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Geopsychiatry and its integration into psychiatry residency curricula: A very first global survey for faculty and psychiatry residents

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ABSTRACT

Background: Geopsychiatry, an emerging field, explores the interaction between environmental factors and mental health, addressing how sociopolitical, economic, and ecological crises impact psychological well-being. Despite its relevance, Geopsychiatry is largely absent from psychiatric training curricula globally.

Study aim: This study aimed to evaluate the current integration of Geopsychiatry in psychiatry residency programs worldwide, and to understand the perceptions of faculty and residents regarding its importance in clinical training.

Methods: This mixed-methods cross-sectional study collected data from 401 psychiatry faculty members and residents across various regions via an online survey from May to September 2024. The survey assessed familiarity with Geopsychiatry, perceived importance of its inclusion in psychiatric education, and barriers to integration. Descriptive and inferential statistical analyses, including chi-square tests, were conducted to evaluate the associations among participant demographics, knowledge, and interest levels.

Results: The findings revealed limited knowledge of Geopsychiatry, with only 4.2 % of the participants reporting high familiarity. Nonetheless, 62.6 % viewed its inclusion in psychiatric education as "very important," particularly those from Latin America and MENA regions. A lack of faculty expertise (48.1 %) and insufficient resources (52.9 %) were cited as significant barriers. However, participation in training activities was significantly associated with higher levels of familiarity ($\chi^2 = 83.063$, $p < 0.001$), underscoring the importance of educational access. Collaborative efforts also enhanced research opportunities in Geopsychiatry ($\chi^2 = 59.530$, $p < 0.001$).

Conclusions: There is a significant gap between the perceived importance of Geopsychiatry and its formal inclusion in training programs. Expanding training opportunities, particularly through online modules and inter-institutional collaborations, may support the integration of this field into psychiatric education, addressing the growing need to prepare future psychiatrists for mental health challenges posed by environmental changes.

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1. Introduction

Geopsychiatry is an emerging interdisciplinary subfield of psychiatry that focuses on the interface between geography and mental health, examining how environmental, geopolitical, and sociocultural factors influence psychological well-being [1]. Unlike Global Mental Health, which emphasizes improving access to care and reducing treatment gaps across countries, Geopsychiatry centers its analysis on the structural and geopolitical determinants of mental illness, such as climate change, disasters, globalization, and socio-economic transformations [1]. It also differs from Cultural Psychiatry, which primarily focuses on cultural interpretations of mental distress and care-seeking behaviors by incorporating broader spatial and political contexts that affect mental well-being [2].

Therefore, Geopsychiatry aims to provide a framework for understanding how global crises intersect with psychiatric morbidity and to offer context-specific mental health responses that go beyond individual pathology. In recent decades, climate change has been linked to increasing rates of anxiety, depression, and post-traumatic stress disorder (PTSD), particularly in vulnerable populations exposed to extreme weather events such as hurricanes, wildfires, floods, and prolonged droughts [3,4]. Given the growing body of knowledge on the clinical significance of the interactions between climate change and mental health, it is recommended that medical education and postgraduate training for psychiatrists and psychotherapists be updated to better equip future professionals in managing the increasing number of patients affected by these issues [5].

Recent studies have explored the intersection of geopolitics and psychiatry, emphasizing the importance of Geopsychiatry in shaping global mental health policies. This approach advocates for the integration of mental health into foreign policy, underscoring the importance of compassionate, evidence-based approaches to address global challenges such as climate change, natural disasters, and conflicts [6]. Geopsychiatry not only contributes to understanding the psychological effects of environmental factors but also supports the need for proactive preventive and follow-up mental health interventions in response to global crises [7]. This interdisciplinary approach is essential in a world that is increasingly affected by such factors, where mental health plays a vital role in mitigating global vulnerability [8].

Geopsychiatry also prepares clinicians to address mental health issues associated with conflict and displacement. As noted in recent publications, it equips clinicians with unique skills to treat conditions beyond PTSD, such as depression, anxiety, and substance abuse in conflict zones, while fostering cultural competence, trauma-informed care, and self-care for clinicians working in these challenging environments [9].

Psychiatry residents typically receive little formal education on how ecological and geopolitical factors impact mental health, which is concerning given the growing mental health challenges associated with environmental change. Traditional mental health training and interventions have long taken an individualistic approach, pathologizing to the patient without critically considering the surrounding environment. This limits interventions and narrows mental health professionals' understanding. As Sri et al. [10] suggest, incorporating Geopsychiatry into education equips future psychiatrists with the tools needed to address mental health issues related to ecological factors and better prepare them for the challenges posed by environmental change.

This study is the first of its kind, designed to assess the current integration of Geopsychiatry in psychiatry residency programs globally and to understand the perceptions of both faculty members and residents regarding its importance. Through an international survey, this study aims to gather information on the knowledge, attitudes, and perceived barriers to incorporating Geopsychiatry into training curricula. As no previous studies have explored this area, the results of this work will provide a critical foundation for future educational, research, and policy initiatives promoting Geopsychiatry in psychiatric education, addressing the emerging need to address the mental health impacts of environmental change [11].

2. Methods

2.1. Study design and participants

This was an observational, mixed-methods, cross-sectional study [12] based on an online survey launched from May 1 to September 30, 2024. Participants were 401 faculty and psychiatry residents, aged, of both sexes, who voluntarily completed a survey spread through messaging apps ("WhatsApp" or "Telegram") and email. These participants were chosen for their direct involvement in clinical practice and psychiatric training, placing them in a key position to assess the relevance and impact of integrating Geopsychiatry into medical education. All participants received complete information regarding the aims of the study, privacy, and data processing. No payment was made to complete the survey.

The participants were selected through intentional, non-probabilistic sampling from the staffing records of the Asociación de Psiquiatras de América Latina (Latin American Association of Psychiatrists) and the World Psychiatric Association. This approach was chosen because these organizations maintain up-to-date staffing records and regular contact with its members. It is of note that the employed Internet-based survey approach is based on the evidence that responses to online surveys may provide similar findings to those reported through "in person" samples [13].

2.2. Measures

The measurement instrument was an online survey specifically created for this study, featuring a variety of question formats to comprehensively capture participants' knowledge and perspectives on Geopsychiatry. Responses were gathered through closed-ended questions, employing Likert scale options for assessing levels of familiarity and perceived importance (e.g., from "not at all familiar" to "very familiar"), and multiple-choice questions to understand views on the relevance of Geopsychiatry in residency curricula. Additionally, dichotomous (yes/no) questions were included to examine attendance at Geopsychiatry-related training activities and participation in research related to Geopsychiatry. Open-ended questions were integrated to allow participants to provide detailed feedback. The complete survey instrument is included in the Supplementary Materials. As this was the first exploratory study on the topic, the survey did not include a predefined or standardized definition of Geopsychiatry. Participants responded based on their own understanding of the field. This approach allowed us to assess awareness, perceived relevance, and the diversity of conceptualizations of Geopsychiatry across different regions and training contexts. When analyzing responses related to curriculum integration, references were considered indicative of "Geopsychiatry content" if they explicitly addressed the relationship between mental health and geopolitical, environmental, or territorial factors—such as climate change, forced migration, or political violence. We acknowledge that this interpretative flexibility may have introduced variation in responses and address this limitation in the Discussion section.

The survey sections focused on the following variables:

2.2.1. Section 1: Demographic information

This section collected basic demographic details to contextualize participants' responses and analyze perspectives based on professional backgrounds and geographic locations. Participants were asked about their country, role in the residency program (such as Program Director, Faculty Member, or Resident), age, and gender. These variables allowed us to explore whether views on Geopsychiatry differed by gender, career stage or region.

2.2.2. Section 2: Awareness and knowledge of geopsychiatry

In this section, questions assessed participants' familiarity with Geopsychiatry concepts, as well as the perceived importance of its inclusion in psychiatric education. Responses on a Likert scale measured how well participants understood the term "Geopsychiatry" and its implications. Additional questions asked about prior participation in Geopsychiatry-related training (e.g., workshops or seminars), providing insights into existing levels of exposure to this field within the participant pool.

