Mental health within primary health care and Global Mental Health: international perspectives and Brazilian context

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This paper presents a theoretical analysis on the integration of mental health within primary care from the perspective of the objectives and strategies of Global Mental Health (GMH). This task is divided into two parts. The first part is dedicated to international review studies on the subject and the second deals with Brazilian regulatory and scientific publications about the issue. The international studies corroborate the integration of mental health within primary health care (PHC) as a fundamental strategy for reaching the goals of GMH. In the Brazilian scenario, this topic is important for policies and research within mental health, but the objective of this integration and the ways in which it is put into operation require better definition. We conclude by pointing out some obstacles that prevent PHC from occupying a strategic role regarding mental health actions within the Brazilian National Health System (SUS).

Keywords: Mental health. Primary healthcare. Global mental health. Family Health Strategy.

Introduction
The field of Global Mental Health (GMH) is a formation of knowledge, studies and practices aimed at reducing the ongoing inequalities in mental health access and care on a global scale\(^1\). This field has among its main focuses\(^2\): gathering information on the impact of mental illnesses in the population; analyze the current state of access and quality of care offered in diverse cultural contexts all over the planet; and generate critique and propose/assess interventions to overcome the difficulties of this offer in order to ensure the best care available for these conditions\(^3,4\). These issues are approached in a global perspective, emphasizing the dimension of injustice and human rights abuse underlying mental health care inequalities both in high, medium and low-income countries and inside them\(^5,6\). Another topic addressed in this paper refers to the complex cultural issues regarding the diagnosis and multiple modalities of tackling mental disorders in various populations\(^7\).

The British magazine *The Lancet*\(^8-13\) published, in 2007, a series of papers under the title *Global Mental Health*, focusing on global mental health disorders. The issue draws together leading experts from the field, being strongly based on scientific evidence. The first five papers\(^8-12\) of the issue documented the following topics: the load and health impact of mental disorders; evidence of effective treatment; unmet care needs in countries classified by the World Bank as low-income and middle-income countries (LAMICs); scarce financial resources and unequal distribution of resources; and existing barriers to the expansion of mental health services. The last paper\(^13\) (scientifically based in evidences and ethically grounded in respect for protecting the human rights of people with mental disorders) was a ‘call for action’ aiming at scaling up the coverage of services for mental disorders in all countries as well as at requiring more funding investments for researches identifying and responding to new issues arising from this process of scaling up services for mental disorders.

Mental and behavioral disorders accounted for approximately a quarter of all years lived with disability (YLD) in the world from 1990 to 2010. In the same period, the years lost due to disability-adjusted life years (DALYs) from mental, neurological
and substance use disorders increased by 38%, accounting for 7.4% of the global burden of health problems\textsuperscript{14}. The World Health organization (WHO) predicted that in 2020 depression would be the second most important cause of disability after ischemic heart disease\textsuperscript{15}. Three quarters of the global mental health burden are in low- and middle-income countries (LMICs)\textsuperscript{16}.

One of the main targets of analysis and intervention in GMBH is called mental health gap\textsuperscript{17}, regarding the finding that many individuals with psychiatric disorders do not receive appropriate and adequate treatment or remain untreated because they are not even recognized and diagnosed with a mental illness. Although there are effective treatments for most mental disorders\textsuperscript{18}, many patients have no access to them. The median global treatment gap is estimated to be 32.2% for schizophrenia and 56.3% for depression\textsuperscript{19}. In low- and middle-income countries (LAMICs), up to three in four persons with mental disorders do not receive the treatments known to work. This treatment gap can exceed 90% in sub-Saharan Africa. This gap shown by research data is hardly surprising, given that, although referring to more than 80% of the world population, LAMIC countries invest less than 20% of all global resources spent on mental health care, currently allocating less than 2% of the total health budget to health treatments\textsuperscript{2,3,20}.

Rebello et al\textsuperscript{14}'s review provides three strategies with the potential of substantially reducing the treatment gap and hence the burden of disease associated with mental disorders: integration of mental health services into primary care services; task sharing and task shifting; and aggregating innovative use of technology to the existing service offerings models of mental health. The integration between mental health and primary care can play an important role in reducing stigma and to tackle the lack of established mental health systems in several countries and locations. Task sharing and training of non-specialists can cut costs and the number of health professionals needed to meet the primary care demands. Innovative use of technology can enhance services access, cut costs, and reduce stigma.

