


Profile of productivity scholarship researchers in the field of Mental Health*

Joselina Rodrigues Moreira^{1,2}

 <https://orcid.org/0000-0002-5190-0426>

Larissa Alves Marcelino¹

 <https://orcid.org/0000-0002-0932-1746>


Poliana Franco Braga¹

 <https://orcid.org/0000-0003-0402-685X>

Daniel Antunes Freitas¹

 <https://orcid.org/0000-0001-7023-8610>

Wellington Danilo Soares¹





 <https://orcid.org/0000-0001-8952-9717>

Objective: to analyze the profile of research productivity fellows in the area of Mental Health, of the National Council for Scientific and Technological Development (CNPq), represented by Psychiatry and Mental Health Nursing. **Methodology:** a quantitative, cross-sectional, descriptive and correlational study whose productivity fellows in Psychiatry and Mental Health Nursing were evaluated from the lists of fellowships in force at CNPq in the first half of 2020. The search on the Lattes Platform indicated 85 fellows in the areas mentioned, 71 of them belonged to Psychiatry and 14 to Mental Health Nursing. **Results:** in Mental Health Nursing, there is a greater representation of women. On the contrary, in Psychiatry, the male gender constitutes a majority. The Southeast and South regions hold 93% of the researchers in Psychiatry and 71.5% in Mental Health Nursing. In Psychiatry, 30% of the researchers do not orient any Scientific Initiation student, and in Mental Health Nursing, only 7% do not orient students of this modality. **Conclusion:** there was a higher prevalence of males in Psychiatry as opposed to a female majority in Mental Health Nursing. There was a concentration of researchers and publications in the Southeast region. Despite the increase in productivity in the Mental Health area, more investment is needed in the area.

Descriptors: Mental Health; Research; Research Personnel; Psychiatry; Nursing.

How to cite this article

Moreira JM, Marcelino LM, Braga PF, Freitas DA, Soares WD. Profile of productivity scholarship researchers in the field of Mental Health. SMAD, Rev Eletrônica Saúde Mental Álcool Drog. 2023 Jan.-Mar.;19(1):82-93.

[cited   ]; Available from:  <https://doi.org/10.11606/issn.1806-6976.smad.2023.188149>

year month day

URL

* Supported by Universidade Estadual de Montes Claros - UNimontes Edital PROINIC, PRP 06/2020, Brazil.

¹ Universidade Estadual de Montes Claros, Montes Claros, MG, Brazil.

² Scholarship holder at the Universidade Estadual de Montes Claros - UNimontes Edital PROINIC, PRP 06/2020, Brazil.

Perfil dos pesquisadores bolsistas de produtividade na área de Saúde Mental

Objetivo: analisar o perfil dos bolsistas de produtividade em pesquisa na área de Saúde Mental, do Conselho Nacional de Desenvolvimento Científico e Tecnológico (CNPq), representados pela Psiquiatria e pela Enfermagem em Saúde Mental. **Metodologia:** estudo quantitativo, transversal, descritivo e correlacional cujos bolsistas de produtividade da Psiquiatria e Enfermagem em Saúde Mental foram avaliados a partir das listas das bolsas em vigor no CNPq no primeiro semestre de 2020. A busca na Plataforma Lattes apontou 85 bolsistas nas áreas citadas, sendo que 71 deles pertenciam à Psiquiatria e 14 à Enfermagem em Saúde Mental. **Resultados:** na Enfermagem em Saúde Mental, há maior representatividade feminina. Ao contrário, em Psiquiatria, o gênero masculino constitui maioria. As regiões Sudeste e Sul detêm 93% dos pesquisadores da Psiquiatria e 71,5% da Enfermagem em Saúde Mental. Em Psiquiatria, 30% dos pesquisadores não orientam nenhum estudante de Iniciação Científica e, na Enfermagem em Saúde Mental, apenas 7% não orientam alunos dessa modalidade. **Conclusão:** houve maior prevalência do sexo masculino na Psiquiatria em oposição à maioria feminina na Enfermagem em Saúde Mental. Evidenciou-se uma concentração de pesquisadores e publicações na região Sudeste. Apesar do aumento na produtividade na área de Saúde Mental, é necessário maior investimento na área.

Descritores: Saúde Mental; Pesquisa; Pesquisadores; Psiquiatria; Enfermagem.

Perfil de los investigadores becarios de productividad en el área de la Salud Mental

Objetivo: analizar el perfil de los becarios de productividad en investigación en el área de Salud Mental del Consejo Nacional de Desarrollo Científico y Tecnológico (CNPq), representados por Psiquiatría y Enfermería en Salud Mental. **Metodología:** estudio cuantitativo, transversal, descriptivo y correlacional, cuya productividad se evaluó a los becarios de Psiquiatría y Enfermería en Salud Mental a partir de las listas de becas vigentes en el CNPq en el primer semestre de 2020. La búsqueda en la Plataforma Lattes apuntó a 85 becarios en las áreas citadas, 71 de ellos pertenecían a la Psiquiatría y 14 a la Enfermería en Salud Mental. **Resultados:** en la Enfermería en Salud Mental, hay mayor representación femenina. Por el contrario, en Psiquiatría, el género masculino constituye la mayoría. Las Regiones Sudeste y Sur albergan al 93% de los investigadores de la Psiquiatría y al 71,5% de la Enfermería en Salud Mental. En Psiquiatría, el 30% de los investigadores no orientan a ningún estudiante de Iniciación Científica y en Enfermería de Salud Mental, solo el 7% no orientan a estudiantes en esta modalidad. **Conclusión:** hubo una mayor prevalencia de hombres en la Psiquiatría, en comparación con la mayoría de mujeres en la Enfermería de Salud Mental. Hubo una concentración de investigadores y publicaciones en la región Sudeste. A pesar del aumento de la productividad en el área de Salud Mental, se necesita una mayor inversión en el área.

Descriptorios: Salud Mental; Investigación; Investigadores; Psiquiatría; Enfermería.

