

Short Communication

Professionalization of Medical Students as Mental Health Promoters

Yordanis Arias Barthelemy ^{1, *}, Justo Reinaldo Fabelo Roche ², Carmen Juana Bural Cintra ¹, Serguei Iglesias Moré ²

1. University of Medical Sciences of Santiago de Cuba, City of Santiago de Cuba 90100, Cuba; E-Mails: ariasyordanisb78@gmail.com; yordanis.arias@infomed.sld.cu; carmenjuanaburgalcintra@gmail.com; ORCID: 0000-0003-4178-7121; 0000-0002-0865-0396
2. University of Medical Sciences of Havana, La Habana 10400, Cuba; E-Mails: fabelo@infomed.sld.cu; simore@infomed.sld.cu; ORCID: 0000-0002-5316-0951; 0000-0002-3382-428X

* **Correspondence:** Yordanis Arias Barthelemy; E-Mails: ariasyordanisb78@gmail.com; yordanis.arias@infomed.sld.cu; ORCID: 0000-0003-4178-7121

Academic Editor: Armida Mucci

OBM Neurobiology
2026, volume 10, issue 4
doi:10.21926/obm.neurobiol.2604355

Received: January 22, 2026
Accepted: September 30, 2026
Published: October 14, 2026

Abstract

In present-day Cuba, there are psychosocial risks (such as stress, psychoactive substance use, an inverted hierarchy of needs, and emigration) that can contribute to mental disorders. Therefore, medical students in Cuba need professional training to serve as online mental health promoters. To achieve this, these students must be trained using the “significant semantic core” method. This initiative aligns with several objectives of the 2030 Agenda for Sustainable Development, which advocates for reducing the morbidity associated with mental disorders. Furthermore, a master’s degree program specializing in mental health promotion should be established at a higher education institution. Officials from the Cuban Ministry of Public Health should train university mid-level technicians as health promoters to support existing public health programs. Finally, the creation of a virtual exchange platform is proposed, enabling medical students trained as mental health promoters to assist Cuban citizens experiencing mental health issues.



© 2026 by the author. This is an open access article distributed under the conditions of the [Creative Commons by Attribution License](https://creativecommons.org/licenses/by/4.0/), which permits unrestricted use, distribution, and reproduction in any medium or format, provided the original work is correctly cited.

Keywords

Medical education; medical students; mental health; mental health teletherapy; psychology

1. Introduction

Universities are educational, developmental, and transformative institutions. Their mission extends beyond merely meeting society's stated and growing needs; they must also identify fundamental problems in their environments and implement strategies and models that foster the preparation and knowledge enhancement of human resources [1, 2]. This involves equipping individuals with the meaningful learning necessary to tackle the challenges imposed by anthropogenic processes [3] challenges that must be addressed through professionalization [4], a process rooted in the individual's continuous formal education within their environment.

In the Cuban primary healthcare context, there are public health workers identified as health promoters. Although they are effective and well-received by communities, and (driven by medical policies and epidemiological realities) focus largely on preventing sexually transmitted infections, they lack university-level academic training for this specific role (unlike in various Ibero-American countries, where bachelor's degrees in health education and promotion exist). Within the current Cuban social fabric [5], there is an urgent need for mental health promoters [6, 7] trained at the university level. Therefore, this paper advocates professionalizing medical students in Cuba as online mental health promoters.

2. Discussion

2.1 Understanding Professionalization

According to Valcárcel et al. [8] professionalization is a process that begins with initial training and must continue uninterrupted throughout one's working life in a dialectical and developmental manner, refining professional skills; it fosters superior competitive performance (leading to individual satisfaction and the resolution of social problems) while necessitating new studies and validations characteristic of advanced education theory [9]. On the other hand, González et al. [10] posits that it is a pedagogical process involving both training and self-training, originating in initial vocational training and extending to the lifelong, continuous training of practicing professionals.