Patel et al.\textsuperscript{21} conducted a global survey by applying open questionnaires to academic leaders of psychiatry, members of the World Psychiatric Association, in a
sample that included representatives from nearly 60 countries. The questionnaire questions sought to identify the priority psychiatric conditions in the respondents’ regions, the treatments available for these disorders, the roles played by health professional involved in the process, as well as suggested strategies to improve access to mental health care and to promote behaviors of seeking help and compliance to long-term treatments. Respondents’ opinion pointed towards three main strategies for reducing the treatment gap: increasing the number of psychiatrists and other mental health professionals; increasing the involvement of a range of appropriately trained non-specialist providers; and the active involvement of people affected by mental disorders in the process of ensuring their rights.

The role of mental health non-specialists, more specifically of primary health care professionals, is thus essential for achieving the objectives towards guaranteeing rights to people with mental disorders and appropriate training for human resources, as underlined by GMBH22. Recognizing the integration of mental health in primary care as a priority on the agenda of GMH broadens the need for further studies regarding the way this integration should take place, how the involved actors see themselves in this process and what are their demands and difficulties in order to reach the desired goals, taking into account the complex local and regional characteristics.

Mental health in primary health care: foundations and challenges

The Primary Health Care (PHC) is defined as the backbone of a national health services system, the standard of a health care system responsible for providing the healthcare to the population regarding their most prevalent health problems, comprising preventive, healing, rehabilitative and health promotion measures, and it should be able to solve around 80% of these problems. The PHC must also be the first-contact in the care network of the health care system, being essentially characterized by a continuous and comprehensive health care, management health care, family-centered care, community guidance and participation, as well as cultural competence of professionals23,24.
The report *Integrating mental health into primary care: a global perspective*, jointly released by the World Health Organization (WHO) and the World Organization Family Doctors Caring for People (WONCA)\textsuperscript{25}, brings together global guidelines and successful experiences reports on a variety of socio-economic contexts from several countries integrating mental health into Primary Health Care (PHC). The document is divided into two parts. The first one presents broad principles that underlie this integration, whereas the second one shows the experiences of best practices in several countries regarding this integration. The report points out that the PHC principles, in a hierarchical health system, should routinely provide in its essential services: early identification of mental disorders; treating common mental disorders; managing patients with stable chronic mental disorders; refer patients who require change when necessary; service care to the needs when mental and physical health problems are interwoven; and, finally, mental health support and prevention.

It is also worth highlighting that maintaining continuity of care is key to the model of an effective primary health care, and the quality of mental health services in primary health care tends to increase when there is an ongoing relationship between healthcare professional and patient. Primary health care services are often the most affordable, available and accepted by the communities. Where mental health care is integrated as part of these services access improves, mental disorders are more easily identified and treated, and comorbid mental and physical health problems are managed more seamlessly and appropriately\textsuperscript{25}.

The report highlights seven good reasons for integrating mental health into primary care. The first three ones are the following: (1) the great burden of mental disorders; (2) mental and physical health problems are interwoven; (3) the enormous treatment gap for mental disorders. The other four reasons refer to primary care for mental health, which: (4) enhances access; (5) promotes respect of human rights in this field; (6) is affordable and cost effective; and (7) generates good health outcomes\textsuperscript{25}.

Patel et al\textsuperscript{26} reviewed studies on the subject by organizing core issues involved regarding three topics: Why integration? What to integrate? How to integrate? The
authors proposed three main reasons for such integration. The first one is the impossibility of offering specialists in mental health in numbers large enough to care for the estimated cases of mental disorders especially in low-income and medium-income countries. Even in developed countries like the United States, only two in ten adults with common mental disorders are treated by specialists each year, the rest is cared by primary health care services. Second, at this level of attention, there is the possibility of an effective, patient-centered and integrated treatment – a treatment in which physical, mental and psychosomatic problems are addressed together by a team of professionals trained for this type of service. Third, the primary health care scenarios, due to following a more general and integrated profile, are more attractive to patients and families concerned about the stigma which is still associated with mental diagnoses and drug abuse and to specialized equipment for the treatment of individuals with serious mental disorders.