Introduction

Mental Health is a theme of extreme importance to public health, in which an estimated 30% of adults, worldwide, have diagnostic criteria for any mental disorder. In Brazil, estimates show that depressive and anxiety disorders correspond, respectively, to the fifth and sixth causes of years lived with disability. Furthermore, it is known that the imbalance in this health area is not exclusive to adults, but also affects children and adolescents. This fact is corroborated by a national and school-based study that showed a 30% prevalence of mental disorders in Brazilian adolescents, characterized by symptoms of anxiety, depression, and nonspecific somatic complaints⁽¹⁾.

Initiated in the 1980s, the National Mental Health Policy, formulated in the context of the Brazilian Psychiatric Reform, gives Brazil a prominent place in the struggle for the protection of the human rights of people with mental disorders. This policy focuses on replacing health care based on psychiatric hospitals, the insane asylums, by a new community-based care system, providing improved living conditions and encouraging the process of deinstitutionalization and de-medicalization⁽²⁾. The elaboration of this new care model was closely associated with the construction of the Unified Health System (UHS), since the creation of the Psychosocial Care Networks (PSCN) considers the need for the UHS to offer an integrated, articulated and resolute network of services, based on its principles and guidelines, whose main focus of care is in the Psychosocial Care Centers (PSCC)⁽³⁾.

In this context, there is the establishment of a demand for the teaching of Mental Health in the formation of health professionals, as it must guide the education in agreement with the health model in force, the UHS. The orientation about the principles, fundamentals and conditions of the procedure in the graduation of health professionals is defined by the National Curricular Guidelines (NCGs), in which there is the demand of a generalist, humanist, critical, reflexive professional profile, turned to the social health needs⁽⁴⁾.

In the undergraduate medical school scenario, after the launch, in 2013, of the *Mais Médicos* Program, which aims to foster human resources in the medical field for the UHS, new NCGs were created in 2014, which considered Mental Health as a basic area, imposing a mandatory course load in this discipline, given the relevance of the epidemiology of mental disorders and the need for efficient health care for these conditions. However, the teaching of Psychiatry is still disproportionate to the magnitude of the topic, whose data show that, by the year 2016, 46% of medical schools did not have any mental health activities in the internship⁽⁵⁻⁶⁾. Moreover, the existing practices related to Psychiatry are predominantly based on the biomedical model, centered on hospital care, disregarding

psychosocial and community aspects determined by the Psychiatric Reform. This fact highlights the training of doctors who are poorly prepared in mental health care, and may be the cause of the therapeutic gap in mental health existing in primary care⁽⁷⁾.

In Nursing undergraduate courses, although there is agreement among the teachers about the need to guide the teaching based on the principles of the Psychiatric Reform, there is no regulation of the competencies in Mental Health for undergraduate students and specialist nurses in the area by the NCGs. Therefore, the lack of clarity in the specific competencies of the nurse in Mental Health and the absence of national consensus about which abilities should be mobilized in the Nursing undergraduate course make difficult the professional practice of Nursing and, consequently, the health care⁽⁸⁾.

The understanding of the Brazilian scientific production in Mental Health is a way to elucidate the reach of the new approach in health proposed by the National Mental Health Policy and the relevance of the theme to the society. It is known that the research in Mental Health has increased significantly in the last years, driven, mainly, by the change in the daily practices and in the configuration of the academic field provided by the Psychiatric Reform. New research questions were raised based on the ethical-political duty to search for new evidences about the practices that go against the old method of health care centered in psychiatric hospitals⁽⁹⁾.

In order to measure the relevance of the research in Mental Health in Brazil, the Research Productivity Scholarships (PQ), instituted by the National Council for Scientific and Technological Development (CNPq), the main funding agency for science in Brazil, are an important tool, since they are destined to outstanding researchers, thus valuing the scientific production. These fellowships are divided into three categories: PQ-Senior, PQ-1, subdivided into levels 1A, 1B, 1C and 1D, and PQ-2, according to the greater experience and titles of the researcher. The PQ-Senior grant is lifelong and is only awarded to those productivity fellows who have remained in levels 1A or 1B for at least 15 years. PQ-2, on the other hand, is the starting category, for which the prerequisite is a doctoral degree of at least three years. Eight years after completion of the doctorate, the fellow can request a transition to category 1, where the last ten years of production will be evaluated. Due to its hierarchy-based structure, the PQs are an excellent gauge of the degree of excellence of scientific production, and can portray the importance of the area of knowledge being researched⁽¹⁰⁻¹¹⁾.

The objective of this study is to analyze the profile of research productivity fellows in the area of Mental Health at CNPq, represented by Psychiatry and Mental Health Nursing.

Methodology

Study type or design: this is a quantitative, cross-sectional, descriptive and correlational study.

Location or scenario: the data survey included the official résumés of researchers with CNPq's productivity scholarship, which were accessed through the Lattes Platform, active in Brazil⁽¹²⁾.

Period: all researchers with fellowships in effect during the first semester of 2020 were included in the survey. The interval between 2015 and 2019 was used to account for the scientific outputs published and the doctoral, master's and undergraduate research orientations given.

Population: Brazilian scientific productivity fellows in Psychiatry and Mental Health Nursing belonging to the "Health Sciences" area.

Selection criteria: the "CV search" tool on the Lattes Platform was used⁽¹²⁾. The search mode used was "name", followed, in the item bases, by "PhDs" and the nationality "Brazilian". In the sequence, the filters used were: CNPq productivity fellows of the Senior, 1A, 1B, 1C, 1D and 2 categories; in the field of professional activity, the major area of Health Sciences was selected, followed at first by the area Nursing, and the sub-area Mental Health Nursing and, at second moment, the area Medicine and the sub-area Psychiatry were selected. In both cases, in the "professional activity" filter, Brazil was inserted in the country field and the option "all" in the region to be searched, as well as in the Federal Unit (FU) field.

Inclusion Criteria: act in the national territory; Brazilian nationality; CNPq's productivity scholarship in force in the 1st semester of 2020; act in the area of Mental Health Nursing or Psychiatry.

Exclusion criteria: inactive CNPq productivity fellowships.

Study variables: in the official curricula, the following information was categorized: category of the PQ grant; gender; region of origin; number of postdoctoral, doctoral, masters and undergraduate students; number of articles and book chapters published.