Drawing on our academic experience and supported by participatory observations regarding this topic, we have formulated the following research questions: Why is there no university degree program for health promoters in Cuba? How can positions for health promoters exist within primary healthcare without a corresponding university degree program? What are the causes of the inadequate professional preparation of individuals serving as health promoters in Cuba? Does this factor limit the care provided to people with mental disorders at the primary healthcare level? How do insufficient teaching and research activities during medical student training in Cuba contribute to the limited preparation of mental health promoters? What obstacles hinder the training of students as mental health promoters in Cuba? Rather than merely creating dilemmas, these questions indicate areas for academic improvement, potentially leading to solutions for pressing social issues in Cuba.

2.2 Health Promoters in Cuba

Cuba's healthcare system is structured across three levels of care: the tertiary level consists of specialized institutes and hospitals; the secondary level comprises general hospitals; and the primary level is represented by polyclinics (health zones) distributed throughout the country. Within these polyclinics, a professional role known as "health promoter," a position open to physicians, nurses, psychologists, social workers, and epidemiologists. This is because Cuba lacks a specific university degree program for health promoters, allowing any health professional to fill the role—unlike in Nicaragua, Chile, Colombia, and Mexico [11], where university-level training programs for health promoters do exist.

Municipal centers for hygiene, microbiology, and epidemiology conduct training for professionals in the health promoter role in Cuba. This professional development focuses primarily on chronic communicable diseases, with a central emphasis on sexually transmitted infections. Indeed, the emergence of such morbidity (specifically, the first cases in Cuba of individuals carrying the virus that causes acquired immunodeficiency syndrome) was the driving force behind the creation of the health promoter role within the health zones.

At times, in an effort to curb the scourge of sexually transmitted infections (STIs), Cuban health experts enlist individuals diagnosed with these conditions to serve as peer health promoters (working with others diagnosed with the same pathology) to help prevent the psychosomatic consequences associated with STIs. Requirements for becoming a peer health promoter include: the individual's voluntary participation, the absence of mental disorders, the completion of at least a secondary education, and the demonstration of certain communication skills. However, this raises a question: do other regulated health programs in Cuba (such as those addressing maternal and child health, mental health, cancer, elderly care, oral health, and chronic non-communicable diseases) not also require health promoters?

2.3 Mental Health Promoters in Cuba

The World Health Organization [12] coined the slogan "There is no health without mental health," highlighting the urgent need for treatment (both psychopharmacological and psychotherapeutic), monitoring, and care for individuals with mental disorders within the primary health care system. This principle is further reinforced by specific objectives 3, 4, and 16 of the 2030 Agenda and the Sustainable Development Goals [13].

Regarding this topic, experts from the Pan American Health Organization [14] define mental health as a state of well-being in which the individual is aware of their own abilities, can cope with the normal stresses of life, and can work productively and fruitfully, thereby contributing to their community. A report by SAPIEN LABS [15] indicates that residents of eight English-speaking countries experienced a 3% decline in mental health, followed by Latin American populations; the countries where residents reported the highest levels of distress were Colombia, Puerto Rico, Mexico, and Venezuela, with women showing the highest degree of impact.

Furthermore, 7% of the subjects studied who were over the age of 65 were struggling with their mental well-being, a situation exacerbated by COVID-19. In this regard, the World Health Organization [16] has issued a report calling for effective strategic programs focused on health promotion and prevention; achieving this would require reinforcing human values and collective

commitment, as well as restructuring academic environments to enable the creation of a mid-level technical training program for health promoters in Cuba.

2.4 The Need for an Online Mental Health Promoter in Cuba

It should be noted that psychosocial risks contributing to mental disorders exist in Cuba, such as stress, psychoactive substance use, an inverted hierarchy of needs, and emigration. Consequently, since 1998, a Community Mental Health Center has been established in each of the country's 168 municipalities. These centers are staffed by a multidisciplinary team comprising three psychiatrists (one child and adolescent psychiatrist and two general psychiatrists), three nurses, three psychologists, a psychometrist, a social worker, and an occupational therapist. Their mission is to implement health-oriented actions designed to improve community mental health and comprehensively address health issues and their determinants.