2.2.3. Section 3: Integration of geopsychiatry into the curriculum

This section investigated whether Geopsychiatry content is currently integrated into psychiatry residency curricula, and if so, the methods of integration. Participants who reported integration of Geopsychiatry were asked to elaborate on how this was achieved, such as through lectures, case discussions, or research projects. To identify potential barriers, participants could select challenges, such as lack of faculty expertise, insufficient resources, or limited time within the curriculum. Additionally, they indicated which resources (e.g., guest lectures, online courses, or case studies) would be helpful for future integration efforts.

2.2.4. Section 4: Social and geopolitical determinants of health

This section explored how social and geopolitical determinants—such as socioeconomic status, political stability, and migration—are addressed in psychiatric training. Participants shared whether these topics were integrated into their current curricula and the methods used, ranging from brief mentions to dedicated lectures or case studies. They also rated the importance of including these determinants in psychiatry education, helping to clarify the relevance of contextual factors in mental health care from a geopolitical perspective.

2.2.5. Section 5: Future directions

In this section, participants expressed their interest in expanding Geopsychiatry content within their programs and assessed the interest level among their peers or residents. Open-ended questions allowed participants to suggest specific topics they believed should be prioritized, such as the mental health effects of climate change or the impact of urban green spaces. Participants were also asked about potential plans or ideas for further integrating Geopsychiatry into future curricula, contributing to the study's exploration of pathways for curriculum development.

2.3. Section 6: Additional comments

This final section provided participants with an opportunity to share any further comments or suggestions regarding the integration of Geopsychiatry into psychiatric education. Additionally, participants could indicate their willingness to be interviewed on the topic, providing contact details if they were interested. This section enabled the collection of qualitative feedback to complement the quantitative data gathered in earlier sections.

2.4. Ethical considerations

This study was conducted within the framework of the Scientific Research Improvement Program of the Research Group on Epidemiology of Mental Disorders, Psychopathology, and Neurosciences, and was approved by the Department of Medical Psychology of the School of Medical Sciences at the National University of Asuncion, Paraguay. The data were handled with strict confidentiality, equality, and justice following the principles of the Declaration of Helsinki.

2.5. Data analysis

Data analysis was conducted using Jamovi and RStudio, incorporating descriptive statistics for the sociodemographic variables and survey responses. Absolute and relative frequencies were calculated along with measures of central tendency to provide a detailed description of the survey population. Additionally, inferential statistics were applied using the chi-square test (χ^2) to assess associations between categorical variables, such as the participants' region of origin and their level of knowledge about Geopsychiatry, as well as between participation in training activities and familiarity with the discipline. A p-value <0.05, indicating statistically meaningful relationships, was considered significant for all inferential tests. Thematic analysis was performed for the open-ended responses, and key themes were extracted to illustrate the participants' perspectives. These qualitative data complemented the quantitative findings, providing richer insights into the participants' views on Geopsychiatry.

3. Results

3.1. Section 1: Demographic information

This study included 401 psychiatrists from various regions of the world, providing a diverse sample with a wide range of sociodemographic and academic backgrounds. In terms of gender distribution, 64.1 % of the participants were women and 35.7 % were men. The average age of the respondents was 35.4 ± 10.24 years. Most participants were from Latin America (including Brazil and the Caribbean), representing 45.8 % of the sample, followed by the Middle East and North Africa (MENA) with 25.7 %. Table 1 provides a detailed overview of the demographic characteristics.

3.2. Section 2: Awareness and knowledge of geopsychiatry

Regarding awareness of Geopsychiatry, results from Table 2 show that 40.6 % of respondents reported being "somewhat unfamiliar," and 27.2 % were "not at all familiar," indicating limited prior exposure to this field. Nevertheless, 62.6 % of participants considered the inclusion of Geopsychiatry in psychiatric education to be "very important," despite 92.3 % reporting that they had not received any formal training in this area.

3.3. Section 3: Integration of geopsychiatry into the curriculum

The current integration of Geopsychiatry into the curriculum proved to be limited, with 77.3 % of participants stating that it was not included at all. The participants who mentioned that Geopsychiatry is "yes" (4.0 %) or "partially" (18.7 %) integrated into the curriculum provided responses that describe the integration of cultural and transcultural

Table 1
Participants' demographic characteristics (N = 401).

Characteristic		n	%
Gender	Female	257	64.1
	Male	143	35.7
	Other	1	0.2
Geographic location	Latin America[a]	184	45.8
	Middle East and North Africa[b]	103	25.7
	Asia[c]	78	19.5
	Europe[d]	36	9.0
Role in the residency program	Associate Program Director	19	4.7
	Program Director	11	2.7
	Faculty member	98	24.5
	Medical resident	273	68.1

[a] Argentina, Barbados, Bolivia, Brazil, Colombia, Costa Rica, Cuba, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, México, Panamá, Paraguay, Perú, Trinidad and Tobago, Uruguay, and Venezuela.
[b] Egypt, Palestine, Saudi Arabia.
[c] Bangladesh, India, Japan, Pakistan, Philippines, South Korea, Sri Lanka, Taiwan, Thailand.
[d] Italy, Russian Federation, United Kingdom.

Table 2
Participants' awareness and knowledge of Geopsychiatry (N = 401).

Characteristic		n	%
Level of familiarity with Geopsychiatry	Very familiar	17	4.2
	Somewhat familiar	112	27.9
	Not very familiar	163	40.6
	Not at all familiar	109	27.2
Perceived importance of including Geopsychiatry in psychiatric education and practice	Very important	251	62.6
	Somewhat important	140	34.9
	Not very important	10	2.5
Attendance at Geopsychiatry-related workshops, seminars, conferences, or training	No	370	92.3
	Yes	31	7.7
Details of specific Geopsychiatry training attended (if applicable).	Workshops, seminars, conferences	25	6.2
	Research projects	3	0.7
	Clinical training	3	0.7

psychiatry within master's and doctoral-level psychiatry programs. The primary forms of integration include:

1. Lectures and conferences: Most responses mention the use of dedicated lectures on cultural psychiatry, suggesting that this is a common teaching method. In some programs, specific topics are covered under the broader umbrella of cultural psychiatry.
2. Clinical case discussions: Several responses highlight the inclusion of clinical case discussions to teach cultural aspects in psychiatry. This approach enables students to apply cultural knowledge in practical scenarios, promoting a deeper and more contextualized understanding of patients.
3. Research projects: Some programs incorporate cultural psychiatry into research projects. These projects often explore topics such as the importance of sociodemographic data, which are crucial for analyzing cultural factors in mental health.
4. Workshops and clinical tutorials: In addition to lectures and case discussions, some programs offer workshops and clinical tutorials. This provides students with hands-on opportunities to engage in culturally relevant aspects of psychiatric practice.
5. Cultural psychiatry in advanced curricula: In certain postgraduate programs (master's and doctoral), cultural psychiatry is not only part of teaching modules, but is also integrated into research curricula. There is an emphasis on the importance of sociodemographic data in studies underscoring the relevance of culture in psychiatric treatment and diagnosis.