Instruments used to collect the information: the collection was performed manually by three researchers, as well as the database construction and tabulation, using the Office-Excel application.

Data collection: the three researchers started the data collection on 07/03/2020 and finished on 07/09/2020 with the construction of the tables in this article.

Data treatment and analysis: the data was compiled and organized in tables and according to regional distribution, gender, area of work, number of orientations and publications. Later, they were converted into percentage values to broaden the understanding of the data and facilitate the analyses. The bibliographic survey was conducted during the process of methodology development and after data collection. In this literature review, articles with methodology and analysis similar to this study were found, and were used as a basis for the method design^(11,13-15), as well as for the discussion of the data found.

Results

The search conducted in the Lattes Platform, in July 2020, showed 85 researchers with CNPq's productivity scholarship in the areas mentioned, 71 of them belonged to Psychiatry and 14 to Mental Health Nursing. None of these fields had any representative in the Senior or 2F categories. In Psychiatry, 15 fellows (21%) were found in category 1A; six in 1B (8%); seven in 1C (10%); 17 in 1D (24%) and 26 researchers in category 2 (37%). On the other hand, in Mental Health Nursing, the search revealed: zero fellows in category 1A; one in 1B (7%); two in 1C (14%); two in 1D (14%) and nine researchers in category 2 (65%). This reveals a majority prevalence of researchers in category 2, with 35 in total, followed by category 1D, with 19 fellows.

In Mental Health Nursing, there is a greater representation of women: 93% of the researchers (13) in this area are women, since the only male representative is in category 2 (Table 1). On the contrary, in Psychiatry, the male gender constitutes the majority, corresponding to 63% of the fellows (45). Among the categories, only in category 2 is there a higher proportion of females, with 16 female researchers (19%), while there are ten male fellows (11.8%). The combination of the two areas reveals a predominance of male researchers in the "Large Mental Health Area", where 54% of the fellows are men.

Table 1 - Categories of productivity fellowships sorted by gender in force in the year 2020*. Montes Claros, MG, Brazil, 2020

Areas	Psychiatry		Mental Health Nursing	
	Female	Male	Female	Male
Senior	0% (n= 0)	0% (n= 0)	0% (n= 0)	0% (n= 0)
1A	0% (n= 0)	17.6% (n= 15)	0% (n= 0)	0% (n= 0)
1B	2.5 % (n = 2)	4.7 % (n= 4)	1% (n = 1)	0% (n= 0)

(continues on the next page...)

Areas	Psychiatry		Mental Health Nursing	
1C	3.5% (n= 3)	4.7 % (n= 4)	2.3% (n = 2)	0% (n= 0)
1D	6% (n= 5)	14.2% (n= 12)	2.3% (n = 2)	0% (n= 0)
2	19 % (n= 16)	11.8% (n= 10)	9.4% (n= 8)	1% (n =1)
2F	0% (n= 0)	0% (n= 0)	0% (n= 0)	0% (n= 0)
Total	31 % (n= 26)	53% (n= 45)	15% (n= 13)	1% (n =1)

*Lattes Platform of the National Council for Scientific and Technological Development (CNPq)

Table 2 shows a relevant regional difference in both fields. The Southeast and South regions have 93% of the researchers (66) in Psychiatry and 71.5% in Mental Health Nursing (10). The North region has no representatives in either of these fields. Regarding

the Northeast region, 4.2% of the fellows (3) are from Psychiatry and 28.5% of the researchers (4) are from Mental Health Nursing. The Midwest region has only fellows in Psychiatry, corresponding to 2.8% of fellows (2) in this field.

Table 2 - Brazilian region of origin of the "Psychiatry" and "Mental Health Nursing"^{**} fellowship researchers in force in 2020. Montes Claros, MG, Brazil, 2020

Region	Psychiatry	Mental Health Nursing
North	0% (n=0)	0% (n=0)
Northeast	4.2% (n= 3)	28.5% (n=4)
Midwest	2.8 % (n= 2)	0% (n=0)
Southwest	62% (n= 44)	50% (n=7)
South	31% (n= 22)	21.5% (n=3)
Brazil	100% (n=71)	100% (n =14)

*Lattes Platform of the National Council for Scientific and Technological Development (CNPq)

In Psychiatry, in the period between 2015 and 2019, 30% of the researchers (21) did not guide any scientific initiation student and 42% (30) did not guide any post-doctoral student (Table 3). In Mental Health Nursing, on the other hand, only 7% (1) did not guide scientific initiation students and 36% (5) did not guide postdoctoral students. In the first area mentioned, most researchers advised one to three master's students (45% - 32 fellows), doctoral students (53% - 38 fellows), post-doctoral

students (50.6% - 36 fellows) and academics (32% - 23 fellows). In the second area, this only occurred in post-doctoral orientations, in which 50% of the fellows (7) oriented one to three students. Regarding the other orientations, there was a predominance of researchers who oriented four to six master's students (43% - 6 fellows) and doctoral students (50% - 7 fellows) and of researchers who oriented more than ten undergraduate students (43% - 6 researchers).

Table 3 - Orientations performed by the "Psychiatry" and "Mental Health Nursing" fellow researchers between 2015 and 2019*. Montes Claros, MG, Brazil, 2020

Psychiatry	0	1 to 3	4 a 6	7 to 9	10
Masters	4% (n=3)	45% (n=32)	31% (n=22)	14% (n=10)	6% (n=4)
Doctorate	8.4% (n=6)	53.5% (n=38)	21.1% (n=15)	12% (n=8)	6% (n=4)
Post-doctorate	42% (n=30)	50.6% (n=36)	6% (n=4)	1.4% (n=1)	0% (n=0)
Scientific initiation	30% (n=21)	32% (n=23)	17% (n=12)	8% (n=6)	13% (n=9)
Mental Health Nursing	0	1 to 3	4 to 6	7 to 9	10
Masters	0% (n=0)	36% (n=5)	43% (n=6)	7% (n=1)	14% (n=2)
Doctorate	0% (n=0)	14% (n=2)	50% (n=7)	36% (n=5)	0% (n=0)
Post-doctorate	36% (n=5)	50% (n=7)	14% (n=2)	0% (n=0)	0% (n=0)
Scientific initiation	7% (n=1)	29% (n=4)	14% (n=2)	7% (n=1)	43% (n=6)

*Lattes Platform of the National Council for Scientific and Technological Development (CNPq)

In the year 2020, the Mental Health Nursing productivity fellows are present in three regions and half are from the Southeast region (Tables 4 and 5). All of them, in the period between 2015 and 2019, published more than 20 articles (100%) and 43% of these researchers (3) published from six to ten book chapters, demonstrating a predominance of this region in terms of publications to the detriment of the other regions of the country. In the Northeast region, 75% of the fellows (3) published more than 20 articles and 25% (1) published between 11 and 20 articles. As for the publication of book chapters, in this locality, 50% (2) published from six to ten chapters, 25% (1), from zero to five, and the other 25%, above ten. In the Southern region, 100% of the researchers (3) had published more than 20 articles and zero to five book chapters.