For these authors, the objective of integration must be the care of common mental problems in the routine of people affected by other illnesses or physical conditions, with special attention to non-communicable chronic diseases such as cancer, diabetes and cardiovascular diseases, HIV/AIDS and pre-natal and maternal health care. As for integration, it is noted a need for detailed planning, with priorities, objectives and realistic strategies, defined and established with the participation of all those involved. Another crucial element for integration refers to a detailed discrimination of tasks and responsibilities of each professional, followed by standardization facilitating the operationalization of treatments and referrals. As an example, the Collaborative Care model is mentioned, presenting evidence of studies made in high-income countries which demonstrated being more effective than the traditional care with a referral to the specialist²⁶.

In three editorials of the Mental Health in Family Medicine magazine, the integration issue is largely debated¹⁵,²⁷,²⁸. The papers repeat some central information. They maintain that to offer care in mental health in primary health care means to guarantee that people who need this care will be able to access it near their homes, without compromising their social support, work and family ties, which may be an
important source of recovery. In the majority of countries, primary health care is available free of charge or at a lower cost than the specialized service. A lower probability of promoting stigma or prejudice is once more indicated as one of the advantages. The therapeutic results in this level of attention have been evaluated as either equivalent or better than the specialized level. The reason for these results includes the possibility of integrated treatment of mental disorders as comorbidity of physical diseases and the longitudinal reach of primary health care. A characteristic of this model is the continuous care, provided from birth till death, allowing for the building of a growing bond between patient and professional, with progress of an understanding of the patient problems and better compliance to the treatment.

Evidence to the contrary is presented regarding the questioning of the capacity of primary health care to offer adequate care to mental health, be it for lack of time among some many other health demands, be it for lack of technical knowledge of the professionals. After educational programs, primary health care doctors deal satisfactorily with mental disorders, not differing from specialists in their capacity to recognize them¹⁵.

Mendenhall et al.¹⁶ developed a large international qualitative study about task sharing and task shifting with primary health care professionals. Focal groups were created in districts of five low-income and middle-income countries in Africa and Asia – Ethiopia, India, Nepal, South Africa and Uganda –, interviewing district managers, area professionals and other actors involved. The authors concluded that the inclusion of mental health in primary care is possible through this process if some conditions are met: more human resources and access to medication; continuous supervision and support at community level and primary health care; and training and financial rewards for health professionals in task sharing.

With regard to this process, Patel²⁶ and Rebello¹⁴ et al listed some possible risks. Some types of mental disorders may be neglected in addressing integration. Some conditions, put together, respond to at least half of the illness load of the neuropsychiatric diagnoses: chronic psychosis, infant mental health disorder such as autism, neuropsychiatric disorders such as epilepsy, dementia and cerebral lesion
The lack of studies demonstrating the effectiveness of integration with primary health care with these disorders care should not, but can lead to some type of negligence of care. On the contrary, the lack of research should place these issues as priority in the scientific agenda. Other potential problems are the overload of the already very weakened health systems, as in countries that live post-conflict situations or fiscal and governmental instability, and the need for more evidence on the integration in low-income and middle-income countries.

On the other hand, there is an agreement among these authors\textsuperscript{14,26} on the main conditions for this mental health integration in PHC to occur: legislation and specific policies which organize and make financially viable the health networks to accomplish this process; a previously established and efficient primary health care system; proposals which take into consideration local circumstances of mental health care and the cared population; training of the professionals involved; continuous specialists support; reference specialized equipments and medications given in an organized manner with well-defined flux and responsibilities.