The challenges faced in integrating Geopsychiatry into the curriculum included insufficient educational resources (52.9 %), lack of faculty expertise (48.1 %), limited time in the curriculum (47.9 %), and lack of interest from trainees (18.2 %). Of the participants, 11.2 % recognized additional challenges in integrating Geopsychiatry into the curriculum. A thematic analysis of these responses revealed several barriers:

1. Lack of awareness and knowledge of the concept: Many respondents indicated general unfamiliarity with geopsychiatry among both faculty and residents. This lack of awareness means that the concept is seldom discussed in the residency context, limiting the understanding of its relevance and application.
2. Not included in the curriculum: Several responses pointed out that geopsychiatry is not formally a part of the national curriculum or residency programs. Although some related determinants or psychosocial risk factors are covered, geopsychiatry itself has not been established as a distinct area or subject, hindering its integration.
3. Lack of priority: For some, geopsychiatry is not considered a priority within the curriculum. This perception suggests that the field may not be viewed as essential to current educational objectives, affecting its inclusion in formal training.
4. Absence of a clear plan for integration: There is a notable lack of a structured plan to integrate geopsychiatry, with some participants highlighting the absence of guidelines or initiatives for implementation. This has resulted in a lack of clear study objectives related to geopsychiatry in the curriculum.
5. Uncertainty about the reason for exclusion: Finally, some participants expressed uncertainty regarding why Geopsychiatry has not been included in the curriculum. This indicates a possible lack of communication about the potential value and relevance of this field, leaving its importance unclear to faculty and trainees.

Participants identified helpful resources for integrating Geopsychiatry into the curriculum, including online courses or modules (68.8 %), collaborations with other institutions (59.1 %), case studies or clinical vignettes (53.9 %), research opportunities (49.4 %), and guest lectures (38.7 %). Of the participants, 7.5 % identified additional useful resources, such as the inclusion of Geopsychiatry as a subspecialty in both undergraduate and postgraduate MD residency programs, increased clinical requirements, and overall incorporation into the curriculum.

3.4. Section 4: Social and geopolitical determinants of health

Participants responded that the impact of social determinants of health on mental health was addressed to varying degrees within their psychiatry residency curriculum. Specifically, 7.9 % indicated that it was not addressed, 40.3 % stated that it was briefly mentioned, 18.9 % reported that it was covered in specific lectures or seminars, and 32.4 % noted that it was integrated throughout the curriculum. Participants reported that social determinants of health (e.g., socioeconomic status, education, and social support) are addressed in psychiatry residency programs through various methods. These included seminars, journal clubs, case discussions, and multidisciplinary team meetings. In clinical training, social factors are regularly considered when planning treatment, particularly in public health settings where socioeconomic status influences medication and treatment decisions. Some programs incorporate these topics into specific courses, such as social psychiatry or public mental health, while others address them through case presentations and supervision sessions, emphasizing the patient's socioeconomic and cultural context. Cross-disciplinary collaboration is also common with teams from social work and psychology involved in comprehensive care planning. Additionally, residents in some programs gain practical experience in vulnerable communities, directly addressing social factors, such as migration, conflict, and unemployment.

In addition, participants rated the importance of incorporating an understanding of geopolitical determinants of mental health and social determinants of health into the psychiatry residency curriculum as follows: 66.6 % viewed it as very important, 30.4 % as somewhat important, 2.5 % as not very important, and 0.5 % as not important at all. Furthermore, participants emphasized the importance of incorporating an understanding of geopolitical and social determinants of health into Psychiatry residency programs, with the following reasoning:

1. Relevance to patient care: Many have noted that social and geopolitical factors play a critical role in shaping the mental health of individuals. By understanding these factors, psychiatrists can provide effective and contextually appropriate care. For example, participants highlighted the role of social determinants, such as poverty, political instability, and environmental factors, all of which significantly impact mental health.
2. Holistic approach: Respondents emphasized the need for a holistic approach to psychiatric training that includes the biopsychosocial model, which integrates biological, psychological, and social aspects. They argued that, without considering the social and geopolitical

context, psychiatric assessments and interventions may lack depth and effectiveness.

3. Impact on mental health outcomes: Some participants pointed out that factors, such as political conflict, economic instability, and cultural context, influence the prevalence and manifestation of mental health conditions. Knowledge of these influences enables mental health professionals to better understand and address the root causes, potentially leading to improved mental health outcomes.
4. Support for public health initiatives: Many respondents believed that an understanding of these determinants is essential for developing public health policies aimed at preventing mental health issues. Training psychiatrists in this area can contribute to broader initiatives addressing mental health at the population level.
5. Educational gaps and curriculum needs: Several participants noted that despite its importance, the study of geopolitical determinants is often underrepresented in current psychiatric curricula. They expressed the need for structured educational content on this topic to prepare future psychiatrists for the realities of clinical practice in diverse and complex sociopolitical environments.

Furthermore, participants provided examples of how their residency programs address the intersection of the social and geopolitical determinants of health in patient care and treatment planning. Specifically, 15.7 % reported that these issues were not addressed, 50.8 % said they were briefly mentioned, 18.7 % indicated that they were covered in specific lectures or seminars, and 14.7 % noted that these topics were integrated throughout the curriculum. Participants provided a range of specific examples of how their residency programs address the intersection of the social and geopolitical determinants of health in patient care and treatment planning. These topics are commonly discussed in lectures, clinical rounds, and case discussions, particularly in courses such as transcultural psychiatry and social psychiatry. Some programs have dedicated seminars and workshops that focus on migration, cultural diversity, and health inequities.

Many participants mentioned that social determinants, including socioeconomic status and access to healthcare, are integral to the creation of treatment plans, and these factors are regularly considered during case presentations and the development of long-term care strategies. In some cases, programs specifically focus on managing the care of migrants and culturally diverse populations, while emphasizing the need to tailor psychiatric care based on patients' access to services. Other programs integrate these issues into community psychiatry rotations, where residents encounter real-world scenarios involving vulnerable populations and address factors such as armed conflict, migration, and public health challenges. Some programs also include research projects on topics such as indigenous suicide and cultural impacts on mental health, while others highlight their involvement in the Mental Health Gap Action Program (mhGAP) to expand access to mental health care in underserved regions.

3.5. Section 5: Future directions

Participants reported a strong interest in incorporating more Geopsychiatry content into their curriculum, with 54.1 % indicating they were very interested, 38.9 % were somewhat interested, 6.2 % were not very interested, and only 0.7 % were not interested at all. In terms of the perceived interest of psychiatry residents, 23.9 % were seen as very interested in learning more about Geopsychiatry, 53.6 % as somewhat interested, 20.9 % as not very interested, and 1.4 % as not interested at all.

The majority of participants (79.6 %) reported that they did not currently have specific plans or ideas for integrating Geopsychiatry into their curriculum, while 20.4 % indicated that they did have ideas. Among those ideas, some specific suggestions for integrating Geopsychiatry are listed in Table 3.

Table 3
Key ideas for integrating Geopsychiatry into curricula.

Integration approach	Description
Educational approaches	Adding lectures, seminars, and workshops; using case studies and reading assignments; creating Geopsychiatry modules parallel to Social and Community Psychiatry.
Research and collaboration	Promoting research on social and geopolitical determinants; collaborating with institutions already incorporating Geopsychiatry; integrating into ongoing research on migration and indigenous health.
Curriculum development	Incorporating Geopsychiatry as a distinct topic or within existing courses; updating curriculum to reflect geopolitical factors; increasing time allocation in Psychiatry training.
Environmental and community health	Integrating environmental psychiatry topics, such as climate change effects and green spaces; exploring Aquaponic systems and Ecosystem Psychiatry; designing clinic spaces to reduce stigma.
Faculty development and resources	Providing training for faculty on Geopsychiatry; developing skill-building programs for faculty and residents to understand and apply Geopsychiatry in clinical practice.

3.6. Section 6: Additional comments

Finally, the participants provided additional comments and suggestions for integrating Geopsychiatry into Psychiatry residency curricula. Their responses reflect diverse perspectives and practical ideas, and are summarized in Table 4.

3.7. Associated factors

The results of the chi-square test ($\chi^2 = 34.662$, df = 15, p = 0.003) indicated a significant association between respondents' region of origin and their familiarity with Geopsychiatry. Psychiatrists from the MENA and Asian regions displayed greater familiarity with Geopsychiatry than those from other regions, suggesting that specific geopolitical contexts may influence the degree of knowledge in this field. For instance, in the MENA region, 8 % of respondents reported being highly familiar with Geopsychiatry, whereas no respondents from Europe indicated a high

Table 4
Participants' additional comments on integrating Geopsychiatry into the curriculum.