The researchers in Psychiatry, as evidenced by Tables 4 and 5, come from four of the five regions of the country. Article publications are concentrated in the Southeast region in which 83% of scholars (39) have published above

20 articles, 15% (7) have published between 11 and 20, and the last 2% (1) have published between zero and ten. As for the contribution of book chapters from this location, 66% of the researchers (31) have published between zero and ten chapters, 19% have published between six and ten chapters, and only 15% have published above ten. In the Midwest region, 50% (1) have published between zero and five book chapters, and 50% (1) have published more than ten. As for the production of articles, 100% (2) had between zero and ten articles published. In the Northeast region, between 11 and 20 articles and six and ten book chapters were produced by 67% (2) of the researchers; the other 33% (1) published above 20 articles and between zero and five chapters. In the Southern region, 68% of scholars published between zero and five chapters, 21% (4) produced between six and ten, and only 11% (2) published above ten chapters. In contrast, 95% of the researchers (18) published more than 20 articles and the other 5% (1) published between zero and ten scientific productions.

Table 4 - Full papers published by "Psychiatry" and "Mental Health Nursing" between 2015 and 2019 by region*. Montes Claros, MG, Brazil, 2020

Psychiatry	0 to 10	11 to 20	Above 20
North	0% (n= 0)	0% (n= 0)	0% (n= 0)
Northeast	0% (n= 0)	67% (n= 2)	33% (n= 1)
Midwest	100%(n=2)	0% (n= 0)	0% (n= 0)
Southwest	2% (n= 1)	15% (n= 7)	83% (n= 39)
South	5% (n= 1)	0% (n= 0)	95% (n= 18)
Mental Health Nursing	0 to 10	11 to 20	Above 20
North	0% (n= 0)	0% (n= 0)	0% (n= 0)
Northeast	0% (n= 0)	25% (n= 1)	75% (n= 3)
Midwest	0% (n= 0)	0% (n= 0)	0% (n= 0)
Southwest	0% (n= 0)	0% (n= 0)	100% (n=7)
South	0% (n= 0)	0% (n= 0)	100% (n= 3)

*Lattes Platform of the National Council for Scientific and Technological Development (CNPq)

Table 5 - Book chapters published by "Psychiatry" and "Mental Health Nursing" between 2015 and 2019 by region*. Montes Claros, MG, Brazil, 2020

Psychiatry	0 to 5	6 to 10	Above 10
North	0% (n=0)	0% (n=0)	0% (n=0)
Northeast	33% (n=1)	67% (n=2)	0% (n=0)
Midwest	50% (n=1)	0% (n=0)	50% (n=1)
Southwest	66% (n=31)	19% (n=9)	15% (n=7)
South	68% (n=13)	21% (n=4)	11% (n=2)
Mental Health Nursing	0 to 5	6 to 10	Above 10
North	0% (n=0)	0% (n=0)	0% (n=0)
Northeast	25% (n=1)	50% (n=2)	25% (n=1)

(continues on the next page...)

Mental Health Nursing	0 to 5	6 to 10	Above 10
Midwest	0% (n=0)	0% (n=0)	0% (n=0)
Southwest	29% (n=2)	43% (n=3)	29% (n=2)
South	100% (n=3)	0% (n=0)	0% (n=0)

*Lattes Platform of the National Council for Scientific and Technological Development (CNPq)

Discussion

The Health Sciences major is subdivided into Dentistry, Medicine, Physical Education, Nursing, Pharmacy, Collective Health, Physiotherapy and Occupational Therapy, Speech Therapy and Nutrition⁽¹³⁾. This major area, in 2020, had 2400 research productivity fellowships registered in the Lattes Platform, more than half belonged to Medicine, and 1325 researchers come from this area⁽¹²⁾. Other areas have less expressive numbers, such as Physiotherapy, and a descriptive cross-sectional study found 55 researchers from this area were awarded productivity grants in 2010⁽¹⁴⁾. In Dentistry, 209 researchers were found, however, the sample corresponds to about one sixth of the number of fellows in Medicine⁽¹⁵⁾. When comparing these numbers with Nursing, which has only 189 researchers in this modality, the difference becomes remarkable and evidences a clear discrepancy of investments in research between these areas belonging to the Health Sciences⁽¹²⁾.

Mental Health research is one of the 24 sub-agendas of the National Agenda for Health Research Priorities (ANPPS). Instituted in 2015, this movement has as main objective to determine the areas to be studied based on the importance and need for the country and associate them with the principles of UHS. The definition of these research fields and the specific themes in each of the sub-agendas was carried out by a Technical Committee and encompasses several disciplinary fields, including Nursing and Medicine⁽¹⁶⁾.

The Nursing area, with 189 researchers, is subdivided into seven subareas, among which is Mental Health Nursing, one of the focuses of this study. As indicated in the tables, this subarea has only 14 fellows registered in the Lattes Platform⁽¹²⁾. With the objective of being in conformity with the ANPPS, CNPq funding grants were allocated for the development of studies in Mental Health Nursing in São Paulo in the period 2013/2014. However, other sub-agendas, such as Noncommunicable Diseases, Child and Adolescent Health, Women's Health and Communicable Diseases, obtained a greater share of these resources to the detriment of the area that concerns psychic suffering⁽¹⁷⁾.