Furthermore, given the rising number of consultations at these Community Mental Health Centers, medical students urgently need training as online mental health promoters [11]. This training aims to improve community members' and fellow students' mental health by comprehensively addressing sociocultural determinants, a goal achievable through the "significant semantic core" method [17]. This proposal draws on Serge Moscovici's theory of social representations and integrates Valdez Medina's "natural semantic networks" psychological test, while incorporating a perspective on the distortion of perceived realities introduced by Professor Armando Alonso.

Modern civilization is navigating the digital age, driven by the proliferation of technologies that often make human life easier (though some individuals known as technophobes, disagree). Given this context, would it be feasible for medical students in Santiago de Cuba to use a technological platform to disseminate information on healthy mental health habits to provide support? Creating an online platform would be highly advantageous; the initiative would offer a support service led by students trained as mental health promoters, a type of health intervention not currently implemented in Cuba.

Cuban undergraduate medical education lacks any specific course (let alone a workshop) to prepare future physicians to serve as online mental health promoters. While subjects such as psychiatry and medical psychology touch on this topic, their curricula could be refined to enhance the public health skills of medical students through virtual platforms, thereby benefiting individuals experiencing mental health struggles.

2.5 Proposal for an Interactive Virtual Platform for Mental Telehealth in Cuba

According to Gómez-Díaz [18] and Chen, Huang, and Torous [19], mental telehealth involves providing support and guidance to an individual or group seeking mental health assistance through advanced technology, bypassing traditional face-to-face methods (such consultations may be conducted by psychologists, psychiatrists, rehabilitation specialists, and health promoters). Telehealth offers several advantages: it eliminates the need for travel, reduces healthcare costs, and allows for connections at various times using multiple communication channels. Conversely, disadvantages include the risk of addiction, the potential for decision-making capacity to be influenced by Generative Artificial Intelligence [20], limited access to the patient's non-verbal cues,

risks of digital identity theft, and potential difficulties for patients with severe sensory impairments (such as deaf-blindness) in accessing the service.

Within Cuba's healthcare system, the Council of Ministers has established regulations, specifically GO-2024-578-099, published in the Official Gazette, on the national system for comprehensive life care. This initiative aims to create the National System for Comprehensive Life Care as an instrument with a strategic vision of care. It is implemented based on a model that fosters coherence and coordination among policies, programs, and actions, as well as collaboration among Central State Administration bodies, local People's Power organs, and other economic and social stakeholders, from the national to the local level.

There are precedents for telemedicine within the Cuban National Health System; examples include the Siboney International Clinic (a paid service for foreigners), the 10 de Octubre mental health center in Havana (which offers only a telephone helpline), the Cuba Mundo Médico portal (a paid service for foreigners), and the Havana court system (with its 103 helpline). Additionally, there is a free online resource (albeit one associated with pseudoscientific content) available to Cubans experiencing mental health issues.

On the one hand, telemedicine in Cuba exists to generate foreign currency, while domestic telemedicine services are limited to telephone helplines (focusing primarily on substance abuse); on the other, online services lack academic credibility. Given this situation, there is an urgent need for an interactive virtual platform that provides free mental telehealth services to Cubans. Practicing mental health professionals should oversee the platform, and a health institution or scientific association should endorse it. In Cuba, this service would be provided in Spanish (the official language) and would be available 24 hours a day. Sponsored by a scientific association or the Cuban Ministry of Health, this virtual platform would aim to provide free mental telehealth to Cubans over the age of 19 seeking mental health support. Services would be delivered in accordance with bioethical principles. They would ensure anonymity, allowing users to choose between video calls, instant messaging, or telephone calls, offering practical alternatives to support their mental health.

The proposed virtual platform will be hosted within the repository of Cuba's Medical Information Center and will feature end-to-end encryption, operating under the following principles:

1. The professional providing mental telehealth services may not record the sessions.
2. Only the professional and the adult seeking mental health care may be present at either end of the connection.
3. Mental telehealth services are intended for Cuban citizens over the age of 19.
4. The individual seeking mental health care may select their preferred connectivity method (exclusively via the platform created for this purpose) to interact with the professional.
5. Cuban citizens requesting help through this virtual platform must do so during the hours specified on the website.
6. Citizens requesting help must grant the necessary permissions via their device (phone, tablet, or computer) for the pre-established form.
7. Citizens requesting help may choose to remain anonymous (a process that reduces or eliminates the individual's identification on the platform).