Theme	Details
Curriculum development and implementation	Introduce Geopsychiatry through short modules, ad hoc lessons, and structured elective courses. Start with conferences, seminars, or online modules. Practical field experiences, such as community visits, were also suggested.
Research and interdisciplinary collaboration	Encourage interdisciplinary collaborations with fields like anthropology and sociology. Promote research projects on social and geographical determinants. Integrate cultural beliefs and perspectives from patients and their families.
Faculty training and capacity building	Train faculty to equip them with Geopsychiatry knowledge. Establish a Latin American training school or hold workshops and conferences to build awareness among professionals.
Focus on environmental and social determinants	Emphasize the mental health effects of climate change, green spaces, and sustainability. Include indigenous perspectives and cosmovisions to bridge mental health care gaps for marginalized populations.
Policy advocacy and institutional support	Advocate for funding and resources to improve facilities and support training. Engage health and educational authorities to support curricular changes. Organize regional meetings to build consensus on Geopsychiatry.

level of familiarity.

The region of origin was also significantly associated with the perceived importance of including Geopsychiatry in psychiatric education ($\chi^2 = 20.522$, df = 10, p = 0.025). Respondents from Latin America and MENA stood out in recognizing Geopsychiatry as "very important" for their training, underscoring that professionals in these regions view geopolitical determinants as crucial to clinical practice.

The analysis of the association between gender and perceived importance of Geopsychiatry showed no significant results ($\chi^2 = 3.024$, df = 2, p = 0.220). Men and women expressed similar views on the relevance of integrating this discipline into psychiatric education.

Examining the relationship between familiarity with Geopsychiatry and the importance of its inclusion in the curriculum yielded highly significant results ($\chi^2 = 50.538$, df = 6, p < 0.001). Psychiatrists who were more familiar with Geopsychiatry were the strongest advocates for its integration into residency programs. Notably, 93 % of those who identified as "very familiar" considered its inclusion "very important."

Attendance at educational activities in Geopsychiatry was strongly associated with familiarity with the discipline ($\chi^2 = 83.063$, df = 3, p < 0.001). Respondents who attended such training showed greater familiarity, emphasizing the role of educational opportunities in expanding knowledge in this area. Only 5 % of those who had not participated in such activities rated themselves as "very familiar."

Regarding barriers to integrating Geopsychiatry, a lack of faculty expertise was significantly associated with the inclusion of Geopsychiatry in the curriculum ($\chi^2 = 16.086$, df = 2, p < 0.001). Programs with less experienced faculty in Geopsychiatry were less likely to include it in their curricula. In contrast, a lack of educational resources was not significantly associated ($\chi^2 = 0.614$, df = 2, p = 0.736), indicating that resource availability does not directly affect the integration of Geopsychiatry into residency programs.

The analysis of residents' perceived lack of interest in learning more about Geopsychiatry also showed no significant results ($\chi^2 = 2.960$, df = 2, p = 0.228). This suggests that faculty perceptions of resident interests do not represent a clear barrier to curriculum integration.

Conversely, participation in online courses or modules was significantly associated with greater familiarity with Geopsychiatry ($\chi^2 = 11.397$, df = 3, p = 0.010). Those engaged in online learning activities showed a greater level of familiarity, highlighting the effectiveness of these training tools.

Finally, collaboration with other institutions was highly significantly associated with research opportunities in Geopsychiatry ($\chi^2 = 59.530$, df = 1, p < 0.001). Respondents reporting institutional collaboration had greater access to research opportunities in this field, suggesting that inter-institutional cooperation is essential for advancing Geopsychiatry in psychiatric research.

4. Discussion

The sociodemographic distribution of respondents revealed a significant prevalence of psychiatrists from Latin America and the MENA region, suggesting representation from areas where geopolitical factors and mental health system development intersect. This finding is important, as it may reflect the socio-political and economic realities in these regions, where the social and political determinants of health are particularly prominent. For instance, Egypt (which represents 25.2 % of the sample) has experienced recent political transitions and public health challenges, likely influencing the prominence of Geopsychiatry in this context. Similar studies have found that psychiatrists in developing countries often face greater structural challenges, potentially sensitizing them to disciplines such as Geopsychiatry [14,15]. However, this geographic concentration may limit the generalizability of these findings to underrepresented regions such as the Caribbean, North America, parts of Europe, and Asia-Pacific.

Regarding gender, the sample consisted of 64.1 % women, which may reflect a shift in the professional dynamics of global psychiatry. Previous studies have reported a growing feminization of psychiatry, particularly in low- and middle-income countries, where educational opportunities for women in medicine have expanded over the past decades [16,17]. This trend may also be related to cultural changes and the increased gender equity in education and professional development. However, prior research indicates that disparities persist in leadership roles, with a higher representation of men in directorial positions [18,19]. It is important to note that this finding may also contain bias, as women tend to respond more frequently to surveys in general, especially those related to their professional field [20].

The limited knowledge of Geopsychiatry, with only 4.2 % of respondents identifying as "very familiar," underscores the absence of this discipline in psychiatric training programs worldwide. This low familiarity likely stems from the lack of formal integration of Geopsychiatry in psychiatric curricula, as corroborated by studies that show that many psychiatry programs lack an explicit focus on the geopolitical determinants of mental health [21]. Despite growing awareness of the influence of social, political, and environmental factors on mental health, a lack of educational resources and specialized instructors appears to be a substantial barrier [22]. These findings align with previous research highlighting gaps in training on socio-political issues in psychiatry, limiting psychiatrists' ability to address complex mental health challenges comprehensively [23,24]. However, the observed positive impact of training activities on Geopsychiatry knowledge highlights the need for expanded educational opportunities in this area.

Despite limited knowledge, a notable 62.6 % of respondents considered the incorporation of Geopsychiatry into psychiatric education to be 'very important,' indicating a strong perceived clinical relevance even among those without formal training in this field. This finding suggests an implicit recognition of the importance of geopolitical factors in psychiatric practice, especially in regions affected by political instability, armed conflict, or forced displacement—all of which significantly impact mental health. However, despite the high percentage acknowledging the importance of Geopsychiatry, most respondents did not actively seek additional training through workshops, seminars, conferences, or related programs. Previous studies have shown that while psychiatrists may lack in-depth knowledge of Geopsychiatry, many recognize the importance of addressing the social and political factors influencing psychiatric disorders [25,26]. Nonetheless, the proportion of health professionals with advanced education who fail to recognize the relevance of geopolitical factors highlights a tendency to deny or underestimate the impacts of climate change, environmental issues, and conflict. The gap between perceived importance and the lack of curriculum integration underscores the urgent educational need to better prepare psychiatrists for these contemporary challenges.

The limited integration of Geopsychiatry into residency programs, with only 4 % of programs fully incorporating this discipline, reflects a general lack of emphasis on geopolitical determinants in psychiatric education. This scarcity may result from structural and educational factors, notably the absence of curricular mandates that require Geopsychiatry-related content [27]. Prior studies suggest that most psychiatric curricula remain focused on traditional biomedical and psychological models, with limited attention paid to socio-cultural and political dimensions [28,29]. This aligns with research indicating a trend toward prioritizing clinical over comprehensive approaches in psychiatric training, thus constraining the development of skills necessary to address the social determinants of mental health [30,31]. Additionally, the lack of institutional recognition of Geopsychiatry as an emerging field likely hinders its curricular adoption. These realities highlight the need for structural reform in psychiatric education to prepare professionals for the complex geopolitical contexts that influence mental health. Moreover, it is important to consider how political systems and levels of academic freedom may affect the integration of Geopsychiatry into psychiatric training. In countries with authoritarian regimes or restricted freedom of expression, discussing politically sensitive topics—such as state violence, environmental injustice, or forced

displacement—may be discouraged or even prohibited in academic settings [32]. This structural limitation may prevent program directors or faculty from including such content, regardless of its clinical or educational relevance. These constraints highlight the need for international academic cooperation and advocacy to support the inclusion of critical socio-political perspectives in medical education.