Psychiatry, one of the specializations of Medicine, with 71 valid scholarships present in the Lattes Platform, when compared with its equivalent area in Nursing, with

14, exposes a significant difference in investments. On the other hand, when compared with the total number of scholarships offered for Medicine and with the other subdivisions established by CNPq, this number becomes less expressive. Areas such as Maternal and Child Health (117 fellowships), Surgery (154 researchers) or Clinical Medicine (446 fellowships) are provided with more resources for research than Psychiatry⁽¹²⁾.

Given the high morbidity and prevalence of mental disorders, which is estimated to reach 25% of the world's lifetime general population, Mental Health is recognized as an area that demands innovation and research^(6,18). Thus, it is justifiable to establish this area as one of the country's research priorities, mainly due to the relevance of the theme for the Brazilian reality⁽¹⁶⁾. However, the investments in Mental Health are below the ideal when comparing emerging and developed countries. In the former, the investment per capita is close to two dollars, and in the latter, the value reaches 50 dollars⁽¹⁸⁾. This disproportionate investment is corroborated by the report published by the Pan American Health Organization which states that insufficient investment in the Americas, particularly in countries with less capital flow, increases the burden on the patient with mental disorders⁽¹⁹⁾.

Another aggravating factor is that most of these resources that are invested are destined to hospitalization services to the detriment of community-based care, and this is contrary to the Psychiatric Reform in process in Brazil since 1970⁽¹⁸⁾. The proposed modifications highlight the need to interact with the mentally ill in a non-stigmatizing way to better provide patient care, based on a holistic view of the individual and the availability of open, community-based networked services^(4,20). This reform influenced the NCGs of the Health courses, culminating, for example, in the requirement of compulsory insertion of the teaching of Mental Health in the curricular grid of the Medicine course, justified by the disproportion between the graduation and the necessity of the clinical practice^(6,18).

Analogously, this gap can be observed in the daily life of universities in the areas of Nursing and Medicine, where teaching remains too centered on the hospital model, representing a challenge to the training process of these professionals⁽²⁰⁾. It is evident that the skills taught in this discipline are vital for the global approach to the patient by

students of Health courses⁽²¹⁾. As undergraduate education is recognized as a place for reproduction of teaching, scientific initiation can contribute to effective relations between teaching and the construction of knowledge, contributing to the humanistic and bias-free training of health professionals⁽²²⁾.

Therefore, it is very important to discuss the number of scientific initiation students oriented by productivity scholarship recipients. In the period analyzed in this research, 30% and 7% of researchers in Psychiatry and Mental Health Nursing, respectively, did not guide any scientific initiation student. This data highlights a deficit in the contribution of these scholars in fomenting the teaching and research in the Mental Health area in the Brazilian graduations, as the scientific initiation constitutes a space for the student to act as a subject of his learning, besides contributing to the increase of the academic performance, expansion of the knowledge in the performance area, preparing the student for the insertion in the post-graduation. However, as highlighted in the data above, not all productivity scholarship holders are available for mentoring, that is, scientific initiation is not very accessible to undergraduates, besides being limited only to institutions destined to research⁽²³⁾.

This study also analyzed the number of orientations performed by the productivity fellows to master's degree, doctorate and post-doctorate. Of the 71 fellows in the area of Psychiatry, 68 advised master's students, 65 advised doctoral students, and 41 advised post-doctoral fellows. Most of them advised between one and three people in each of these post-graduate courses. It is evident that the mentoring of masters and doctorates was more robust. As well as of the 14 Mental Health Nursing productivity fellows, all mentored masters and doctoral students, with an average of four to six mentors.

Most of the orientations aimed at master's and doctoral degrees are due to Brazil's attempt, in recent decades, to follow the international trend of increasing efficiency in the system of scientific production and training of new researchers. In fact, there has been progress in the area of training and increase in publications, as the number of doctorates doubled between 2000 and 2010, the University of São Paulo (USP) has now reached more than 200 thousand PhDs and 700 thousand Masters, graduated in less than 15 years, but this scientific progress has not shown the same proportion in terms of social relevance⁽²³⁾.

In opposition to this advance, in Brazil only 12% of the active population has a university degree, compared to 55% in Russia and 40% in the United States. Therefore, 88% of the Brazilian population is not familiar with scientific knowledge. According to a survey on the development conditions of Brazilian society, compared to other nations, in the criterion "Science in Schools", the

country is ranked 60th in the world. This reality justifies the fact that the number of researchers decreases according to the years of study and degree, for example, 36% of the psychiatry productivity fellows in this study did not provide post-doctoral mentoring during the analyzed period⁽²³⁾. Therefore, although the country is growing in relation to the training of new researchers, there are still numerous social obstacles for the universalization and the relevance of scientific knowledge, especially in the area of Mental Health, due to the great stigmatization of mental disorders, which represents a barrier of access and inefficiency faced by patients in the health system and in society⁽⁶⁾.

Nursing is a historically female profession. It is among the most feminized areas among those with more than 100 fellows, with 95.7% women fellows⁽²⁴⁻²⁵⁾. Mental Health Nursing (Table 1) follows the same distribution pattern. Gender and professional placement issues are based on social representation, which then influences the individual's way of acting in society. Therefore, the insertion of a man in an environment labeled as feminine or vice-versa generates a questioning of the individual's ability to succeed in the position⁽²⁶⁾. The attribution of a concept of gender purely influenced by the binary and biological vision contributes to the restriction of the characteristic of femininity to women and masculinity to men and, consequently, perpetuates the division of tasks between the sexes that is currently in force⁽²⁷⁾.

In other areas, also belonging to the Health Sciences, similarly, there is a predominance of the female gender, among which Nutrition and Pharmacy can be highlighted. These areas carry the stigma of being considered female professions and contrast with male-dominated fields, such as Dentistry and Medicine^(15,25,27). For a long time, this predominance was justified by alleging that medical knowledge would incorporate scientific and technological knowledge and, therefore, would be considered masculine and Nursing knowledge would be diffuse, not very scientific and, therefore, qualified as feminine. These beliefs do not match reality⁽²⁷⁾.