The platform, designed to provide mental telehealth services to Cuban citizens, will feature a logo incorporating elements of Cuban culture and a slogan. It will also list the names, professional backgrounds, and workplaces of the professionals volunteering to assist Cuban citizens. The homepage will prominently display the project's sponsor, mission, and vision (in accessible,

conversational language), along with options for citizens to request assistance, while always informing them of the option to remain anonymous.

Furthermore, the proposed virtual platform could be linked to the social media networks used by Cubans to identify and report potential suicidal and/or aggressive behaviors to the relevant health authorities within a regulatory framework, thereby reducing mortality associated with mental health issues. A precedent for this is the methodology developed by Pompeu Fabra University [21], which stratifies social media users into high-risk or low-risk categories. High-risk users are characterized by speaking more frequently in the first person, using a higher number of negations, expressing anxiety online, having fewer online friends, using fewer characters in their writing, or exhibiting increased activity during the night [22]. Reports generated by Generative Artificial Intelligence and supervised by specialized clinical staff would enable the planning of psychoeducation campaigns, without targeting any specific user.

Another useful tool for mental telehealth via the proposed platform is Virtual Reality (VR) psychotherapy; Feixas and Alabèrnia-Segura [23] demonstrated the effectiveness of VR in treating a controlled sample of adolescents and older adults suffering from anxiety, cognitive impairment, self-esteem issues, and eating disorders. The advantage of VR is that it provides a scenario controlled by the mental health professional; the disadvantage is that the patient may feel alienated from reality or develop an addiction to the technology. Additionally, the patient could (if they so choose) create a virtual avatar representing the psychotherapist of their choice psychological treatment.

Furthermore, a virtual program could analyze images [24] and the non-verbal behavior of patients during the mental telehealth process, generating a post-session report that the mental health specialist could integrate into the analysis, diagnosis, and treatment plan to foster the patient's progress.

2.6 Ethics Statement

Scientific Project: Estrategia para la atención a consumidores de Cannabinoides sintético. Código: NA241LH0028/0992.

3. Conclusions

Based on the foregoing, a higher education institution should launch a master's degree program for mental health promoters; such professionalization would address the social demands arising from the current context of Cuban society. Another alternative within the mental health program would be to train medical students to serve as online mental health promoters leveraging young people's aptitude for technology supported by the "significant semantic core" method. A virtual exchange platform is proposed where medical students, trained as mental health promoters, could assist Cuban citizens experiencing mental health struggles. Officials at the Cuban Ministry of Public Health should establish a mid-level technical training program for health promoters to support the public health initiatives currently regulated and implemented in Cuba.

Author Contributions

Dr. Yordanis Arias Barthelemy: conceptualization. Dr. Justo Reinaldo Fabelo Roche: drafting. Dr. Carmen Juana Bursal Cintra: literature review. Dr. Serguei Iglesias-Moré: validation.

Competing Interests

The authors have declared that no competing interests exist.