In our study, key educational barriers to Geopsychiatry integration included lack of faculty expertise and inadequate educational resources. The deficit in faculty expertise may stem from Geopsychiatry's emergence as a formal field, meaning that many educators have not received training in this area. This phenomenon has been observed in other emerging fields, where the rapid evolution of knowledge surpasses the educational system's ability to train instructors [33,34]. Moreover, the lack of suitable educational resources—such as textbooks, didactic materials, and Geopsychiatry-specific case studies—also poses a challenge. Studies have shown that when a discipline lacks standardized or accessible materials, its integration into academic programs is often hindered as instructors struggle to deliver content effectively [35,36]. To address these barriers, it is essential to develop specific educational resources including online modules, teaching guides, and geopolitically relevant case studies. Additionally, continuous faculty training through seminars, workshops, and Geopsychiatry conferences can bridge the knowledge gap and foster a broader and more inclusive perspective in psychiatric education.

Non-significant factors for Geopsychiatry integration included lack of resident interest and insufficient curriculum time. Only 18.2 % of respondents cited resident disinterest as a barrier, indicating that most psychiatry students are not resistant to learning about Geopsychiatry. This finding contrasts with the common perception that medical students and residents often prioritize clinically oriented areas over socio-political content [37]. Furthermore, the finding that lack of time was not a significant barrier (with 52.1 % stating there was sufficient time) suggests that curriculum load may not be an insurmountable obstacle to incorporating new content, as has been the case in other emerging medical fields. These observations suggest that integration efforts should focus on enhancing educational quality and ensuring that instructors have the tools and knowledge to effectively deliver content. Consistent with prior studies, with adequate training and institutional support, Geopsychiatry could be viewed as a valuable addition to comprehensive psychiatric education, rather than an added curricular burden [38,39].

Access to online modules and conferences on geopolitical determinants, reported by 68.8 % of respondents, underscores the effectiveness of digital tools in expanding Geopsychiatry knowledge. In a context where this discipline is not formally integrated into many residency programs, these online platforms fill a crucial gap by providing flexible, globally accessible content that may otherwise be challenging to incorporate into traditional curricula. This finding aligns with those of previous studies that highlight the growing role of distance education in continuous medical training, particularly in emerging fields [40,41]. The accessibility of online modules enables professionals from different regions to update their knowledge without geographical and time constraints of in-person education. However, content quality and standardization are essential because the effectiveness of online modules can vary widely based on material quality and participant interaction. Thus, developing high-quality online resources with input from Geopsychiatry experts can enhance the positive impact of these tools.

Limited access to research opportunities, with 50.6 % of respondents noting a lack in this area, represents a significant barrier to advancing Geopsychiatry in both academic and clinical fields. Mental health research has shown that social and geopolitical determinants profoundly influence the prevalence and manifestations of psychiatric disorders. However, this topic remains under-explored. Limited access to research opportunities may be tied to a lack of dedicated funding and the scarcity of academic institutions prioritizing Geopsychiatry [21]. Prior studies emphasize that inter-institutional collaborations are key to developing robust research projects in emerging fields, and this context is no exception [42,43]. Strengthening partnerships between universities, research centers, and international organizations could create a collaborative network that advances Geopsychiatry research. Establishing dedicated academic positions and research facilities in this discipline can consolidate research efforts and generate empirical data to support education and policy development in mental health.

The significant association between region of origin and familiarity with Geopsychiatry suggests a strong influence of geopolitical contexts on knowledge of this discipline. Respondents from MENA and Asia reported higher levels of familiarity than those from other regions. This disparity likely reflects the historical and political experiences of these regions and their impact on perceptions of geopolitical determinants of mental health. For example, MENA faces constant political instability, armed conflict, and forced displacement, which are factors that deeply affect the mental health of its populations [44,45]. Consequently, psychiatrists in this region may be attuned to the need to understand how these factors shape psychiatric disorders. In Asia, rapid economic development, along with social challenges such as urbanization and internal migration, may raise awareness of Geopsychiatry [46]. This finding is consistent with studies demonstrating that regional geography, politics, and economics are central to how mental health systems address population needs [47,48]. In contrast, European systems tend to be more traditionally oriented and may not emphasize geopolitical factors as much, indicating a need for change in psychiatric education in stable global regions [49].

The highly significant relationship between participation in training activities and Geopsychiatry knowledge is one of the findings of this study. This highlights the importance of expanding training opportunities in this area as those who attended training activities exhibited considerably greater knowledge than those who did not. This finding aligns with prior research in other emerging fields where exposure to specific educational content is a key predictor of knowledge and professional competency [50]. Given that Geopsychiatry is still developing, increased visibility in medical education is required. These results support the idea that workshops, seminars, and specialized conferences can effectively improve knowledge in this area. Furthermore, this finding suggests that training opportunities should be more widely accessible, as more than nine out of ten respondents had no formal Geopsychiatry training, revealing a critical gap in the current educational landscape. Integrating these training activities into specialized conferences, residency programs, and ongoing psychiatric education could maximize their impact.

The effectiveness of online courses, as shown by the significant association between online participation and greater knowledge, supports the growing recognition of digital platforms as a vital tool for medical education. In a global context, where Geopsychiatry is often absent from traditional curricula, online courses offer an accessible and flexible alternative for professionals seeking to deepen their understanding of geopolitical determinants in mental health [51]. This finding aligns with prior studies showing that online education is particularly effective in niche or emerging topics, where the availability of in-person resources and expert instructors may be limited [52,53]. Online courses facilitate continuous learning, allowing health care professionals to stay current without interrupting their clinical responsibilities. However, ensuring the quality of these courses is essential for maintaining educational standards. Developing partnerships with academic and health organizations can enhance the quality and relevance of these programs, align them with international standards, and address psychiatric professionals' specific needs. This approach could be especially beneficial in regions with limited access to high-quality in-person education.

Finally, interinstitutional collaborations emerged as a critical factor for accessing research opportunities in Geopsychiatry, reinforcing the importance of strategic partnerships in advancing this field. Collaboration between academic institutions, clinical settings, and health organizations facilitates knowledge and resource exchange, creating

research networks capable of addressing complex issues that transcend national boundaries [54]. This result aligns with research from other emerging fields, indicating that inter-institutional cooperation is essential for innovation and progress, particularly in areas that require multidisciplinary approaches [55,56]. For Geopsychiatry, where social and geopolitical determinants are key variables, international collaboration allows for comparative research on different geopolitical contexts and their mental health impacts. Such alliances not only enhance research quality and quantity but also support the development of mental health policies that are both informed and contextually relevant. Therefore, promoting inter-institutional collaborations should be a priority for academic and mental health institutions aiming to drive research in this crucial area.

Overall, this study underscores the urgent need to integrate Geopsychiatry into psychiatry residency programs because of its role in understanding the social and geopolitical determinants of mental health. Although only 4 % of programs currently include Geopsychiatry, 62.6 % of psychiatrists surveyed consider it "very important" to their training, reflecting a significant demand for a more comprehensive approach to the contexts impacting mental health. The strong association between educational activities and Geopsychiatry knowledge demonstrates that access to targeted training can effectively enhance familiarity in this emerging field. Similarly, online courses offer a practical solution for expanding knowledge, particularly in areas with limited resources.

Our study also highlights the role of inter-institutional collaborations in generating research opportunities, indicating that partnerships between academic and health institutions are crucial for advancing research and developing contextually relevant mental health policies. However, barriers such as lack of faculty expertise and inadequate educational resources need to be addressed to facilitate wider Geopsychiatry integration. Ultimately, this study emphasizes the need for a restructured approach in psychiatric education that includes a geopolitical and multidimensional perspective, preparing future psychiatrists to meet the complex mental health challenges posed by global factors.

