi.org/10.1016/j.jpsychires.2021.04.038. PMid:33965733
- 16. Topp L. Single rooms, seclusion and the non-restraint movement in British asylums, 1838-1844. Soc Hist Med. 2018;31(4):754-773. https://doi.org/10.1093/shm/hky015. PMid:30515022 PMCid:PMC6263206
- 17. Turner J, Hayward R, Angel K, Fulford B, Hall J, Millard C, et al. The history of mental health services in modern England: practitioner memories and the direction of future research. Med Hist. 2015;59(4):599-624. https://doi.org/10.1017/mdh.2015.48 PMid:26352306 PMCid:PMC4595954
- 18. Freudenthal R, Moncrieff J. "A landmark in psychiatric progress?" The role of evidence in the rise and fall of insulin coma therapy. Hist Psychiatry. 2021;33(1):0957154X2110625. https://doi.org/10.1177/0957154x211062538 PMid:34935541 PMCid:PMC8886299
- 19. Stevens P, Harper DJ. Professional accounts of electroconvulsive therapy: a discourse analysis. Soc Sci Med. 2007;64(7):1475-1486. https://doi.org/10.1016/j.socscimed.2006.11.015 PMid:17208342
- 20. Koziol, M. Diagnosing Womanhood: Lessons Learned from Gender Bias in 20th Century Psychiatry. Montreal: McGill University; 2016.
- 21. Braslow JT. Mental Ills and Bodily Cures: Psychiatric Treatment in the First Half of the Twentieth Century. Berkeley: University of California Press; 1997. https://doi.org/10.1525/9780520917934