Although there is still an extensive predominance of women in nursing, the rate of demand for higher education of men in this undergraduate course is slowly increasing⁽²⁷⁾. Already in Medicine, in 1960, the proportion between women and men reached its lowest value, 13% against 87% of male doctors. Since then, there has been an evolution of these numbers toward equality between the proportions. In 2017, 45% of the country's professionals were female. This was made possible by an increase in the number of women graduating from medical school. In 2016, this number had already surpassed that of men eight years ago⁽²⁸⁾.

In specializations, 66.7% of the areas have a majority of men, and Psychiatry follows this pattern. In

2017, indicators indicated that 55.1% of practitioners in this area were male. However, in 2015, the prevalence was 57.4%, which shows an increase in the proportion of female professionals in this field. This seems to be a global trend in the practice of medicine observed also in Brazil⁽²⁸⁻³⁰⁾.

Despite this observed trend, the presence of female fellows in the area of Psychiatry still does not keep up with the national prevalence of practicing physicians. Almost 65% of the researchers in this area are male. Some fields, such as Urology and Nephrology, have almost 75% prevalence of men in research. Other fields, such as Pediatrics, Cardiology, Hematology and Oncology, also showed male indicators, surpassing the female figures⁽³¹⁻³²⁾. In view of this, there seems to be a mismatch between the increase of women in the labor market and the number of women inserted in research, as also occurs in dentistry. This may be associated with a late insertion of women in the science and technology system, low peer recognition, which may influence the selection process for scholarships. In addition, factors such as pregnancy and maternity can add extra difficulties for the effective entry of women into the world of scientific research^(15,32).

When analyzing the number of articles and chapters published by the productivity fellows in Psychiatry, the South region stands out, where 95% of fellows published more than 20 articles and 68% of fellows published between zero and five chapters, followed by the Southeast region where 83% of fellows published more than 20 articles and 66% published between zero and five chapters. In contrast, only 33% of fellows in the Northeast region published more than 20 articles, and in the Midwest region, 100% of fellows published only from zero to ten articles, but stood out in terms of book chapters, with 67% publishing between six and ten of these. As for the productivity fellows in the area of Mental Health Nursing, the production in the Southeast and South regions also stands out, since 100% of these fellows published more than 20 articles. The Southeast region presents a higher productivity in terms of published book chapters, since 29% of the fellows published more than ten chapters, while in the South region, 100% published between zero and five chapters.

It is possible to assess, with these data, that there is a growing scientific productivity in the Mental Health area, considering, proportionally, the number of productivity fellows in this area and the number of articles and book chapters published by them. Despite the increased interest in this area of research since the Psychiatric Reform, there is a need to further increase these productions as an incentive to train professionals with a holistic view of the patient and who do not stigmatize mental disorders^(22-23,33).

Another need is to develop more studies that promote the development of evidence for psychosocial care with an approach to the guiding principles of the assistance policies and on professional training and research in Mental Health⁽¹⁸⁾.

Also evident is the regional disparity regarding the concentration of researchers and publications, as these are concentrated in the Southeast and South regions. This disparity can also be observed in previous studies, as regional inequality has a historical origin in Brazil, due to the concentration of capital and industrial activity in the Southeast and South regions since the colonial period, with consequent greater economic, social and academic development of these regions^(11,25,31,34). Proof of this is the fact that, among all the Psychiatry and Mental Health Nursing productivity fellows analyzed, there were none from the North region and only two (2.8%) in the Midwest region among the Psychiatry fellows and none from this region among the Mental Health Nursing fellows. Furthermore, 62% and 50% of the total Psychiatry and Mental Health Nursing fellows, respectively, belong to the Southeast region. The South region is the second with the highest number of fellows, followed by the Northeast, which has 28.5% of the Mental Health Nursing fellows and only 4.2% of the Psychiatry fellows. It is concluded, therefore, that there is an even greater need to foster research in the North and Midwest regions of the country⁽³⁴⁾.

Conclusion

Due to the increasing affection of the population for mental health problems, this area has become extremely relevant to the Brazilian public health with the inclusion of a new model of care linked to UHS. This model is based on the protection of the human rights of people with mental disorders instituted after the Psychiatric Reform in Brazil. Such scenario has determined a greater demand for teaching and research in this field in order to build solid evidence to promote improvements in Mental Health practice.

Having said that, this study proposed to analyze the profile of the researchers with productivity in research in the Mental Health field at CNPq as a way to measure the Brazilian scientific production in this field and discuss the disparities and the advances in Mental Health in Brazil.

The results found a total of 85 scholarships, 71 of which were in the area of Psychiatry and only 14 in the area of Mental Health Nursing. This data shows a greater investment of CNPq in other areas, such as Maternal and Child Health, Surgery and Clinical Medicine, to the detriment of areas related to mental suffering, even in the face of the high morbidity and prevalence of mental disorders.

Regarding the university teaching of Mental Health in the areas of Nursing and Medicine, a deficit was detected in the contribution of the productivity scholarship holders for the fomentation of research in Mental Health in the Brazilian undergraduate courses, evidenced by the little adhesion of the researchers to the orientation of scientific initiation students, hindering the access of the undergraduate to knowledge and updating in this field.

It was also possible to notice a higher prevalence of the female gender in the Mental Health Nursing fellowship researchers, as opposed to a higher male prevalence among Psychiatry fellowship researchers. Thus, despite the increase in the proportion of women in Medicine, in this field of practice, men still prevail, and this may be associated with a late insertion of women in the science and technology system, low recognition by peers, in addition to factors such as pregnancy and maternity.

There is an evident concentration of researchers and publications in the Southeast and South regions associated with the absence of researchers in the North region. This data corroborates the results of previous similar studies, emphasizing a historical regional inequality, with greater concentration of economic, social and academic development in the Southeast and South regions.

Although the productivity in the Mental Health area is growing, it is still necessary to invest more in the area, as well as to increase the number of researchers and production, considering mainly the North and Midwest regions, in order to reduce regional disparities and train qualified professionals who produce knowledge in all areas of the country.