The lack of training on how geopolitical and environmental factors influence mental health has significant implications for the ability of future psychiatrists to effectively address the mental health needs of diverse populations, particularly those affected by global crises. This gap in understanding geopolitical determinants and neglecting environmental influences—such as war, migration, and climate change—can lead to an inadequate understanding of how these factors contribute to psychiatric conditions, especially in vulnerable populations who frequently experience high rates of mental health disorders [57,58]. Moreover, proper training enables a preventive approach, allowing for early or assertive interventions before symptoms fully develop, or once they are present. There is also a circular effect: the lack of training in the geopolitical and environmental aspects of mental health reduces residents' engagement in related research and hinders the development of evidence-based practices in this area. Preparing professionals for an emerging field, often marked by denialism, is essential to foster a broader understanding of health and promote more integrated approaches that consider the complex macrosocial factors involved in mental health.

The results of this study align with global trends in psychiatry, where fields such as Cultural Psychiatry and Global Mental Health increasingly emphasize the importance of understanding socio-political and environmental contexts in mental healthcare. These fields face similar barriers to integration, such as limited faculty expertise and insufficient training resources [59]. For instance, Cultural Psychiatry has gained acceptance through institutional support, standardized materials, and case studies, providing a potential roadmap for Geopsychiatry's integration into psychiatric curricula [60]. Global Mental Health has successfully leveraged international collaborations to address gaps in expertise and research, particularly in low- and middle-income countries. These collaborations have improved educational offerings and fostered research networks, a model that can be adapted to Geopsychiatry [61]. Similarly, Public Health Psychiatry, which addresses the societal determinants of mental health, offers another comparison. Its successful integration highlights the potential for Geopsychiatry to emphasize geopolitical determinants within psychiatric training [62]. By learning from these fields, psychiatric educators can anticipate and overcome the challenges in integrating Geopsychiatry. A structured approach—focused on creating educational resources, fostering collaborations, and training faculty—could help address current gaps and bring Geopsychiatry into mainstream psychiatric education.

Several practical steps can be taken to facilitate the integration of Geopsychiatry into psychiatric residency curricula. First, developing standardized educational materials such as textbooks, online modules, and clinical case studies would provide faculty and residents with accessible resources to understand the geopolitical determinants of mental health [63]. Second, increasing faculty training through workshops, seminars, and collaborative teaching exchanges could help to overcome the current gap in expertise. Faculty exchange programs, similar to those used in Global Mental Health, can provide a platform for knowledge sharing across institutions [64]. Third, expanding online educational platforms would ensure that even institutions with limited resources could access Geopsychiatry training. Finally, fostering inter-institutional research collaborations is essential to generate empirical data on the impact of geopolitical factors on mental health. By partnering with academic institutions and research bodies, psychiatric programs can strengthen their research capabilities and contribute to the evidence base in Geopsychiatry. These initiatives can help overcome current barriers to integrating Geopsychiatry and ensure that future psychiatrists are equipped to address global mental health challenges.

4.1. *Limitations and future research directions*

This study has several limitations. First, the geographic concentration of respondents, primarily from Latin America and the MENA regions, may limit the generalizability of the findings to underrepresented areas, such as the Caribbean and parts of Europe. Additionally, the non-probabilistic sampling method may have introduced a selection bias, as participants were primarily recruited through specific psychiatric associations. Those who chose to respond to the survey may also have a greater sensitivity and openness to the topic, potentially skewing the results. The self-reported nature of the survey could further introduce response bias, with participants possibly overestimating their familiarity with or the importance they attribute to Geopsychiatry. As we did not systematically analyze residency programs, the data on the integration of Geopsychiatry into these programs may be influenced by subjective interpretations of the content. In addition, the absence of a standardized definition of Geopsychiatry within the survey instrument may have led to variability in how participants interpreted and reported Geopsychiatry-related content and experiences. Furthermore, the cross-sectional design of the study offers only a snapshot in time, without capturing longitudinal trends or shifts in attitudes toward Geopsychiatry over time. Another limitation is the overrepresentation of women in our sample, which may introduce gender-related bias, as women are generally more likely to respond to surveys, especially those in professional fields. Despite these limitations, this study is one of the first to systematically explore the integration of Geopsychiatry into psychiatry residency programs worldwide. By including a diverse sample of faculty members and residents from various regions, this study offers a unique perspective on global awareness and the perceived importance of Geopsychiatry in psychiatric education. The mixed-methods approach, which combines quantitative and qualitative data, provides deeper insights into both the barriers and facilitators of Geopsychiatry integration. This study also serves as a foundational reference for future research aimed at developing educational policies and training frameworks in this emerging field. Future research should aim to build on the findings of this exploratory study through longitudinal and cross-

regional designs that assess changes in awareness, curricular integration, and training outcomes over time. Comparative studies across different political and educational systems could help to better understand how structural and ideological factors influence the adoption of Geopsychiatry in psychiatric education. In addition, several participants expressed willingness to take part in follow-up interviews. While no interviews have been conducted to date, we are currently developing a qualitative research protocol to explore these issues more deeply in the near future. These insights could inform the development of targeted training strategies and institutional policies.

5. Conclusion

In conclusion, this study highlights the urgent need to integrate Geopsychiatry into psychiatry residency curricula worldwide. Despite low levels of familiarity among participants, a significant proportion recognized the importance of incorporating Geopsychiatry, reflecting a demand for education on how geopolitical and environmental factors influence mental health. This study underscores the importance of targeted training opportunities, such as online courses and interinstitutional collaborations, which can bridge current knowledge gaps and support the development of a more comprehensive psychiatric education framework. To overcome existing barriers, efforts should focus on resource development and faculty training to facilitate the incorporation of Geopsychiatry into residency programs. These initiatives are crucial for equipping future psychiatrists with the skills necessary to address the complex global mental health challenges in an increasingly interconnected and environmentally vulnerable world.

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CRediT authorship contribution statement

Julio Torales: Writing – review & editing, Writing – original draft, Validation, Supervision, Methodology, Investigation, Formal analysis, Data curation, Conceptualization. **Anthon Daniel Torres-Romero:** Writing – review & editing, Writing – original draft, Project administration, Investigation, Formal analysis, Data curation, Conceptualization. **Iván Barrios:** Writing – review & editing, Writing – original draft, Methodology, Investigation, Formal analysis, Data curation, Conceptualization. **João Mauricio Castaldelli-Maia:** Writing – original draft, Conceptualization. **Egor Chumakov:** Conceptualization. **Antonio Ventriglio:** Conceptualization. **Helena Moura:** Conceptualization. **Joana Corrêa de Magalhães Narvaez:** Conceptualization. **Afzal Javed:** Conceptualization. **Dinesh Bhugra:** Conceptualization. **Albert Persaud:** Conceptualization.

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Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.geopsy.2025.100004.

Data availability

The data that has been used is confidential.

References

[1] Castaldelli-Maia JM, Bhugra D. What is geopsychiatry? Int Rev Psychiatr 2022 Feb; 34(1):1–2. https://doi.org/10.1080/09540261.2022.2031915.

[2] Chyung D, McDermott JF, Horner MS. Global mental health and cultural psychiatry [Internet]. JAACAP Connect; 2016 [cited 25th March 2025]. Available from: https://jaacapconnect.org/api/v1/articles/92593-global-mental-health-and-cultural-psychiatry.pdf.

[3] Berry HL, Bowen K, Kjellstrom T. Climate change and mental health: a causal pathways framework. Int J Publ Health 2010;55(2):123–32. https://doi.org/10.1007/s00038-009-0112-0.

[4] Cianconi P, Betrò S, Janiri L. The impact of climate change on mental health: a systematic descriptive review. Front Psychiatr 2020;11:74. https://doi.org/10.3389/fpsyt.2020.00074.