The integration of mental health in primary health care in Brazil

According to the National Policy of Basic Attention, the Brazilian Public Health System (SUS) has in the Family Health Strategy its Primary Health Care model – or basic health care, as it is also designated this level of health system in the Brazilian public policies\textsuperscript{29}. The family health strategy is implemented through a multi-professional family health team formed by a doctor, a nurse, a nurse assistant, and community health workers in numbers directly in proportion to the number of people treated (maximum of 12 CHW per team; maximum seven hundred and fifty people per CHW). This multi-professional team is responsible for offering Primary Health Care to the population of a defined geographical area, taking also into consideration economical and cultural aspects, accessibility to the team, among others. The population average recommended for each team is three thousand people, maximum four thousand.
The role of the basic health care and the Family Health Strategy (FHS) in mental health is addressed in several legislative, regulatory and technical documents in the Brazilian Public Health System. Decree number 224 of 1992³º is the first regulation of mental health care in the Brazilian Public Health System, presenting the basic units of health and the Psychosocial Care Centers (PCC) as preferred non-hospital services for the mental health. Law number 10.216 of 2001³º is the main legislative landmark of mental health in Brazil, guaranteeing those with mental disorder access to the best possible treatment in the health system, protection against any form of abuse and exploitation, and preferential treatment in mental health community services.

The Ministry of Health Decree no. 336/2002³º explains in detail the Psychosocial Care Centers modus operandi that are now organized in three modalities, in ascending order of range/complexity and scope. On the other hand, however, there is no guidance on the role of basic care. It is described what is entitled to the Psychosocial Care Centers, being among their specifications: “supervise and qualify the basic health care teams, services and mental health programs in the scope of their territory and/or their assistance module” (p. 126).

Basic care is indicated as fundamental place in the Mental Health Care Network, although there is no specific operational guidance for the Primary Health Care (PHC) in these documents. In Reforma psiquiátrica e política de saúde mental no Brasil³¹ (Psychiatric reform and the mental health policy in Brazil), it is highlighted that the basic care teams, due to their proximity to families and communities, “present themselves as a strategic resource for facing important public health problems, such as the harm linked to the abuse of alcohol, drugs and many other forms of psychological pain” (p.33). The document also points out that: “there is a component of subjective suffering associated with each and every illness, sometimes acting as an obstacle to the compliance of preventive practices or healthier lifestyles” (p.33). According to this publication, the Ministry of Health has been stimulating, in the basic health care policies, inclusive guidelines of the user’s subjective dimension and care to the most common mental health problems.
In *Saúde mental e atenção básica: o vínculo e o diálogo necessários*³² (Mental health and basic health care: the necessary bond and dialogue), it is pointed out that mental health should be organized according to a model of health care network, of which the Psychosocial Care Centers (PCC) are not the only instrument, adding to them, among others, the primary care. In municipalities with less than twenty thousand inhabitants, the mental health network can be structured from the basic health care units. Three axes are described for the organization of mental health in the basic health care: (1) matrix support to the basic health care teams; (2) formation as priority strategy for inclusion of mental health into basic health care; (3) inclusion of mental health in the basic care information system.

In order to attend the population mental health demands, the matrix support is proposed as an organizational arrangement of technical support to the basic health care services and the main qualification strategy of the Family Health Strategy (FHS). A technical team responsible for the matrix support shares cases with family health teams applying case group discussions and conducting joint interventions alongside families and communities or shared services³².

However, even if the matrix support were already appointed in 2003 as the main assisting guideline in mental health in basic health care, a specific decree – 154/2008³³ – established the Family Health Support Centers (FHSC) only in 2008. The FHSC are formed by teams of health professionals from different areas of knowledge, aiming at offering matrix support to a fixed number of family health teams in some priority thematic axes: physical/practical body activities; complementary and comprehensive practices; rehabilitation; diet and nutrition; mental health; children’s health; women’s health; and pharmaceutical assistance. Moreover, a Family Health Support Center team does not have just one model of formation, requiring the unification of professionals of various areas, possibly being among them psychiatric and psychology professionals. However, in regard to the formation of the team, the decree offers the following recommendation: "Considering the epidemiological magnitude of mental disorders, it is recommended that each Family Health Support Center counts with at least 1 (one) professional in the mental health area"³³.
In order to subsidize the matrix support in mental basic health care, the Ministry of Health has published *O Guia prático de matriciamento em saúde mental*⁴ (The Practical guide to matrix support in mental health), suggesting forms of operating the work jointly among specialist professionals in matrix mental health and the family matrix support in health teams. This work may involve inter-consultations, that is, care in a group of patients by Family Health Support Centers (FHSC) and Family Health Strategy (FHS) professionals, house visits, cases discussion and therapeutic project design, group interventions, educational activities with the FHS, among others, as long as a referral relationship between the FHSC and FHS is not established and the FHSC do not function as a user’s gateway.