References

1. Lopes CS. Como está a saúde mental dos brasileiros? A importância das coortes de nascimento para melhor compreensão do problema. *Cad. Saúde Pública* [Internet]. 2020 [cited 2020 Jul 18];36(2):e00005020. Available from: <https://doi.org/10.1590/0102-311x00005020>
2. Almeida JMC. Política de saúde mental no Brasil: o que está em jogo nas mudanças em curso. *Cad. Saúde Pública* [Internet]. 2019 [cited 2020 Jul 18];35(11):e00129519. Available from: <https://doi.org/10.1590/0102-311x00129519>
3. Ministério da Saúde (BR), Secretaria de Atenção à Saúde, Coordenação Geral de Saúde Mental, Álcool e Outras Drogas. *Saúde Mental no SUS: Cuidado em Liberdade, Defesa de Direitos e Rede de Atenção Psicossocial. Relatório de Gestão 2011-2015*. Brasília, DF: Ministério da Saúde; 2016.
4. Carneiro LA, Porto, CC. Saúde mental nos cursos de graduação: interfaces com as diretrizes curriculares nacionais e com a reforma psiquiátrica. *Cad Bras Saúde Ment* [Internet]. 2014 [cited 2020 Jul 18];14(6):150-67.

Available from: <https://periodicos.ufsc.br/index.php/cbsm/article/view/68544/41292>

5. Paulin LF, Poças RCG, Giraldez F, Marim J, Centelhas I, Nicolucci C. Construindo o Internato de Saúde Mental: a Experiência da Universidade São Francisco. *Rev Bras Educ Med* [Internet]. 2020 [cited 2020 Jul 18];44(1):e005. Available from: <https://doi.org/10.1590/1981-5271v44.1-20190149>
6. Araújo GO, Ramos MMF, Suarte APMM, Coutinho LG, Braga BV, Blanco-Vieira T. Ganho de Conhecimento no Internato Médico em Psiquiatria Não Reduz Estigmatização dos Transtornos Mentais. *Rev Bras Educ Med* [Internet]. 2020 [cited 2020 Jul 18];43(1):424-30. Available from: <https://doi.org/10.1590/1981-5271v43suplemento1-20180277>
7. Pereira AJ, Andrade DCL. Estratégia Educacional em Saúde mental para médicos da atenção Básica. *Rev Bras Educ Med* [Internet]. 2017 [cited 2020 Jul 18];41(4):478-86. Available from: <https://doi.org/10.1590/1981-52712015v41n4rb20160021>
8. Tavares CMM, Gama LN, Souza MMT, Paiva LM, Silveira PG, Mattos MGR. Competências específicas do enfermeiro de saúde mental enfatizadas no ensino de graduação em enfermagem. *Rev Port Enf Saúde Ment* [Internet]. 2016 [cited 2020 Jul 18];(spe4):25-32. Available from: <https://doi.org/10.19131/rpesm.0137>
9. Campos RO. Pesquisa em Saúde Mental no Brasil: through the looking-glass. *Ciênc Saúde Colet* [Internet]. 2011 [cited 2020 Jul 18];16(4):2032. Available from: <https://doi.org/10.1590/S1413-81232011000400001>
10. Conselho Nacional de Desenvolvimento Científico e Tecnológico (CNPq) [homepage]. RN-028/2015. 2015 [cited 2020 Jul 17]. Available from: http://cnpq.br/view/-/journal_content/56_INSTANCE_0oED/10157/2409490
11. Leite ACF, Rocha Neto I. Perfil dos Bolsistas de Produtividade em Pesquisa do CNPq em Educação. *Rev Bras Ens Sup* [Internet]. 2017 [cited 2020 Jul 18];4(3):97-112. Available from: <https://doi.org/10.18256/2447-3944.2017.v3i4.2350>
12. Plataforma Lattes CNPq [homepage]. Busca textual. [cited 2020 Jul 19]. Available from: <http://buscatextual.cnpq.br/buscatextual/busca.do>
13. Wainer J, Vieira P. Avaliação de bolsas de produtividade em pesquisa do CNPq e medidas bibliométricas: correlações para todas as grandes áreas. *Perspect Ciênc Inf* [Internet]. 2013 [cited 2020 Jul 20];18(2):60-78. Available from: <https://doi.org/10.1590/S1413-99362013000200005>
14. Sturmer G, Viero CCM, Silveira MN, Lukrafka JL, Plentz RDM. Análise do perfil e da produção científica dos fisioterapeutas bolsistas produtividade do Conselho Nacional de Desenvolvimento Científico e Tecnológico. *Rev Bras Fisioter* [Internet]. 2013 [cited 2020 Jul 20];17(1):41-8. Available from: <https://doi.org/10.1590/S1413-35552012005000068>