REFERENCES

- 22. Phillips SP. Defining and measuring gender: a social determinant of health whose time has come. Int J Equity Health. 2005;4:11. https://doi.org/10.1186/1475-9276-4-11. PMid:16014164 PMCid:PMC1180842
- 23. Ruiz MT, Verbrugge LM. A two-way view of gender bias in medicine. J Epidemiol Community Health. 1997;51(2):106-109. https://doi.org/10.1136/jech.51.2.106 PMid:9196634 PMCid:PMC1060427
- 24. Liu KA, DiPietro Mager NA. Women's involvement in clinical trials: historical perspective and future implications. Pharm Pract, 2016;14(1):708. https://doi.org/10.18549/pharmpract.2016.01.708. PMid:27011778 PMCid:PMC4800017
- 25. Committee on Women's Health Research Women's Health Research. [Internet]. Washington (DC): National Academies Press; 2001 [accessed 23 Feb 2025] Available from: https://books.google.co.uk/books?
- hl=en&lr=&id=mACtc2JhJ7QC&oi=fnd&pg=PR1&ots=w6ix9MfQSN&sig=czNJ9X0aTdy6_JY GQ9Pp4lxsQes&redir_esc=y#v=onepage&q&f=false
- 26. National Institute on Drug Abuse Treatment Clinical Trials Network. Successfully Including Women in Clinical Trials. A Guide for Researchers [Internet]. 2015. Available from: https://www.drugabuse.gov/sites/default/files/womens-brochure 1025-004 508.pdf
- 27. Betai D, Ahmed AS, Saxena P, Rashid H, Patel H, Shahzadi A, et al. Gender disparities in cardiovascular disease and their management: a review. Cureus. 2024;16(5):e59663. https://doi.org/10.7759/cureus.59663 PMid:38836150 PMCid:PMC11148660
- 28. Pinn VW. Sex and gender factors in medical studies: implications for health and clinical practice. JAMA. 2003;289(4):397-400. https://doi.org/10.1001/jama.289.4.397 PMid:12533102
- 29. Howard LM, Ehrlich AM, Gamlen F, Oram S. Gender-neutral mental health research is sex and gender biased. Lancet Psychiatry. 2017;4(1):9-11. https://doi.org/10.1016/S2215-0366(16)30209-7 PMid:27856394
- 30. Cabiya JJ, Canino G, Chavez L, Ramirez R, Alegría M, Shrout P, et al. Gender disparities in mental health service use of Puerto Rican children and adolescents. J Child Psychol Psychiatry. 2006;47(8):840-848. https://doi.org/10.1111/j.1469-7610.2006.01623.x PMid:16898998
- 31. Terrier LM, Levêque M, Amelot A. Most lobotomies were done on women. Nature. 2017;548(7669):523. https://doi.org/10.1038/548523e PMid:28858312
- 32. Ogren K, Sandlund M. Lobotomy at a state mental hospital in Sweden: a survey of patients operated on during the period 1947-1958. Nord J Psychiatry. 2007;61(5):355-362. https://doi.org/10.1080/08039480701643498. PMid:17990197
- 33. Toledo ET. The Circulation and Application of Psychosurgery in the Juquery Psychiatric Hospital, São Paulo: a Gender Issue (1936–1956) [Internet]. Rio de Janeiro (Brazil): Casa de Oswaldo Cruz, Fundação Oswaldo Cruz; 2019. Available from: https://arca.fiocruz.br/handle/icict/50350.
- 34. Braslow, J.T. and Starks, S.L. (2005). The making of contemporary American psychiatry, part 2: Therapeutics and gender before and after World War II. History of Psychology, 8(3), pp.271-288. https://doi.org/10.1037/1093-4510.8.3.271. PMid:16217884
- 35. Tone A, Koziol M. (F)ailing women in psychiatry: lessons from a painful past. CMAJ. 2018;190(20):E624-E625. https://doi.org/10.1503/cmaj.171277. PMid:30991349 PMCid:PMC5962395
- 36. Raz M. A surgically induced childhood. In: What's wrong with childhood? From the progressive era to the present. Rochester (NY): Boydell and Brewer; 2013. p.101-117. https://doi.org/10.1515/9781580467940-008. PMid:23513502
- 37. Miller, A. The Lobotomy Patient A Decade Later: A Follow-up Study of a Research Project Started in 1948. Can Med Assoc J. 1967;96(15):1095. Available from: https://pmc.ncbi.nlm.nih.gov/articles/PMC1922743/.
- 38. Terrier L-M, Lévêque M, Amelot A. Brain lobotomy: a historical and moral dilemma with no alternative? World Neurosurg. 2019;132:211-218. https://doi.org/10.1016/j.wneu.2019.08.254 PMid:31518743

The British Student Doctor Journal



To discuss an article published in this issue, please contact:

editorinchief@bsdj.org.uk

The British Student Doctor

Cardiff University Press PO Box 430 1st Floor, 30-36 Newport Road Cardiff, CF24 0DE United Kingdom

bsdj.org.uk thebsdj.cardiffuniversity press.org



/thebsdj



@thebsdj



@thebsdj

To submit an article for publication in **The British Student Doctor**, please visit: <u>bsdj.org.uk/author-guidelines</u>

EDITORS IN CHIEF

Dr Sruthi Saravanan

DEPUTY EDITOR IN CHIEF

Mr Alexander Hagan

FOUNDERS

Dr Shivali Fulchand Dr Eleni Panagoulas Dr James M. Kilgour

FACULTY ADVISORY BOARD

Professor Kevin Eva (Chair) Dr Chloe Wilson Professor Steve Riley Professor John Ingram Professor Nick Cooper Dr Simon Fleming Dr Lara Varpio Dr Philip Xiu

EDITORIAL AND MANAGEMENT TEAM

Senior Editors

Dr Rosemary Kirk Ms Anna De Beer

Associate Editors

Dr Juliet Kenstavica Pinto Ms Aghna Wasim Mr Callum Williams Dr Rose How Mr Joshua Bryan Mr Christopher Shin Mr Angelos Dodopoulos

Peer Review Lead

Miss Jyotsna Balaji

Design Editors

Dr Stella Goeschl Mr Aksh Sharma Dr Robert Tucker