

2-2-2026

Italian Medical Students' Knowledge, Attitudes and Beliefs about Medical Marijuana and their Implications on the Italian Medical Curriculum

Sneh S. Shah

Roberta Pastorino, PhD

Giovanni Gambassi, MD

Follow this and additional works at: https://jdc.jefferson.edu/aoa_research_symposium_posters

Part of the [Medical Education Commons](#)

[Let us know how access to this document benefits you](#)

Network

This Article is brought to you for free and open access by the Jefferson Digital Commons. The Jefferson Digital Commons is a service of Thomas Jefferson University's [Center for Teaching and Learning \(CTL\)](#). The Commons is a showcase for Jefferson books and journals, peer-reviewed scholarly publications, unique historical collections from the University archives, and teaching tools. The Jefferson Digital Commons allows researchers and interested readers anywhere in the world to learn about and keep up to date with Jefferson scholarship. This article has been accepted for inclusion in Alpha Omega Alpha Research Symposium Posters by an authorized administrator of the Jefferson Digital Commons. For more information, please contact: JeffersonDigitalCommons@jefferson.edu.



Abstract

Purpose: This study assessed Italian medical students' knowledge, attitudes, and clinical exposure regarding medical marijuana to inform curriculum development.

Methods: Cross-sectional anonymous online survey distributed across Italian medical universities (May 2023-March 2024) using Likert-scale items; chi-square tests examined demographic differences.

Results: Among 382 participants, 95.0% supported curricular inclusion and 86.6% would prescribe under current laws. However, among clinical-year students (n=155), only 12.9% felt adequately knowledgeable to counsel patients and 5.8% had participated in relevant patient care.

Conclusion: Italian medical students strongly support medical cannabis but lack formal training and clinical exposure, highlighting urgent need for curriculum enhancement.

Introduction

- Current legal framework:** Since 1998, Italian physicians can prescribe cannabis products for therapeutic use; the 2007 Ministerial Decree officially recognized the therapeutic potential of cannabinoids (THC, dronabinol, nabilone), and the 2015 Ministry of Health decree established frameworks for medical cannabis.
- Evidence for therapeutic use:** Research supports cannabis's potential for treating chronic pain, cancer-related symptoms, and neuropathic pain, though long-term effects require further investigation and the topic remains controversial due to cultural, legal, and scientific factors.
- Knowledge gaps in Italian students:** International studies show that while nursing, pharmacy, and medical students support therapeutic cannabis use and legalization, they report limited knowledge about its applications and low confidence in counseling patients. Research on Italian medical students' perspectives remains scarce.
- Study rationale:** Understanding Italian medical students' knowledge, attitudes, and beliefs about medical marijuana is critical for developing targeted educational interventions and ensuring future physicians are prepared to navigate this complex healthcare area as they will increasingly encounter patients who could benefit from medical cannabis.

Materials and Methods

- Study design and setting:** Prospective cross-sectional study using an anonymous online Google Form survey distributed to medical students across public and private Italian universities between May 2023 and March 2024. Distribution coordinated through class representatives at medical schools.
- Survey content:** Assessed attitudes toward legal and medical marijuana use, perceptions of health benefits, adequacy of cannabis-related education in curricula, exposure to classroom and clinical teaching about cannabis, self-perceived readiness to counsel patients, and acceptability of cannabis for specific conditions.
- Statistical analysis:** Data analyzed using R; descriptive statistics expressed as absolute and percentage frequencies; chi-square tests performed to assess differences in attitudes across demographic variables, year of study, and university type.