The present National Policy in Basic Care²⁹ reinforces the FHSC as a component of basic health care, aiming at broadening its reach and the scope of its action in this level of attention, as well as its solvability. On the other hand, however, no particular mention is made to the role of basic health care in mental health.

The Psychosocial Care Network (PCN) was created in 2011 as a strategy of mental health care in the Brazilian Public Health System³⁵, aiming at “the creation, growth and articulation of attention points to health for people with mental disorder or pain and with needs caused by the use of crack, alcohol and other drugs”. PCN gathers a diversification of public equipment regarding mental health care, giving them different responsibilities and appointing integration and operational guidelines. The PCN is formed by the FHS, the PCC, Family Health Support Centers, urgency and emergency services, psychiatric hospital beds, therapeutic home services, the program *De volta para casa* (Back home), community centers and therapeutic communities. These services are linked to the following components: basic health care, specialized psychosocial health care, urgency and emergency health care, home care in a temporary capacity, hospital health care, deinstitutionalizing strategies, and psychosocial rehabilitation.

Among national scientific publications, four national works directly approach in their titles the theme integration of mental health in basic health or family care. Nunes et al³⁶ carried out a two-trends study: a theoretical and an empirical one. In the
Theoretical part, they attempted to establish confluences among the principles of the psychiatric reform and family health. Simultaneous guidance of the actions of the psychosocial model of care and FHS were found in the following issues: comprehensiveness of attention; social participation; expansion of the health–illness concept; interdisciplinarity of care; and territorialization of actions. At the practical forefront of study, ethnography in a family health unity with four teams, focal groups and individual interviews with the professionals with these teams was created. The findings showed that, despite the theoretical confluences, mental health practices in the teams studied hardly existed. There were various reasons for this observation: lack of knowledge of the psychiatric reform; lack of qualification in mental health by the FHS professionals and technicians; non-identification by the population of mental health problems as priorities in the areas studied; and lack of conditions for care in the FHS, including lack of psychiatric medications, and the non-existence of a mental health network working as a backup and allowing a quick referral in cases of necessity.

As for the theme inclusion of mental health actions on the basic health care, Souza e Rivera, performed a national bibliographical review. Targeting the objectives of the psychiatric reform, the authors referred to the PCC as the iconic health equipment in this process, but indicate that the mental health in basic health care integration, based on the three guidelines of the document Saúde mental e atenção básica (Mental Health and basic health care), as the main path for the psychosocial health care expansion in Brazil. Furthermore, the authors analyze the similarities between the principles that guide both mental health actions and the basic health care: the articulation of knowledge and practices; the acceptance of users; the responsibility for the patients in the territory; the bonding between the subjects involved; and the integration of care.

Also worth mentioning are Correia et al, who carried out a systematic review of national literature about the theme mental health care of people with psychic pain and their families assisted by the professionals in the family health team. From 131 summaries, 17 papers were selected: 12 research reports were made with one or more members of the FHS team; two reports about the experience; two theoretical
reflections; and one literature review. Four central themes emerged from a detailed reading of the 17 selected papers regarding the actions developed in the FHS: home visit to the mentally ill and their family; bonding and sheltering; referral; and therapy workshops. Finally, the authors concluded that the mental health actions studied in basic health care do not present uniformity in their execution, depend either on the individual mobilization of the professionals or on the political decision of the local management. The best strategy observed in order to be successful in getting assistance for the mentally ill in the FHS was investing in the professional qualification through ongoing education and training in this area.

Souza et al39 present a narrative review of the national literature on works addressing mental health in the Family Health Strategy in the period ranging from 1999 and 2009. The authors conducted the study from a selection of 38 works – 27 research reports, 6 intervention reports, and 5 theoretical essays –, identifying as the main frequently addressed themes: demands in mental health directed to Primary Health Care; professional perceptions and practices related to mental health; PCC and FHS connections; community health workers’ experiences; and the psychologists’ performance in the FHS. The authors concluded that the analyzed studies showed problems such as: stereotype views on mental disorders; predominance of asylum logic; and lack of registers, flux, strategies, qualified support to the families and integration in network.