[5] Brandt L, Adorjan K, Catthoor K, Chkonia E, Falkai P, Fiorillo A, et al. Climate change and mental health: position paper of the European Psychiatric Association. Eur Psychiatry 2024;67(1):e41. https://doi.org/10.1192/j.eurpsy.2024.1754.

[6] Persaud A, Bhugra D. Geopsychiatry-"putting mental health into foreign policy". Int Rev Psychiatr 2022;34(1):3–5. https://doi.org/10.1080/09540261.2022.2032615.

[7] Persaud A, Bhugra D. Geopsychiatry, global vulnerability, mitigation and psychiatry. Int J Soc Psychiatr 2022;68(8):1537–8. https://doi.org/10.1177/00207640221110068.

[8] Torales J, Castaldelli-Maia JM, Ventriglio A, Barrios I, Almirón-Santacruz J, García O, et al. The CAPE (Compassion, Assertive Action, Pragmatism, and Evidence) vulnerability index - second Edition: putting mental health into foreign policy to address globalization, conflict, climate change, and natural disasters. Ind Psychiatry J 2023;32(Suppl 1). https://doi.org/10.4103/ipj.ipj_211_23.

[9] El-Khoury J, McMahon A, Kazem F, Atoui M, Castaldelli-Maia JM, Corrêa de Magalhães Narvaez J, et al. Equipping the next generation of clinicians for addressing conflict mental health: a role for Geopsychiatry. PLOS Ment Health 2024;1(3):e0000094. https://doi.org/10.1371/journal.pmen.0000094.

[10] Sri A, Bhugra D, Persaud A, Tribe R, Gnanapragasam S, Castaldelli-Maia JM, Torales J, Ventriglio A. Global mental health and climate change: a geo-psychiatry perspective. Asian J Psychiatr 2023;84:103562. https://doi.org/10.1016/j.ajp.2023.103562.

[11] Padhy SK, Sarkar S, Panigrahi M, Paul S. Mental health effects of climate change. Indian J Occup Environ Med 2015;19(1):3–7. https://doi.org/10.4103/0019-5278.156997.

[12] Torales J, Barrios I. Diseño de investigaciones: algoritmo de clasificación y características esenciales. Med clín. soc. 2023;7(3):210–35. https://doi.org/10.52379/mcs.v7i3.349.

[13] Gosling SD, Vazire S, Srivastava S, John OP. Should we trust web-based studies? A comparative analysis of six preconceptions about internet questionnaires. Am Psychol 2004;59(2):93–104. https://doi.org/10.1037/0003-066X.59.2.93.

[14] Ghebrehiwet S, Ogundare T, Owusu M, Harris BL, Ojediran B, Touma M, et al. Building a postgraduate psychiatry training program in Liberia through cross-country collaborations: initiation stages, challenges, and opportunities. Front Public Health 2023;11:1020723. https://doi.org/10.3389/fpubh.2023.1020723.

[15] Malhotra S, Padhy SK. Challenges in providing child and adolescent psychiatric services in low resource countries. Child Adolesc Psychiatr Clin N Am 2015;24(4): 777–97. https://doi.org/10.1016/j.chc.2015.06.007.

[16] Shannon G, Minckas N, Tan D, Haghparast-Bidgoli H, Batura N, Mannell J. Feminisation of the health workforce and wage conditions of health professions: an exploratory analysis. Hum Resour Health 2019 Oct 17;17(1):72. https://doi.org/10.1186/s12960-019-0406-0. Erratum in: Hum Resour Health. 2019;17(1):84. doi: 10.1186/s12960-019-0425-x.

[17] Knaul FM, Arreola-Ornelas H, Essue BM, Nargund RS, García P, USA Gómez, et al. The feminization of medicine in Latin America: 'More-the-merrier' will not beget gender equity or strengthen health systems. Lancet Reg Health Am 2022;8:100201. https://doi.org/10.1016/j.lana.2022.100201.

[18] Sachs BC, Benitez A, Buelow MT, Gooding A, Schaefer LA, Sim AH, et al. Women's leadership in neuropsychology: historical perspectives, present trends, and future directions. Clin Neuropsychol 2018;32(2):217–34. https://doi.org/10.1080/13854046.2017.1420234.

[19] Gruber J, Mendle J, Lindquist KA, Schmader T, Clark LA, Bliss-Moreau E, et al. The future of women in psychological science. Perspect Psychol Sci 2021;16(3): 483–516. https://doi.org/10.1177/1745691620952789.

[20] Becker R, Glauser D. Are prepaid monetary incentives sufficient for reducing panel attrition and optimizing the response rate? An experiment in the context of a multi-wave panel with a sequential mixed-mode design. Bulletin of Sociological Methodology/Bulletin de Méthodologie Sociologique. 2018;139(1):74–95. https://doi.org/10.1177/0759106318762456.

[21] Handuleh JIM, Persaud A. Geopolitics of mental health in Africa. In: Tribe R, Bhugra D, editors. Social justice, social discrimination, and mental health: theory, practice, and professional issues. New York: Routledge; 2024. https://doi.org/10.4324/9781003351351.

[22] Turner L. "Psychiatry has to Be political": the préterrain to a new fanon. In: Turner L, Neville H, editors. Frantz Fanon's Psychotherapeutic approaches to clinical work. New York: Routledge; 2019. 9780429465307.

[23] Yang X, She R, Lau MM, Lau JT. Anticipated socio-political developments and related personal responses as structural determinants of mental health problems: a population-based study. Int J Soc Psychiatr 2020;66(1):58–66. https://doi.org/10.1177/0020764019879948.

[24] Antić A. Transcultural psychiatry: cultural difference, universalism and social psychiatry in the age of decolonisation. Cult Med Psychiatry 2021;45(3):359–84. https://doi.org/10.1007/s11013-021-09719-4.

[25] Brouwers EPM. Social stigma is an underestimated contributing factor to unemployment in people with mental illness or mental health issues: position paper and future directions. BMC Psychol 2020;8(1):36. https://doi.org/10.1186/s40359-020-00399-0.

[26] Philo C, Callard F, McGeachan C, Parr H. Geopsychiatry and geography: a response. Int J Soc Psychiatr 2024;70(1):80–6. https://doi.org/10.1177/00207640231195289.

[27] Jain BM. The geopsychology theory of international relations in the 21st century: escaping the ignorance trap. Lanham: Rowman & Littlefield; 2021. p. 275. Available from: https://rowman.com/ISBN/9781498573597/.

[28] Arafat SMY, Kar SK, Sharma P, Marahatta K, Baminiwatta AKAB. A comparative analysis of psychiatry curriculum at undergraduate level of Bangladesh, India, Nepal, and Sri Lanka. Indian J Psychiatry 2021;63(2):184–8. https://doi.org/10.4103/psychiatry.IndianJPsychiatry_615_20.

[29] Farre A, Rapley T. The new old (and old new) medical model: four decades navigating the biomedical and psychosocial understandings of health and illness. Healthcare 2017;5(4):88. https://doi.org/10.3390/healthcare5040088.

[30] Kirkbride JB, Anglin DM, Colman I, Dykxhoorn J, Jones PB, Patalay P, et al. The social determinants of mental health and disorder: evidence, prevention and recommendations. World Psychiatry 2024;23(1):58–90. https://doi.org/10.1002/wps.21160.

[31] Woods-Jaeger B, Cho B, Briggs EC. Training psychologists to address social determinants of mental health. Train Educ Prof Psychol 2024;18(1):31–41. https://doi.org/10.1037/tep0000307.

[32] Altbach PG. Academic freedom: international realities and challenges. High Educ 2001;41:205–19. https://doi.org/10.1023/A:1026791518365.

[33] Moats J. Preparing for the future of work and the development of expertise. In: Germain ML, Grenier RS, editors. Expertise at work: current and emerging trends [Internet]. Cham: Springer International Publishing; 2021. p. 197–224. https://doi.org/10.1007/978-3-030-64371-3_10.