References

1. Fonseca BB, Cornelio OM, Marzo FR. Treatment of uncertainty in the evaluation of Human Resources performance of a project based on fuzzy sets [Tratamiento de la incertidumbre en la evaluación del desempeño de los Recursos Humanos de un proyecto basado en conjuntos borrosos] (In Spanish). Ser Cient Univ Cienc Inform. 2020; 13: 84-93. Available from: <https://dialnet.unirioja.es/servlet/articulo?codigo=8590282>.
2. Lima CNS. Evaluation models adequacy in human resources for job performance [Adecuación de los modelos de evaluación en recursos humanos para el desempeño laboral] (In Spanish). Rev Investig Psicol. 2021; 69-79. Available from: http://www.scielo.org.bo/scielo.php?script=sci_arttext&pid=S2223-30322021000100007&lng=es&tlng=es.
3. Gallego-Torres AP, Castro-Montaña JE. Study of the social representations of the teachers on anthropogenic climate change [Estudio de las representaciones sociales de los docentes sobre el cambio climático antropogénico] (In Spanish). Rev Cient. 2020; 38: 229-242. Available from: <https://dialnet.unirioja.es/servlet/articulo?codigo=7592407>.
4. Matarranz M. Key issues of teacher professionalization. A bibliographic review [Aspectos clave de la profesionalización docente. Una revisión bibliográfica. Cuestiones pedagógicas] (In Spanish). Rev Cienc Educ. 2022; 2: 129-144. Available from: <https://dialnet.unirioja.es/servlet/articulo?codigo=8733073>.
5. Zangara MA, Martin MM. Technology as a tool within the social and cognitive fabric. In: The field of educational technology. How to support educational inquiries and actions in times of uncertainty [La tecnología como herramienta en el entramado social y cognitivo. In: El campo de la tecnología educativa. Cómo acompañar las interpelaciones y acciones educativas en épocas de incertidumbre] (In Spanish). Editorial de la Universidad Nacional de La Plata; 2024. Available from: <http://sedici.unlp.edu.ar/handle/10915/173596>.
6. González BM, Leal LJ, Ramos MS, Manresa LR, Valdés MA, Hernández MP. Promoters in maternal and child health to develop the Participatory Prenatal and Postnatal Childcare Program [Promotores en salud materno-infantil para desarrollar el Programa de Puericultura Prenatal y Posnatal Participativa] (In Spanish). Edumecentro. 2020; 12: 128-145. Available from: <http://scielo.sld.cu/pdf/edu/v12n2/2077-2874-edu-12-02-128.pdf>.
7. Pérez AG, Arrabal VR, Cepero IR, Cáliz RC. Primary school students promoting health through research in the area of physical education [El alumnado de educación primaria promotor de salud a través de la investigación en el área de educación física] (In Spanish). Retos. 2024; 55: 327-338. Available from: <https://revistaretos.org/index.php/retos/article/view/101545>.

8. Valcárcel N, Lamas M, Canalías S, Martínez Y. Human capital research and development [Investigación y desarrollo del Capital Humano] (In Spanish). Guayaquil, Ecuador: Editorial Binario; 2023. Available from: <https://binario.com.ec/investigacion-y-desarrollo-del-capital-humano/>.
9. Cardoso CL, Valdés NM, Panesso PV. The advanced education theory: Epistemology of a Cuban educational theory [La teoría de la Educación Avanzada: Epistemología de una teoría educativa cubana] (In Spanish) [Internet]. VARONA Rev Cient Metodol. 2022. Available from: <http://revistas.ucpejv.edu.cu/index.php/rVar/article/view/1549>.
10. Gorrín GM, Gascón LCH, López MS. Professionalization in medical education [Profesionalización en educación médica] (In Spanish). Rev Cubana Med Gen Integr. 2026; 42: e3962. Available from: <https://www.google.com/url?sa=t&source=web&rct=j&opi=89978449&url=https://revmgi.sld.cu/index.php/mgi/article/download/3962/866/16289>.
11. Henríquez JL. The mental health paraprofessionals of UCA: A recollection of my memories [Los promotores de salud mental de la UCA: Un relato de mis recuerdos] (In Spanish). Estud Centroam. 2024; 79: 65-88. Available from: <https://dialnet.unirioja.es/servlet/articulo?codigo=10228087>.
12. Organización Mundial de la Salud. There is no health without mental health—Region of the Americas [No hay salud sin salud mental—Región de las Américas] (In Spanish) [Internet]. Organización Mundial de la Salud; 2020. Available from: <https://www.paho.org/es/noticias/8-10-2020-no-hay-salud-sin-salud-mental>.
13. CEPAL. The 2030 agenda and the sustainable development goals: An opportunity for Latin America and the Caribbean [Agenda 2030 y los Objetivos de Desarrollo Sostenible Una oportunidad para América Latina y el Caribe] (In Spanish) [Internet]. CEPAL; 2016. Available from: <https://www.cedhnl.org.mx/bs/vih/secciones/planes-y-programas/Agenda-2030-y-los-ODS.pdf>.
14. Organización Panamericana de la Salud. Mental health: Community Promoter's guide [Salud Mental Guía del promotor comunitario] (In Spanish) [Internet]. Organización Panamericana de la Salud; 2013. Available from: <https://iris.paho.org/bitstream/handle/10665.2/31342/salud-mental-guia-promotor.pdf?sequence=1&isAllowed=y>.
15. SAPIEN LABS. World Mental State 2021 [Estado mental del mundo 2021] (In Spanish) [Internet]. SAPIEN LABS; 2021. Available from: <https://mentalstateoftheworld.report/wp-content/uploads/2022/04/Estado-mental-del-mundo-2021.pdf>.
16. Organización Mundial de la Salud. World mental health report [Informe mundial sobre salud mental] (In Spanish) [Internet]. Organización Mundial de la Salud; 2022. Available from: <https://iris.who.int/bitstream/handle/10665/356118/9789240051966-spa.pdf>.
17. Arias BY, Zaldivar HM, Jiménez AY, Iglesia MS. Significant semantic core method to prevent alcoholism in university students from their social representations [El método núcleo semántico significativa propuesta para prevenir el alcoholismo en estudiantes universitarios] (In Spanish). Rev Hosp Psiquiatr Habana. 2025; 22. Available from: <https://revhph.sld.cu/index.php/hph/article/view/719>.
18. Gómez-Díaz JA. Telemental health care: A systematic review for the design of a protocol based on good practices in Telepsychology [Atención en telesalud mental: Una revisión sistematizada para el diseño de un protocolo basado en buenas prácticas en Telepsicología] (In Spanish). Rev