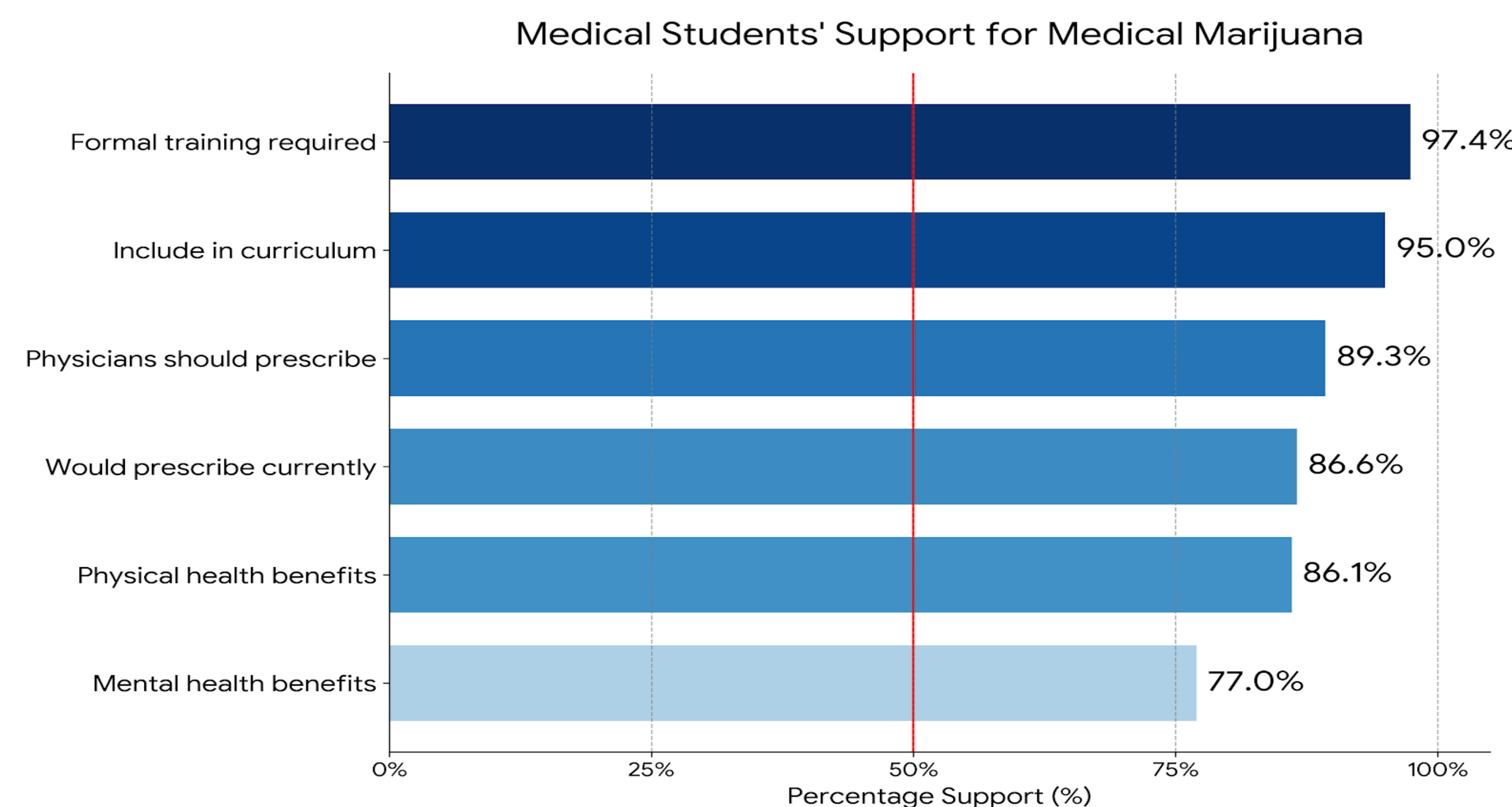


Figure 1. Italian Medical Students' Support for Medical Marijuana

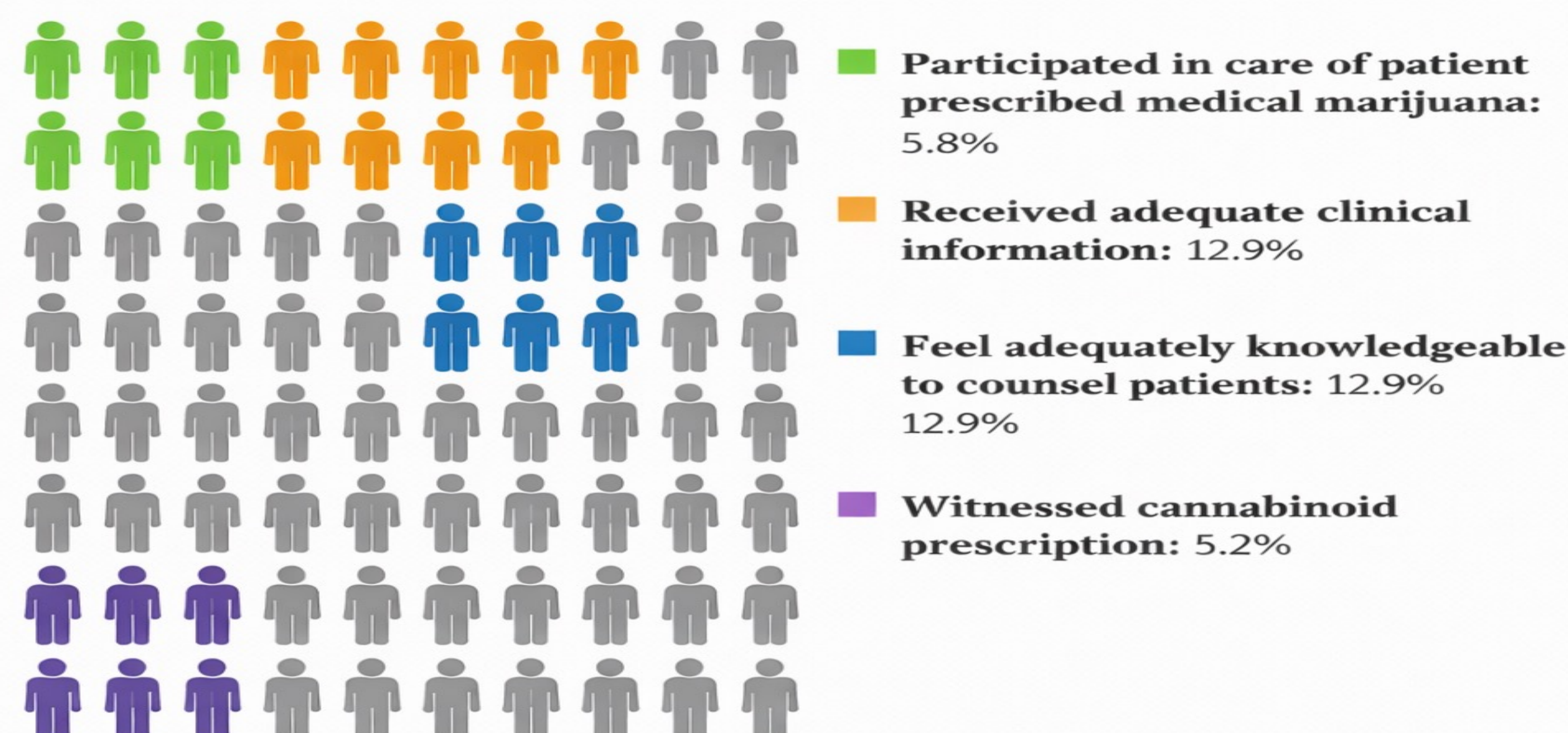


Figure 2. Clinical Exposure to Cannabinoid Medications Among Clinical-Year Medical Students

Results

- Overwhelmingly Positive Attitudes Toward Medical Marijuana:** Strong support across all students: 86.6% would prescribe medical marijuana under current laws, 89.3% agreed physicians should prescribe marijuana as medical therapy, 86.1% perceived significant physical health benefits, 77.0% perceived mental health benefits, 95.0% supported curriculum inclusion, and 97.4% agreed physicians should receive formal training before prescribing.
- Minimal Clinical Exposure Despite High Support:** Among clinical-year students (≥4th year, n=155), exposure was extremely low: only 5.8% participated in care of a patient prescribed medical marijuana, 12.9% reported adequate clinical information about risks/benefits, 12.9% felt adequately knowledgeable to counsel patients, and only 5.2% witnessed physician prescription of cannabinoid medications (Dronabinol, Nabilone).

Discussion and Conclusions

- Global Pattern of Curricular Gaps:** Despite strong student support for cannabis education, limited clinical and classroom exposure reflects significant curricular deficiencies in Italy consistent with international studies; only 22.5% of US medical students reported learning about medical cannabis through curriculum, German students lack knowledge and perceived competence, and Canadian physicians-in-training desire more education on cannabis for therapeutic purposes.