15. Souza JGS, Popoff DAV, Oliveira RCN, Almeida ER, Martelli H Junior, Martins AMEBL. Profile and scientific production of Brazilian researchers in dentistry. *Arq Odontol* [Internet]. 2016 [cited 2020 Jul 20];52(1). Available from: http://revodonto.bvsalud.org/scielo.php?script=sci_arttext&pid=S1516-09392016000100006
16. Ministério da Saúde (BR). Biblioteca Virtual Saúde [homepage]. Agenda Nacional de Prioridades de Pesquisa em Saúde [cited 2020 Jul 20]. Available from: http://bvsms.saude.gov.br/bvs/publicacoes/agenda_nacional_prioridades_2ed_4imp.pdf
17. Barros ALBL, Nóbrega MML, Santos RS, Cézar-Vaz MR, Pagliuca LMF. Pesquisa em enfermagem e a modificação da árvore do conhecimento no CNPq: contribuição à ciência. *Rev Bras Enferm* [Internet]. 2020 [cited 2020 Jul 20]. Available from: <https://doi.org/10.1590/0034-7167-2017-0911>
18. Mazzaia MC. Needs in Mental Health and Research. *Rev Bras Enferm*. 2018;71(Suppl 5):2077-8. <https://doi.org/10.1590/0034-7167-2018-0363>
19. Pan American Health Organization [homepage]. The Burden of Mental Disorders in the Region of the Americas, 2018. Washington, D.C.: PAHO; 2018 [cited 2020 Jul 20]. Available from: https://iris.paho.org/bitstream/handle/10665.2/49578/9789275120286_eng.pdf?sequence=10&isAllowed=y
20. Santos JE, Lino DCSF, Vasconcellos EA, Souza RC. Processos formativos da docência em saúde mental nas graduações de enfermagem e medicina. *Rev Port Enf Saúde Mental*. 2016 [cited 2020 Jul 20];(Spec N 4):85-92. Available from: <https://doi.org/10.19131/rpesm.0146>
21. Cliquet MB, Rodrigues CIS. Grupo tutorial e a saúde mental no Ensino médio. *Rev Bras Educ Médica* [Internet]. 2016 [cited 2020 Jul 20];40(4):591-601. Available from: <https://www.scielo.br/pdf/rbem/v40n4/1981-5271-rbem-40-4-0591.pdf>
22. Pinho MJ. Ciência e ensino: contribuições da iniciação científica na educação superior. *Rev Aval Educ Superior (Campinas)* [Internet]. 2017 [cited 2020 Jul 20];22(3):658-75. Available from: <https://doi.org/10.1590/s1414-40772017000300005>
23. Soares PC. Contradições na pesquisa e pós-graduação no Brasil. *Est Avançados* [Internet]. 2018 [cited 2020 Jul 20];32(92):289-313. Available from: <https://doi.org/10.5935/0103-4014.20180020>
24. Guedes MC, Azevedo N, Ferreira LO. A produtividade científica tem sexo? Um estudo sobre bolsistas de produtividade do CNPq. *Cad Pagu* [Internet]. 2015 [cited 2020 Jul 20];45:367-99. Available from: <https://doi.org/10.1590/18094449201500450367>
25. Mombaque WS, Padoin SMM, Lacerda MR, Gueterres EC. Perfil dos pesquisadores bolsistas de produtividade em pesquisa na área da enfermagem. *Rev Enferm UFPE Online*. 2015 [cited 2020 Jul 20];9(2 supl):844-50. Available from: <https://periodicos.ufpe.br/revistas/revistaenfermagem/article/view/10408/11182>
26. Oliveira PAS. As dificuldades enfrentadas por homens que exercem profissões rotuladas femininas pela sociedade [Undergraduate thesis]. Manhuaçu: Centro Superior de Estudos de Manhuaçu; 2016 [cited 2020 Jul 20]. Available from: <http://www.pensaracademico.unifacig.edu.br/index.php/repositorioctcc/article/view/606>
27. Cunha YFF, Sousa RR. Gênero e enfermagem: um ensaio sobre a inserção do homem no exercício da enfermagem. *Rev Adm Hosp Inov Saúde* [Internet]. 2017 [cited 2020 Jul 20];13(3). Available from: <https://revistas.face.ufmg.br/index.php/rahis/article/view/140-149>
28. Fundação Osvaldo Cruz. Demografia Médica no Brasil 2018 [Homepage]. 2018 [cited 2020 Jul 20]. Available from: [http://www.epsjv.fiocruz.br/sites/default/files/files/DemografiaMedica2018%20\(3\).pdf](http://www.epsjv.fiocruz.br/sites/default/files/files/DemografiaMedica2018%20(3).pdf)
29. Universidade de São Paulo. Demografia Médica no Brasil 2015 [Homepage]. 2015 [cited 2020 Jul 20]. Available from: <http://www.usp.br/agen/wp-content/uploads/DemografiaMedica30nov2015.pdf>
30. Eiguchi K. La feminización de la medicina. *Rev Argent Salud Pública* [Internet]. 2017 Mar [cited 2020 Jul 20];8(30):6-7. Available from: <http://rasp.msal.gov.ar/rasp/articulos/volumen30/6-7.pdf>
31. Oliveira EA, Pécoits-Filho R, Quirino IG, Oliveira MC, Martelli DR, Lima LS, et al. Perfil e produção científica dos pesquisadores do CNPq nas áreas de Nefrologia e Urologia. *J Bras Nefrol* [Internet]. 2011 [cited 2020 Jul 20];33(1):31-7. Available from: <https://doi.org/10.1590/S0101-28002011000100004>
32. Sales GH, Martelli DRB, Oliveira EA, Dias VO, Oliveira MCLA, Martelli H Júnior. Avaliação da Produção Científica em Áreas da medicina: um Estudo Comparativo. *Rev Bras Educ Med* [Internet]. 2017 [cited 2020 Jul 20];41(2). Available from: <https://doi.org/10.1590/1981-52712015v41n2rb20160099>
33. Sacco AM, Valiente L, Vilanova F, Wendt GW, DeSousa DA, Koller SH. Perfil dos Bolsistas de Produtividade em Pesquisa do CNPq atuantes em Psicologia no Triênio 2012-2014. *Psicol Ciên Profissão* [Internet]. 2016 [cited 2020 Jul 20];36(2):292-303. Available from: <https://doi.org/10.1590/1982-3703002702015>
34. Monteiro Neto A. Desigualdades Regionais no Brasil: Características e tendências recentes. *Boletim Regional Urbano Ambiental* [Internet]. 2014 [cited 2020 Jul 20];9. Available from: http://repositorio.ipea.gov.br/bitstream/11058/5582/1/BRU_n09_desigualdades.pdf

Authors' contribution

Study concept and design: Joselina Rodrigues Moreira. **Obtaining data:** Larissa Alves Marcelino. **Data analysis and interpretation:** Poliana Franco Braga. **Drafting the manuscript:** Joselina Rodrigues

Moreira, Daniel Antunes Freitas. **Critical review of the manuscript as to its relevant intellectual content:**

Wellington Danilo Soares.

All authors approved the final version of the text.

Conflict of interest: the authors have declared that there is no conflict of interest.


Received: Jul 5th 2021

Accepted: Oct 20th 2021

Corresponding author:

Wellington Danilo Soares

E-mail: wdansoa@yahoo.com.br

 <https://orcid.org/0000-0001-8952-9717>

Copyright © 2023 SMAD, Rev Eletrônica Saúde Mental Álcool Drog.
This is an Open Access article distributed under the terms of the Creative Commons CC BY.

This license lets others distribute, remix, tweak, and build upon your work, even commercially, as long as they credit you for the original creation. This is the most accommodating of licenses offered. Recommended for maximum dissemination and use of licensed materials.