More recent review studies40-42 focuses on the analysis of matrix support in mental health of family health teams. Three of them pointed towards the matrix support as an important tool to qualify care in mental health offered by the FHS, improving the technical knowledge of mental health professionals, increasing the teams therapeutic offer with psychosocial tools and giving support to teams to build more efficient flux and therapeutic projects with other services of the health network. At the same time, there are many difficulties in this process involving the many interests and priorities of the professionals involved, the tension between quantity and quality of services offered in the FHS, and its own network capacity of answering adequately the users’ therapeutic needs. The three reviews also conclude that, as it is a
very recent process, further studies are required to indicate clearer ways on how to enhance the matrix support as an integration tool of mental health in primary health care.

**Conclusions**

People who are affected by mental disorders need health systems that supply their care needs with the best possible scientific backing available. The academic production gathered by the Global Mental Health shows that these psychosocial and pharmacological resources are cost–effective and must be accessible to all the people on the planet. The way to reach this objective is only possible, in the short term and in a sustainable manner, by applying a strong primary care that, while integrated to an organized mental health network and with specialized resources, is the basis of mental health care.

The international literature states that integration is the main global strategy of expansion of access to mental health, pointing out innumerous evidences that demonstrate the advantages and viability of the model. At the same time, the need for stronger and more detailed studies on the experiences in course is repeated, especially demonstrating epidemiological impact, favorable clinical closures, cost–effectiveness and ways for the culture impasses involved.

On the other hand, the analysis on the main decrees and technical guidance of the Ministry of Health on this theme signals that, indeed, in the Brazilian Public Health System, it is recognized that the basic care plays a fundamental role in mental health care. Nevertheless, limits of competence between basic health care and the PCCs have not been established, having a double–entry system for this demand profile. Furthermore, the matrix support in mental health through the FHSC is the main mechanism, with a better fundament in decrees, to qualify the FHS for this service. This fact, however, raises the doubt if this should be the only one, or even if it is the best way to promote the necessary qualification.
National studies proved the existence of several investigations on the theme, but there is little coherence in the guiding questions and methodologies. The findings show several difficulties of the FHS in dealing with mental health, while the matrix support has been proposed and evaluated as the main answer to these problems. There are, however, some issues not well exploited and that deserve to be highlighted.

A better structuring of the FHS, as efficient and resolutive Primary Health Care (PHC) for the health problems more prevalent and incapacitating of the population, including mental disorders, would not be a more effective response? Are the professionals only unprepared to deal with mental disorders or is there a general lack of preparing to deliver a quality PHC, which is also reflected in mental health? The model of basic health care centered in programs or in areas of health – mental health, children’s health, among others – diverges from the proposal of a PHC which works as the main system gateway and does not “choose” or classify the users which it will attend according to the programs and resources available, but shelters and offers answers of comprehensiveness and coordinated care irrespective of the user’s problem. The official publications as well as researches point towards the analysis of mental health as an isolatable field from the workings of all the PHC, a political and epistemic movement which does not take into consideration the need that, in order for the mental health integration to work, a strong and structured pre-existent PHC is necessary, or at least in concurrent structure.

The presence of professionals with specific PHC training (doctors with family and community health medicine specialization and nurses with specialization in family health) represents a differential in the quality of mental health services. The need for PHC to be developed by specialist professionals in Family and Community Medicine/Family Health is one of the foundations of this level of system in the main universal public health systems in the world adopting PHC as their guiding and organizer level. However, it must be emphasized that this is a subject that gets very little attention in national publications.

The Global Mental Health offers for the challenges of the integration of mental health in PHC in the Brazilian scenario the perspective of dealing with these challenges.
from strategies centered in overcoming inequalities of access and quality of services in mental health that can only be achieved by the PHC protagonism. This perspective has the potential of increasing and realigning the axles that have been adopted for this integration with the Brazilian Public Health System. By applying it, the Family Health Strategy (FHS) no longer has a supporting role for the Psychosocial Care Centers (PCC) to respond to the mental health population needs and to assume a place of coordination and comprehensive care – with the support of the CAPS and NASF – for reaching an effective answer.

Collaborators
Leandro David Wenceslau contributed to the literature review and analysis, and to the final writing of this paper. Francisco Ortega contributed to the critic review and agreement with the final version of this paper.

References