[34] Teschers C, Neuhaus T, Vogt M. Troubling the boundaries of traditional schooling for a rapidly changing future – looking back and looking forward. Educ Philos Theor 2024;56(9):873–84. https://doi.org/10.1080/00131857.2024.2321932.

[35] Hense H, Harst L, Küster D, Walther F, Schmitt J. Implementing longitudinal integrated curricula: systematic review of barriers and facilitators. Med Educ 2021; 55(5):558–73. https://doi.org/10.1111/medu.14401.

[36] Karakuş G. Solutions for barriers in curriculum implementation. Afr Educ Res J 2021;9(2):591–9. https://doi.org/10.30918/AERJ.92.21.084.

[37] Schrewe BM. Medical citizenship and the social right to health care in Canada : a genealogy of medical education discourses [Internet]. University of British Columbia; 2023. https://doi.org/10.14288/1.0434651 [cited 15th October 2024].

[38] Etxeandia-Pradera JI, Martinez-Uribe D, Bellver-Pradas F, Gonzalez-Piqueras JC, Nacher J, Aguilar EJ. Training psychiatry residents in descriptive Psychopathology: a systematic review. Psychopathology 2021:1–17. https://doi.org/10.1159/000512791.

[39] Cavallo M, Pedroli E, Cantoia M, McGrath B, Cecchetti S. Attitudes of mental health professionals towards telepsychology during the pandemic: a pilot study. Healthcare 2023;11(11):1542. https://doi.org/10.3390/healthcare11111542.

[40] Hilburg R, Patel N, Ambruso S, Biewald MA, Farouk SS. Medical education during the coronavirus disease-2019 pandemic: learning from a distance. Adv Chron Kidney Dis 2020;27(5):412–7. https://doi.org/10.1053/j.ackd.2020.05.017.

[41] Binks AP, LeClair RJ, Willey JM, Brenner JM, Pickering JD, Moore JS, et al. Changing medical education, overnight: the curricular response to COVID-19 of nine medical schools. Teach Learn Med 2021;33(3):334–42. https://doi.org/10.1080/10401334.2021.1891543.

[42] Costumato L. Collaboration among public organizations: a systematic literature review on determinants of interinstitutional performance. Int J Public Sect Manag 2021;34(3):247–73. https://doi.org/10.1108/IJPSM-03-2020-0069.

[43] Hedges JR, Soliman KFA, Southerland WM, D'Amour G, Fernández-Repollet E, Khan SA, et al. Strengthening and sustaining inter-institutional research collaborations and partnerships. Int J Environ Res Publ Health 2021;18(5):2727. https://doi.org/10.3390/ijerph18052727.

[44] Furness M, Trautner B. Reconstituting social contracts in conflict-affected MENA countries: whither Iraq and Libya? World Dev 2020;135:105085. https://doi.org/10.1016/j.worlddev.2020.105085.

[45] Hammad J, Tribe R. Social suffering and the psychological impact of structural violence and economic oppression in an ongoing conflict setting: the Gaza Strip. J Community Psychol 2020;48(6):1791–810. https://doi.org/10.1002/jcop.22367.

[46] Wang C, Wang D, Abbas J, Duan K, Mubeen R. Global financial crisis, smart lockdown strategies, and the COVID-19 spillover impacts: a global perspective implications from southeast Asia. Front Psychiatr 2021;12:643783. https://doi.org/10.3389/fpsyt.2021.643783.

[47] Rosen A, Gill NS, Salvador-Carulla L. The future of community psychiatry and community mental health services. Curr Opin Psychiatr 2020;33(4):375–90. https://doi.org/10.1097/YCO.0000000000000620. PMID: 32452944.

[48] Mao W, Agyapong VIO. The role of social determinants in mental health and resilience after disasters: implications for public health policy and practice. Front Public Health 2021;9:658528. https://doi.org/10.3389/fpubh.2021.658528.

[49] Van Daele T, Karekla M, Kassianos AP, Compare A, Haddouk L, Salgado J, et al. Recommendations for policy and practice of telepsychotherapy and e-mental health in Europe and beyond. J Psychother Integrat 2020;30(2):160–73. https://doi.org/10.1037/int0000218.4.
[50] Bowman MA, Vongkulluksn VW, Jiang Z, Xie K. Teachers' exposure to professional development and the quality of their instructional technology use: the mediating role of teachers' value and ability beliefs. J Res Technol Educ 2022;54(2):188–204. https://doi.org/10.1080/15391523.2020.1830895.
[51] Bozkurt A, Jung I, Xiao J, Vladimirschi V, Schuwer R, Egorov G, et al. A global outlook to the interruption of education due to COVID-19 pandemic: navigating in a time of uncertainty and crisis. Asian J Distance Educ 2020;15(1):1–126. Available from: https://asianjde.com/ojs/index.php/AsianJDE/article/view/462.
[52] Katz M, Nandi N. Social media and medical education in the context of the COVID-19 pandemic: scoping review. JMIR Med Educ 2021;7(2):e25892. https://doi.org/10.2196/25892.
[53] Bhat GM, Bhat IH, Shahdad S, Rashid S, Khan MA, Patloo AA. Analysis of feasibility and acceptability of an E-learning module in anatomy. Anat Sci Educ 2022;15(2):376–91. https://doi.org/10.1002/ase.2096.
[54] Gonzalo JD, Dekhtyar M, Caverzagie KJ, Grant BK, Herrine SK, Nussbaum AM, et al. The triple helix of clinical, research, and education missions in academic health centers: a qualitative study of diverse stakeholder perspectives. Learn Health Syst 2020;5(4):e10250. https://doi.org/10.1002/lrh2.10250.
[55] Penniston KL. Academic research collaboration. In: Nakada SY, Patel SR, editors. Navigating organized urology: a practical guide. Cham: Springer International Publishing; 2022. p. 69–88. https://doi.org/10.1007/978-3-031-05540-9_9 [cited 15th October 2024].
[56] Christiansen SH, Juebei C, Xiangyun D. Cross-institutional collaboration in engineering education – a systematic review study. Eur J Eng Educ 2023;48(6):1102–29. https://doi.org/10.1080/03043797.2023.2228727.
[57] Persaud A, Bhat PS, Ventriglio A, Bhugra D. Geopolitical determinants of health. Ind Psychiatry J 2018;27(2):308–10. https://doi.org/10.4103/ipj.ipj_71_18.
[58] Persaud A, Bhugra D, Valsraj K, Bhavsar V. Understanding geopolitical determinants of health. Bull World Health Organ 2021;99(2):166–8. https://doi.org/10.2471/BLT.20.254904.
[59] Bhugra D, Bhui K. In: Textbook of cultural psychiatry. second ed. Cambridge: Cambridge University Press; 2018. https://doi.org/10.1017/9781316810057.
[60] Kirmayer LJ. Rethinking cultural competence. Transcult Psychiatry 2012;49(2):149–64. https://doi.org/10.1177/1363461512444673.
[61] Patel V, Prince M. Global mental health: a new global health field comes of age. JAMA 2010;303(19):1976–7. https://doi.org/10.1001/jama.2010.616.
[62] Saraceno B, van Ommeren M, Batniji R, Cohen A, Gureje O, Mahoney J, et al. Barriers to improvement of mental health services in low-income and middle-income countries. Lancet 2007;370(9593):1164–74. https://doi.org/10.1016/S0140-6736(07)61263-X.
[63] Patel V, Minas H, Cohen A, Prince M. Global mental health: principles and practice. Oxford: Oxford University Press; 2013. https://doi.org/10.1093/med/9780199920181.001.0001.
[64] Collins PY, Patel V, Joestl SS, March D, Insel TR, Daar AS, et al. Grand challenges in global mental health. Nature 2011;475(7354):27–30. https://doi.org/10.1038/475027a.