- Key Recommendations:** Curriculum development: introduce comprehensive modules on medical marijuana pharmacology, therapeutic applications, and legal aspects; clinical training: increase opportunities for cannabis-related patient care exposure through internships and case-based learning; research integration: encourage student participation in cannabis research; faculty training: equip educators with up-to-date knowledge and resources.

References

- Zaami, S., Di Luca, A., Di Luca, N. M., & Vergallo, G. M. (2018). Medical use of cannabis: Italian and European legislation. *PubMed*, 22(4), 1161–1167. https://doi.org/10.26355/eurev_201802_14405
- Chan, M. H., Knoepke, C. E., Cole, M. L., McKinnon, J., & Matlock, D. D. (2017). Colorado medical students' attitudes and beliefs about marijuana. *Journal of General Internal Medicine*, 32(4), 458–463. <https://doi.org/10.1007/s11606-016-3957-y>
- Denneker, T., Mahling, M., Hermann, S., Stengel, A., Zipfel, S., Herrmann-Werner, A., & Festl-Wietek, T. (2024). Medical students' attitudes and perceived competence regarding medical cannabis and its suggestibility. *BMC Medical Education*, 24(1). <https://doi.org/10.1186/s12909-024-05089-8>
- St Pierre, M., Matthews, L., & Walsh, Z. (2020). Cannabis education needs assessment among Canadian physicians-in-training. *Complementary Therapies in Medicine*, 49, 102328. <https://doi.org/10.1016/j.ctim.2020.102328>

Acknowledgements

I would like to thank my mentors Dr. Giovanni Gambassi and Dr. Roberta Pastorino for their guidance and mentorship throughout this project. AI was consulted for the illustration of Figure 2.