Psicol. 2023; 15: e352334. Available from:

<https://dialnet.unirioja.es/servlet/articulo?codigo=9711859>.

19. Chen K, Huang JJ, Torous J. Hybrid care in mental health: A framework for understanding care, research, and future opportunities. *NPP Digit Psychiatry Neurosci*. 2024; 2: 16.
20. Diaz Sanabria AM, Suarez Diaz CA, Cortes Alvis Y, Velandia Márquez MP. Artificial Intelligence as a Tool for Mental Health Development in Spanish-Speaking Latin America [La inteligencia artificial como herramienta para el desarrollo de la salud mental en Hispanoamérica] (In Spanish) [Internet]. Universidad de San Buenaventura Medellín, Extensión Ibagué; 2024. Available from: <https://bibliotecadigital.usb.edu.co/server/api/core/bitstreams/8fd333cd-a3a8-4563-855d-81d4368932d1/content>.
21. Ezinmo O, Eterovich N, Martín E. Reflections on technology in suicide prevention [Reflexiones acerca de la tecnología en la prevención del suicidio] (In Spanish). *Innovation*. 2021; 1: 27-32. Available from: https://www.wemindcluster.com/wp-content/uploads/2022/03/Brains04_Innovation_Tech-PS.pdf.
22. Ramírez-Cifuentes D, Freire A, Baeza-Yates R, Puntí J, Medina-Bravo P, Velazquez DA, et al. Detection of suicidal ideation on social media: Multimodal, relational, and behavioral analysis. *J Med Internet Res*. 2020; 22: e17758.
23. Feixas G, Alabèrnia-Segura J. Technological contributions to psychotherapy: The potential of virtual reality [Aportaciones de la tecnología a la psicoterapia: El potencial de la Realidad Virtual] (In Spanish). *Rev Psicoterapia*. 2021; 32: 81-93. Available from: <https://dialnet.unirioja.es/servlet/articulo?codigo=7987088>.
24. Di Felice M, Lamas C, Maleh F, Norscini J, Ramón H, Deroche A, et al. Application of artificial intelligence in the context of mental health: Research lines of the Gemis group [Aplicación de la inteligencia artificial en el contexto de la salud mental: líneas de investigación del grupo Gemis] (In Spanish). Proceedings of the XXVI Workshop de Investigadores en Ciencias de la Computación (WICC); 2024 April 18-19; Puerto Madryn, Argentina. Available from: <https://sedici.unlp.edu.ar/bitstream/handle/10915/176303/Ponencia.pdf?sequence=3&isAllowed=y>.